Enabling the Extraordinary
To Fly To Power To Live

MEGGiTT

安装手册

vibro-meter®

使用 CAxxx 压电加速度计（有外部信号调节器）的振动测量链

Ex

本文件包含有关预期用于潜在爆炸性环境的产品的重要信息。

参考文档 MACA/ZH-CN
版本 17 – 2023 年 01 月

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修订记录表

版本	发布日期	编写人 / 修改人	描述	签名
1	23.07.97	R. Meyer /ew	英文原版 （翻译自法语版手册）	RM
2	28.07.99	R. Meyer / jlb	修改了电缆布置图，以更好地说明接地技术 （图 6-11、 6-23、 6-35）	RM
3	- - -	- - -	（为使所有语言版本的编号保持一致， 已跳过英文版第 3 版）	- - -
4	06.09.04	R. Meyer	一般修订。 根据指令 94/9/CE 更新了 “Ex” 信息。	RM
5	08.04.08	D. Evans	重大结构调整 更新了防爆证书	DE
6	25.03.09	S. Trono	更新了防爆证书和接线图	ST
7	01.07.09 / 02.02.2010	S. Trono / P. Ward	由于 IPC704 有新的证书，更新了防爆证书和接线图。 由于 CA134、 CA20x、 CA28x、 CA30x、 CA901、 CE134、 CE28x 和 CE31x 有新的 “Ex nA” 证书，更新了防爆证书和接线图。	ST / PW
8	11.10.2011	Peter Ward	本文件为新的 CA 手册 （根据现有的分为两部分的 CA 和 CE 手册产生）。 为 CA134、CA20x、CA28x、CA30x 和 CA901 添加了新的防爆证书。 重新引入了维护部分。 根据最新的 Meggitt 品牌指南进行了更新。	PW
9	18.07.2013	Peter Ward	添加了 GSI127 电气隔离装置 （5 安装电气隔离装置），并更新了机械图 （1 基于 CAxxx 的振动测量链简介）和电气图 （7 电气连接）。更新了防爆证书。	PW
10	06.03.2014	Peter Ward	明确了 GSI122、 GSI124 和 GSI127 的允许安装区域。 更新了 7 电气连接：更新了图 7-4、图 7-5 和图 7-6 的电气图。 还更新了附录 A：ATEX 认证：更新了 PTB 01 ATEX 1061 U、 LCIE 02 ATEX 6110 X 和 LCI 06.0008X，移除了 TÜV 03 ATEX 2153 X，添加了 PTB 02 ATEX 1125。 还更新了附录 B：cCSAus 认证：更新了 1636188。	PW
11	12.09.2014	Peter Ward	为 5.3 将 GSI124 电气隔离装置更换为 GSI127 添加了注释，明确指出电缆长度可能必须进行调整。 更新了 7 电气连接：更新了图 7-4、图 7-5 和图 7-6 的电气图。 更新了附录 A：ATEX 认证：更新了 PTB 01 ATEX 1061 U、 LCIE 02 ATEX 6179 X、 KEMA 04 ATEX 1055、 KEMA 04 ATEX 1294、 LCIE 08 ATEX 6017 X、 LCIE 05 ATEX 6033 X 和 LCIE 02 ATEX 6085 X。 更新了附录 B：cCSAus 认证：更新了 1636188、1514310、 1550831、 1545315、 1699234 和 1243981，并添加了 70004630 和 70001999。 更新了附录 C：IECEx 认证 更新了 IECEx LCI 08.0041 X。 更新了附录 D：KGS 认证：添加了 14-GA4BO-0130X。 更新了旧的附录 E：TIIS 认证：更新了 GYJ12.1448X。	PW

版本	发布日期	编写人 / 修改人	描述	签名
12	02.02.2015	Peter Ward	更新了 7 电气连接：更新了图 7-4、图 7-5 和图 7-6 的电气图。 更新了附录 A：ATEX 认证：更新了 LCIE 09 ATEX 1043 X、 LCIE 09 ATEX 1044 X、 LCIE 09 ATEX 1047 X、 LCIE 09 ATEX 1048 X、 LCIE 09 ATEX 1046 X 和 LCIE 09 ATEX 1027 X。 更新了附录 C：IECEx 认证：更新了 IECEx LCI 10.0021X，添加了 IECEx LCIE 13.0053X。	PW
13	24.10.2018	Peter Ward	更改了所有 Vibro-Meter® 产品名称以不使用空格，以便与最新的产品命名约定保持一致。 添加了一条声明，指出 Meggitt SA 产品认证和保证仅适用于直接购自 Meggitt SA 或授权分销商的产品 （请参见重要须知）。 添加了重要的安全相关信息 （请参见灼热表面和灼伤风险和替换零件和配件）。 移除了大部分 ABA15x 工业外壳信息 （因为不再提供 — 替换为 ABA17x 工业外壳）。 移除了大部分 GSI124 电气隔离装置信息（因为不再提供 — 替换为 GSI127 电气隔离装置）。 更新了 2.2.2 安装程序以包含紧固力矩值和有关 CAxxx 压电加速度计的信息 （请参见表 2-1）。 更新了 5 安装电气隔离装置以阐明 GS127 应垂直安装，但可以正面朝上或倒过来安装 （倒置）（请参见 5.2.1 安装程序）。 更新了 7 电气连接以使用最新的电气图 （请参见图 7-4，图 7-5 和图 7-6）。 添加了关于清洁基于 CAxxx 的振动测量链的信息 （请参见 8.3 清洁）。 添加了报废产品处置信息 （请参见 9 报废产品处置）。 …	PW

版本	发布日期	编写人 / 修改人	描述	签名
13 （续）	29.10.2018	Peter Ward	… 更新了能源产品退货程序和表格，以便与 Meggitt Vibro-Meter® 网站的内容保持一致 （请参见 10 服务与支持）。 更新了附录 A：ATEX 认证： 添加了 PTB 98 ATEX 3101 U (ABA161)。 添加了 BVS 15 ATEX E 112 U 和 Presafe 14 ATEX 5378 U (ABA17x)。 更新了 KEMA 04 ATEX 1055 （CA28x、 CE28x 和 CE31x）。 移除了 LCIE 02 ATEX 6093 X (GSI122)。 移除了 LCIE 05 ATEX 6033 X (GSI124)。 更新了 LCIE 13 ATEX 3037 X (GSI127)。 移除了 PTB 02 ATEX 1125 （电缆接头 / 填料函压盖）。 添加了 LCIE 02 ATEX 0038 U、 LCIE 03 ATEX 0033 U、PTB 98 ATEX 3130、 PTB 11 ATEX 1007 X、SIRA 10 ATEX 1224 X、 SIRA 10 ATEX 1225 X、SEV 15 ATEX 0151 和 SEV 15 ATEX 0152 X （电缆接头 / 填料函压盖）。 更新了附录 B：cCSAus 认证： 更新了 cCSAus 1636188 (CA134)。 更新了 cCSAus 70004630 (CA20x)。 更新了 cCSAus 1514310 （CA28x、CE28x 和 CE31x）。 更新了 cCSAus 1550831 (CA30x)。 移除了 cCSAus 1545315 （CE134 和 GSI122）。 移除了 cCSAus 1699234 (GSI124)。 更新了 cCSAus 70001999 (GSI127)。 更新了 cCSAus 1243981 (IPC704)。 更新了附录 C：IECEx 认证： 添加了 IECEx PTB 08.0003U （ABA160、 JB116 和 JB118）。 添加了 IECEx PTB 08.0005U (ABA161)。 添加了 IECEx BVS 16.0026U 和 IECEx PRE 14.0042U (ABA17x)。 添加了 IECEx DEK 15.0029 （CA28x、 CE28x 和 CE31x）。 移除了 IECEx LCI 06.0010X (GSI124)。 更新了 IECEx LCIE 13.0026X (GSI127)。 添加了 IECEx LCI 10.0009U、 IECEx PTB 03.0000、IECEx PTB 11.0019X、 IECEx SEV 15.0018、IECEx SEV 15.0019 X、 IECEx SIR 07.0009X 和 IECEx SIR 07.0010X （电缆接头 / 填料函压盖）。 更新了附录 D：KGS 认证： 添加了 KGS 17-GA4BO-0551X (CA20x)。 添加了 KGS 17-GA4BO-0323X (CA28x)。 添加了 KGS 17-GA4BO-0550X (CA901)。 添加了 KGS 17-GA4BO-0325X (GSI127)。 移除了旧的附录 E：NEPSI 认证： 移除了 NEPSI GYJ12.1448X (CA134)。 移除了 NEPSI GYJ12.1451X (GSI124)。 移除了 NEPSI GYJ12.1450X (IPC704)。 添加了新的附录 E：TIIS 认证： 添加了 TIIS TC20432 (CA134)。 添加了 TIIS TC20544 (CA134)。 添加了附录 G：EAЭC RU 认证 添加了 TC RU C-CH.МШ06.B.00134 （ABA160、CA134、 CA20x、 CA28x、 CA30x、 CA901、 GSI12x、IPC704 和 JB11x）。	PW

版本	发布日期	编写人 / 修改人	描述	签名
14	26.03.2019	Peter Ward	添加了 ABA17x 工业外壳 （请参见 1.2.6 ABA17x 和 ABA160 工业外壳、 4 安装接线盒、工业外壳和信号调节器）。 添加了 IPC707 信号调节器 （请参见安装在潜在爆炸性环境中的设备、 1.2.4 IPC707 信号调节器、 4 安装接线盒、工业外壳和信号调节器），IPC707 信号 调节器 安全 手册参考（请参见相关文档和出版物），以及关于如何配置外部监控和 / 或保护系统以结合 IPC707 运行的信息 （请参见 6 配置外部监控系统）。还相应地更新了机械图 （请参见 1 基于 CAxxx 的振动测量链简介）和电气图 （请参见 7 电气连接）。 更新了附录 A：ATEX 认证： 添加了 LCIE 18 ATEX 3026 X 和 LCIE 18 ATEX 1012 X (IPC707)。 更新了附录 B：cCSAus 认证： 添加了 cCSAus 70198728 (IPC707)。 更新了附录 C：IECEx 认证： 添加了 IECEx LCIE 18.0023X (IPC707)。 更新了附录 D：KGS 认证： 添加了 KGS 18-GA4BO-0548X 和 KGS 18-GA4BO-0549X (IPC707)。	PW
15	18.11.2019	Peter Ward	更新了 7 电气连接以使用最新的电气图 （请参见图 7-1、图 7-2 和图 7-3）。 更新了附录 E：TIIS 认证： 更新了 TIIS TC20432 (CA134)。 更新以使用最新的 Meggitt 品牌标识。	PW
17	09.01.2023	Peter Ward	添加了 3.2.2 软线 “ 低噪音 ” 电缆最小弯曲半径 以提供有关带有柔性不锈钢保护管的电缆的最小弯曲半径的信息。 更新了 4.4.2.1 接地 以删除任何特定建议，因为 IPC707 信号调节器的操作无论是否有直接电气接地 (GND) 都会产生等效的电磁 (EMC) 性能。 更新了 图 4-5 以使用最新的 IPC707 信号调节器和 MA130 DIN 导轨安装适配器图纸。 更新了 7 电气连接以使用最新的电气图 （请参见图 7-1、图 7-2 和图 7-3）。 更新了附录 A：ATEX 认证： 更新了 PTB 01 ATEX 1061 U (ABA160、 JB116 和 JB118) 和 PTB 98 ATEX 3101 U (ABA161)。 更新了 LCIE 09 ATEX 1044 X (CA20x)。 移除了 LCIE 02 ATEX 6085 X 和 LCIE 09 ATEX 1027 X (IPC704)。 更新了 LCIE 18 ATEX 1012 X 和 LCIE 18 ATEX 3026 X (IPC707)。 添加了 ITS 16 ATEX 101335 X 和 ITS 16 ATEX 101336 X (电缆接头 （填料函压盖）)。 移除了 SIRA 10 ATEX 1224 X 和 SIRA 10 ATEX 1225 X (电缆接头 （填料函压盖）)。 …	PW

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17 （续）	16.01.2023	Peter Ward	… 更新了附录 B：cCSAus 认证： 更新了 cCSAus 1550831 (CA30x)。 移除了 cCSAus 1243981 (IPC704)。 更新了附录 C：IECEx 认证： 更新了 IECEx PTB 08.0003U (ABA160、 JB116 和 JB118) 和 IECEx PTB 08.0005U (ABA161)。 更新了 IECEx BVS 16.0026U (ABA17x)。 移除了 IECEx LCI 06.0009X 和 IECEx LCIE 13.0053X (IPC704)。 更新了 IECEx LCIE 18.0023X (IPC707)。 添加了 IECEx ITS 16.0011X 和 IECEx ITS 16.0012X (电缆接头 （填料函压盖）)。 更新了 IECEx SEV 15.0019X (电缆接头 （填料函压盖）)。 移除了 IECEx SIR 07.0009X 和 IECEx SIR 07.0010X (电缆接头 （填料函压盖）)。 更新了附录 D：KGS 认证： 更新了 KGS 17-GA4BO-0551X (CA20x)。 添加了 KGS 21-GA4BO-0276X (CA20x)。 移除了 KGS 12-GA4BO-0396X (IPC704)。 更新了附录 E：TIIS 认证： 更新了 TIIS TC 20432 和 TIIS TC 20544 (CA134)。 添加了附录 F：UK 认证： 添加了 CML 21 UKEX 4542 X (GSI127)。 添加了 CML 21 UKEX 2543 X 和 CML 21 UKEX 4544 X (IPC707)。 更新了附录 G：EAЭC RU 认证 (TR CU) ： 添加了 EAЭC RU C-CH.AД07.B.02998/21 (ABA17x)。 添加了 EAЭC RU C-CH.AД07.B.03042/21 (CA134, CA20x, CA28x, CA30x 和 CA901)。 添加了 EAЭC RU C-CH.AД07.B.03008/21 (GSI127)。 添加了 EAЭC RU C-CH.AД07.B.04681/22 (IPC707)。 移除了 TC RU C-CH.МШ06.B.00134 (ABA160, CA134, CA20x, CA28x, CA30x, CA901, GSI12x, IPC704 和 JB11x)。 添加了附录 H：INMETRO 认证： 添加了 INMETRO BVC20.3862-X 和 INMETRO BVC20.3863-X (CA134)。 添加了 INMETRO BVC20.3861-X (IPC707)。 添加了附录 I：CNEx / CCC Ex 认证： 添加了 CNEx 22.2014X (CA134)。 添加了 CCC Ex 2022312310000425 (IPC707)。	PW

	部门	姓名	签名	日期
技术内容批准人	ATEX 经理	Pascal Kornatko	PK	12.01.2023
	工程部 （电子产品）	Hans-Peter Aeby	H-PA	16.01.2023
	产品线管理部	Frédéric Micco	FM	16.01.2023
文档发布人	技术出版物	Peter Ward	PW	16.01.2023

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本文件中与 Meggitt Vibro-Meter® (Meggitt SA) 提供的产品有关的所有声明、技术信息和建议均基于被认为是可靠的信息；但是，除非与 Meggitt SA 另有明确书面约定，否则不保证此类数据的准确性或完整性。
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前言

关于本手册

本手册介绍了如何安装带有外部信号调节器 (IPC70x) 的振动测量链 （使用 CAxxx 压电加速度计，即振动传感器），这些均来自 Meggitt 的 Vibro-Meter® 产品系列。

本手册还介绍了这些基于 CAxxx 的振动测量链的一般用途。

注意： 请参阅使用 CExxx 压电加速度计和 PVxxx 压电速度传感器的振动测量链安装手册，获取有关采用附加或集成的信号调节电子器件的压电加速度计的信息，这些产品属于 Meggitt 的 Vibro-Meter® 产品系列。

关于 Meggitt 和 Vibro-Meter®

Meggitt PLC 是一家全球工程集团，总部位于英国，专门设计和制造面向航空航天和能源市场的高性能组件和系统。

位于瑞士弗里堡的 Meggitt 工厂作为 Meggitt SA （前称 Vibro-Meter SA）的法人实体运营。Vibro-Meter® 是 Meggitt 的一个产品系列，将我们的核心传感和监控技术应用于发电、油气和其他工业市场。

Meggitt SA 生产一系列能够在极端环境下运行的振动、动压、接近、气隙及其他传感器、电子监控和保护系统，以及航空航天和陆基涡轮机械用的创新软件。

Vibro-Meter® 产品和解决方案在传感和监控领域处于领先地位已超过 65 年，帮助确保机械设备安全、可靠、高效地工作，其中包括为 Meggitt Vibro-Meter® 产品系列生产的基于 CAxxx 的振动测量链。

如需进一步了解 Meggitt Switzerland、我们引以为傲的创新和卓越传统以及我们面向能源市场和应用的解决方案，请访问 www.meggittsensing.com/energy 网站。

哪些人应使用本手册？

本手册供有资质的人员使用，例如监视 / 控制系统的机械和电气装配工以及操作人员。

注意： 参与 Meggitt Vibro-Meter® 设备安装、操作和维护的人员应接受电子和 / 或机械工程方面的必要技术培训 （专业证书 / 文凭或同等学历），以使他们能够正确、安全地安装、操作和 / 或维护设备。

请遵守相关说明！

应严格遵守本手册所述的程序，以确保 CAxxx 压电加速度计及其相关设备正确安装。这样可以确保测量信号可靠，系统按预期运行。

用户应遵守一般安全程序，以及一般和特定的机器制造商指南和说明。

本文件的局限性

本手册并未述及所有可能的安装和连接方式，但详细介绍了几种特定配置。这些配置通常可进行调整以适合特定应用 （请联系您当地的 Meggitt 代表或 Meggitt SA 获取更多信息）。

相关文档和出版物

相关产品的更多信息可见相应的数据表，这些数据表可在我们的网站 www.meggittsensing.com/energy 获得，也可以从您当地的 Meggitt 代表处获得。

使用基于 CAxxx 的振动测量链（包含带诊断功能的 IPC707 信号调节器）的安全相关系统的操作人员还应参考以下文档：

- IPC707 信号调节器安全手册
  （文档参考号 MAIPC707-FS/E）。

在安全相关应用中使用 IPC707 信号调节器时，假定最终用户酌情执行了 IPC707 信号调节器安全手册中的说明和建议。

不遵守这些说明和执行安全手册中的建议可能会对操作人员和 /或 第三方造成伤害，和 /或 导致设备损坏，并使任何保修失效。

注意： 为确保使用最新版本的文档，请访问 Meggitt Vibro-Meter® 网站 www.meggittsensing.com/energy，并检查是否有任何更新。或者，您也可以联系您当地的 Meggitt 代表。

安全

本手册中使用的标志和样式

本手册在适当的地方使用了以下标志：

“ 警告 ” 安全标志

该标志引入了必须执行或遵循的指令、程序或预防措施。不遵守警告语可能会对操作人员和 /或 第三方造成伤害，和 /或 导致设备损坏。

“ 警诫 ” 安全标志

该标志让操作员注意必须执行或遵循的信息、指令或程序。不遵守警诫语可能会导致设备损坏。

“ 静电敏感设备 ” 标志

该标志表明所处理的设备或系统可能会被静电放电损坏。
请参见静电敏感设备处理注意事项页 xiii 获取更多信息。

注意： 这是 “ 注意 ” 段落样式的示例。它让操作人员注意与所处理对象有关的补充信息或建议。

关于安全的重要说明

不遵守这些说明和执行本手册中的建议可能会对操作人员和 /或 第三方造成伤害，和 /或 导致设备损坏，并使任何保修失效。

在安装和使用所述设备之前，请仔细阅读本手册并遵守安全说明。

这样，您就能知晓潜在的危险并能安全地工作，从而确保对自己和设备的保护。

我们已尽一切努力使用上述标志在本手册中包含特定的安全相关程序。但操作人员仍应遵守所有公认的安全程序。

所有负责安装、操作和 / 或维护本手册所述设备的人员均应接受正确安全程序的培训。

对于因未遵守任何安全相关说明或者在未经 Meggitt SA 书面许可的情况下对设备进行的任何修改、改造或修理而导致的人身伤害或物质损失， Meggitt 不承担任何责任。在未经 Meggitt SA 书面许可的情况下对设备进行的任何修改、改造或修理将会任何保修失效。

安装在潜在爆炸性环境中的设备

本手册涵盖了可在潜在爆炸性环境（危险区域）使用的设备，以及仅适用于普通应用（ 非爆炸性环境）的设备。

为确保设备 /系 统组件能在潜在爆炸性环境（ 防爆区域）安全地使用，请务必：

- 确认其具有产品防爆证书中所述的特殊标志。
- 遵守相同防爆证书中界定的标准。

防爆证书编号后的 “**X**” 或 “**U**” 表示该设备需符合特殊条件才能安全使用。这些条件在相应防爆证书的相应部分定义。

如需更多信息，请参见本手册附录中的防爆证书。 （防爆证书也可以从我们的网站 **WWW.MEGGITTSENSING.COM/ENERGY** 获得）

如果保护模式为 “**Ex nA**” 的 **CAxxx** 压电加速度传感器位于防爆区域 **2**（ 危险区域），则电气装置必须提供保护，以防超过 **119 V** 的电压瞬变造成损坏。

保护模式为 “**Ex ec**” 或 “**Ex nA**” 的 **IPC707** 信号调节器、保护模式为 “**Ex nA**” 的 **IPC704** 信号调节器或处于防爆区域 **2**（危险区）的保护模式为 “**Ex nA**” 的 **GSI127** 电气隔离装置必须安装在防护等级至少为 **IP54**（ 或同等级别）的壳体内，同时适当考虑相应防爆证书规定的最大散热量。

对于北美地区处于防爆区域 **2** 的 **IPC707** 或 **IPC704** 信号调节器 **(cCSAus)**，**IPC707** 或 **IPC704** 安装所在的最后外壳必须具有相应 **cCSAus** 防爆证书所述的特别警戒语和警告语（ 请参阅 **cCSAus** 防爆证书以获取更多信息）。

另请见 **8** 维护。

如果要在潜在爆炸性环境 （危险区域）使用 **CAxxx** 压电加速度计，请务必使用本质安全型振动测量链。

因此，防爆版本提供了所有 “ 传感器侧 ” 部件，例如压电加速度计、信号调节器、传输电缆、电气隔离装置、电源、安全栅和接线盒。

灼热表面和灼伤风险

基于 **CAxxx** 的振动测量链之内或之上可能存在灼热表面。

根据环境工作温度以及基于 **CAxxx** 的测量链的安装和冷却，组件可能会变得烫手，在操作时有灼伤的风险。

应将基于 **CAxxx** 的测量链的组件视为灼热表面，在冷却之前请勿触碰。

不遵守这些说明可能会导致受伤。

一般操作注意事项

Meggitt 的 Vibro-Meter® 压电加速度计坚固耐用，可以承受一定程度的粗心操作。但是，仍应采取一些预防措施。

在操作 CAxxx 压电加速度计之前，请仔细阅读以下建议。

- 请勿将传感器掉落在坚硬的表面上或使其遭受剧烈冲击。
- 在处理、存放或运输传感器时，应用塑料防护网保护传感器的主体/头部。只有在安装传感器或对其进行检查或测试时才拆除此保护装置。
- 检查传感器时应查看是否有凹痕，因为这表明它可能因撞击而遭受了物理冲击。这可能会已经损坏传感器内的组件。
- 请勿过度弯曲传感器电缆或相关电缆。请遵守相应数据表中提到的最小弯曲半径。
- 存放和使用设备时，请遵守相应数据表中提到的环境规格 （温度、湿度）。
- 另请见静电敏感设备处理注意事项页 xiii 。

静电敏感设备处理注意事项

电子设备使用的某些装置可能会被积聚的静电所产生的静电放电所损坏。因此，必须采取特殊的预防措施以最小化或消除出现此类静电放电的可能性。

在处理电子电路、印刷电路板或包含电子元件的模块之前，请仔细阅读以下建议。

- 在处理电子电路之前，请通过触碰并短暂握住接地的金属物体 （如管道或机柜）的方式释放掉身体上产生的静电。
- 不要穿合成衣物，以免在身体上积聚静电，因为合成衣物会产生并存储静电。最好是棉或棉混纺材料，因为它们不会存储静电荷。
- 除非绝对必要，否则请勿处理电子电路。只能靠前面板手柄来拿模块。
- 请勿使用导电设备或用手触摸印刷电路板、其连接器或组件。
- 在从系统机架上取下电子电路、印刷电路板或包含电子元件的模块后，应立即将其放入防静电保护袋中。

替换零件和配件

只能使用批准的替换零件和配件。

请勿连接不兼容的产品或配件。

只能使用适合基于 CAxxx 的振动测量链一起使用的替换零件和配件，且它们已由 Meggitt SA 批准。

使用不兼容的替换零件和配件可能会造成危险，并可能损坏设备或造成伤害。

有关替换零件和配件的信息：

- 访问 Meggitt Vibro-Meter® 网站 www.meggittsensing.com/energy
- 联系您当地的 Meggitt 代表。

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本页故意留空

1 基于 CAXXX 的振动测量链简介

1.1 概述

本章概述了采用 CAxxx 压电加速度计 （即振动传感器）的振动测量链，它属于 Meggitt 的 Vibro-Meter® 产品系列。表 1-1 总结了基于 CAxxx 的测量链的范围。

表 1-1：基于 CAxxx 的振动测量链示例

基于 CAxxx 的振动测量链组成部分	类型		
带 MI 电缆和软线 “ 低噪声 ” 电缆的压电加速度计	CAxxx	✓	
带软线 “ 低噪声 ” 电缆的压电加速度计			✓
电缆组件 （软线）	ECxxx	✓	✓
接线盒	JB116	*	*
信号调节器	IPC707 或 IPC704	✓	✓
工业外壳	ABA17x 或 ABA160	*	*
双线传输电缆 （电流）	K2xx	**	**
三线传输电缆 （电压）	K3xx	**	**
电气隔离装置	GSI127	*	*
电源	APFxxx 或 ASPS	*	*
机械图 （见图 x）		**1-1 (a)**	**1-1 (b)**

注释：
* 可选。
** 测量链中必须安装 K2xx 或 K3xx。

注意： MI = 矿物绝缘硬线电缆。

1.2 部件说明

1.2.1 CAxxx 压电加速度计

Meggitt Vibro-Meter® 提供一系列 CAxxx 压电加速度计，包括：

- CAxxx 带 MI 电缆和配套软线 “ 低噪声 ” 电缆的压电加速度计，适合温度非常高的应用。
- CAxxx 带软线 “ 低噪声 ” 电缆的压电加速度计，适合中等温度的应用。

注意： 有关特定 CAxxx 压电加速度计的更多信息可见相应的数据表。

如果要潜在爆炸性环境中使用 CAxxx 压电加速度计，请阅读并遵守**安装在潜在爆炸性环境中的设备页 XII****所述的重要安全信息。**

如果要在潜在爆炸性环境 （危险区域）使用 CAxxx 压电加速度计，请务必使用本质安全型振动测量链。

因此，防爆版本提供了所有 “ 传感器侧 ” 部件，例如压电加速度计、信号调节器、传输电缆、电气隔离装置、电源、安全栅和接线盒。

所有 CAxxx 压电加速度计都需要外部信号调节器。

注意： 请参阅使用 CExxx 压电加速度计和 PVxxx 压电速度传感器的振动测量链安装手册，获取有关采用附加或集成的信号调节电子器件的压电加速度计的信息，这些产品属于 Meggitt 的 Vibro-Meter® 产品系列。

1.2.2 ECxxx 电缆组件

ECxxx 电缆组件为软线 “ 低噪声 ”、屏蔽型双导线电缆组件，用于将 CAxxx 压电加速度计与 IPC707 或 IPC704 信号调节器连接起来。某些 ECxxx 电缆组件具有挠性的不锈钢保护管，以提供额外的机械保护。

1.2.3 JB116 接线盒

JB116 接线盒为测量链中的整体电缆和延长电缆之间的连接提供 IP65 等级的保护。这些接线盒由聚酯纤维制成，并提供一系列电缆接头 （填料函压盖），可结合不同直径的电缆使用。

1.2.4 IPC707 信号调节器

如果要潜在爆炸性环境中使用 IPC707 信号调节器，请阅读并遵守安装在潜在爆炸性环境中的设备页 xii 所述的重要安全信息。

IPC707 信号调节器将来自 CAxxx 压电加速度计的基于电荷的信号转换为适合传输到外部监控和 / 或保护系统的电流输出或电压输出信号。或者， IPC707 信号调节器也支持诊断功能（即内置测试设备 (BITE) 电路），用于指示由传感器、电缆和 IPC707 信号调节器组成的测量链存在的问题。

IPC707 的输出信号包由动态测量分量 (AC) 和准静态诊断分量 (DC) 组成。对于可选的诊断功能，诊断分量的标称值是一个值，指示正常运行，其他值指示传感器和 / 或电缆、信号调节器、信号调节器电源存在的问题或其他问题。连接到 IPC707 的外部机械保护和 / 或状态监视系统可以监视 IPC707 输出信号诊断分量 (DC) 的标称值，并提供警报以指出存在问题（非正常运行）。请参见 4.4 安装 IPC707 信号调节器获取更多信息。

注意： 与所有可配置的 IPC707 产品选项一样，订购时必须进行环境 （标准或爆炸 (“Ex”)）、诊断功能 （带或不带）和输出信号 （电流或电压）的选择。

注意： IPC707 的金属外壳（导电）连接到它的 “COM” 和 “SHD” 端子。因此，IPC707 可以在 IPC707 与搭铁 (GND) 之间有或没有直接电气连接的情况下安装和操作。
如需更多信息，请参见 4.4 安装 IPC707 信号调节器 和 4.4.2 安装程序。

注意： 使用 IPC707 信号调节器的基于 CAxxx 的振动测量链，带有电流调制输出信号、双线传输电缆和 GSI127 电气隔离装置，能在比任何其他解决方案更长的距离上传输更高质量的信号，因此强烈建议使用。

具有诊断功能的 IPC707 信号调节器适用于安全相关系统，例如符合 IEC 61508 的 SIL 2 以及符合 ISO 13849 的 PL c Cat 1。

注意： 请参阅 IPC707 信号调节器安全手册，获取有关在安全相关系统 （功能安全环境）中使用 IPC707 的更多信息。

1.2.5 IPC704 信号调节器

如果要潜在爆炸性环境中使用 IPC704 信号调节器，请阅读并遵守安装在潜在爆炸性环境中的设备页 XII**所述的重要安全信息。**

IPC704 信号调节器将来自 CAxxx 压电加速度计的基于电荷的信号转换为适合传输到外部监控和 / 或保护系统的电流调制或电压调制输出信号。

注意： 与所有可配置的 IPC704 选项一样，订购时必须进行环境 （标准或爆炸 (“Ex”)）和输出信号类型 （电流或电压）的选择。

注意： IPC704 的金属外壳（导电）连接到它的 “COM” 信号 / 端子。因此，IPC704 的外壳必须与搭铁 (GND) 进行电隔离，以消除接地环路并帮助确保测量链正确运行。

注意： 使用 IPC704 信号调节器的基于 CAxxx 的振动测量链，带有电流调制输出信号、双线传输电缆和 GSI127 电气隔离装置，可实现长距离高质量信号传输。

1.2.6 ABA17x 和 ABA160 工业外壳

ABA17x 和 ABA160 工业外壳可以用于封闭和保护 IPC70x 信号调节器。

ABA17x 工业外壳有不同的尺寸提供，可容纳和保护不同数量的 IPC70x 信号调节器. ABA171 可容纳和保护最多两个信号调节器，ABA172 可容纳和保护最多四个信号调节器，ABA173 可容纳和保护最多八个信号调节器。 ABA17x 包含一个或多个 DIN 导轨， IPC70x 使用 DIN 导轨安装适配器进行安装。

ABA160 工业外壳可容纳和保护一个 IPC704 信号调节器。 ABA160 使用底板来安装 IPC704。

ABA17x 和 ABA160 工业外壳的防护等级为 IP66，并提供可用于危险区域 （潜在爆炸性环境）的版本。

1.2.7 K209 和 K210 电缆

K209 或 K210 电缆用作电流传输电缆，在需要进行电流传输时直接或者通过 GSI127 电气隔离装置，将 IPC707 或 IPC704 信号调节器连接到电子监控系统。 K209 和 K210 为屏蔽型双线电缆，设计用于恶劣的工业环境。如果需要，可以使用可选的保护管 （如 KS107）为电缆提供额外的机械保护。

K209 电缆只能用于普通应用 （即非爆炸性环境）。

K210 电缆可以在潜在爆炸性环境中使用，例如在测量链中安装了 GSI127 时。

也可以使用 K209 或 K210 电缆将 GSI127 电气隔离装置连接到电子监控系统。

1.2.8 K309 和 K310 电缆

K309 或 K310 电缆用作电压传输电缆，在需要进行电压传输（充足）时直接或者通过充当安全栅的 GSI127 电气隔离装置，将 IPC707 或 IPC704 信号调节器连接到电子监控系统。K309 和 K310 为屏蔽型三线电缆，设计用于恶劣的工业环境。如果需要，可以使用可选的保护管（如 KS107）为电缆提供额外的机械保护。

K309 电缆只能用于普通应用 （即非爆炸性环境）。

K310 电缆可以在潜在爆炸性环境中使用，例如当测量链中安装了 GSI127 （或其他安全栅 — Meggitt 无法提供）时。

1.2.9 GSI127 电气隔离装置

基于 CAxxx 的测量链利用 GSI127 电气隔离装置为传感器 / 信号调节电路供电，包括位于潜在爆炸性环境中的传感器/信号调节电路，同时在 “ 传感器侧 ” 电路与电源之间以及 “ 传感器侧 ” 电路与 “ 显示器侧 ” 电路接地之间提供电气隔离。它还将来自信号调节器的测得的电流（双线传输系统）或电压 （三线传输系统）信号转换为基于电压的比例 （浮动）输出信号，以便随后由电子监控系统等 “ 监视器侧 ” 电路使用。

为了能在潜在爆炸性环境中使用， GSI127 拥有允许在防爆区域 2 安装的认证，即 “Ex nA [ia]” 安全栅。因此， GSI127 是一个关联设备，可以连接到处于潜在爆炸性环境中的本质安全型设备。

GSI127 允许安装在防爆区域 2 （危险区域）。
如需更多信息，请参见 7.2 一般接线图。

在普通应用（非爆炸性环境）中，GSI127 可以在不需要电气隔离但需要考虑传输距离或降低噪声的情况下使用，因为它可以抑制传感器接地与电子监控系统接地之间出现的帧电压 （从而帮助减少测量链中的噪声）。

GSI127 通常安装在机架外部的 DIN 导轨上，一般安装在机柜外壳内。GSI127 电气隔离装置需要外部电源，例如 APFxxx 电源 （请参见 1.2.10 APFxxx 电源）或 ASPS 辅助传感器电源（请参见 1.2.11 ASPS 辅助传感器电源）。

注意： GSI127 电气隔离装置已取代 GSI124。

1.2.10 APFxxx 电源

可能需要 APF19x 或 APF20x 电源为需要 24 V_{DC} 电源的外部硬件供电，例如 GSI127 电气隔离装置（请参见 1.2.9 GSI127 电气隔离装置）。APFxxx 需要使用市电 AC（或高压 DC）输入，通常安装在机架外部的 DIN 导轨上，一般在机柜外壳内。

1.2.11 ASPS 辅助传感器电源

ASPS 辅助传感器电源可以用来为需要 24 V_{DC} 电源的外部硬件供电，例如 GSI127 电气隔离装置 （请参见 1.2.9 GSI127 电气隔离装置）。

将 VM600 机架用作电子监控系统时，如果使用 AC 输入版本的 RPS6U 机架电源设备，则 ASPS 可以安装在 VM600 机架上。它可以替代安装在外部的 APFxxx 电源，从而减少接线并简化安装。

1.3 机械图

图 1-1 显示了基于 CAxxx 的振动测量链的一些例子。

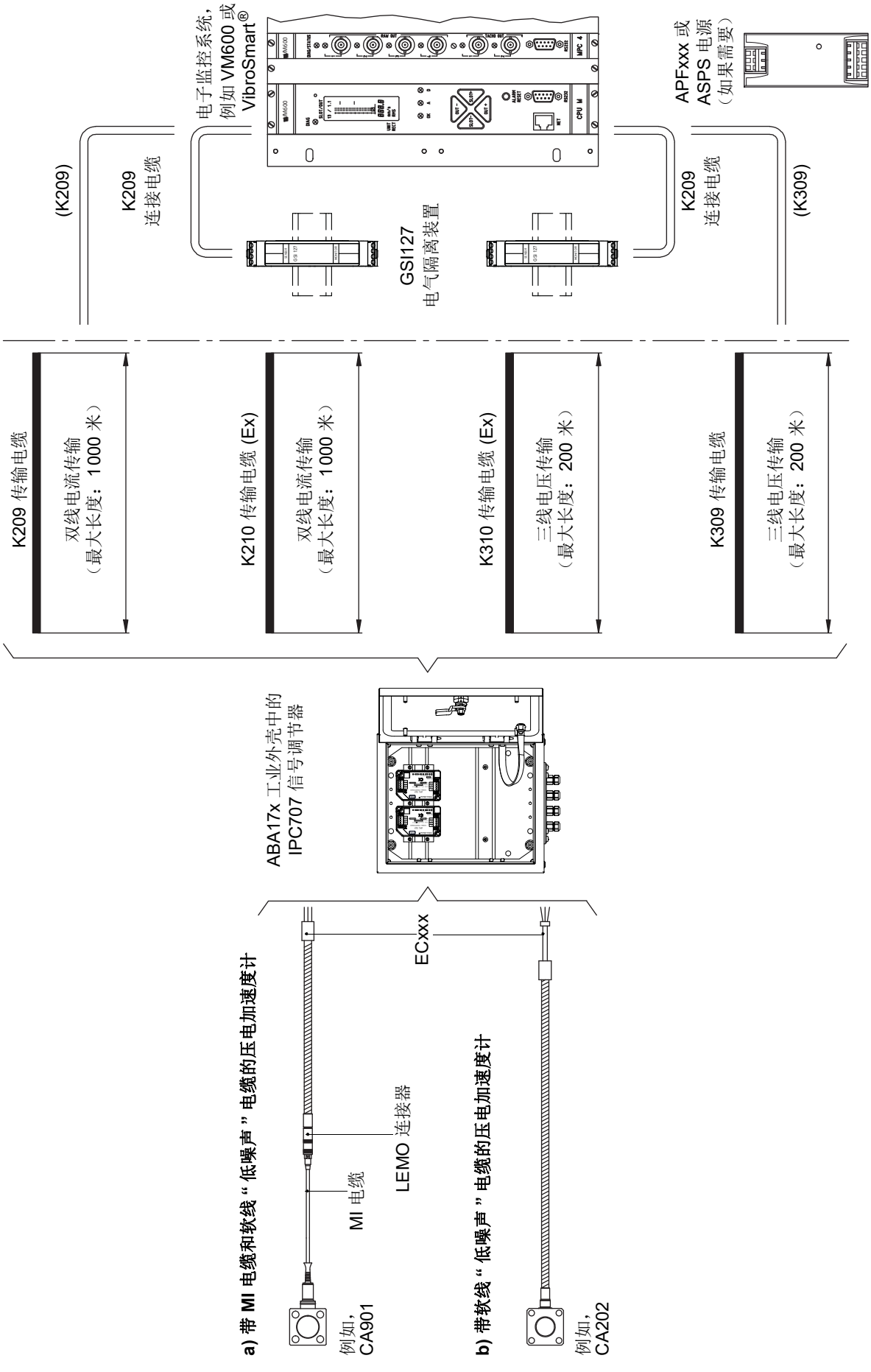

图 1-1： 基于 CAxxx 的振动测量链示例

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2 安装压电加速度计

本章提供有关安装 CAxxx 压电加速度计（即振动传感器）的一般指南。一般来说，此信息适用于测量链中的所有压电加速度计。

注意： 更多产品特定的信息可见相应的 CAxxx 压电加速度计数据表。

注意： 当使用整体电缆安装压电加速度计时，必须采取特殊的预防措施。请参见 3.3 安装 MI 电缆和 3.1.1 潜在爆炸性环境中的电缆。

2.1 一般注意事项

2.1.1 安装在潜在爆炸性环境中的设备

为确保可以安全地潜在爆炸性环境（ 如防爆区域）使用该设备，请务必遵守产品防爆证书中所述的标准。

防爆证书编号后的 “X” 或 “U” 表示该设备需符合特殊条件才能安全使用。这些条件在相应防爆证书的相应部分定义。

如需更多信息，请参见本手册附录中的防爆证书。 (防爆证书也可以从我们的网站 WWW.MEGGITTSENSING.COM/ENERGY 获得）

2.1.2 推荐的安装点

压电加速度计和相关硬件必须非常小心地安装，以提高所收集数据的质量并提高产品的耐用性。压电加速度计可以安装在机器的不同部分 （请参见图 2-1）。

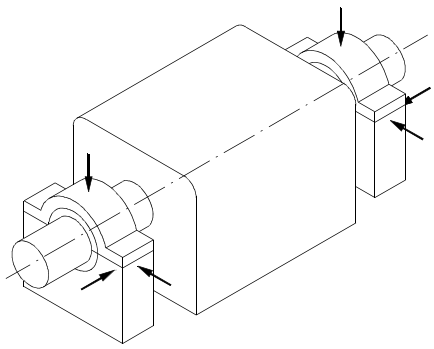


图 2-1： 推荐的安装点

应尽可能靠近轴承安装压电加速度计。安装在机械刚度较低的表面上的压电加速度计可能会产生错误的测量结果。

测量整个结构的运动情况时应当小心，以免将加速度计置于结构的共振位置。典型的安装位置可以在电机端罩上，并尽可能靠近轴承。风扇和泵轴台也是其他常用的可接受位置。

注意： 应严格遵守所述程序，以确保正确安装设备。

注意： 遵守一般安全程序，以及一般和特定的机器制造商说明和准则。

注意： 本手册并未述及所有安装方案。但详细介绍了几种特定配置，这些配置通常可进行调整以适合特定应用。请联系您当地的 Meggitt 代表或 Meggitt SA 以获得更多信息。

注意： 务必遵守机加工公差，以消除振动信号因加速度计底座变形而被污染的可能性。

2.1.2.1 质量效应

连接到结构物的任何传感器都会影响结构物的运动。结构物的质量应至少是传感器质量的 10 倍，以使该效应的误差小于 10％。

注意： 有关传感器重量的更多信息可见相应的 CAxxx 压电加速度计数据表。

2.1.3 工作温度范围

压电加速度计安装所在的环境温度必须永远在其工作温度范围内。

注意： 有关传感器工作温度范围的更多信息可见相应的 CAxxx 压电加速度计数据表。

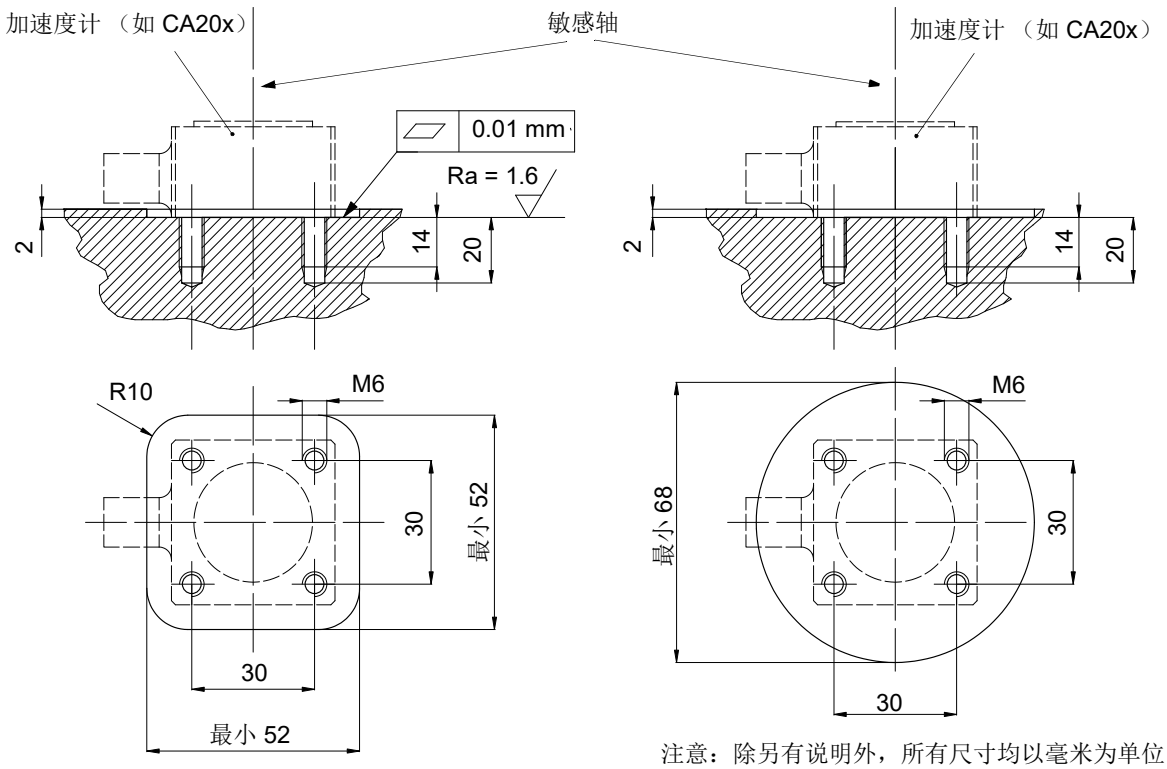
2.2 安装压电加速度计

2.2.1 准备好机器表面

只有压电加速度计正确装在目标机器上，才能进行准确的测量，尤其是高频分量。在测量过程中，加速度计的底座和安装面必须保持良好的接触。理想情况下，传感器应安装在尽可能靠近振动源 （例如轴承座）的位置。

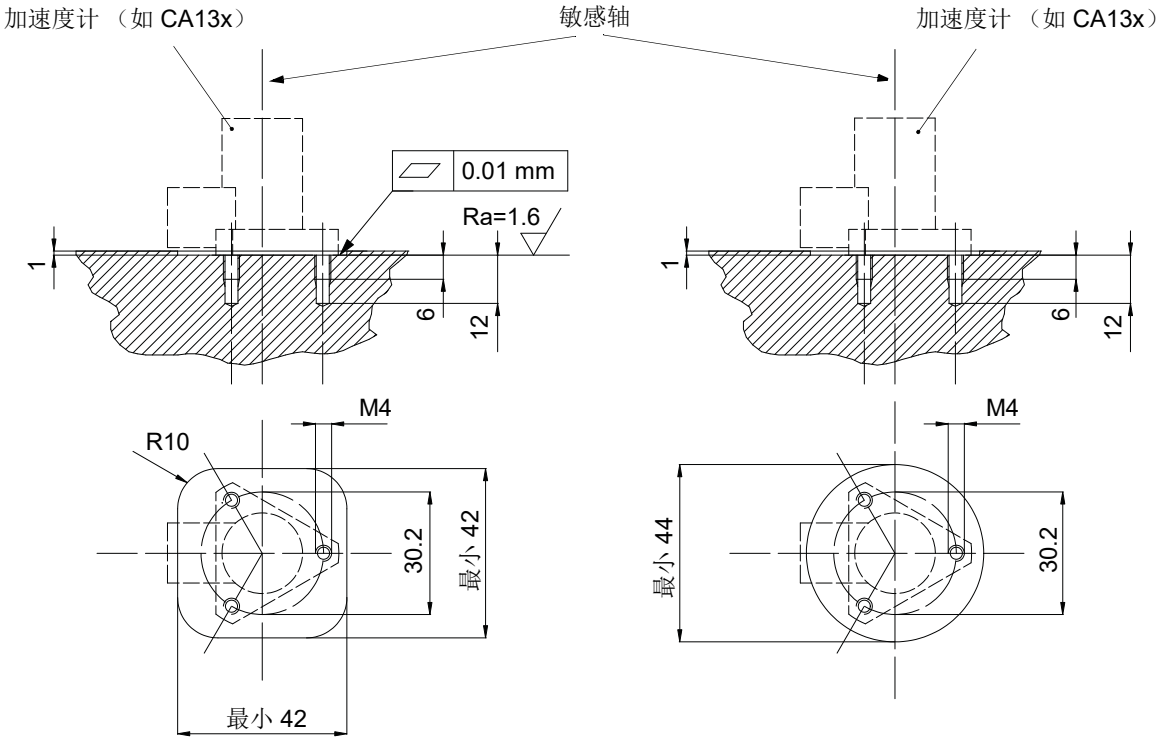
在安装压电加速度计之前，应在安装位置准备好机器表面。表面应平整并垂直于预期的灵敏度轴线。机加工面的最大表面波度应为 0.01 毫米，最大表面粗糙度应为 Ra 1.6。图 2-2 显示了所需安装面的示例。

应根据所需的安装螺钉或转接螺柱小心地钻出所有安装孔并攻丝。



注意：除另有说明外，所有尺寸均以毫米为单位。

图 2-2：CA20x 压电加速度计的安装面



注意：除另有说明外，所有尺寸均以毫米为单位。

图 2-3：CA13x 压电加速度计的安装面

2.2.2 安装程序

不论压电加速度计的类型如何，安装程序都相似 （概览请见图 2-4）。

注意： 压电加速度计的尺寸各不相同。更多信息可见相应的 CAxxx 压电加速度计数据表。

安装压电加速度计：

1- 准备好将要安装压电加速度计的机器表面部分 （请参见 2.2.1 准备好机器表面）。

2- 清洁安装面以清除所有残留颗粒 （金属屑、灰尘）。

3- 将压电加速度计放在安装面上 （请参见图 2-4）。

4- 给固定螺钉涂上适合应用情形工作温度的螺纹锁固胶。

注意： 螺纹锁固胶 （如 LOCTITE® 241 或同等产品）可防止螺钉因振动而变松。如有必要，这种螺纹锁固胶让零件日后可以拆卸。

5- 使用扭矩扳手固定压电加速度计。
使用的拧紧力矩取决于用来固定传感器的螺钉的尺寸和强度等级，并符合表 2-1 定义的数值。

表 2-1：不同安装螺钉的拧紧力矩值

螺钉		力矩 （最小值）		力矩 （标称值）	
公制	英制	公制	英制	公制	英制
M3.5	6-40 UNF （或 6-32 UNC）	1 N•m	0.7 lb-ft	2 N•m	1.5 lb-ft
M4	8-36 UNF	2 N•m	1.5 lb-ft	4 N•m	3 lb-ft
M5	10-32 UNF	4 N•m	3 lb-ft	9 N•m	6.6 lb-ft
M6	1/4″-28UNF	7 N•m	5.2 lb-ft	15 N•m	11.1 lb-ft

注释：
另请参阅相应的 CAxxx 压电加速度计数据表。
为了优化接触表面并帮助确保组件不会因振动而变松，应使用尺寸合适的弹簧锁紧垫圈，并在所使用的特定螺钉的机械极限 （强度等级）范围内使拧紧力矩最大。

带外部信号调节器的压电加速度计 （如 CA20x）

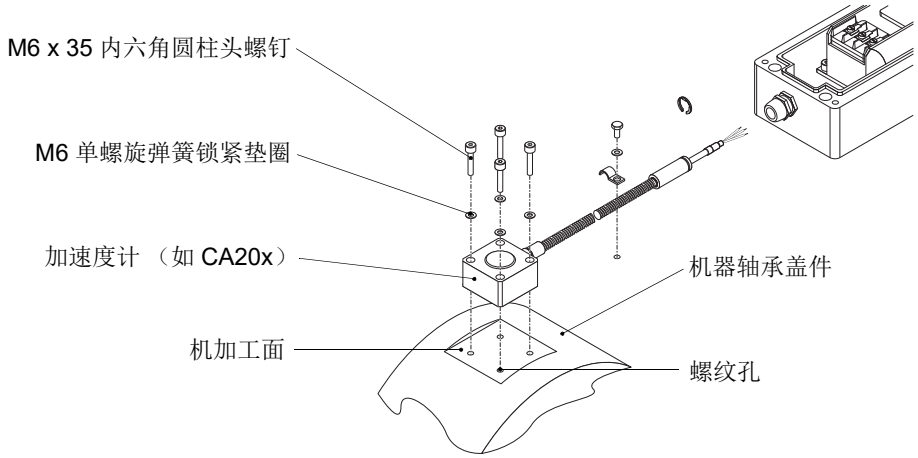
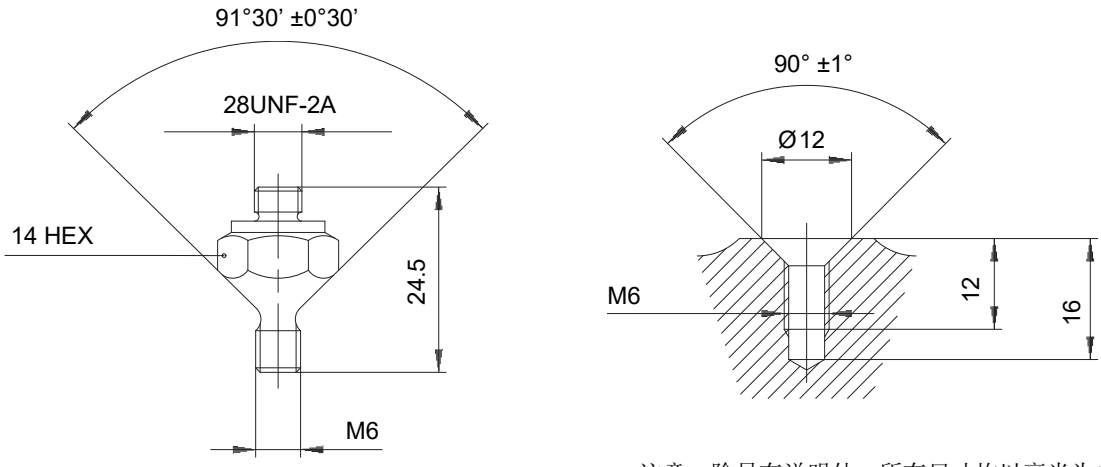


图 2-4：在机加工表面安装压电加速度计

2.2.3 安装配件

注意： 有关安装配件的更多信息，请联系您当地的 Meggitt 代表或 Meggitt SA。

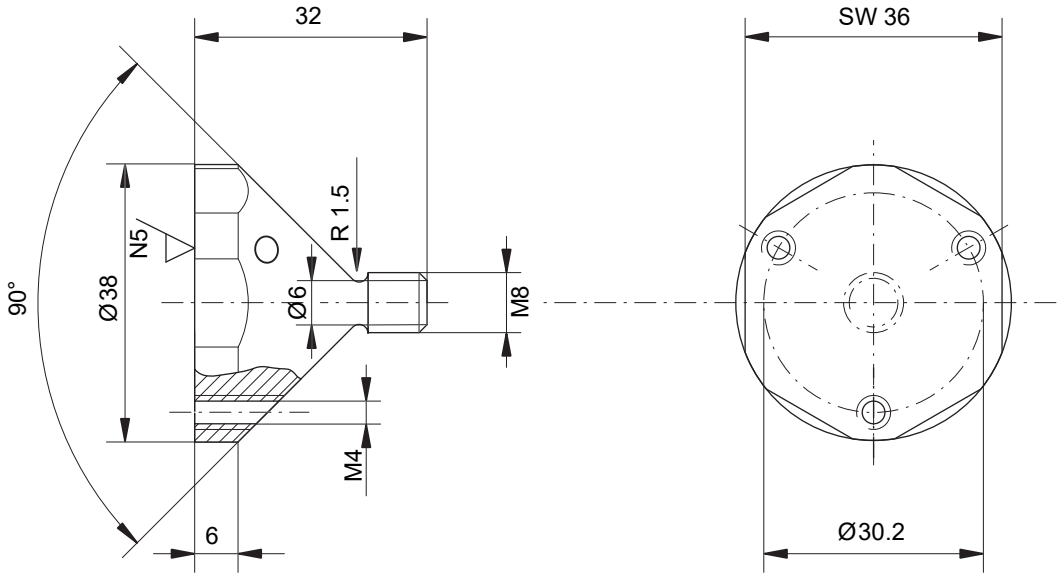
2.2.3.1 MA122 安装适配器



注意：除另有说明外，所有尺寸均以毫米为单位。

图 2-5：MA122 安装适配器

2.2.3.2 TA104 安装螺柱



注意：除另有说明外，所有尺寸均以毫米为单位。

图 2-6：TA104 安装螺柱

2.2.3.3 TA101 电气隔离支架

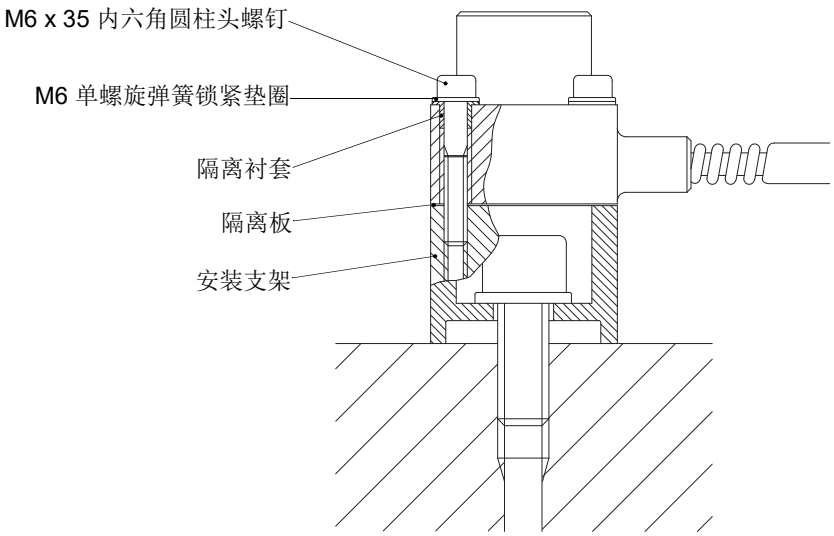
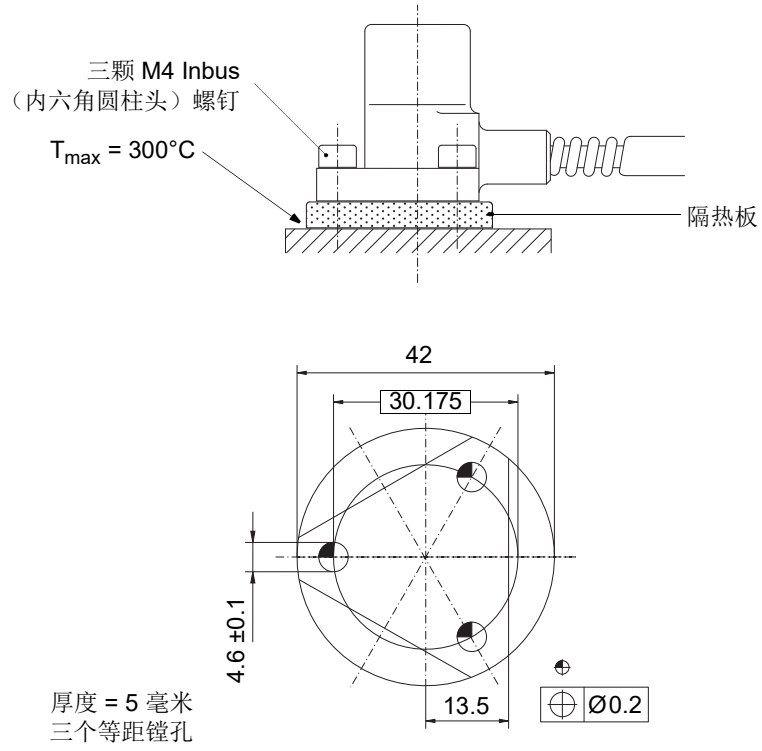


图 2-7：TA101 电气隔离支架

2.2.3.4 TA105 隔热支架



注意：除另有说明外，所有尺寸均以毫米为单位。

图 2-8：TA105 隔热支架

3 安装电缆

本章提供有关在基于 CAxxx 的振动测量链中安装电缆的指南。

注意： 有关产品特定的更多信息可见相应的数据表。

此信息适用于测量链中的以下任何电缆：

- 直接或间接连接到压电加速度计的电缆，这些电缆承载电荷信号。这包括整体电缆、连接电缆组件 (ECxxx) 和延长电缆。
- 其他传输电缆和连接电缆 （K2xx 和 K3xx）。

注意： 对软线“低噪声”电缆和 MI 电缆的要求分别在 3.2 安装软线“低噪声”电缆和 3.3 安装 MI 电缆中阐述。

有关连接传输和连接电缆的更多信息在 5 安装电气隔离装置中说明。

3.1 一般注意事项

3.1.1 潜在爆炸性环境中的电缆

只有适合在潜在爆炸性环境（ 防爆区域）使用的电缆才能在此类环境中安装。

潜在爆炸性环境中安装的所有电缆（ 完整电缆和 /或 电缆组件）的长度必须根据相应防爆证书相应部分所定义的标准确定。

如需更多信息，请参见本手册附录中的防爆证书。 (防爆证书也可以从我们的网站 WWW.MEGGITTSENSING.COM/ENERGY 获得）

3.1.2 工作温度范围

电缆安装所在的环境温度必须永远在其工作温度范围内。

注意： 有关电缆工作温度范围的更多信息可见相应的数据表。

3.1.3 最小弯曲半径

连接和固定整体电缆、延长电缆、传输电缆或连接电缆时，必须考虑最小弯曲半径。

注意： 有关特定电缆最小弯曲半径的更多具体信息可见相应的数据表。另请见 3.2.2 软线“低噪音”电缆最小弯曲半径 和 3.3.3 最小弯曲半径，按要求。

不遵守电缆最小弯曲半径要求可能会导致电缆永久损坏。

3.1.4 最大程度减少电磁干扰源

测量链中的信号对低频电磁干扰 (EMI) 和射频干扰 (RFI) 很敏感。在信号电平较低的压电加速度计附近时尤其如此。干扰可能有多种来源，包括电源线、强磁场、电机、开关设备、便携式电话和对讲机。

必须采取以下预防措施来减少 EMI 的影响：

1- 使用适当的接地技术。始终遵循电气接线图 （请参见 7 电气连接）。

2- 将每个测量链与其他所有测量链进行电气隔离 （屏蔽）。

3- 尽可能将电缆放在接地的钢制保护管中，以提供额外的电气和机械保护。

4- 请勿让信号电缆穿过用于其他目的的导管，例如电源线或通讯线路。

3.1.5 使用电缆导管

电缆导管为电缆提供机械和电气保护。所有信号线应穿过仅为一种电缆预留的导管。请勿将信号线与电源或通讯电缆混用。

电缆导管必须根据行业标准良好接地，以提供电磁干扰防护 （请参见 3.1.4 最大程度减少电磁干扰源）。它们应能防止水或其他液体进入。如果存在出现此类情况或在导管中形成冷凝水的危险，则应提供充分排水。

3.1.6 软线“低噪声”电缆的制备

3.1.6.1 软线“低噪声”电缆的结构

软线“低噪声”电缆由两组导体组成，导体以许多不同的涂层包裹。以下数字对应插图图 3-1 和图 3-2 上显示的参考数字。

1- 每个导体都套有 PTFE 套管，一起构成导线。

2- 导线上覆有一层薄碳膜。

3- 2 根导线与 2 根软线绞在一起。

4- 绞合的导线和软线上还涂有一层碳膜，从而形成电缆的芯线。

5- 电缆的芯线覆盖有金属屏蔽网。

6- 芯线及其屏蔽层覆盖有 PTFE 套管。

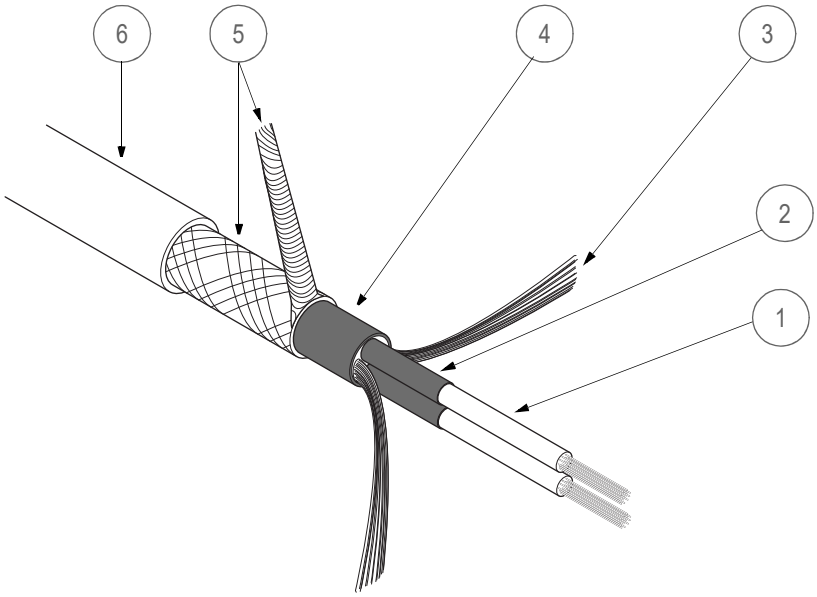


图 3-1：软线“低噪声”电缆的结构

3.1.6.2 制备软线“低噪声”电缆

图 3-2 显示了如何制备软线“低噪声”电缆。

连接区域内不得残留任何碳迹。
使用酒精和细钢丝绒去除所有碳迹。

A- 剥去 PTFE 套管 (6)。

B- 解开金属屏蔽网 (5) 并将其绞合，使其形成引线。

C- 剥去电缆芯线上的碳膜 (4)。

使用酒精和细钢丝绒去除所有碳迹。

D- 裁剪芯线 (3) 并剥去每根导线上的薄碳膜 (2)。

使用酒精和细钢丝绒去除所有碳迹。

E- 按所需的长度，剥除每根导线 (1) 的外皮。

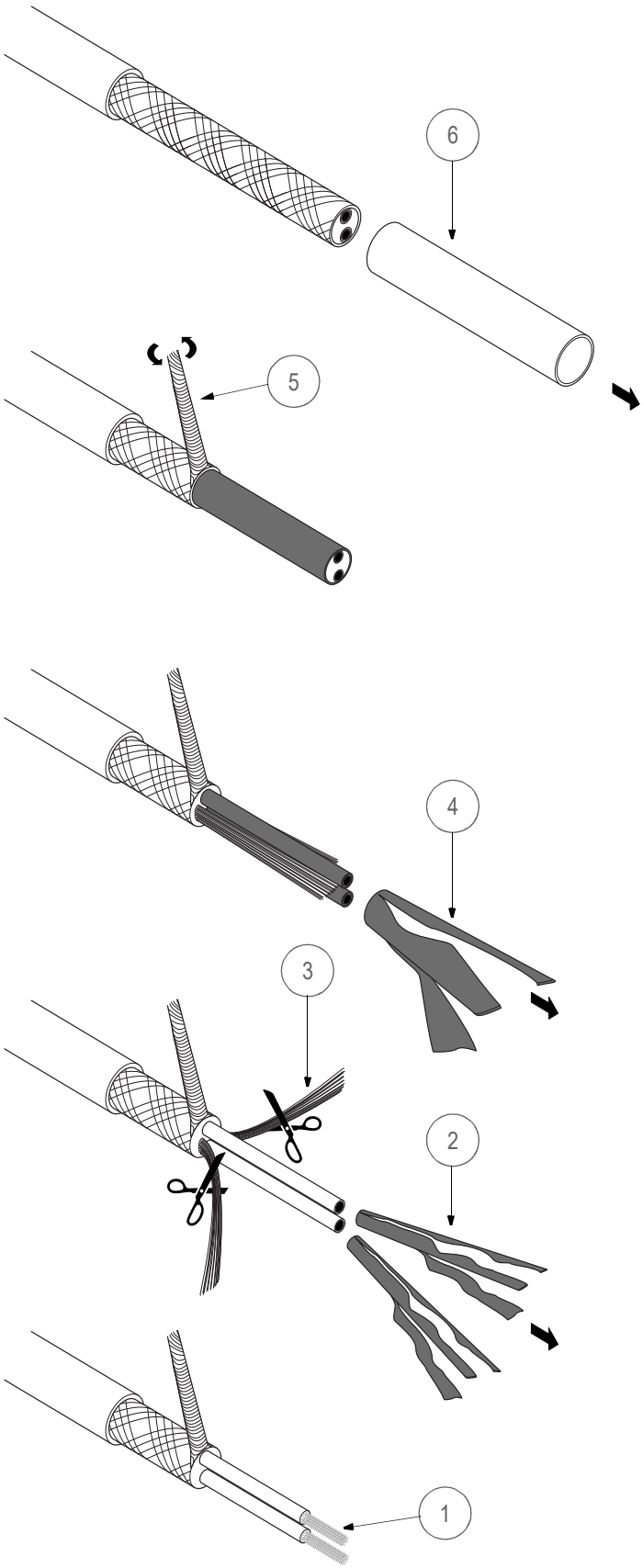


图 3-2： 软线 “ 低噪声 ” 电缆的制备

3.2 安装软线 “ 低噪声 ” 电缆

本部分适用于所有带有电荷信号的电缆 （带或不带挠性保护管），包括整体电缆和连接电缆组件 (ECxxx)。

请在安装软线 “低 噪声 ”电 缆之前先查看 3.1 一般注意事项。

3.2.1 电缆夹紧的重要性

由于压电加速度计会传输微弱的电荷信号，因此必须夹紧与之连接的所有电缆。电缆的移动（例如振动或共振）会导致电缆中产生电荷，从而在测得的信号中产生干扰 （由于摩擦起电效应）。

因此，带电电缆必须按固定间隔夹紧，以限制其移动，如图 3-3所示。建议采取以下最大间隔：

- 125 毫米，对于装在振动结构 （>10 克）上的电缆。
- 250 毫米，对于装在非振动结构上的电缆。

注意： 安装在测量链中 IPC70x 信号调节器之后的传输电缆 （K2xx 或 K3xx）承载基于电流或电压的信号。这些电缆对 对摩擦起电效应不那么敏感，因此夹紧不是那么重要。不过，必须采取预防措施以减少 EMI （请参见 3.1.4 最大程度减少电磁干扰源）。

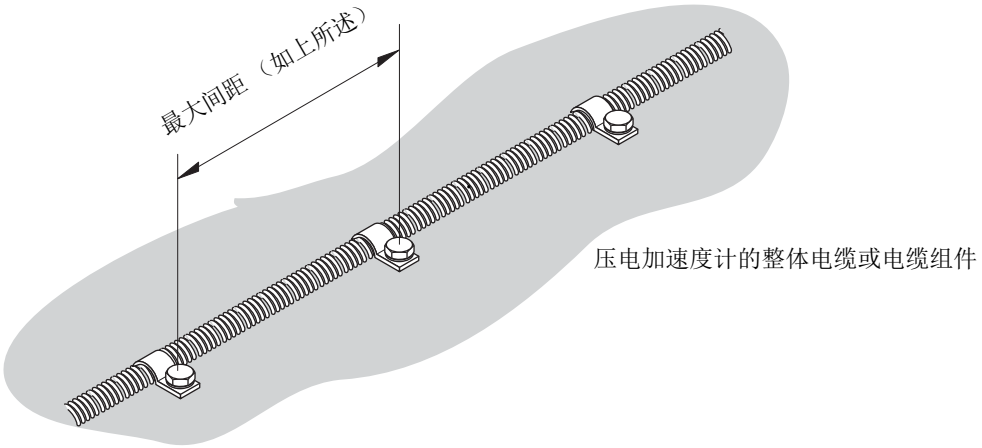


图 3-3： 使用柔性保护管按固定间隔夹紧电缆

3.2.2 软线 “ 低噪音 ” 电缆最小弯曲半径

软线 “ 低噪声 ” 电缆的最小弯曲半径取决于任何相关的柔性不锈钢保护管的直径，以及电缆 / 保护管是否预期经历单一运动 （静态弯曲半径 / 固定应用）或多次运动 （动态弯曲半径 / 可移动应用）。

电缆保护管外径与最小弯曲半径的关系见表 3-1。

表 3-1：带保护管的软线 “ 低噪声 ” 电缆的最小弯曲半径

	最小弯曲半径	
电缆保护外径 (Ø)	**静态弯曲半径 — 用于单次移动 / 固定应用**	**动态弯曲半径 — 适用于多次运动 / 可移动应用**
5.0 mm (0.20 in)	15 mm (0.59 in)	---
6.0 mm (0.24 in)	16 mm (0.63 in)	---
7.0 mm (0.28 in)	17 mm (0.67 in)	---
8.7 mm (0.34 in)	15 mm (0.59 in)	105 mm (4.1 in)

必须始终遵守带有保护管的软线“低噪声”电缆的最小弯曲半径。
不遵守带有保护管的电缆的最小弯曲半径可能会导致电缆/保护管永久损坏。

3.2.3 软线 “ 低噪声 ” 电缆安装程序

1- 如图 3-4 如示，将电缆尽可能靠近压电加速度计夹紧，注意不要对电缆产生应力。电缆应尽可能平直地到距离传感器 2 到 3 厘米的第一个电缆夹。

注意： 有关电缆最小弯曲半径的更多信息可见相应的数据表。另请见 3.3.3 最小弯曲半径。

2- 按固定间隔夹紧电缆的其余部分 （请参见 3.2.1 电缆夹紧的重要性）。

3- 给固定螺钉涂上适合应用情形工作温度的螺纹锁固胶。

注意： 螺纹锁固胶 （如 LOCTITE® 241 或同等产品）可防止螺钉因振动而变松。如有必要，这种螺纹锁固胶让零件日后可以拆卸。

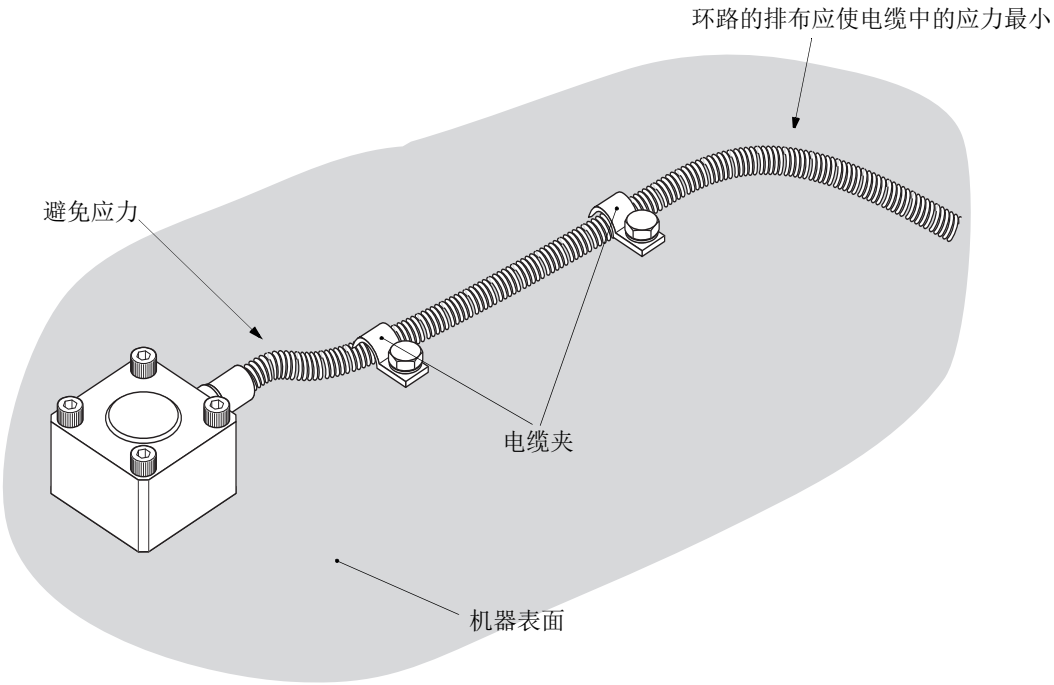


图 3-4： 安装软线“低噪声”电缆

注意：	压电加速度计的机械设计依传感器不同而异。更多信息可见相应的 CAxxx 压电加速度计数据表。

3.3 安装 MI 电缆

注意：	在安装压电加速度计之前，请确保整体 MI 电缆对应用情形而言足够长。 例如，零件号 (PNR) 的最后 3 位数字可以包含表示电缆长度的代码。更多信息可见相应的 CAxxx 压电加速度计数据表。

请在安装完整 MI 电缆之前先查看 3.1 一般注意事项。

3.3.1 一般规定

这些说明补充并在必要时替代 3.1 一般注意事项中给出的一般说明。

3.3.2 处理

MI 电缆是测量链的一个重要部分，因为它会将电荷信号传输到调节电子器件。因此，必须小心地处理 MI 电缆。不得不必要地弯曲或粗暴地处理这些电缆（请参见 3.3.3 最小弯曲半径）。

3.3.3 最小弯曲半径

MI 电缆的最小弯曲半径取决于电缆直径以及电缆在给定点是只弯曲一次还是已经弯曲多次（最多弯曲 20 次）。电缆直径和最小弯曲半径之间的关系见表 3-2。

表 3-2： MI 电缆的最小弯曲半径

	最小弯曲半径	
电缆直径	**单弯**	**最多弯曲 20 次**
1.0 mm (0.039 in)	6 mm (0.25 in)	30 mm (1.20 in)
1.6 mm (0.063 in)	8 mm (0.30 in)	35 mm (1.30 in)
2.0 mm (0.078 in)	10 mm (0.40 in)	45 mm (1.70 in)
3.2 mm (0.125 in)	16 mm (0.60 in)	75 mm (2.90 in)

必须始终遵守 MI 电缆的最小弯曲半径要求。不遵守电缆最小弯曲半径要求可能会导致电缆永久损坏。

3.3.4 电缆安装程序

请在执行进一步步骤之前先查看 3.1.1 潜在爆炸性环境中的电缆。

1- 展开整体 MI 电缆。

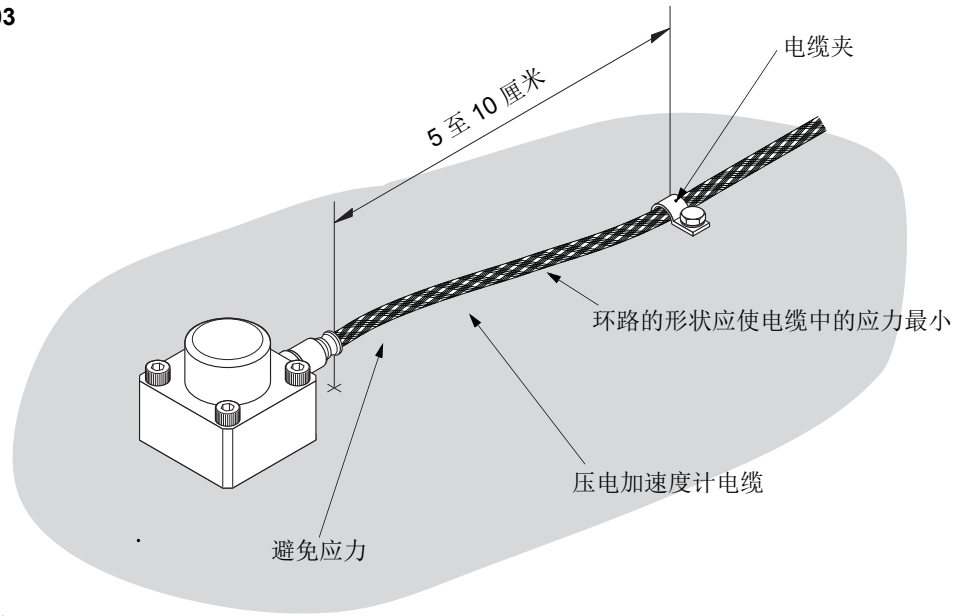
2- 如图 3-5 所示，将电缆夹在机器表面，确保不超过最小弯曲半径（请参见 3.3.3 最小弯曲半径）。

注意： 压电加速度计和第一个电缆夹必须安装在同一个振动表面上。

3- 压紧整根电缆。任何多余的电缆都应盘绕起来并压紧。

未正确夹紧的电缆部分可能会损坏，可能导致压电加速度计出现不可逆转的损坏。

例如， CA303



例如， CA901

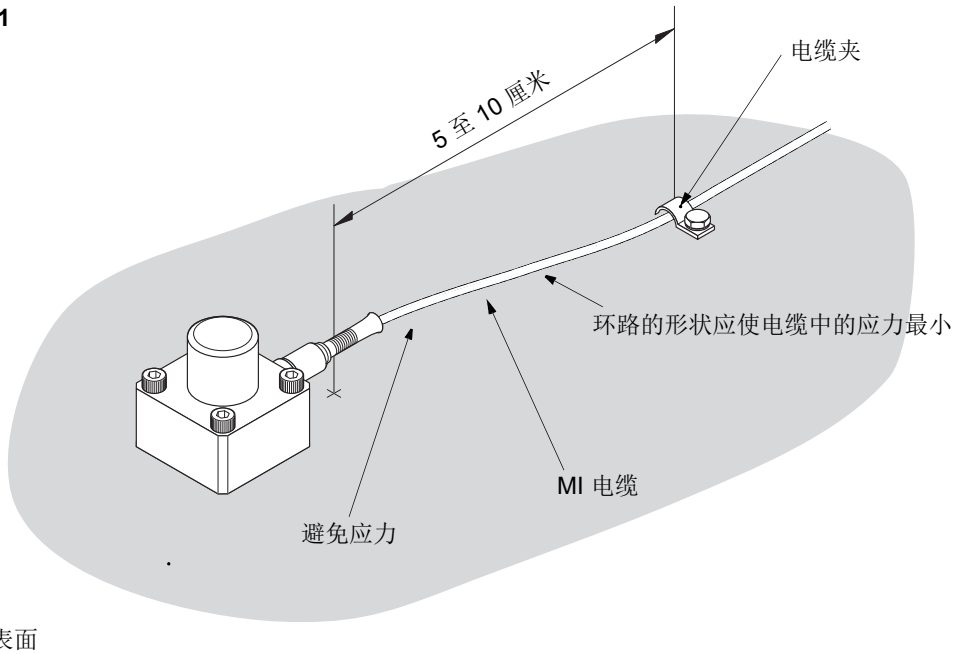


图 3-5：安装压电加速度计电缆 （根据 ISO 5348 标准调整）或整体 MI 电缆

注意： 压电加速度计的机械设计依传感器不同而异。更多信息可见相应的 CAxxx 压电加速度计数据表。

3.4 MI 电缆连接器

3.4.1 连接器

MI 电缆可以安装两种连接器：

- Meggitt Vibro-Meter® / LEMO 0 型连接器。
- Meggitt Vibro-Meter® 高温连接器。

3.4.2 一般注意事项

必须始终遵守以下有关连接器的注意事项。

- 当连接器不使用时，应使用护盖保护所有类型的连接器，使其免受物理和环境（例如湿度）损坏。连接器插针或连接器螺纹损坏可能会导致测量错误。
- 当配对的两部分就位时，请勿对连接器施加过大负载。两个半体上出现力矩或应力可能会损坏连接器连接点或螺纹，导致数据传输无效。应特别注意确保软线与硬线的连接得到充分支撑，并且没有应力。
- 当使用带有螺纹连接的连接器时，请确保螺纹没有滑丝或未对准。

3.4.3 检查程序

目视检查两个连接器半体是否存在以下情况：

- 检查外部壳体是否有损坏的部位、划痕或凹痕。
- 检查连接器插针，确保它们没有弯曲或松动。
- 确保连接器插针、螺纹或外壳上没有灰尘、污垢或颗粒物。

Meggitt Vibro-Meter® / LEMO 型连接器为一种推入配合装置，可通过向后拉外部壳体而将其分离。

Meggitt Vibro-Meter® 高温连接器必须连接在一起，两个半体必须以 9 N•m ±2 N•m (6.6 lb-ft ±1.5 lb-ft) 的力矩结合。

3.5 安装传输电缆和连接电缆

请在安装传输电缆或连接电缆之前先查看 3.1 一般注意事项。

传输电缆（位于 IPC70x 信号调节器之后）和连接电缆（位于 GSI12x 电气隔离装置之后）可以根据低压装置标准进行安装。

但是，应注意尽量减少干扰的影响（3.1.4 最大程度减少电磁干扰源）。

4 安装接线盒、工业外壳和信号调节器

本章提供关于安装基于 CAxxx 的振动测量链中接线盒、 ABA17x 工业外壳和 IPC707 信号调节器的一般指南。

注意： 有关产品特定的更多信息可见相应的数据表。

此信息适用于该链中的以下产品：

- 用于将压电加速度计电缆连接到延长电缆的接线盒 （请参见 4.2 安装接线盒）。
- ABA17x 工业外壳 （请参见 4.3 安装 ABA17x 工业外壳）。
- IPC707 信号调节器 （请参见 4.4 安装 IPC707 信号调节器）。

4.1 一般注意事项

4.1.1 潜在爆炸性环境中的接线盒

JB116 接线盒可以安装在潜在爆炸性环境中。

如需更多信息，请参见本手册附录中的防爆证书。 （防爆证书也可以从我们的网站 WWW.MEGGITTSENSING.COM/ENERGY 获得）

所有其他未获得防爆认证的接线盒不得安装在爆炸性环境中。

4.1.2 潜在爆炸性环境中使用的工业外壳和信号调节器

ABA17x 工业外壳可安装在潜在爆炸性环境中。

如需更多信息，请参见本手册附录中的防爆证书。 （防爆证书也可以从我们的网站 WWW.MEGGITTSENSING.COM/ENERGY 获得）

所有其他未获得防爆认证的工业外壳不得安装在潜在爆炸性环境中。

保护模式为 “Ex ec” 或 “Ex nA” 的 IPC707 信号调节器、保护模式为 “Ex nA” 的 IPC704 信号调节器或处于防爆区域 2（危险区）的保护模式为 “Ex nA” 的 GSI127 电气隔离装置必须安装在防护等级至少为 IP54（ 或同等级别）的壳体内，同时适当考虑相应防爆证书规定的最大散热量。

对于北美地区处于防爆区域 2 的 IPC707 或 IPC704 信号调节器 (cCSAus)，IPC707 或 IPC704 安装所在的最后外壳必须具有相应 cCSAus 防爆证书所述的特别警戒语和警告语（ 请参阅 cCSAus 防爆证书以获取更多信息）。

注意： 请参考相应的数据表，以确定工业外壳是否可以安装在潜在爆炸性环境中。

在潜在爆炸性环境中，不允许带电安装和更换，因为在这些危险区域，必须先关闭电子设备的电源，然后才能安全地断开任何电气连接。

警告 — 通电时请勿隔离。

对于处于防爆区域 2 的保护模式为 “Ex ec” 或 “Ex nA” 的 IPC70x 信号调节器，请勿在设备或电路通电时安装或更换 IPC70x，也请勿隔离（ 切断或断开）任何电气连接。

4.1.3 工作温度范围

安装接线盒、工业外壳或信号调节器的环境温度必须永远在其工作温度范围内。

注意： 有关接线盒、工业外壳或信号调节器工作温度范围的更多信息，请参见相应的数据表。

只能将接线盒安装在温度永远处于接线盒内所连接电缆温度范围内的位置。

只能将工业外壳安装在温度永远处于外壳内信号调节器温度范围内的位置。

注意： 有关电缆或信号调节器工作温度范围的更多信息，请参见相应的数据表。

4.2 安装接线盒

请在安装接线盒之前先查看 4.1 一般注意事项。

4.2.1 安装接线盒

JB116 接线盒具有内部安装孔位，可轻松安全地安装在墙上或其他安装面上。

1- 选择一个没有振动的位置来安装接线盒。

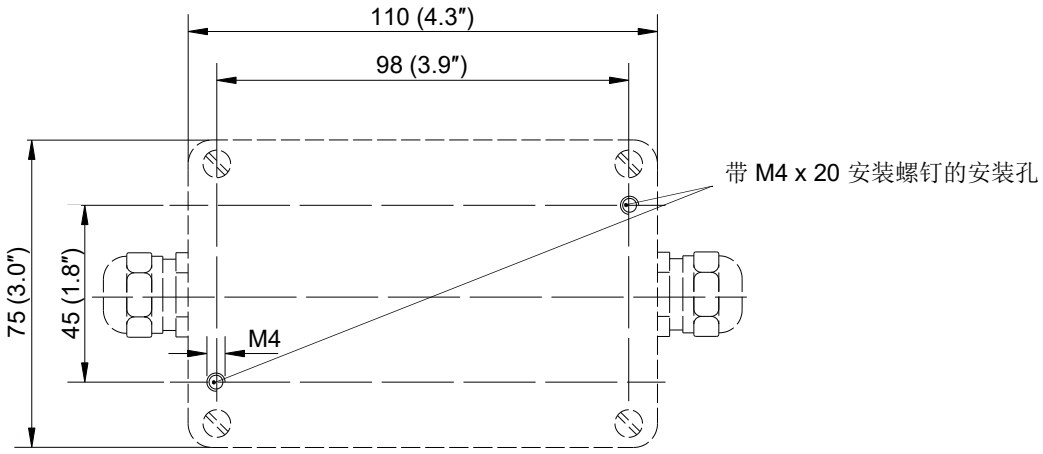
2- 检查接线盒上安装孔之间的距离，然后在安装面钻取并准备适当的孔 （请参见图 4-1 了解 JB116 接线盒的尺寸）。

注意： 关于不同接线盒的尺寸，请参见相应的数据表。

3- 卸下接线盒的盖子 （请参见图 4-2）。

4- 使用随附的螺钉将接线盒安装在安装面上。

5- 连接接线盒内的电缆 （请参见 4.2.2 接线盒内的连接电缆）。



注意：除另有说明外，所有尺寸均以毫米 （英寸）为单位。

图 4-1：JB116 接线盒的尺寸

4.2.2 接线盒内的连接电缆

1- 安装接线盒 （请参见 4.2.1 安装接线盒）。

2- 松开接线盒上的电缆接头 （填料函压盖），然后将电缆穿过。

3- 在接线盒内进行电气连接 （请参见图 4-2）。

4- 拧紧电缆接头（填料函压盖），并检查电缆是否已通过接头（填料函压盖）牢靠地固定。这可帮助确保接线盒防水。

5- 如果电缆具有柔性的不锈钢保护管，则将 Ø8 卡环放入电缆套管的凹槽中 （请参见图 4-2）。这可帮助防止电缆滑出电缆接头 （填料函压盖）。

6- 将盖子拧回到接线盒上。

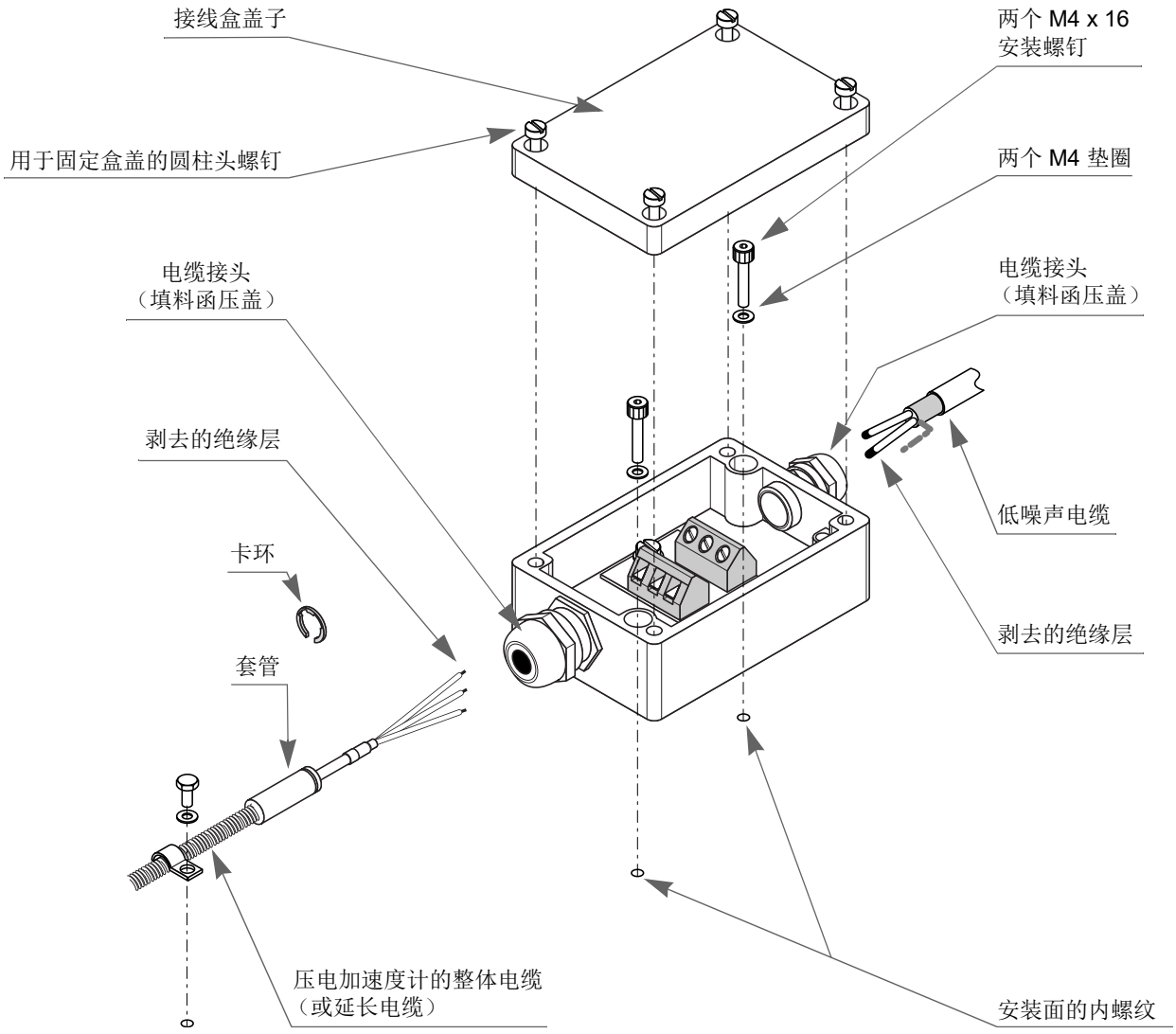


图 4-2：安装 JB116 接线盒

4.3 安装 ABA17x 工业外壳

请在安装工业外壳之前先查看 4.1 一般注意事项。

4.3.1 安装 ABA17x 工业外壳

ABA17x 工业外壳具有外部安装支架，可轻松安全地安装在墙上或其他安装面上。

1- 选择一个没有振动的位置来安装 ABA17x 工业外壳。

2- 检查工业外壳上安装支架之间的距离，然后在安装面上钻取并准备适当的孔 （请参见图 4-7）。

注意： ABA17x 工业外壳的尺寸不同。更多信息可见 ABA17x 工业外壳的数据表。

3- 使用适当的螺钉和固定件，例如用于基层材料的墙塞 （锚栓），将工业外壳安装在安装面上。

注意： 在安装重物时，所使用的螺钉和固定件必须适合安装面和基层材料。

4- 安装一个或多个信号调节器并连接工业外壳内的电缆 （请参见 4.4 安装 IPC707 信号调节器和 4.4.4 连接电缆）。

4.4 安装 IPC707 信号调节器

4.4.1 关于 IPC707 信号调节器

IPC707 信号调节器是一个高度可配置的产品，可以结合不同的产品选项订购，例如环境（标准或爆炸 (“Ex”)）、诊断功能 （带或不带）、传输功能和输出信号 （电流或电压）、滤波 （低通和高通截止频率）和安装 （带或不带 DIN 导轨安装适配器）等的选择，这实际上产生了不同版本的产品。

订购 IPC707 时，零件号 (PNR) 和订购选项代码用于指出信号调节器的完整配置。例如，包含零件号 (PNR) 和订购选项代码的完整 IPC707 订购编号为：
244-707-000-012-Ax-Bx-Cxxxxx-Dx-Exx-Fxxxxx-Gx。

注意： 请参阅 IPC707 信号调节器数据表，获取有关订购选项代码的更多信息。

注意： IPC707 信号调节器的所有可配置产品选项必须在订购时选择。
所有 IPC707 信号调节器都是在制造过程中在工厂进行配置，因此， IPC707 的配置是固定的，以后不能更改。

4.4.1.1 带或不带诊断功能

重要的是，订购信号调节器时， IPC707 可以配置为“带诊断”或“不带诊断”。

带有可选诊断电路（内置测试设备 (BITE)）的 IPC707 信号调节器持续检查测量链的完整性，并更新 IPC707 输出信号诊断分量 (DC) 的标称值，以指示测量链 （传感器、电缆和 IPC707 信号调节器本身的运行状况）。换句话说，带诊断功能的 IPC707 的输出信号会发生变化，以指示测量的有效性，因此您总能知道何时可以安全地运行机器。

不带诊断功能的 IPC707 信号调节器不会检查测量链的完整性，但维持 IPC707 输出信号诊断分量 (DC) 的固定标称偏差值 （以指示只有 IPC707 信号调节器正常运行）。

订购选项代码 **Bx** 用于指定 IPC707 可选诊断功能的配置如下：

- 订购号 244-707-000-012-Ax-**B2**-Cxxxxx-Dx-Exx-Fxxxxx-Gx，
  适用于带**诊断**功能的 IPC707 。
- 订购号 244-707-000-012-Ax-**B1**-Cxxxxx-Dx-Exx-Fxxxxx-Gx，
  适用于不带**诊断**功能的 IPC707 。

注意： 只有带诊断功能的 IPC707 信号调节器（订购选项代码 **B2**）适用于安全相关应用。

4.4.1.2 识别不同的版本

如图 4-3 所示，位于 IPC707 信号调节器顶部的产品标签显示完整的订购号，包括零件号 (PNR) 和订购选项代码。

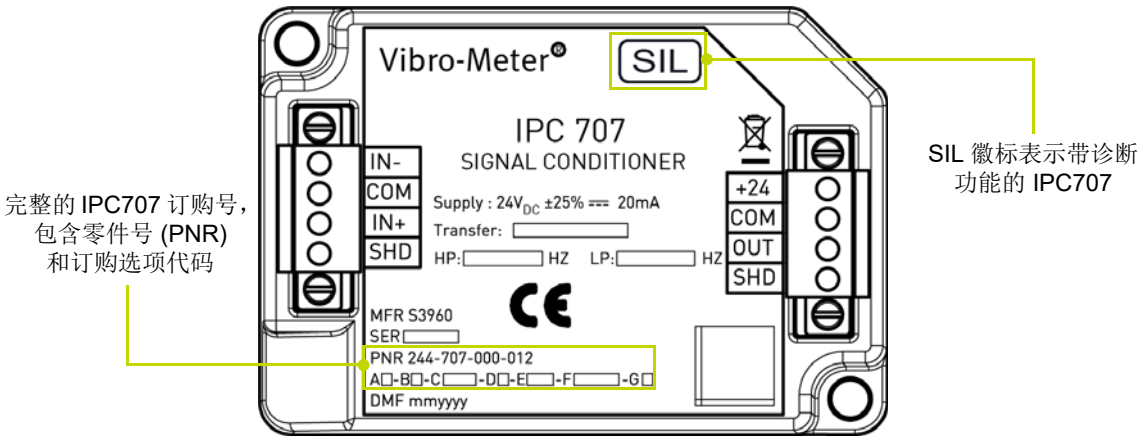


图 4-3：带典型产品标签的 IPC707 信号调节器的顶视图，显示了完整的订购号 (PNR)

注意： 带诊断功能的 IPC707 信号调节器（适用于安全相关应用）可通过订购选项代码 **B2** 和 **SIL** 徽标来识别。

请务必查看 IPC707 产品标签，以确保在安装或更换信号调节器之前，零件号 (PNR) 和订购选项代码适合相关应用。

4.4.1.3 运行概述

如图 4-4 所示，信号调节器 IPC707 的输出是一个由动态测量分量 (AC) 和准静态诊断分量 (DC) 组成的模拟信号。

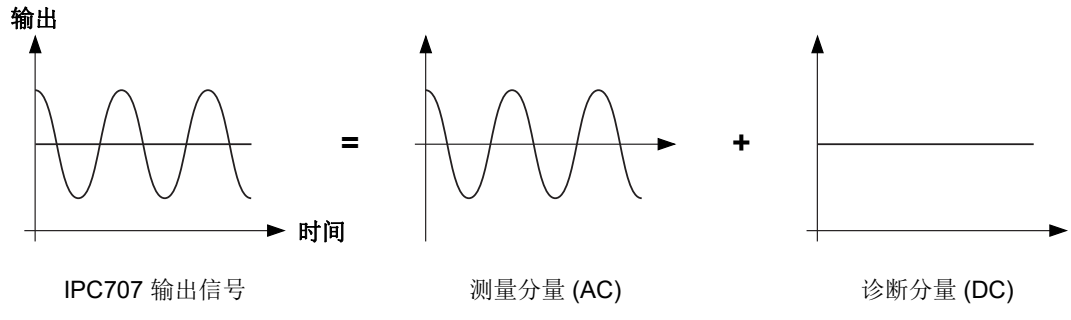


图 4-4：来自 IPC707 信号调节器的输出信号

对于来自基于 CAxxx 的振动测量链中的 IPC707 信号调节器的输出信号：

- 测量分量 (AC) 对应测得的振动。
- 诊断分量 (DC) 对应测量链的状态，如下所示：
  - 对于带诊断功能的 IPC707，输出信号诊断分量 (DC) 的标称值发生变化，以指示 IPC707 测量链的运行状况，如表 4-1 所述。
  - 对于不带诊断功能的 IPC707，输出信号诊断分量 (DC) 的标称值未发生变化，如表 4-2 所述。

表 4-1 列出了来自带诊断功能的 IPC707 输出信号诊断分量 (DC) 的允许值。

表 4-1：来自带诊断功能的 IPC707 输出信号诊断分量 (DC) 的允许值

诊断分量 (DC) 值	测量链是否正常？	描述
13 mA_{DC} ±0.5 mA_{DC} 或 8 V_{DC} ±0.5 V_{DC}	是	正常运行。 来自 IPC707 测量链的输出信号的测量分量 (AC) 值得信赖。
11 mA_{DC} ±0.5 mA_{DC} 或 6 V_{DC} ±0.5 V_{DC}	否	传感器和 / 或电缆出现问题
10 mA_{DC} ±0.5 mA_{DC} 或 5 V_{DC} ±0.5 V_{DC}		信号调节器出现问题
<8 mA_{DC} 或 <3 V_{DC}		测量链或电源出现其他问题
其他电流或电压值		内部诊断未检测到信号调节器出现问题
注释 来自 IPC707 的输出信号可以是电流 (mA) 信号，也可以是电压 (V) 信号，具体取决于所配置的传输功能和输出信号。 虽然来自 IPC707 的输出信号的最大公差为 ±0.5 mA_{DC} 或 ±0.5 V_{DC}，使得能在任何情况下（包括强电磁干扰）运行，但典型公差 ±0.2 mA_{DC} 或 ±0.2 V_{DC} 可以在正常运行条件下看到。		

注意： 请参阅最新版本的 IPC707 信号调节器安全手册，获取有关带诊断功能的 IPC707 更多信息。

表 4-2 列出了来自不带诊断功能的 IPC707 输出信号诊断分量 (DC) 的允许值。

表 4-2：来自不带诊断功能的 IPC707 输出信号诊断分量 (DC) 的允许值

诊断分量 (DC) 值	测量链是否正常？	描述
12 mA_{DC} ±0.5 mA_{DC} 或 7 V_{DC} ±0.5 V_{DC}	是	正常运行
其他电流或电压值	否	测量链 （传感器、电缆和 / 或信号调节器）出现问题
注释 来自 IPC707 的输出信号可以是电流 (mA) 信号，也可以是电压 (V) 信号，具体取决于所配置的传输功能和输出信号。 虽然来自 IPC707 的输出信号的最大公差为 ±0.5 mA_{DC} 或 ±0.5 V_{DC}，使得能在任何情况下（包括强电磁干扰）运行，但典型公差 ±0.2 mA_{DC} 或 ±0.2 V_{DC} 可以在正常运行条件下看到。		

4.4.1.4 传感器兼容性

为支持带诊断功能的 IPC707 信号调节器正确运行， CAxxx 压电加速度计、电缆和整个测量链必须满足特定的电气要求 （请参见 4.4.1.5 有效的 IPC707 测量链）。

表 4-3 列出了与带诊断功能的 IPC707 信号调节器兼容的 CAxxx 压电加速度计。

表 4-3：CAxxx 与带诊断功能的 IPC707 信号调节器兼容的压电加速度计

CAxxx 压电加速度计	零件号 (PNR)	备注 / 注释
CA134	144-134-000-2xx	带整体 MI 电缆的 CA134 传感器不兼容
CA202	144-202-000-xxx	
CA280	144-280-000-xxx	
CA30x	144-30x-000-0xx	带整体 MI 电缆的 CA30x 传感器不兼容
其他		联系 Meggitt 以获取更多信息
注释 通常，带有长度超过 0.5 米（19.7 英寸）的整体矿物绝缘 (MI) 电缆的 CAxxx 压电加速度计与带有诊断功能的 IPC707 信号调节器不兼容。这是因为矿物绝缘 (MI) 电缆的导体通常没有单独屏蔽，导致电缆导体之间的电容相对较高，从而妨碍发现传感器存在问题 （因为电缆的电容变得大于并 “ 淹没 ” 传感器的电容）。		

4.4.1.5 有效的 IPC707 测量链

为支持带诊断功能的 IPC707 信号调节器正确运行，IPC707 测量链必须 “ 有效 ”，也就是说，传感器 （CAxxx 压电加速度计）、电缆和整个测量链必须满足特定的电气要求。

注意： 请参阅 IPC707 信号调节器安全手册，获取有关 “ 有效 ”IPC707 测量链特定电气要求的更多信息。

4.4.1.6 安全相关应用中的 IPC707 测量链

当在安全相关应用中使用 IPC707 测量链时，某些条件 / 限制适用。

作为执行安全仪表功能 (SIF) 的外部安全仪表系统 (SIS) 的输入（ 传感器），IPC707 测量链必须由兼容 IPC707 的传感器、兼容 IPC707 的电缆以及带诊断功能的 IPC707 信号调节器组成。

最终用户有责任确保酌情执行 IPC707 信号调节器安全手册所述的建议。

注意： 请参阅 IPC707 信号调节器安全手册，获取有关在安全相关系统 （功能安全环境）中使用 IPC707 的更多信息。

4.4.2 安装程序

请在安装 IPC707信 号调节器前先查看 4.1 一般注意事项。

IPC707 信号调节器可以不同的方式安装，具体取决于配置的安装选项：

- 带 DIN 导轨安装适配器的 IPC707
  带 DIN 导轨安装适配器（订购选项 **G2**）的 IPC707 应安装在 35 毫米宽的对称 DIN 导轨上，例如 TH 35-7.5。
- 不带 DIN 导轨安装适配器的 IPC707
  不带 DIN 导轨安装适配器 （订购选项 **G1**）的 IPC707 应安装在基板或其他安装面上。

IPC707 通常安装在无振动位置的工业外壳中、机架上或机箱 / 机柜中，尽管也可以直接安装在机器上 （不带 DIN 导轨选件）。

IPC707 的外壳具有可拆卸的螺丝端子连接器，可以从外壳主体上拔下，以简化信号调节器的安装 （请参见图 4-7）。

4.4.2.1 接地

注意： IPC707 的金属外壳 （导电）连接到它的 “COM” 和 “SHD” 端子。因此， IPC707 可以在 IPC707 与搭铁 (GND) 之间有或没有直接电气连接的情况下安装和操作。

在 IPC707 与搭铁 (GND) 之间有或没有直接电气连接的情况下安装和操作 IPC707 都会产生符合必要 CE 和 SIL 电磁兼容性 (EMC) 标准的测量链。

请参见 7.2 一般接线图。

4.4.2.2 安装在 DIN 导轨上

带 DIN 导轨安装适配器的 IPC707 信号调节器可轻松安装在 DIN 导轨上或从导轨上卸下（请参见图 4-5）。无需使用螺丝刀或专用工具。

将带 DIN 导轨安装适配器的 IPC707 信号调节器装在 DIN 导轨上：

1- 将 DIN 导轨安装适配器的弹簧端钩到 DIN 导轨的一侧上。

2- 推压 DIN 导轨安装适配器的弹簧端 （从而压缩弹簧），同时旋转 IPC707 信号调节器，以便将安装适配器的另一端钩在 DIN 导轨的另一边缘上。

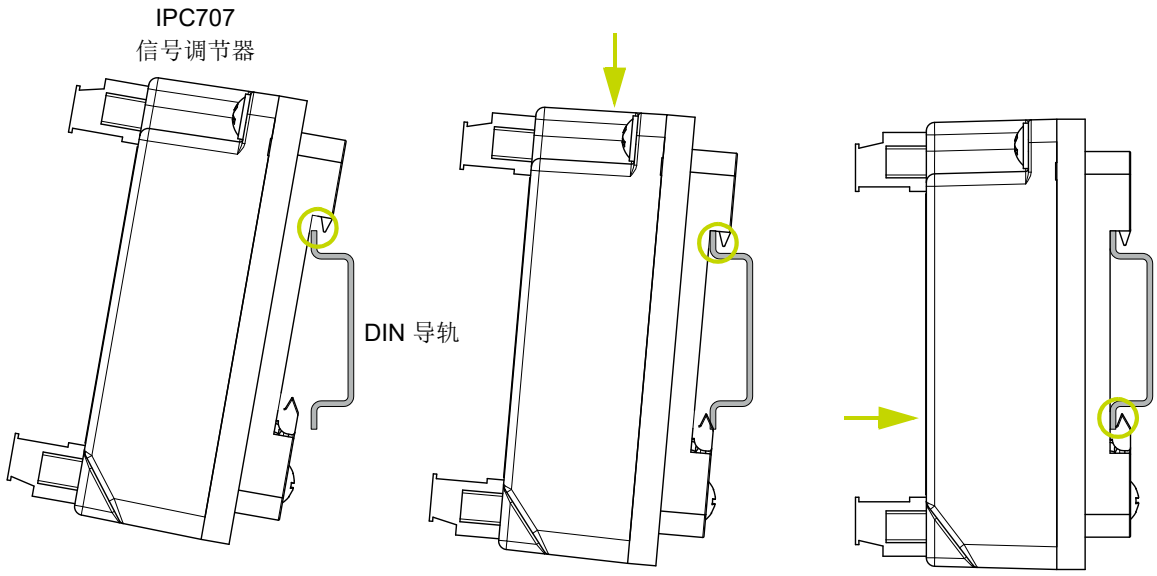
3- 将电缆连接到信号调节器 （请参见 4.4.4 连接电缆和 7.2 一般接线图）。

同样，从 DIN 导轨上拆下 IPC707 信号调节器：

1- 断开电缆与信号调节器的连接 （请参见 4.4.4 连接电缆）。

2- 推压 DIN 导轨安装适配器的弹簧端 （从而压缩弹簧），同时旋转 IPC707 信号调节器，以便从 DIN 导轨的一个边缘解开安装适配器的另一端。

3- 从 DIN 导轨的另一个边缘解开 DIN 导轨安装适配器的弹簧端。



1. 将 DIN 导轨安装适配器的弹簧端钩到 DIN 导轨的一侧上。
2. 推压 DIN 导轨安装适配器的弹簧端，同时转动 IPC707 信号调节器，使其钩在 DIN 导轨上。

图 4-5：在 DIN 导轨上安装 ABA17x 信号调节器

对于装在 DIN 导轨上的 IPC707 信号调节器，可在 IPC707 和搭铁 (GND) 之间进行直接的电气连接，方法是将电缆屏蔽层夹在工业外壳、机架或机柜 / 机箱入口处的接地支架上，或者将专用接地线 （跨线）添加到 IPC707 输入端的 “SHD” 端子上。

4.4.2.3 安装在基板或其他安装面上

将不带 DIN 导轨安装适配器的 IPC707 信号调节器安装在基板或其他安装面上：

1- 使用附带的安装螺钉将 IPC707 信号调节器安装在工业外壳的基板或其他安装面上。

2- 穿过 IPC707 外壳本体的两个安装孔，紧固两个 M4 安装螺钉 （或同等螺钉）。

3- 将电缆连接到信号调节器 （请参见 4.4.4 连接电缆和 7.2 一般接线图）。

注意： IPC707 信号调节器有两个安装孔，而 IPC704 信号调节器有四个安装孔。安装孔的尺寸相同，因为 IPC707 替代了 IPC704。

同样，从基板或其他安装面上拆下 IPC707 信号调理器：

1- 断开电缆与信号调节器的连接 （请参见 4.4.4 连接电缆）。

2- 松开两个安装螺钉。

3- 拆下 IPC707 信号调节器。

对于装在基板或其他安装面 （例如，装在工业外壳内、机架上或机柜 / 机箱中，或者直接装在机器上）的 IPC707 信号调节器， IPC707 与搭铁 (GND) 之间的直接电气连接可以通过 IPC707 的金属外壳及其安装所在的机箱 / 机器的金属来实现。

4.4.3 拆下并插入螺丝端子连接器

从 IPC707 信号调节器的主体上卸下螺丝端子连接器：

1- 松开两个外加固定螺钉。这些位于螺丝端子连接器的外边缘。

2- 拉动螺丝端子连接器，将其从装置的主体上卸下。

将螺丝端子连接器重新插入 IPC707 信号调节器的主体：

1- 将螺丝端子连接器推入装置的主体。

2- 紧固两个外加固定螺钉。

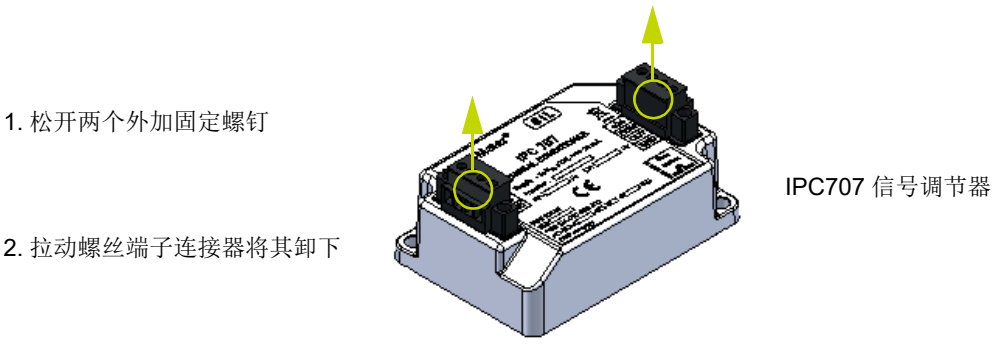


图 4-6：从 IPC707 信号调节器的主体上卸下螺丝端子连接器

4.4.4 连接电缆

请在将电缆连接到 IPC707 信号调节器之前先查看 4.1 一般注意事项。

软线“低噪声”传感器电缆组件用于将 CAxxx 压电加速度计连接到 IPC707 信号调节器的输入端。

传输电缆用于将 IPC707 信号调节器的输出端连接到 GSI127 电气隔离装置等“监视器测”电路或者 VM600 或 VibroSmart® 等监控系统。

来自“传感器侧”的传感器电缆和到“监视器侧”的传输电缆使用可拆卸的螺丝端子连接器连接到 IPC707（请参见图 4-6 和图 4-7）。

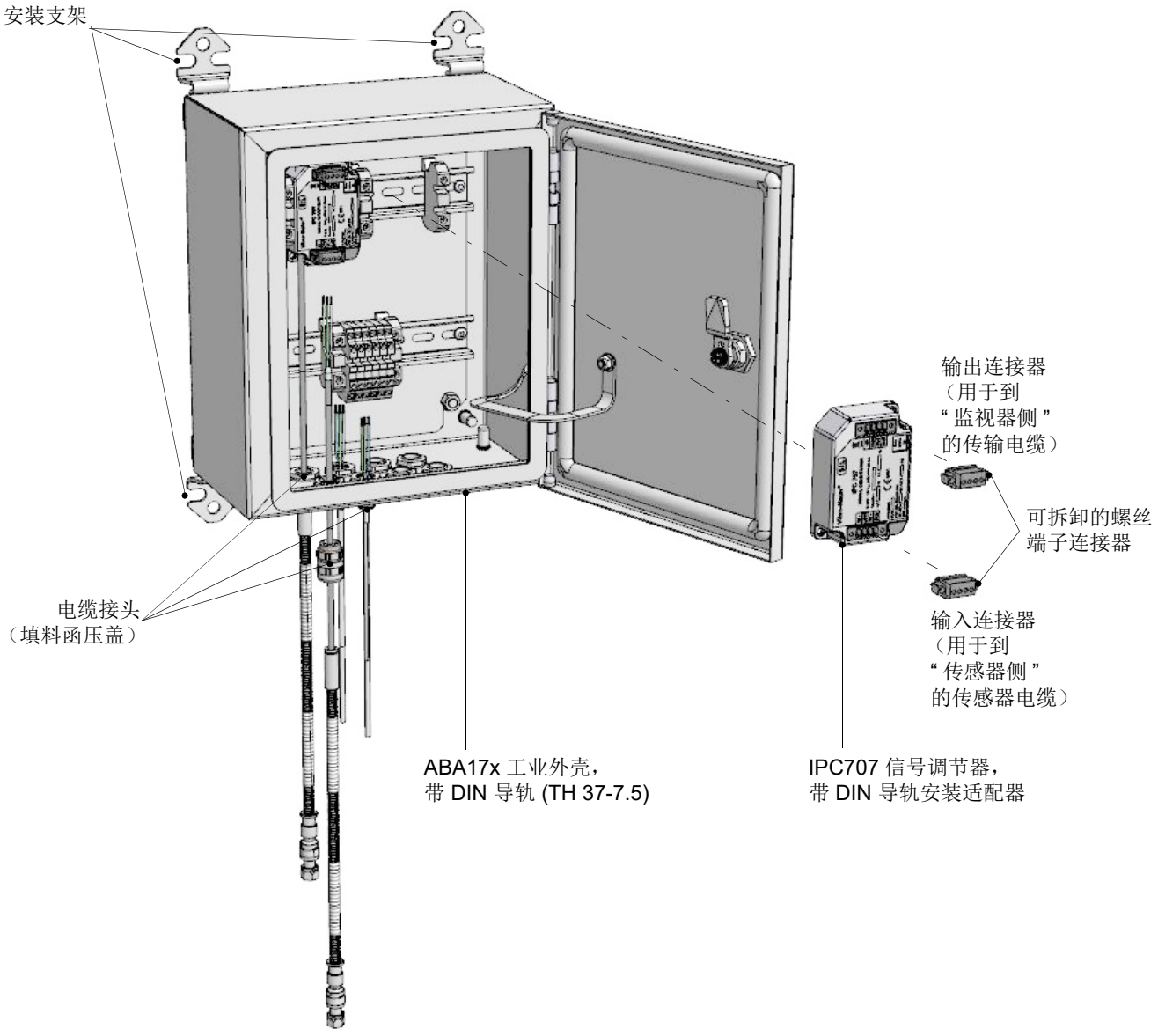


图 4-7：IPC707 ABA17x 工业外壳中的信号调节器

注意： IPC707 的外壳具有可拆卸的螺丝端子连接器，可以从外壳主体上拔下，以简化信号调节器的安装。

IPC707 信号调节器输入端处的螺丝端子连接器具有标记为 “IN−”、“COM”、“IN+” 和 “SHD” 的接头，用于连接到 “ 低噪声 ” 传感器电缆组件 （连接到 “ 传感器侧 ”）。

注意： “ 传感器侧 ” 的 “ 低噪声 ” 传感器电缆组件的屏蔽层必须连接到 IPC707 信号调节器的 “SHD” 输入端。

IPC707 信号调节器输出端的螺丝端子连接器具有标记为 “+24”、“COM”、“OUT” 和 “SHD” 的接头，用于连接到传输电缆 （连接到 “ 监视器侧 ”），如下所示：

- 为结合配置有电流输出信号 （双线传输系统）的 IPC707 信号调节器运行，使用了三个输出螺丝端子 （“+24”、 “COM” 和 “SHD”）。另一个螺丝端子 (“OUT”) 未连接。
- 为结合配置有电压输出信号 （三线传输系统）的 IPC707 信号调节器运行，使用了全部输出螺丝端子 （“+24”、 “COM”、 “OUT” 和 “SHD”）。

注意： 到 “ 显示器侧 ” 的传输电缆的屏蔽层必须连接到 IPC707 信号调节器的 “SHD” 输出端。

请参见 4.4.2.1 接地获取有关接地的信息，参见 7.2 一般接线图以了解使用 IPC707 信号调节器的基于 CAxxx 的振动测量链的详细接线图。

将电缆连接到 IPC707 信号调节器：

1- 确保关闭设备的电源。

2- 安装工业外壳和 IPC707 信号调节器 （请参见 4.3 安装 ABA17x 工业外壳和 4.4 安装 IPC707 信号调节器）。

3- 剥去软线 “ 低噪声 ” 电缆组件和传输电缆的导线绝缘层 （请参见 3 安装电缆）。

4- 松开工业外壳上的电缆接头 （填料函压盖），然后将电缆穿过。

5- 在工业外壳内进行电气连接，也就是将传感器电缆的电线连接到 IPC707 信号调节器的输入端，将传输电缆连接到信号调节器的输出端 （请参见图 4-7 和 7.2 一般接线图）。

6- 拧紧电缆接头（填料函压盖），并检查电缆是否已通过接头（填料函压盖）牢靠地固定。这可帮助确保工业外壳防水。

7- 如果电缆具有柔性的不锈钢保护管，则将 Ø 8 卡环放入电缆套管的凹槽中 （示例请见 ABA160 工业外壳的图 4-2）。这可帮助防止电缆滑出电缆接头 （填料函压盖）。

8- 关闭工业外壳的门 （或固定盖子）。

如果需要，请参见 4.5 将 IPC704 信号调节器更换为 IPC707 或 4.6 将 IPC620 信号调节器更换为 IPC707。

4.4.5 配置外部监控系统

结合基于 CAxxx 的振动测量链 （使用 IPC707 信号调节器）使用的外部监控和 / 或保护系统必须配置为使用 IPC707 提供的适当标称偏差值 （即 IPC707 输出信号的诊断分量 (DC)）。

注意： 带诊断功能的 IPC707 提供的标称偏差值不同于不带诊断功能的 IPC707 所提供的标称偏差值。

请参见 6 配置外部监控系统。

4.5 将 IPC704 信号调节器更换为 IPC707

请在将 IPC704 信号调节器更换为 IPC707 之前先查看 4.1 一般注意事项。

IPC707 信号调节器通常安装在 ABA17x 工业外壳中，IPC704 信号调节器则通常安装在 ABA160 或 ABA17x 工业外壳中。

注意： 在将 IPC704 信号调节器更换为 IPC707 时，可能必须调整信号调节器的电缆长度，以允许不同的安装（带或不带 DIN 导轨适配器）和不同的工业外壳（ABA17x、ABA160 或同等产品）。

4.5.1 拆卸 IPC704

IPC704 信号调节器通常安装在 ABA160 或 ABA17x 工业外壳中。来自“传感器侧”的传感器电缆和到“监视器侧”的传输电缆使用可拆卸的螺丝端子连接器连接到 IPC704（请参见图 4-8）。

拆卸 IPC704 信号调节器：

1- 确保关闭设备的电源。

2- 打开门或卸下工业外壳的盖板（示例参见 ABA160 工业外壳的图 4-8）。

3- 标记来自“传感器侧”的传感器电缆和到“监视器侧”的传输电缆（两个电缆都连接到 IPC704）的每根导线。参见图 4-8，并使用表 4-4 来记录编号和/或给每根导线标上颜色。

4- 对于 IPC704，拧下信号调节器外壳左侧 / 底部的螺丝端子，以断开传感器电缆与“传感器侧”电路（测量链）的连接。

5- 对于 IPC704，拧下信号调节器外壳右侧 / 顶部的螺丝端子，以断开传输电缆与“监视器侧”电路（电子监控系统）的连接。

6- 从工业外壳的电缆接头（填料函压盖）上拆下电缆。

7- 从设备安装板或 DIN 导轨上拆下 IPC704。

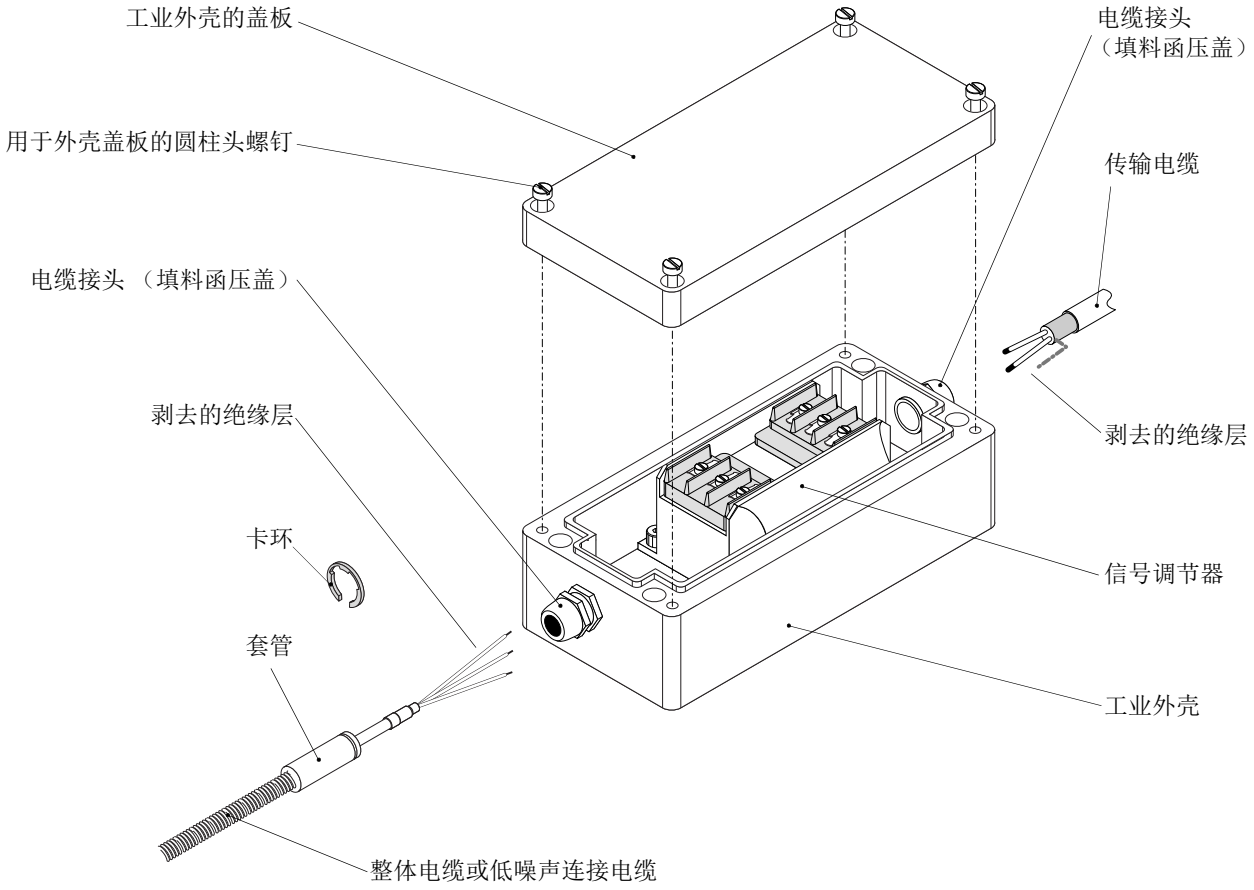


图 4-8：ABA160 工业外壳中的 IPC704 信号调节器

表 4-4：IPC704 导线识别并映射到 IPC707

传感器电缆 （“ 传感器侧 ”）				传输电缆 （“ 监视器侧 ”）			
IPC704[1] 端子	**线号**	**线色**	**IPC707[2] 端子**	**IPC704[1] 端子**	**线号**	**线色**	**IPC707[2] 端子**
I/P+			**IN+**	+24			**+24**
COM			**COM[3]**	COM			**COM**
I/P−			**IN−**	OUT			**OUT**
			SHD[3]				**SHD**

注释

1. IPC704 的金属外壳连接到其 COM 输入 / 端子。因此， IPC704 必须与搭铁 (GND) 进行电隔离，例如，将 IPC704 安装在将其与地面搭铁的设备之上或之内。
2. IPC707 的金属外壳 （导电）按如下方式连接到其 COM 和 SHD 输入端子：COM 和 SHD 输入以及 COM 输出直接连接到所有版本的金属外壳； SHD 输出经电容器连接到金属外壳 （对于标准和 “Ex ec/nA” 版本），对于 “Ex ia” 版本则直接连接到金属外壳。
   因此，可以在 IPC707 与搭铁 (GND) 之间有或没有直接电气连接的情况下安装和操作 IPC707。不过，建议在 IPC707 与搭铁 (GND) 之间有直接电气连接的情况下进行安装，以提高抗电磁干扰性 (EMI)。请参见 4.4.2 安装程序和 7.2 一般接线图。
3. 为了提高性能和接口连接灵活性，IPC707 具有单独的 COM 输入和输出端子以及 SHD 输入和输出端子，因此来自传感器电缆的任何单独屏蔽连接 / 导线 （通常为绿色跨线）都应连接到 IPC707 的 SHD 输入端，而到传输电缆的任何单独屏蔽连接 / 导线都应连接到 IPC707 的 SHD 输出端 （请参见 7.2 一般接线图）。相反， IPC704 仅有 COM 输入和输出端子可用作接地和屏蔽的共同参考。

4.5.2 安装和连接 IPC707

IPC707 信号调节器通常安装在 ABA17x 工业外壳中。来自 “ 传感器侧 ” 的传感器电缆和到 “ 监视器侧 ” 的传输电缆使用可拆卸的螺纹端子连接器连接到 IPC707 （请参见图 4-6）。

将 IPC704 更换为 IPC707 信号调节器：

1- 确保遵循 4.5.1 拆卸 IPC704 中所述的程序，且设备的电源已关闭。

2- 重复使用现有的工业外壳或安装新的工业外壳 （请参见 4.3 安装 ABA17x 工业外壳）。

3- 将 IPC707 装在工业外壳中 （请参见 4.4.2 安装程序）。

4- 必要时，调整传感器电缆和传输电缆的长度。

注意： ABA17x 工业外壳的尺寸可能与现有工业外壳的尺寸不同。如果电缆太短而无法连接，则让电缆松弛些。

注意： 如果松弛后电缆仍然太短，则安装延长电缆和接线盒。请联系您当地的 Meggitt 代表或 Meggitt SA 以获得更多信息。

5- 松开 ABA17x 工业外壳上的电缆接头（填料函压盖），然后将电缆穿过（请参见 4.3.1 安装 ABA17x 工业外壳）。

6- 剥去每根导线的末端以露出约 5 毫米的导体。

7- 对于要连接的每根导线：

- 利用在表 4-4 记录的信息，确定每根导线必须连接到哪个 IPC707 螺丝端子连接器和端子。
- 将导体插入相应的螺丝端子连接器并拧紧固定螺钉直至拧紧，从而连接每根导线。

注意： IPC707 的外壳具有可拆卸的螺丝端子连接器，可以从外壳主体上拔下，以简化信号调节器的安装。

另请见 4.4.4 连接电缆。

4.5.3 配置外部监控系统

将 IPC704 信号调节器更换为 IPC707 信号调节器时，结合基于 CAxxx 的振动测量链使用的外部监控和 / 或保护系统必须进行更新，以使用 IPC707 提供的适当标称偏差值 （即 IPC707 输出信号的诊断分量 (DC)）。

注意： IPC707 提供的标称偏差值（诊断分量 (DC)）可以不同于 IPC704 所提供的标称偏差值 （“ 驻留 ” 电流或电压）。

请参见 6 配置外部监控系统。

4.6 将 IPC620 信号调节器更换为 IPC707

请在将 IPC620 信号调节器更换为 IPC707 之前先查看 4.1 一般注意事项。

IPC707 信号调节器通常安装在 ABA17x 工业外壳中， IPC620 信号调节器则通常安装在 IPC620 专用盒 （工业外壳）中。

注意： 在将 IPC620 信号调节器更换为 IPC707 时，可能必须调整信号调节器的电缆长度，以允许不同的安装（带或不带 DIN 导轨适配器）和不同的工业外壳（ABA17x、ABA160 或同等产品）。

4.6.1 拆卸 IPC620

IPC620 信号调节器通常安装在 IPC620 专用盒 （工业外壳）中。来自 “ 传感器侧 ” 的传感器电缆和到 “ 监视器侧 ” 的传输电缆使用螺丝端子连接器连接到 IPC620 （请参见图 4-9）。

拆卸 IPC620 信号调节器：

1- 确保关闭设备的电源。

2- 卸下 IPC620 盒的盖板和保护盖 （请参见图 4-9）。

3- 标记来自 “ 传感器侧 ” 的传感器电缆和到 “ 监视器侧 ” 的传输电缆 （两个电缆都连接到 IPC620）的每根导线。参见图 4-9，并使用表 4-5 来记录编号和/或给每根导线标上颜色。

4- 对于 IPC620，拧下 IPC620 盒左侧 / 底部的螺丝端子，以便断开传感器电缆与 “ 传感器侧 ” 电路（测量链）的连接，并从传感器电缆套管（在电缆接头（填料函压盖）的后面）上卸下卡环。

5- 对于 IPC620，拧下 IPC620 盒右侧 / 顶部的螺丝端子，以断开传输电缆与 “ 监视器侧 ” 电路 （电子监控系统）的连接。

6- 从 IPC620 盒的电缆接头 （填料函压盖）上拆下电缆。

7- 拆下 IPC620 和 IPC620 盒。

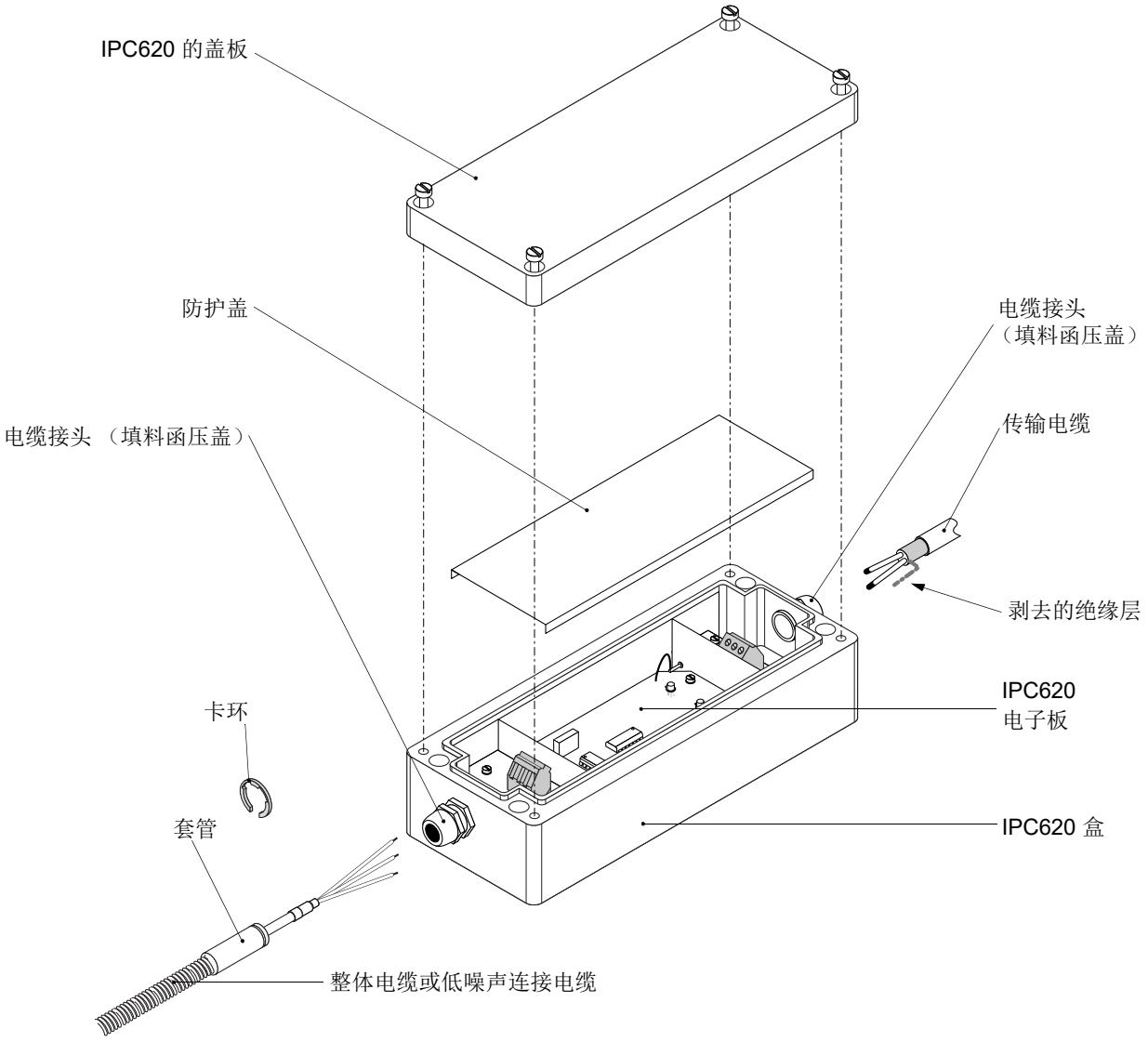


图 4-9：IPC620 信号调节器

表 4-5：IPC620 导线识别并映射到 IPC707

传感器电缆 （“ 传感器侧 ”）				传输电缆 （“ 监视器侧 ”）			
IPC620[1] 端子	线号	线色	IPC707[2] 端子	IPC620[1] 端子	线号	线色	IPC707[2] 端子
1			**IN+**	4			**+24**
2			**COM[3]**	5			**COM**
3			**IN−**	6			
			SHD[3]				**OUT**
							SHD

注释

1. IPC620 信号调节器封装在 IPC620 专用盒 （工业外壳）内，该盒是密封的压铸聚酯盒且 IPC620 电子设备完全浮空。
2. IPC707 的金属外壳 （导电）按如下方式连接到其 COM 和 SHD 输入端子：COM 和 SHD 输入以及 COM 输出直接连接到所有版本的金属外壳； SHD 输出经电容器连接到金属外壳 （对于标准和 “Ex ec/nA” 版本），对于 “Ex ia” 版本则直接连接到金属外壳。
   因此，可以在 IPC707 与搭铁 (GND) 之间有或没有直接电气连接的情况下安装和操作 IPC707。不过，建议在 IPC707 与搭铁 (GND) 之间有直接电气连接的情况下进行安装，以提高抗电磁干扰性 (EMI)。请参见 4.4.2 安装程序和 7.2 一般接线图。
3. 为了提高性能和接口连接灵活性，IPC707 具有单独的 COM 输入和输出端子以及 SHD 输入和输出端子，因此来自传感器电缆的任何单独屏蔽连接 / 导线 （通常为绿色跨线）都应连接到 IPC707 的 SHD 输入端，而到传输电缆的任何单独屏蔽连接 / 导线都应连接到 IPC707 的 SHD 输出端 （请参见 7.2 一般接线图）。相反， IPC620 仅有 COM 输入和输出端子 （针脚 2 和 5）可用作接地和屏蔽的共同参照。而且， IPC620 没有 OUT 输出端子，因为它仅支持电流 （双线）信号传输。

4.6.2 安装和连接 IPC707

IPC707 信号调节器通常安装在 ABA17x 工业外壳中。来自 “ 传感器侧 ” 的传感器电缆和到 “ 监视器侧 ” 的传输电缆使用可拆卸的螺纹端子连接器连接到 IPC707 （请参见图 4-6）。

将 IPC620 更换为 IPC707 信号调节器：

1- 确保遵循 4.6.1 拆卸 IPC620 中所述的程序，且设备的电源已关闭。

2- 安装新的工业外壳 （请参见 4.3 安装 ABA17x 工业外壳）。

3- 将 IPC707 装在工业外壳中 （请参见 4.4.2 安装程序）。

4- 必要时，调整传感器电缆和传输电缆的长度。

注意： ABA17x 工业外壳的尺寸与 IPC620 的尺寸不同。如果电缆太短而无法连接，则让电缆松弛些。

注意： 如果松弛后电缆仍然太短，则安装延长电缆和接线盒。请联系您当地的 Meggitt 代表或 Meggitt SA 以获得更多信息。

5- 松开 ABA17x 工业外壳上的电缆接头（填料函压盖），然后将电缆穿过（请参见 4.3.1 安装 ABA17x 工业外壳）。

6- 剥去每根导线的末端以露出约 5 毫米的导体。

7- 对于要连接的每根导线：

- 利用在表 4-5 记录的信息，确定每根导线必须连接到哪个 IPC707 螺丝端子连接器和端子。
- 将导体插入相应的螺丝端子连接器并拧紧固定螺钉直至拧紧，从而连接每根导线。

注意： IPC707 的外壳具有可拆卸的螺丝端子连接器，可以从外壳主体上拔下，以简化信号调节器的安装。

另请见 4.4.4 连接电缆。

4.6.3 配置外部监控系统

将 IPC620 信号调节器更换为 IPC707 信号调节器时，结合基于 CAxxx 的振动测量链使用的外部监控和 / 或保护系统必须进行更新，以使用 IPC707 提供的适当标称偏差值 （即 IPC707 输出信号的诊断分量 (DC)）。

注意： IPC707 提供的标称偏差值（诊断分量 (DC)）可以不同于 IPC620 所提供的标称偏差值 （“ 驻留 ” 电流或电压）。

请参见 6 配置外部监控系统。

此页故意留空

5 安装电气隔离装置

本章提供有关在基于 CAxxx 的振动测量链中安装 GSI127 电气隔离装置的指南。

GSI127 是 GSI122、GSI123、GSI124 和 GSI130 电气隔离装置以及 GSV14x 电源和安全栅装置的直接替代产品。

注意： 带有订购选项 B02（对于使用电流传输（双线）的 IPCxxx）或 B04（对于使用电压传输（三线）的 IPCxxx）的 GSI127 可以用于基于 CAxxx 的振动测量链。

注意： 有关 GSI127 电气隔离装置的更多信息可见相应的数据表。

5.1 一般注意事项

5.1.1 潜在爆炸性环境中的电气隔离装置

基于 CAxxx 的振动测量链中必须有 GSI12x 电气隔离装置，它们采用保护模式 “Ex i”（本质安全型）安装在潜在爆炸性环境（防爆区域）。

GSI127 是一个具有附加保护模式的相关设备，该模式允许当设备是安装在防护等级至少为 IP54（或同等等级）的壳体内时在防爆区域 2（危险区域）进行安装，同时适当考虑相应防爆证书规定的最大散热量。

如需更多信息，请参见本手册附录中的防爆证书。（防爆证书也可以从我们的网站 WWW.MEGGITTSENSING.COM/ENERGY 获得）

没有这种附加保护模式的其他相关设备不得安装在危险区域。

注意： 电气隔离装置也可用于普通应用情形（非爆炸性环境），例如，为了实现远距离信号传输（双线电流传输）和/或减少测量链中由于帧电压引起的噪声。

5.1.2 工作温度范围

电气隔离装置安装所在的环境温度必须永远在其工作温度范围内。

注意： 有关电气隔离装置工作温度范围的更多信息可见相应的数据表。

5.2 安装 GSI127 电气隔离装置

请在安装 GSI127 电气隔离装置之前先查看 5.1 一般注意事项。

5.2.1 安装程序

GSI127 电气隔离装置应安装在 35 毫米宽的对称 DIN 导轨上，例如 TH 35-7.5（请参见图 5-1），而且通常安装在工业外壳中、机架上或机柜中。

注意： GSI127 电气隔离装置应垂直安装在 DIN 导轨上，因为这样的方位可使冷却设备的气流最大化。
如图 5-1 所示， GSI127 通常正面朝上安装 （此时安装适配器闩锁位于装置的底部），但同样也可以倒过来安装 （倒置，此时安装适配器闩锁位于装置的顶部），以方便安装和接线。

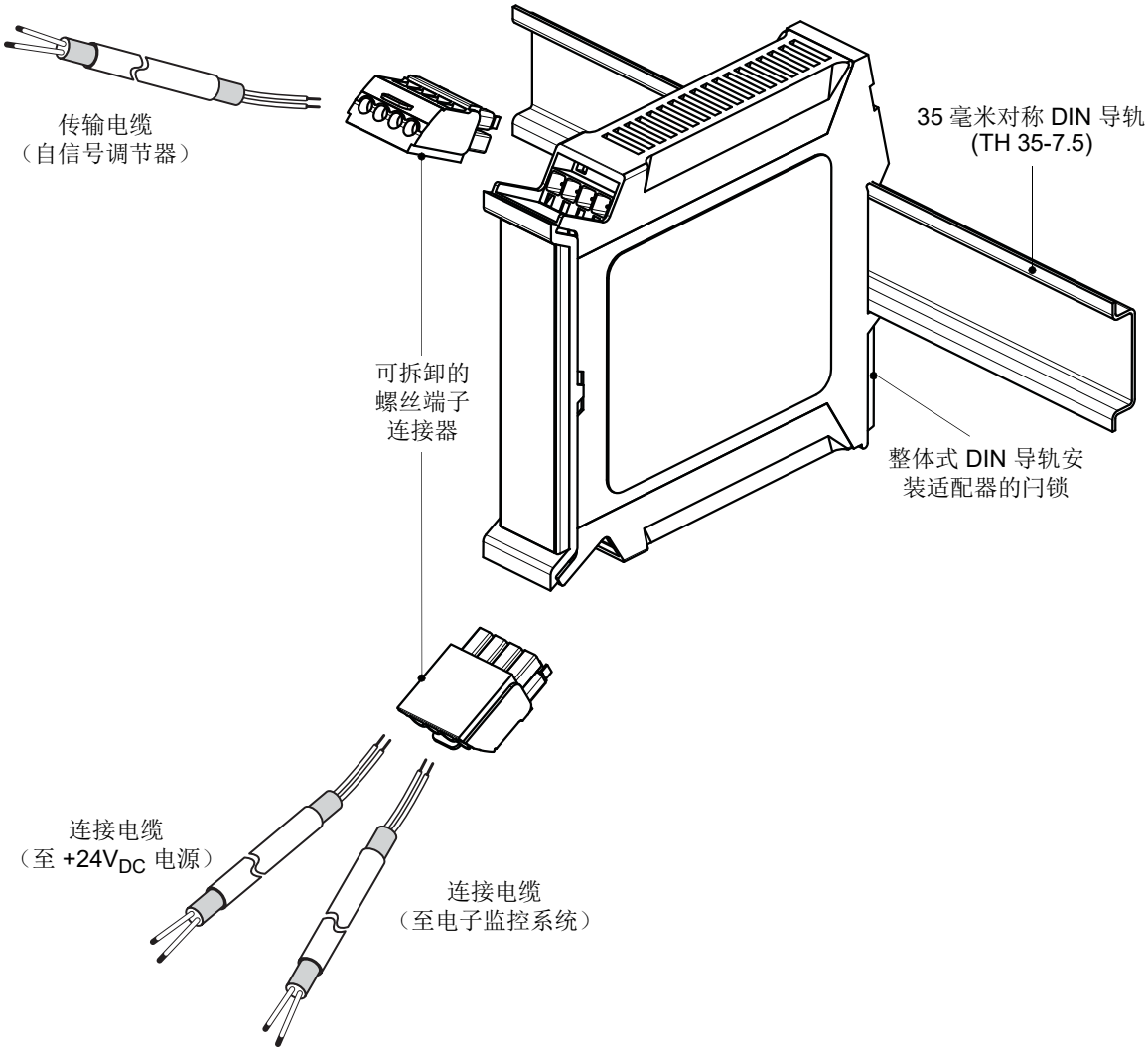


图 5-1：DIN 导轨上的 GSI127 电气隔离装置 （显示带有双线电流传输系统的连接）

GSI127 的外壳具有可拆卸的螺丝端子连接器，可以从外壳主体上拔下，以简化该装置的安装。

5.2.2 拆下并插入螺丝端子连接器

从 GSI127 装置的主体上卸下螺丝端子连接器：

1- 将螺丝端子连接器（用作杠杆）正面的凸起片从该装置主体上推开，以克服固定力，并分离螺丝端子连接器和该装置（请参见图 5-2）。用足够大的力将连接器与该装置的主体分离约 5 毫米。

2- 拉动螺丝端子连接器，将其从装置的主体上卸下。

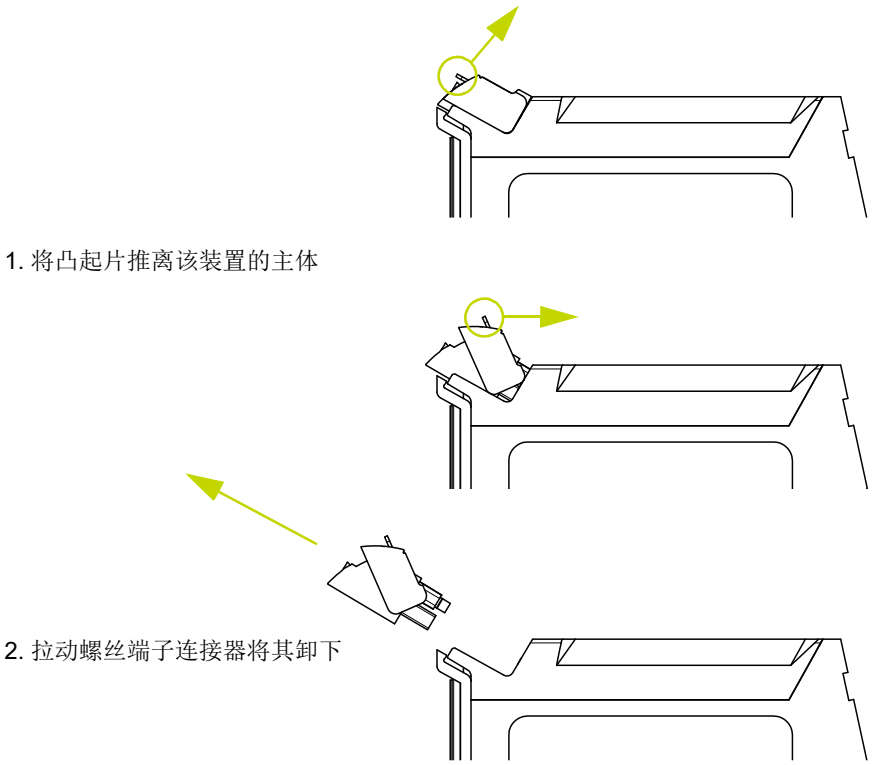


图 5-2：从 GSI127 装置的主体上卸下螺丝端子连接器

将螺丝端子连接器重新插入 GSI127 装置的主体：

1- 确保将螺丝端子连接器正面的凸起片向下压平，使连接器的后部不受阻碍。

2- 将螺丝端子连接器与该装置的主体对齐，确保两个部件的导轨对齐，然后将连接器推入该装置的主体。

3- 当螺丝端子连接器距离该装置的主体约 1-2 毫米时，需要更大的力才能克服机械锁定机构和连接器的摩擦力。

正确插入连接器后，应该会听到喀哒一声。

5.2.3 连接电缆

来自 “ 传感器侧 ” 电路的传输电缆 （IPC70x 信号调节器）和到 “ 显示器侧 ” 电路的连接电缆使用可拆卸的螺丝端子连接器连接到 GSI127 电气隔离装置 （请参见图 5-1 和图 5-2）。

注意： GSI127 顶部被标记为 “ 传感器 ” 的螺丝端子连接器用于连接到传输电缆，而传输电缆连接到 “ 传感器侧 ” 电路，即传感器和 / 或信号调节器等前端电路。

注意： GSI127 的底部被标记为 “ 监视器 ” 的螺丝端子连接器用于连接到连接电缆，而连接电缆连接到 VM600 或 VibroSmart® 监控系统等 “ 监视器侧 ” 电路。

在 GSI127 的顶部正面有一个由四个被标记为 “ 传感器 ” 的螺丝端子组成的端子块，其中最多三个用于连接到传输电缆，而传输电缆连接到 “ 传感器侧 ” 电路：

- 为结合 IPC70x 信号调节器（双线传输系统）的电流信号运行，应使用带有订购选项 B02 的 GSI127。该选项使用两个传感器螺丝端子，分别标记为 “+” 和 “-”。其他两个标记为 “NC” 的传感器螺丝端子未连接。
- 为结合 IPC70x 信号调节器（三线传输系统）的电压信号运行，应使用带有订购选项 B04 的 GSI127。该选项使用三个传感器螺丝端子，分别标记为 “+”、“COM” 和 “I/P”。另一个标记为 “NC” 的传感器螺丝端子未连接。

在 GSI127 的底部正面有一个由四个被标记为 “ 监视器 ” 的螺丝端子组成的端子块，所有端子都用于连接到连接电缆，而连接电缆连接到 “ 监视器侧 ” 电路：

- 电压输出信号的连接对所有 GSI127 （订购选项 B01 至 B21）而言都相同，并使用标记为 “24 VDC +”、 “24 VDC −”、 “ 信号 0V” 和 “ 信号 O/P” 的所有监视器螺丝端子。

请参见 7 电气连接，了解基于 CAxxx 的振动测量链 （使用 GSI127）的详细接线图。

注意： 来自 “ 传感器侧 ” 电路的传输电缆的屏蔽层不应连接到 GSI127 电气隔离装置（“ 开放式屏蔽 ”）。
相反，来自 “ 传感器侧 ” 电路的传输电缆必须连接至机柜 （含有 GSI127）入口处的强制接地支架。

注意： GSI127 电气隔离装置不需要接地，也不应对其 DIN 导轨接地。

如果需要，请参见 5.3 将 GSI124 电气隔离装置更换为 GSI127 或 5.4 将 GSI122 或 GSI130 电气隔离装置更换为 GSI127。

5.3 将 GSI124 电气隔离装置更换为 GSI127

对于 GSI124 电气隔离装置：

- 外壳顶部的连接用于到电子监控系统的连接电缆。
- 外壳底部的连接用于来自传感器和 / 或信号调节器等前端电路的传输电缆。

对于 GSI127 电气隔离装置：

- 外壳顶部的连接用于来自传感器和 / 或信号调节器等前端电路的传输电缆。
- 外壳底部的连接是到电子监控系统的连接电缆。

注意： 将 GSI124 电气隔离装置更换为 GSI127 时，可能必须调整到该装置的电缆长度，以适应这种位置变化。

5.3.1 拆卸 GSI124

请在将 GSI124 电气隔离装置更换为 GSI127 之前先查看 5.1 一般注意事项。

GSI124 电气隔离装置通常安装在工业外壳中、机架上或机柜中。来自“ 传感器侧 ” 电路的传输电缆和到“监视器侧”电路的连接电缆使用螺丝端子连接器连接到 GSI124（请参见图 5-3）。

拆卸 GSI124：

1- 关闭设备的电源。

2- 标记来自 “ 传感器侧 ” 的传输电缆和到 “ 监视器侧 ” 的连接电缆 （两个电缆都连接到 GSI124）的每根导线。参见图 5-3，并使用表 5-1 来记录编号和/或给每根导线标上颜色。

3- 对于 GSI124，拧下该装置上半部分的螺丝端子，以断开连接电缆与 “ 监视器侧 ” 电路（电子监控系统）的连接。

4- 对于 GSI124，拧下该装置下半部分的螺丝端子，以断开传输电缆与 “ 传感器侧 ” 电路（信号调节器）的连接。

5- 断开接地连接。也就是说，从 GSI124 的底面断开以压合连接器端接的黑色跨线，然后将其从 DIN 导轨上拆下，因为 GSI127 不需要它 （请参见图 5-3）。

6- 从 DIN 导轨上卸下 GSI124。

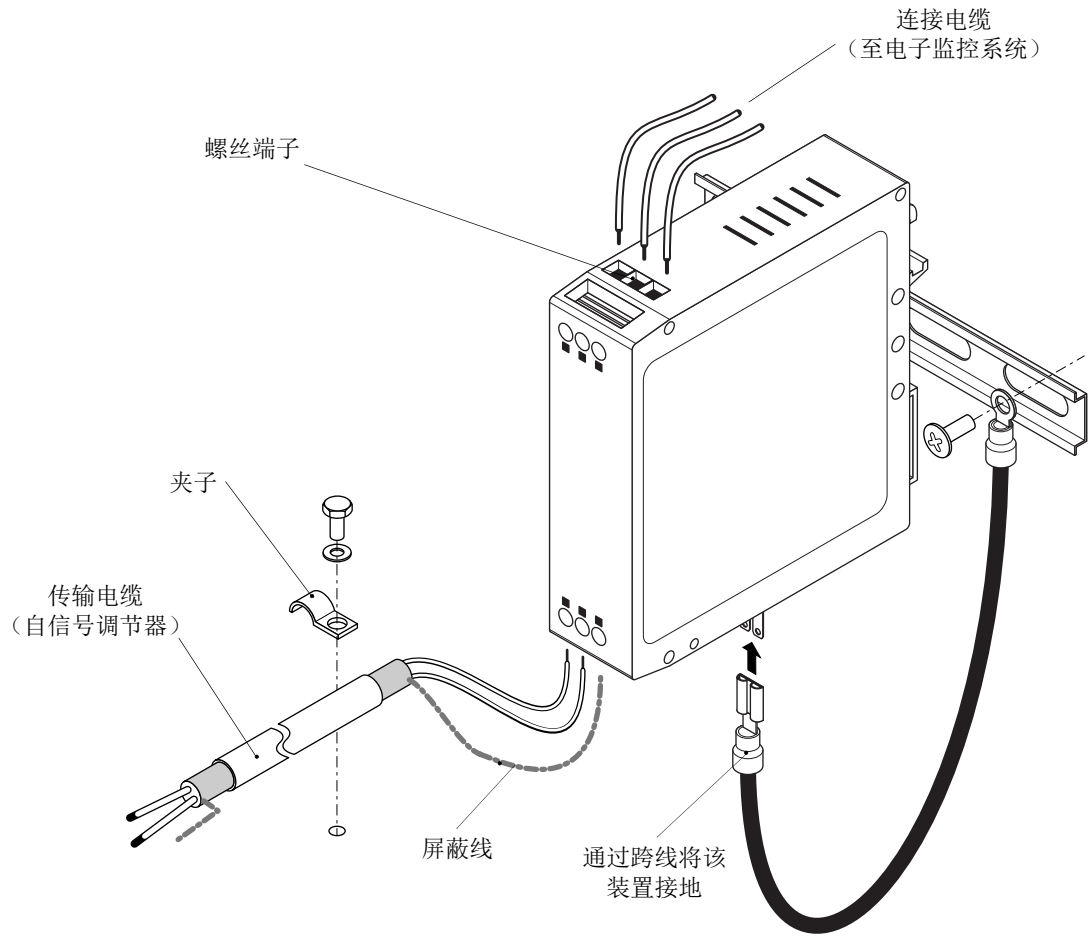


图 5-3：GSI124 电气隔离装置

表 5-1：GSI124 导线识别并映射到 GSI127

传输电缆 （“ 传感器侧 ”）				连接电缆 （“ 监视器侧 ”）				
GSI124 端子	**线号**	**线色**	**GSI127 端子**	**GSI124 端子**	**线号**	**线色**	**GSI127 端子**	
+			+	OUT			O/P	信号
–			–	0V[2]			0V	
屏蔽[1]				+24V			+	24 VDC
				0V[2]			–	

注释

1. 来自 “ 传感器侧 ” 电路的传输电缆的屏蔽层不得连接到 GSI127 电气隔离装置 （“ 开放式屏蔽 ”）。相反，屏蔽层必须连接到机柜 （含有 GSI127）入口处的强制接地支架。请参见 7 电气连接。
2. 为了提高性能和接口连接灵活性， GSI127 具有一个带两个专用螺丝端子 （O/P 和 0V）的单独差分 （“ 浮动 ”）输出以及一个带两个专用螺丝端子 （+ 和 -）的单独 24 V_{DC} 电源输入，而 GSI124 具有单个端子 (0V)，用作信号输出和电源输入的共同参考。
   将 GSI124 更换为 GSI127 时， GSI127 的 0V （信号）端子和到电子监控系统的连接电缆之间的连接以及 GSI127 的 - (24 VDC) 端子和到电源的连接电缆之间的连接需要单独的导线。

5.3.2 安装和连接 GSI127

将 GSI124 更换为 GSI127：

1- 确保遵循 5.3.1 拆卸 GSI124 中所述的程序，且设备的电源已关闭。

2- 重复使用现有的 DIN 导轨或安装新的 DIN 导轨。

3- 将 GSI127 夹到 DIN 导轨上。

4- 必要时：

- 调整传输电缆和连接电缆的长度。
- 剥去来自“传感器侧”电路的传输电缆外皮，以获得足够长的屏蔽线，以便连接到机柜（含有 GSI127）入口处的强制接地支架（请参见 7 电气连接）。

5- 剥去每根导线的末端以露出约 5 毫米的导体。

6- 对于要连接的每根导线：

- 利用在表 5-1 记录的信息，确定每根导线必须连接到哪个端子。
- 将导体插入相应的螺丝端子并拧紧固定螺钉直至拧紧，从而连接每根导线。

注意： GSI127 的外壳具有可拆卸的螺丝端子连接器，可以从外壳主体上拔下，以简化该装置的安装。

5.4 将 GSI122 或 GSI130 电气隔离装置更换为 GSI127

5.4.1 拆卸 GSI122 或 GSI130

请在将 GSI122 或 GSI130 电气隔离装置更换为 GSI127 之前先查看 5.1 一般注意事项。

GSI122 或 GSI130 电气隔离装置通常安装在工业外壳中、机架上或机柜中。这些装置通常使用定位销和固定螺钉安装在专用的安装板上（请参见图 5-5）。来自“传感器侧”电路的传输电缆和到“监视器侧”电路的连接电缆使用压接到导线上的 AMP Faston 6.3 接线片连接到 GSI122 或 GSI130（请参见图 5-4）。

拆卸 GSI122 或 GSI130：

1- 关闭设备的电源。

2- 标记来自“传感器侧”的传输电缆和到“监视器侧”的连接电缆（两个电缆都连接到 GSI122 或 GSI130）的每根导线。参见图 5-4，并使用表 5-2 来记录编号和/或给每根导线标上颜色。

3- 对于 GSI122 或 GSI130，从装置的上半部分拉出三个 AMP Faston 6.3 接线片，以断开到“监视器侧”电路（电子监控系统）的连接电缆。

4- 对于 GSI122 或 GSI130，从装置的下半部分拉出两个 AMP Faston 6.3 接线片，以断开来自“传感器侧”电路（信号调节器）的传输电缆。

5- 松开 M4 固定螺钉，直到 GSI122 或 GSI130 被拆卸，然后从 DIN 导轨上拆下安装板（请参见图 5-5）。

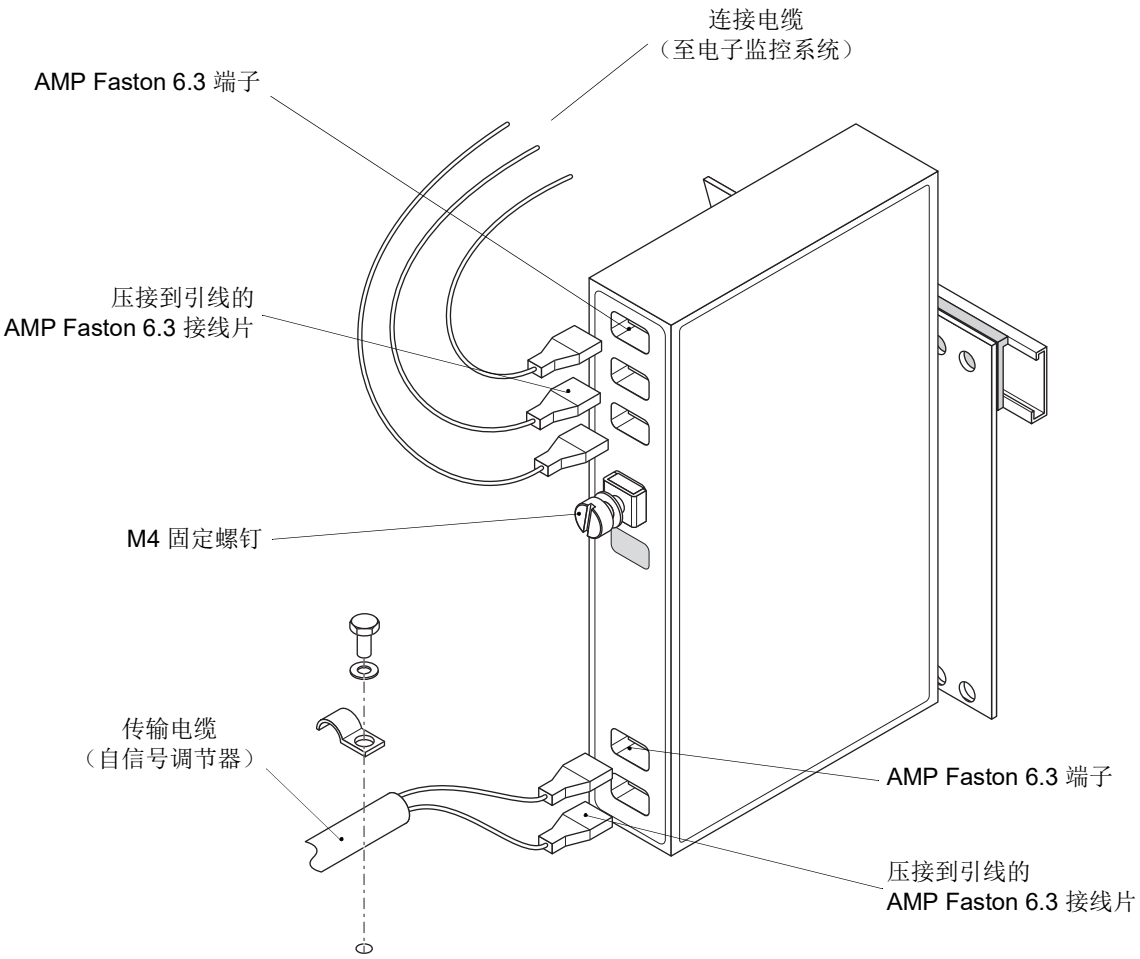


图 5-4：GSI122 或 GSI130 电气隔离装置

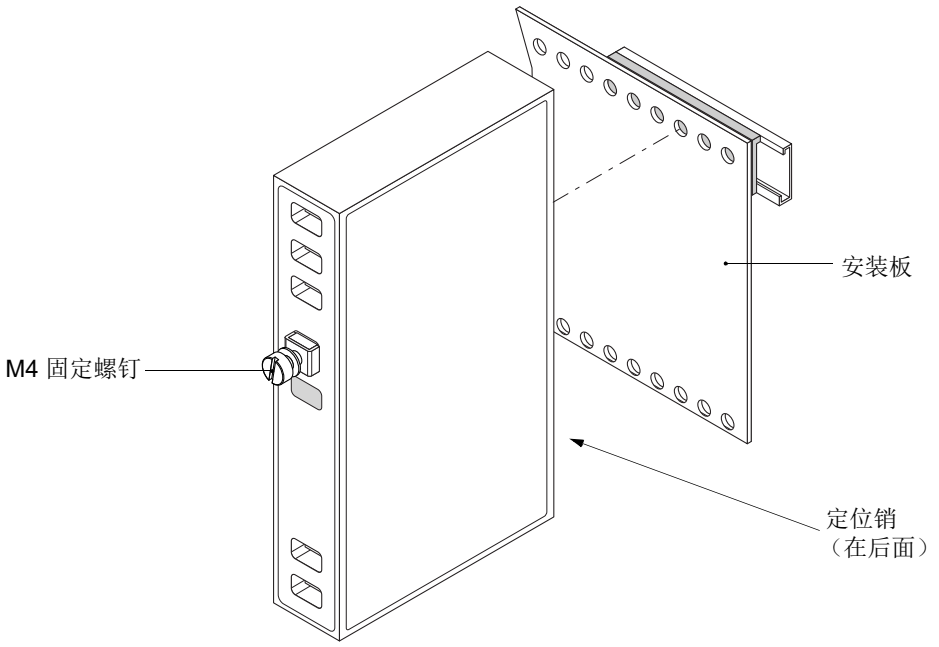


图 5-5：GSI122 和 GSI130 电气隔离装置使用的安装板

表 5-2：GSI122 或 GSI130 导线识别并映射到 GSI127

传输电缆 （“ 传感器侧 ”）				连接电缆 （“ 监视器侧 ”）				
GSI122 或 GSI130 端子	**线号**	**线色**	**GSI127 端子[1]**	**GSI122 或 GSI130 端子**	**线号**	**线色**	**GSI127 端子**	
+			**+**	信号			**O/P**	**信号**
–			**–**	0V[2]			**0V**	
				+24V			**+**	**24 VDC**
				0V[2]			**–**	

注释

1. 来自 “ 传感器侧 ” 电路的传输电缆的屏蔽层不得连接到 GSI127 电气隔离装置 （“ 开放式屏蔽 ”）。相反，屏蔽层必须连接到机柜 （含有 GSI127）入口处的强制接地支架。请参见 7 电气连接。
2. 为了提高性能和接口连接灵活性， GSI127 具有一个带两个专用螺丝端子 （O/P 和 0V）的单独差分 （“ 浮动 ”）输出以及一个带两个专用螺丝端子（+ 和 -）的单独 24 V_{DC} 电源输入，而 GSI122 和 GSI130 具有单个端子 (0V)，用作信号输出和电源输入的共同参考。将 GSI122 或 GSI130 更换为 GSI127 时， GSI127 的 0V （信号）端子和到电子监控系统的连接电缆之间的连接以及 GSI127 的 -(24 VDC) 端子和到电源的连接电缆之间的连接需要单独的导线。

5.4.2 安装和连接 GSI127

将 GSI122 或 GSI130 更换为 GSI127：

1- 确保遵循 5.4.1 拆卸 GSI122 或 GSI130 中所述的程序，且设备的电源已关闭。

2- 重复使用现有的 DIN 导轨或安装新的 DIN 导轨。

3- 将 GSI127 夹到 DIN 导轨上。

4- 靠近导线被压接到 AMP Faston 6.3 接线片的地方裁切每根导线。

5- 必要时：

- 调整传输电缆和连接电缆的长度。
- 剥去来自 “ 传感器侧 ” 电路的传输电缆外皮，以获得足够长的屏蔽线，以便连接到机柜 （含有 GSI127）入口处的强制接地支架 （请参见 7 电气连接）。

6- 剥去每根导线的末端以露出约 5 毫米的导体。

7- 对于要连接的每根导线：

- 利用在表 5-2 记录的信息，确定每根导线必须连接到哪个端子。
- 将导体插入相应的螺丝端子并拧紧固定螺钉直至拧紧，从而连接每根导线。

注意： GSI127 的外壳具有可拆卸的螺丝端子连接器，可以从外壳主体上拔下，以简化该装置的安装。

此页故意留空

6 配置外部监控系统

对于结合基于 CAxxx 的测量链（包括 IPC707 信号调节器）使用的外部监控和 / 或保护系统，例如 VM600 或 VibroSmart® 系统，务必确保为振动测量配置的警报级别（警报和 / 或危险）同时适合 IPC707 （带或不带诊断功能）和受保护的机械 / 系统的配置。

此外，结合基于 CAxxx 的振动测量链 （使用 IPC707 信号调节器）使用的外部监控和 / 或保护系统应当能够检测和报告 IPC707 信号调节器输出信号的诊断分量 (DC) 所传达的测量链状态，如 6.1 带诊断功能的 IPC707 和 6.2 不带诊断功能的 IPC707 所述。

另请见 4.4.1.3 运行概述。

例如， VM600 MPSx 软件 （VM600 机械保护卡使用）和 VibroSight® 软件 （VM600 状态监视卡和 VibroSmart® 监视和 / 或保护模块使用）支持传感器测量链 “OK” 功能，从而软件可以指示监控系统测得的信号标称偏差值 （诊断分量 (DC)）是否超出了正常 OK 上下限所定义的区域。

注意： 请参阅监控和 / 或保护系统文档以获取更多信息。

6.1 带诊断功能的 IPC707

在基于 CAxxx 的测量链中 （使用带诊断功能的 IPC707 信号调节器）， IPC707 持续地：

- 对 IPC707 测量链的组件 （传感器、电缆和信号调节器）执行运行状况检查。
- 更新其输出信号的诊断分量 (DC)，以传达 IPC707 测量链的完整性信息并指出检测到的问题的源头。
- 更新其输出信号中对应于所测得振动的测量分量 (AC)。

因此，结合带诊断功能的 IPC707 信号调节器使用的外部监控和 / 或保护系统应监测 IPC707 输出信号的诊断分量 (DC) 是否有图 6-1 和表 4-1 中所述的值。

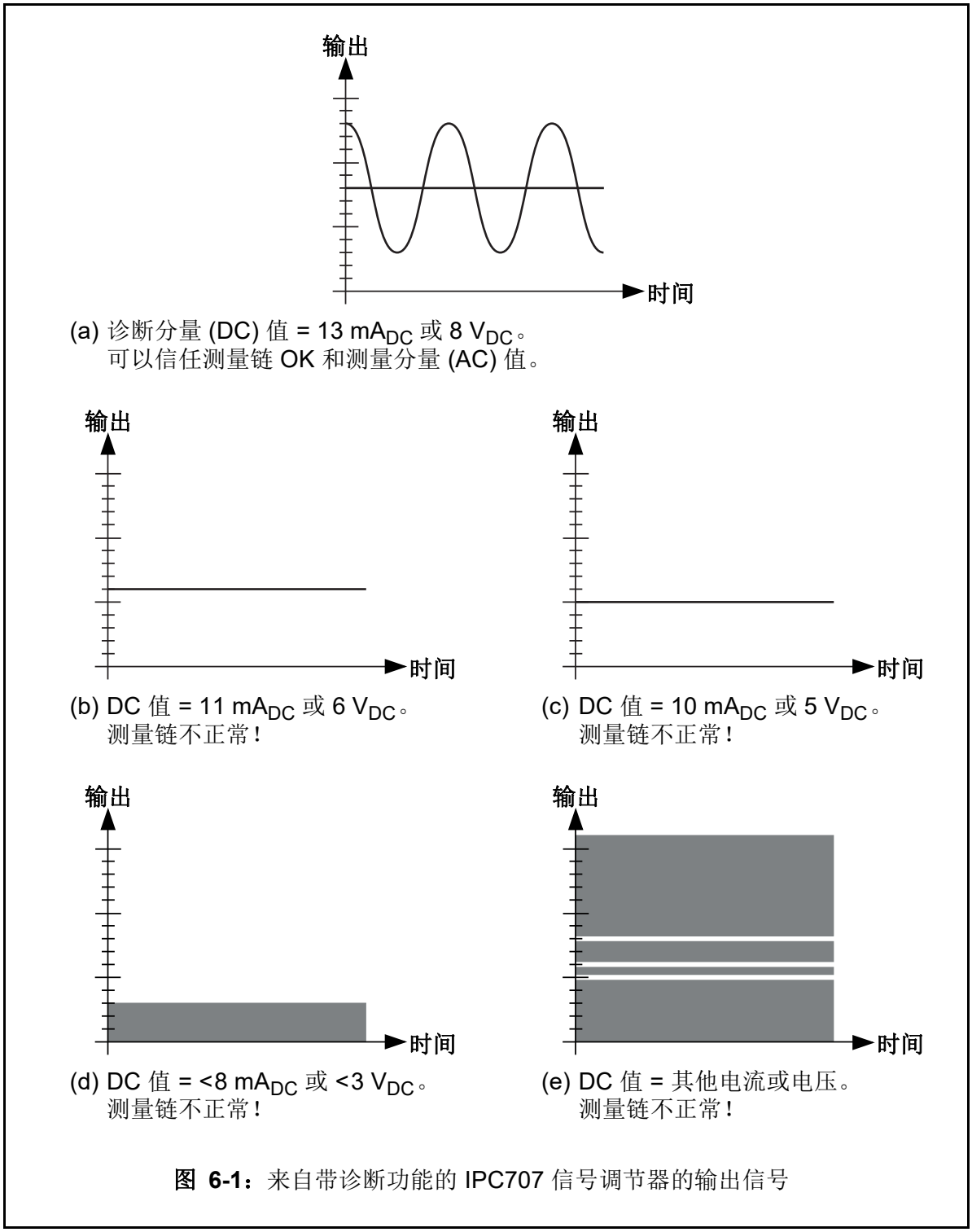


图 6-1：来自带诊断功能的 IPC707 信号调节器的输出信号

6.1.1 定义警报级别

如图 6-1 (a) 所示，在正常运行期间，带诊断功能的 IPC707 信号调节器将更新其输出信号，如下所述：

- 将诊断分量 (DC) 更新为 13 mA_{DC} ±0.5 mA_{DC} 或 8 V_{DC} ±0.5 V_{DC}。
- 将测量分量 (AC) 更新为值 <±5 mA_{DC} 或 <±5 V_{DC}，对应于测得的物理量 （振动），具体取决于为 IPC707 配置的传输功能 （请参见 4.4.1 关于 IPC707 信号调节器）。

如图 6-1 (b)、(c) 和 (d) 所示，在检测到已知问题后，带诊断功能的 IPC707 信号调节器将更新其输出信号，如下所述：

- 将诊断分量 (DC) 更新为以下值之一：
  - 11 mA_{DC} ±0.5 mA_{DC} 或 6 V_{DC} ±0.5 V_{DC}
  - 10 mA_{DC} ±0.5 mA_{DC} 或 5 V_{DC} ±0.5 V_{DC}
  - <8 mA_{DC} 或 <3 V_{DC}。

同样，如图 6-1 (e) 所示，在检测到未知问题后，带诊断功能的 IPC707 信号调节器将更新其输出信号，如下所述：

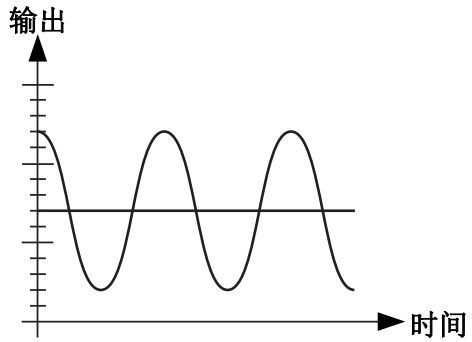
- 将诊断分量 (DC) 更新为以下值之一：
  - 其他电流值或其他电压值
    （即，不是 13 mA_{DC} 或 8 V_{DC}，不是 11 mA_{DC} 或 6 V_{DC}，不是 10 mA_{DC} 或 5 V_{DC}，也不是 <8 mA_{DC} 或 <3 V_{DC}）。

6.2 不带诊断功能的 IPC707

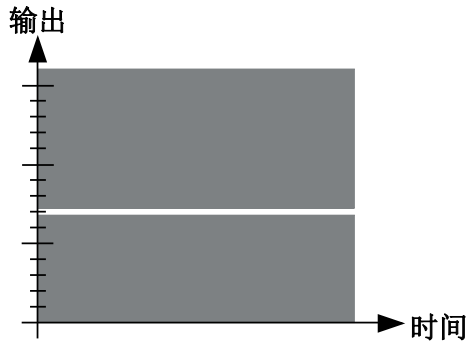
在基于 CAxxx 的测量链中 （使用不带诊断功能的 IPC707 信号调节器）， IPC707 持续地：

- 将其输出信号的诊断分量 (DC) 维持在固定的标称偏差值（以指出仅 IPC707 信号调节器正常运行）。
- 持续更新其输出信号中对应于所测得振动的测量分量 (AC)。

因此，结合不带诊断功能的 IPC707 信号调节器使用的外部监控和/或保护系统应监测 IPC707 输出信号的诊断分量 (DC) 是否有图 6-2 和表 4-2 中所述的值。



(a) 诊断分量 (DC) 值 = 12 mA_{DC} 或 7 V_{DC}。
可以信任测量链 OK 和测量分量 (AC) 值。



(b) DC 值 = 其他电流或电压。
测量链不正常！

图 6-2：来自不带诊断功能的 IPC707 信号调节器的输出信号

6.2.1 定义警报级别

如图 6-2 (a) 所示，在正常运行期间，不带诊断功能的 IPC707 信号调节器将更新其输出信号，如下所述：

- 将诊断分量 (DC) 更新为 12 mA_{DC} ±0.5 mA_{DC} 或 7 V_{DC} ±0.5 V_{DC}。
- 将测量分量 (AC) 更新为值 <±5 mA_{DC} 或 <±5 V_{DC}，对应于测得的物理量 （振动），具体取决于为 IPC707 配置的传输功能 （请参见 4.4.1 关于 IPC707 信号调节器）。

如图 6-1 (b) 所示，在检测到问题后，不带诊断功能的 IPC707 信号调节器将更新其输出信号，如下所述：

- 将诊断分量 (DC) 更新为以下值之一：
  - 其他电流值或其他电压值
    （即，不是 12 mA_{DC} 或 7 V_{DC}）。

7 电气连接

7.1 一般注意事项

在一般应用（非爆炸性环境）中，使用基于 CAxxx 的振动测量链不需要认证。

但是，在潜在爆炸性环境中，使用这些测量链需要获得防爆认证。测量链中每个产品所需的实际防爆认证取决于产品安装所在的 ATEX/IECEx 区域。

每个接线图（图 7-4和 图 7-5）包含的 “爆 炸区域要求的认证 (ATEX/IECEx)”表概述了根据其安装所在的 ATEX/IECEx 区域，测量链中每种产品都需要获得的防爆认证。也就是说，这些表格指出了当接线图某个区域（A 区、B 区 或 C 区）对应产品安装所在的不同 ATEX/IECEx 区域时，接线图该区域的产品需要获得防爆认证。

潜在爆炸性环境中安装的所有电缆（完整电缆和 /或 电缆组件）的长度必须根据相应防爆证书相应部分所定义的标准确定，这些标准概述如下图 7-6。

如需更多信息，请参见本手册附录中的防爆证书。 (防爆证书也可以从我们的网站 WWW.MEGGITTSENSING.COM/ENERGY 获得）

7.2 一般接线图

注意： 有关将设备连接到电子监控系统的信息可见系统随附的项目特定的接线图。

为了能在潜在爆炸性环境中使用，GSI127 拥有允许在防爆区域 2（危险区）安装的认证，即 “Ex nA [ia]” 安全栅。

其他信息在表 7-2 列出的接线图中给出。

表 7-1：带 IPC707 和 GSI127 的接线图索引

基于 CAxxx 的振动测量链详情	接线图	图
CAxxx 压电加速度计（带或不带整体电缆）、电缆组件、ABAxxx 外壳中的 IPC707 信号调节器、传输电缆、可选的 GSI127 电气隔离装置和可选的 APFxxx 电源 — 在工业应用中使用单个机柜。 **根据接线图中 “爆 炸区域要求的认证 (ATEX/IECEx)” 表中给出的信息，这些测量链适用于非爆炸性或潜在爆炸性环境。**	044-001-000E211 （第 1 页，共 3 页）	7-1
如上所述，但在工业应用中使用两个机柜。机柜以最长 50 米的连接电缆分隔开。 **根据接线图中 “爆 炸区域要求的认证 (ATEX/IECEx)” 表中给出的信息，这些测量链适用于非爆炸性或潜在爆炸性环境。**	044-001-000E211 （第 2 页，共 3 页）	7-2
如上所述，但汇总了用于测量链计算的防爆参数。	044-001-000E211 （第 3 页，共 3 页）	7-3

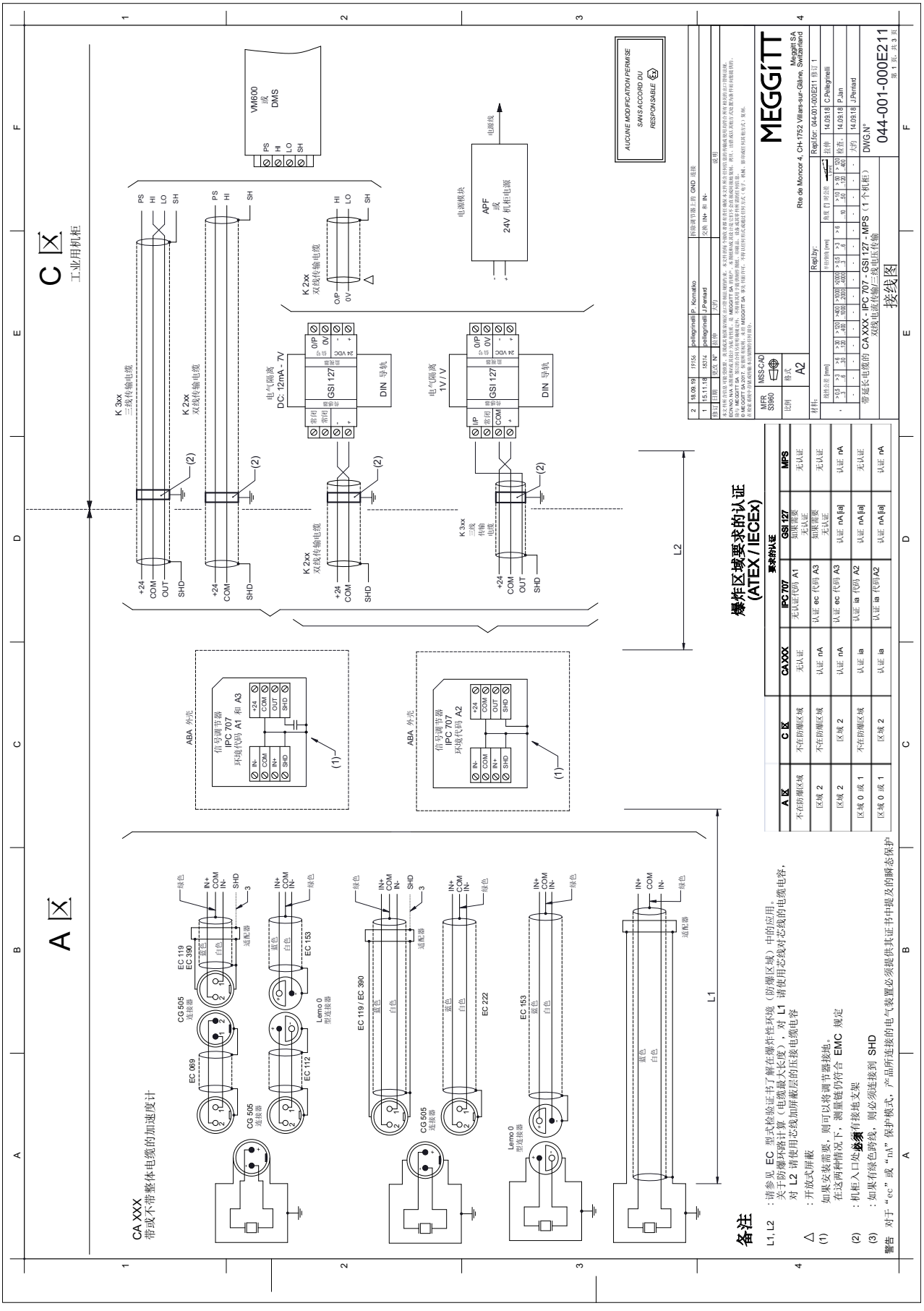


图 7-1： 基于 CAxxx 的振动测量链，适用于非爆炸性或潜在爆炸性环境 — 在工业应用中使用单个机柜

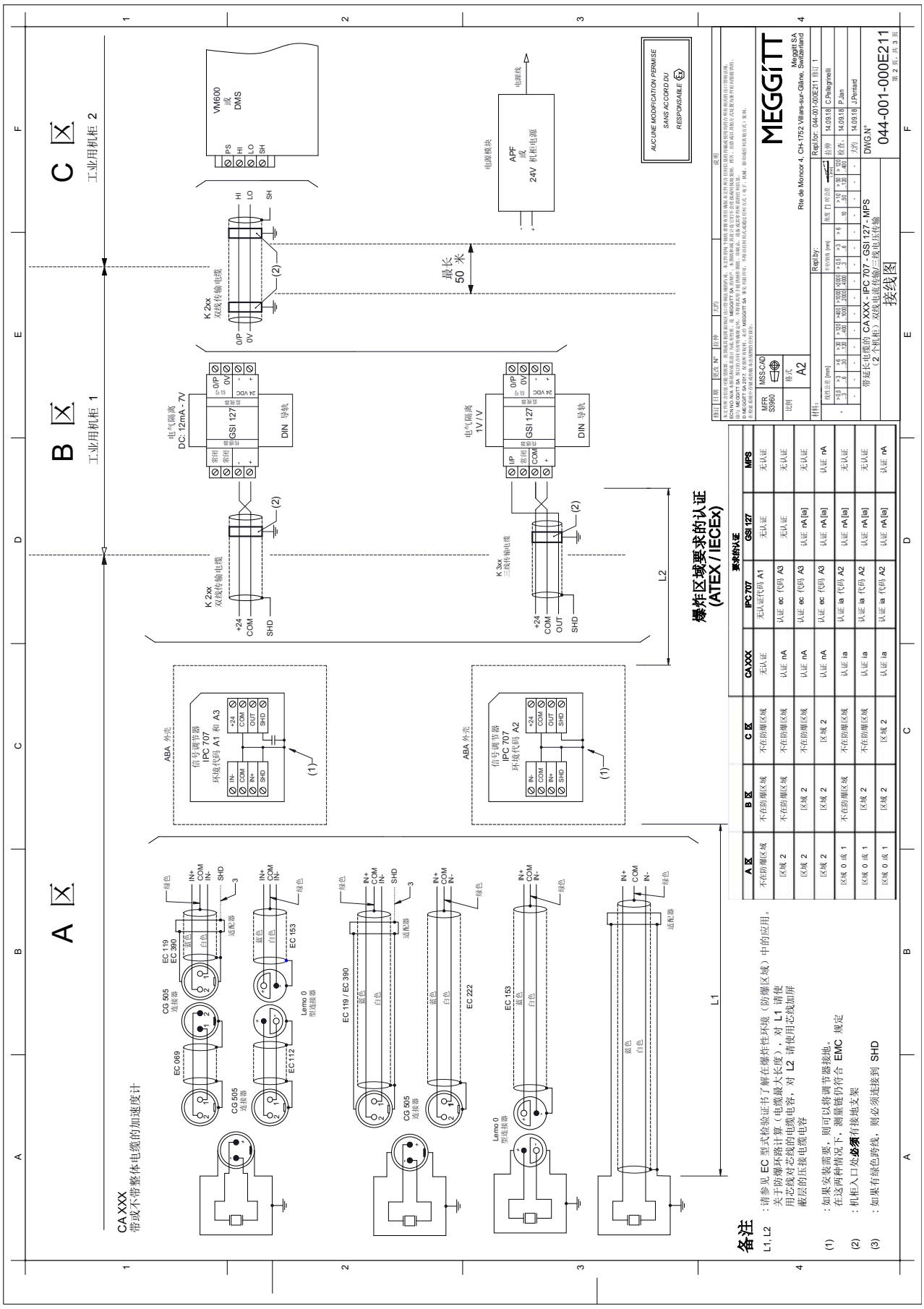


图 7-2： 基于 CAxxx 的振动测量链，适用于非爆炸性或潜在爆炸性环境 — 在工业应用中使用两个机柜

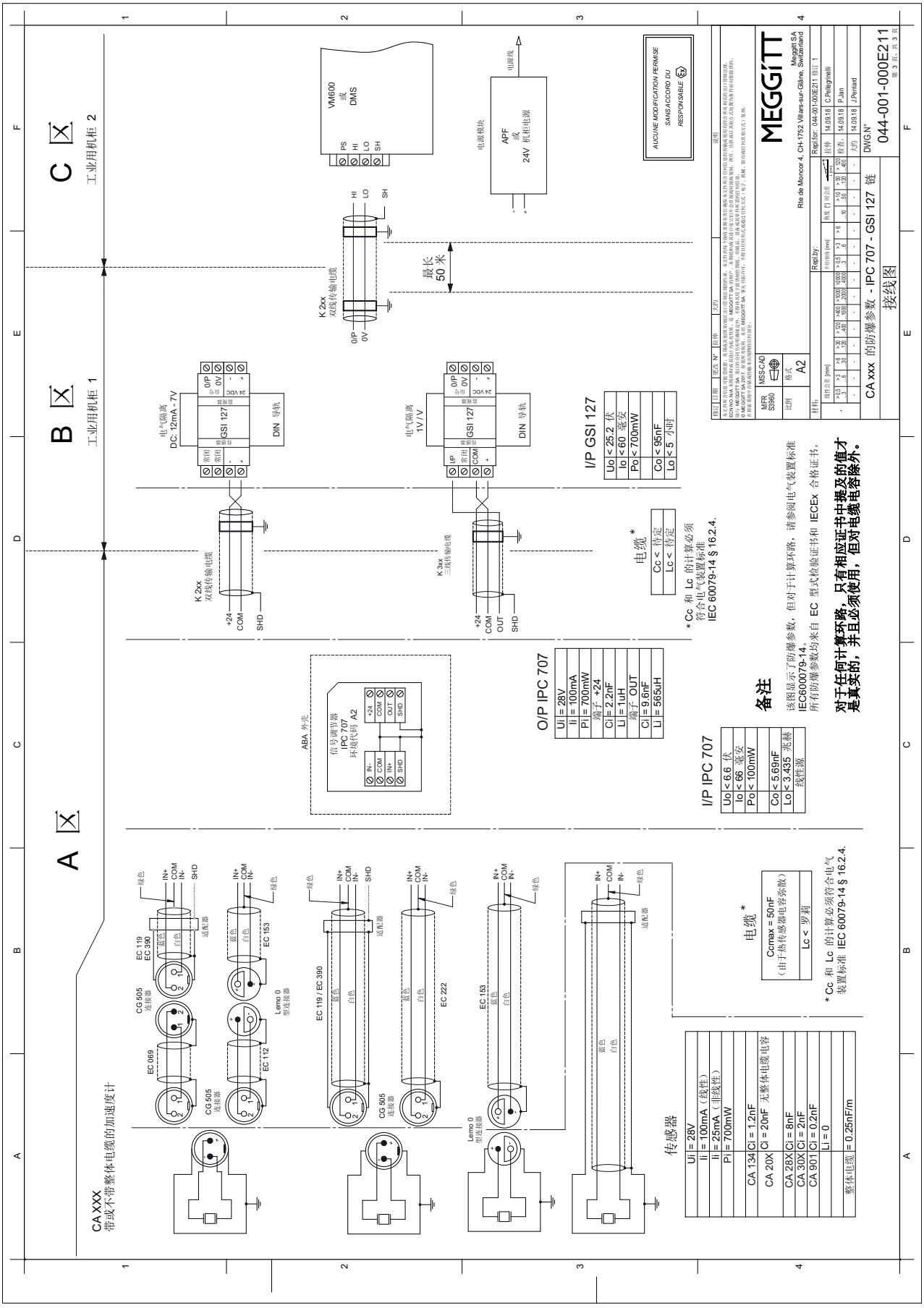


图 7-3： 基于 CAxxx 的振动测量链，适用于非爆炸性或潜在爆炸性环境 — 汇总了用于测量链计算的防爆参数

7.3 带 IPC704 信号调节器的一般接线图

注意： IPC707 信号调节器已取代 IPC704，因此以下接线图仅供参考。

其他信息在表 7-2 列出的接线图中给出。

表 7-2：带 IPC704 和 GSI127 的接线图索引

基于 CAxxx 的振动测量链详情	接线图	图
CAxxx 压电加速度计（带或不带整体电缆）、电缆组件、ABAxxx 外壳中的 IPC704 信号调节器、传输电缆、可选的 GSI127 电气隔离装置和可选的 APFxxx 电源 — 在工业应用中使用单个机柜。 **根据接线图中 “爆 炸区域要求的认证 (ATEX/IECEx)” 表中给出的信息，这些测量链适用于非爆炸性或潜在爆炸性环境。**	044-001-000E121（第 1 页，共 3 页）	7-4
如上所述，但在工业应用中使用两个机柜。机柜以最长 50 米的连接电缆分隔开。 **根据接线图中 “爆 炸区域要求的认证 (ATEX/IECEx)” 表中给出的信息，这些测量链适用于非爆炸性或潜在爆炸性环境。**	044-001-000E121（第 2 页，共 3 页）	7-5
如上所述，但汇总了用于测量链计算的防爆参数。	044-001-000E121（第 3 页，共 3 页）	7-6

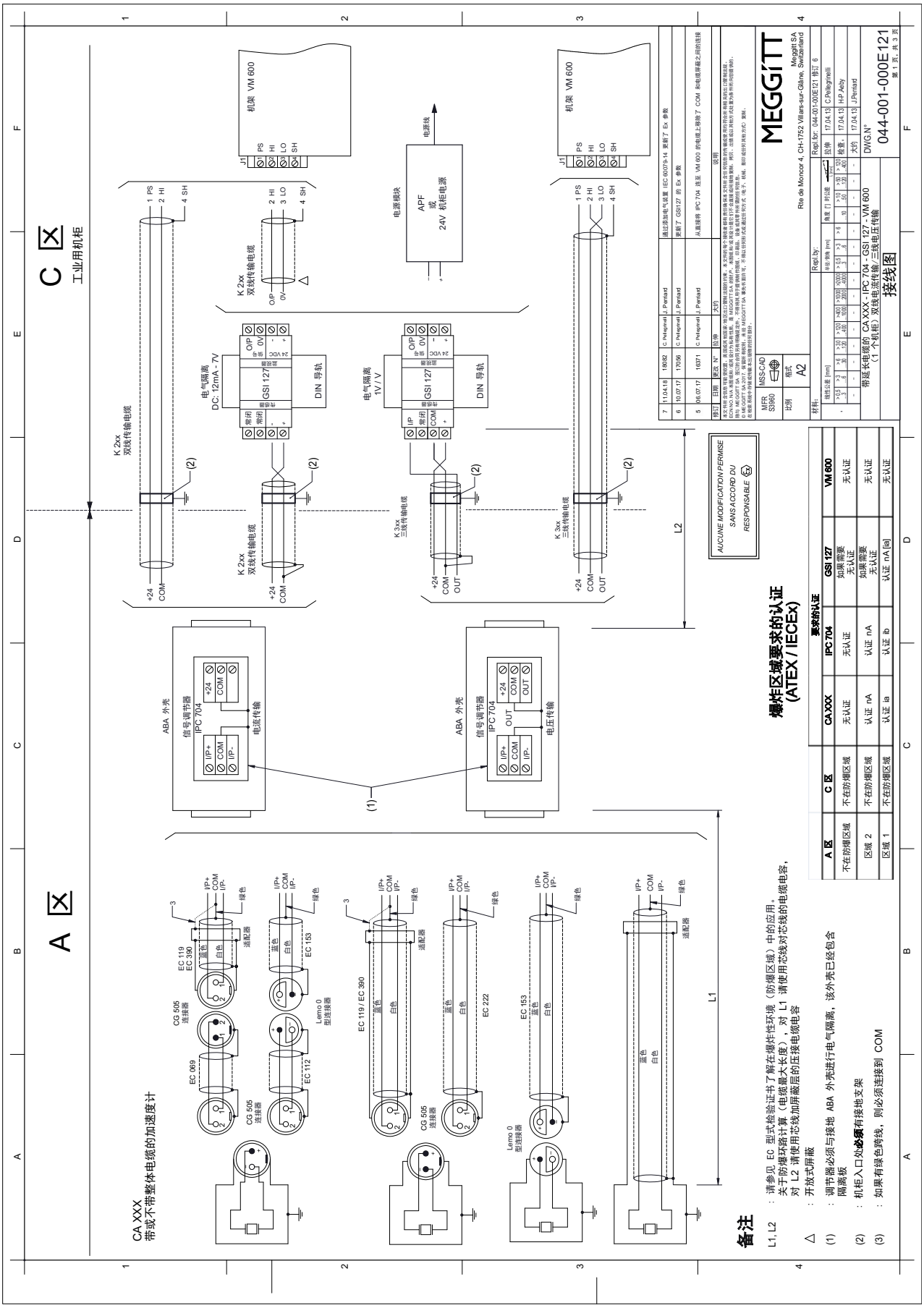
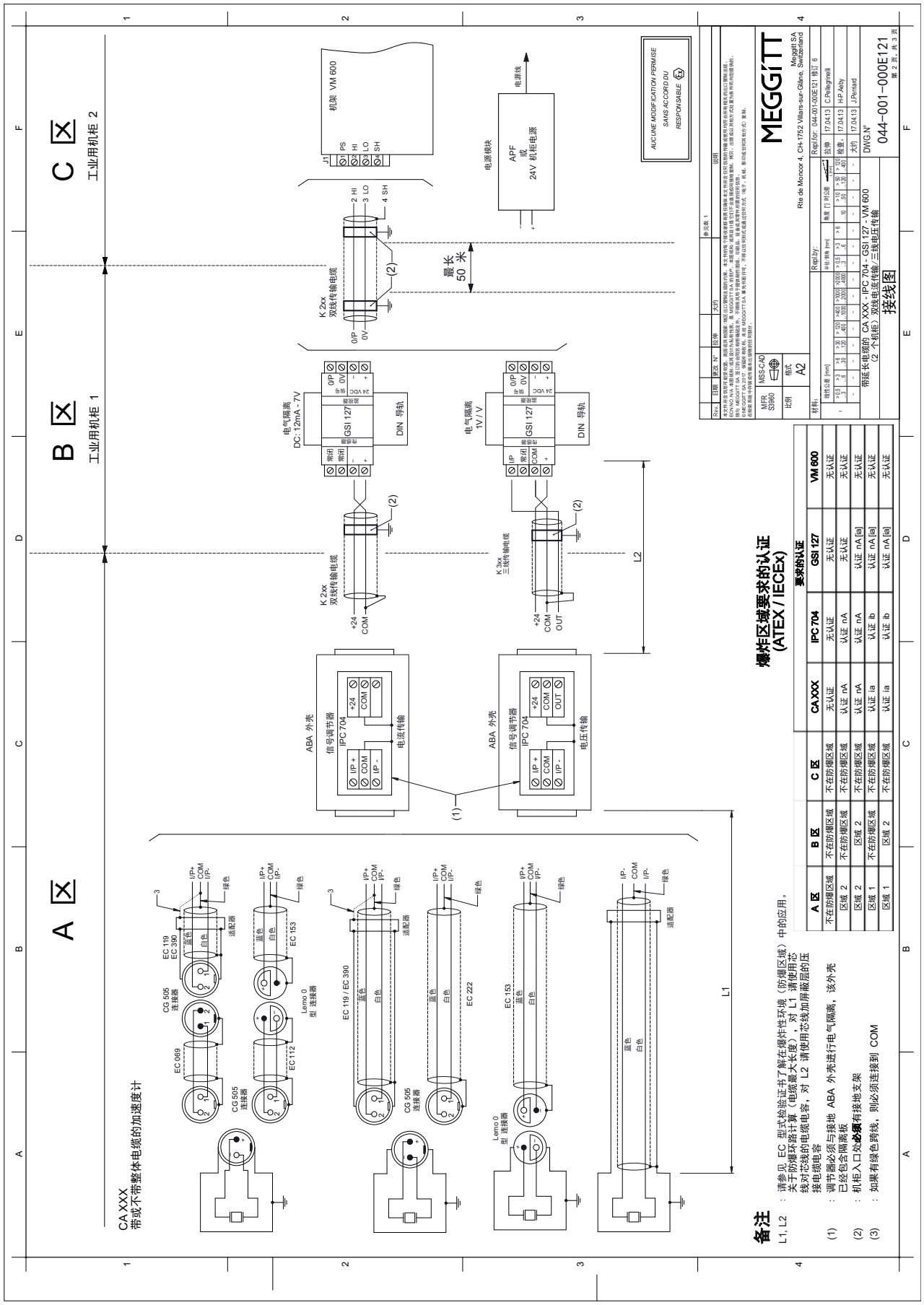


图 7-4： 基于 CAxxx 的振动测量链，适用于非爆炸性或潜在爆炸性环境 — 在工业应用中使用单个机柜



爆炸区域要求的认证
(ATEX / IECEx)

			要求的认证			
A 区	**B 区**	**C 区**	**CAXXX**	**IPC704**	**GSI 127**	**VM 600**
不在防爆区域	不在防爆区域	不在防爆区域	无认证	无认证	无认证	无认证
区域 2	不在防爆区域	不在防爆区域	认证 nA	认证 nA	无认证	无认证
区域 2	区域 2	不在防爆区域	认证 nA	认证 nA	认证 nA [ia]	无认证
区域 1	不在防爆区域	不在防爆区域	认证 ia	认证 fb	认证 nA [ia]	无认证
区域 1	区域 2	不在防爆区域	认证 ia	认证 fb	认证 nA [ia]	无认证

备注

L1, L2 ：请参见 EC 型式检验证书了解在爆炸性环境（防爆区域）中的应用。关于防爆环路计算（电缆最大长度），对 L1 请使用芯线对芯线的电缆电容，对 L2 请使用芯线加屏蔽层的压接电缆电容

(1) ：调节器必须与接地 ABA 外壳进行电气隔离，该外壳已经包含隔离板

(2) ：机柜入口处**必须**有接地支架

(3) ：如果有绿色跨线，则必须连接到 COM

MEGGiTT
Rte de Moncor 4, CH-1752 Villars-sur-Glâne, Switzerland
Meggitt SA

MFR S3960 | MSS-CAD | 比例 | 幅式 A2

带延长电缆的 CA XXX - IPC 704 - GSI 127 - VM 600
(2 个机柜) 双线电流传输 / 三线电压传输
接线图

DWG.N° 044-001-000E121
第 2 页，共 3 页

图 7-5： 基于 CAxxx 的振动测量链，适用于非爆炸性或潜在爆炸性环境 — 在工业应用中使用两个机柜

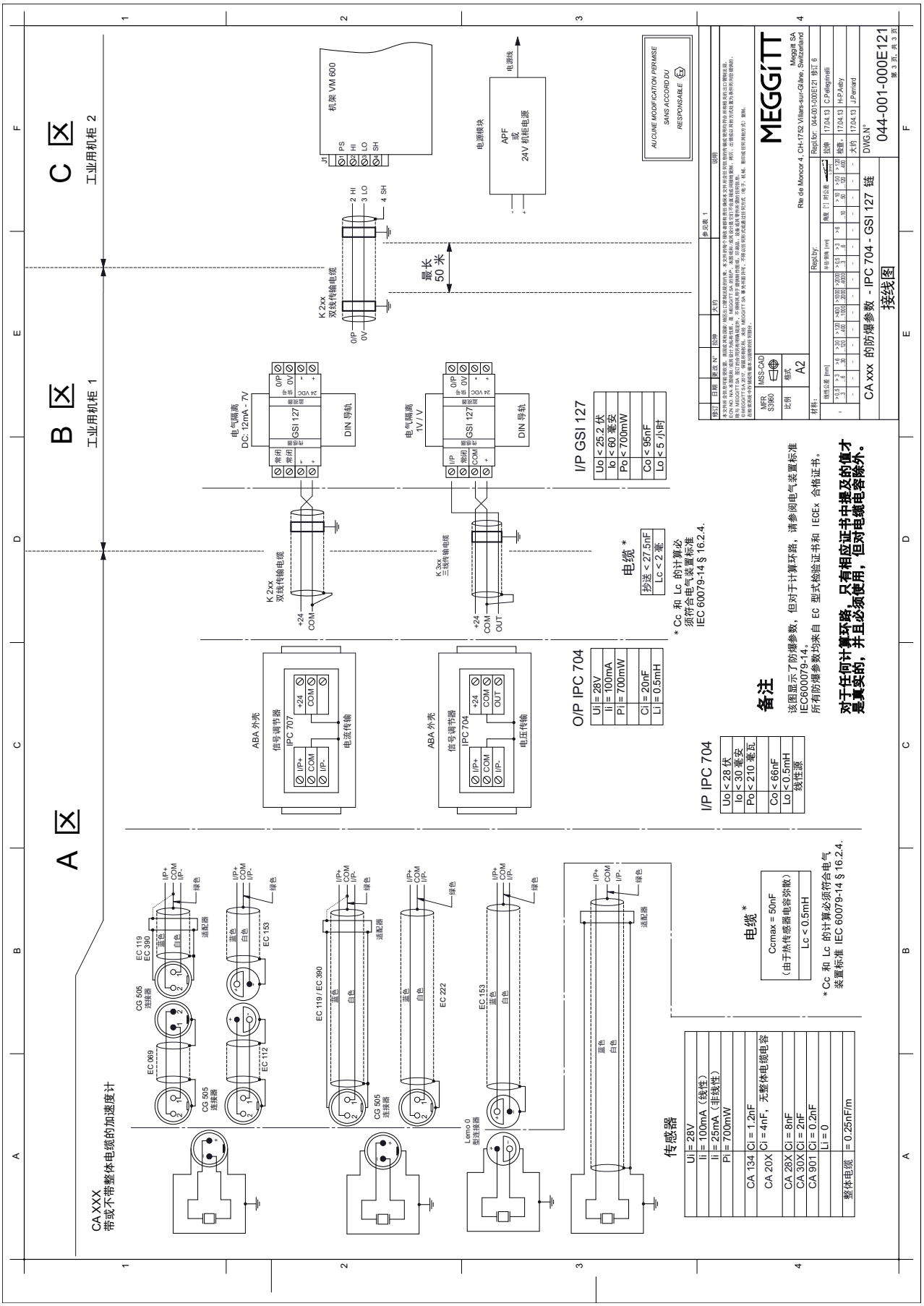


图 7-6： 基于 CAxxx 的振动测量链，适用于非爆炸性或潜在爆炸性环境 — 汇总了用于测量链计算的防爆参数

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8 维护

8.1 一般规定

本手册中所述的基于 CAxxx 的振动测量链 （即 CAxxx 压电加速度计、电缆或相关设备，例如 IPC70x 信号调节器和 GSI12x 电气隔离装置）无需特殊维护。

注意： 未经授权的人员尝试对仍在保修范围内的设备进行任何修改或维修均会导致保修失效。

请参见 10 服务与支持获取与缺陷硬件维修有关的详细联系方式。

8.2 对潜在爆炸性环境中使用的设备的要求

需要维护时，只能由具有防爆资质的合格人员使用相关材料执行。

对可在潜在爆炸性环境中使用的 MEGGITT VIBRO-METER® 设备执行的任何维护作业必须遵守相应防爆证书相应部分规定的标准。

如需更多信息，请参见本手册附录中的防爆证书。（防爆证书也可以从我们的网站 WWW.MEGGITTSENSING.COM/ENERGY 获得）

请勿尝试修改或维修 MEGGITT VIBRO-METER® 产品系列中在潜在爆炸性环境中使用的设备。

8.3 清洁

基于 CAxxx 的振动测量链部件无需清洁。

但是，如果确实需要清洁：

- 使用湿布清洁，然后根据需要用干布擦干。
- 远离带电的电气零件。
- 请勿使用任何溶剂或清洁剂。切勿往部件上倾倒或喷洒任何清洁剂或液体。

如果确实需要清洁，请仅使用湿布擦拭，并远离通电（“带 电 ”）的电气零件。

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9 报废产品处置

基于 CAxxx 的振动测量链使用的部分组件 （例如 IPC70x 信号调节器和 GSI12x 电气隔离装置）属于电气 / 电子产品，因此，在使用寿命结束时必须以可接受的方式进行处置。这对于减少污染和提高资源效率很重要。

注意： 出于环境和经济原因，报废的电气和电子设备必须与其他废弃物分开收集和处理：不得进入垃圾填埋场 （或者倾倒场、废料场、垃圾场、垃圾堆或垃圾堆积场）。

在欧洲 （欧盟），报废的电气 / 电子产品被归类为废弃电子电气设备 (WEEE)，须遵守欧盟 (EU) 关于废弃电子电气设备的指令 2012/19/EU （通常称为 WEEE 指令）的要求。

根据 WEEE 法规，所有废弃电气电子设备应当单独收集，然后根据最佳可行的环保技术进行处理和处置。这是因为电子废弃物 （或电子废物）可能含有对环境和 / 或人体健康有害的物质。此外，电子废弃物也是可促进循环经济的宝贵原材料来源。

产品标签上使用 WEEE 标志（“ 打叉的带轮垃圾桶 ”）表示设备在其使用寿命终了时必须妥善进行处理和处置 （请参见图 9-1）。

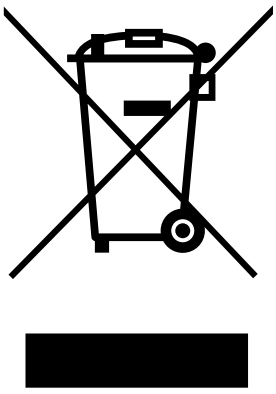

图 9-1： WEEE 标志

尽管许多非欧盟国家制定了 WEEE 法规，但不同的报废产品处置法律法规在世界其他国家和地区也适用。因此，请咨询您当地的主管部门以获取与您所在国家和地区有关的信息和指南。

注意： 电气 / 电子产品在使用寿命终了时必须以环保的方式进行处置。
在欧盟成员国内， WEEE 指令适用。
在世界其他国家和地区，可能适用不同的法律法规，因此请咨询您当地的主管部门。

有关报废产品处置的其他信息和指南，请联系您当地的 Meggitt 代表。或者，请联系我们的总公司：

环境、健康与安全部门
Meggitt SA
Route de Moncor 4
PO Box 1616
CH-1701 Fribourg
瑞士

电话：+41 26 407 11 11
电子邮箱：ehs@ch.meggitt.com
网站：www.meggittsensing.com/energy

10 服务与支持

10.1 联系我们

Meggitt 的全球客户支持网络提供一系列支持，包括 10.2 技术支持和 10.3 销售和维修支持。如需客户支持，请联系您当地的 Meggitt 代表。或者，请联系我们的总公司：

客户支持部门
Meggitt SA
Route de Moncor 4
PO Box 1616
CH-1701 Fribourg
瑞士

电话：+41 26 407 11 11
电子邮箱：energysupport@ch.meggitt.com
网站：www.meggittsensing.com/energy

10.2 技术支持

Meggitt 的技术支持团队提供售前和售后技术支持，包括：

1- 一般咨询
2- 技术咨询
3- 故障排除
4- 实地考察。

注意： 如需更多信息，请联系您当地的 Meggitt 代表或 Meggitt SA （请参见 10.1 联系我们）。

10.3 销售和维修支持

Meggitt 的销售团队提供售前和售后支持，包括提供以下方面的建议：

1- 新产品
2- 零配件
3- 维修。

注意： 如果产品需要返修，则应随附填写完成的能源产品退货表，详见第 10-4 页。

10.4客户反馈

作为我们改善客户服务这一持续承诺的一部分，我们热忱欢迎您提出意见。提供反馈时，请完成第 10-7 页上的 能源客户反馈表，然后交回给 Meggitt SA 总部（请参见 10.1 联系我们）。

维修和退货

能源产品退货程序

如果是 Meggitt Vibro-Meter® 能源产品需要退回给 Meggitt Switzerland，请使用 Meggitt Vibro-Meter® 网站 www.meggittsensing.com/energy/service-and-support/repair 上的在线产品退货程序

如网站所述，产品退货程序如下：

1- 填写完成并在线提交网站上提供的**能源产品退货表**（注意：* 表示必填字段）。

对于要退回的每种能源产品，必须填写并在线提交单独的能源产品退货表。
在线提交能源产品退货表后，将会在回复时发送一封包含能源产品退货参考号的确认邮件，确认 Meggitt Switzerland 已收到该产品退货表。
请在以后有关产品退货的所有通信中都使用能源产品退货参考号。

2- 完成并包含最终用户证书。

对于要退回的每种能源产品，还需要相关的最终用户证书。
建议处理少量产品的小型组织使用一次性最终用户证书，建议处理较多产品的大型组织使用年度最终用户证书。
任何一个最终用户证书均可用于涵盖多个产品。

注意： 请访问网站或联系我们的客户支持部门（请参见 10.1 联系我们）以获取适当的最终用户证书表格。

3- 请将能源产品以及确认电子邮件和最终用户证书的打印副本发送至 Meggitt Switzerland，地址为

Meggitt SA, Repairs department, Route de Moncor 4, PO Box 1616, CH-1701 Fribourg, Switzerland。

尽管单个最终用户证书（打印副本）可以用于多个产品，但每个要退回的产品仍需要单独的确认电子邮件（打印副本）。

4- 此外，价值 0.00 瑞士法郎的采购订单 (PO) 必须发送给 Meggitt Switzerland，以支持初步问题诊断。

注意： 请包括以下再现的**能源产品退货表**，以支持收集填写和在线提交表格所需的信息。

能源产品退货表

联系方式

名字：*

姓氏：*

职务：

公司：*

地址：*

国家 / 地区：*

电子邮箱：*

电话：*

传真：

产品信息

产品类型：*

零件号 (PNR)：*

序列号 (SER)：

注意：如果序列号 (SER) 未知，请输入“未知”。

防爆产品：

☐ 是

☐ 否

SIL 产品：*

☐ 是

☐ 否

Meggitt SA 采购订单号：

购买日期 (dd.mm.yyyy)：

保修产品：

☐ 是

☐ 否

☐ 不知道

安装地点：

最终用户：

退货信息

退货原因：*

☐ 维修

☐ 开箱即故障

如果退货原因为“维修”，请回答以下问题：*

故障类型：

☐ 持续

☐ 时断时续

☐ 取决于温度

故障发生前运行了多长时间？

故障描述：

请提供详细描述，以帮助诊断问题。

如果退货原因为“开箱即故障”，请回答以下问题：*

开箱即故障的类型：

☐ 产品损坏

☐ 产品配置错误

☐ 交付的产品不正确

☐ 文档 / 标签问题

☐ 产品到货即损

其他信息：

请提供尽可能多的信息，以帮助诊断问题。

防爆产品信息 — 仅防爆产品需要的其他信息

产品是否安装在危险区域 （潜在爆炸性环境）？：

☐ 是

☐ 否

如果产品安装在危险区域，请回答以下问题：

故障发生前运行了多长时间？：

其他信息：

SIL 产品信息 — 仅 SIL 产品需要的其他信息 *

产品是否安装在安全相关系统中？ *

☐ 是

☐ 否

如果产品安装在安全相关系统中，请回答以下问题：*

系统是否在安全模式下发生故障 **？：* （也就是说，安全继电器工作了，但跳闸是假的。）

☐ 是

☐ 否

☐ 不适用

系统是否在危险状态下发生故障 **？：* （也就是说，故障并未导致安全状态。）

☐ 是

☐ 否

☐ 不适用

故障发生前运行了多长时间 （小时）？：*

其他信息：

** LED 指示灯故障被视为是外观问题。

反馈

能源客户反馈表

手册信息

手册标题：

使用 CAxxx 压电加速度计的振动测量链 安装手册

参考号：	MACA/ZH-CN	版本：	版本 17
发布日期：	2023 年 01 月		

客户联系方式

名字：*

姓氏：*

职务：

公司：*

地址：*

国家 / 地区：*

电子邮箱：*

电话：*

传真：

反馈 — 一般

请回答以下问题：

文档是否组织得有条理？	☐ 是	☐ 否
信息在技术上是否准确？	☐ 是	☐ 否
是否需要更多技术细节？	☐ 是	☐ 否
说明是否完整明确？	☐ 是	☐ 否
描述是否容易理解？	☐ 是	☐ 否
示例和图表 / 照片是否有帮助？	☐ 是	☐ 否
示例和图表 / 照片是否足够？	☐ 是	☐ 否
风格 / 措词是否易于阅读？	☐ 是	☐ 否
是否有任何信息未包括在内？	☐ 是	☐ 否

请在下面的 “ 反馈 — 其他 ” 部分包含所有其他信息。

反馈 — 其他

其他信息：

请提供尽可能多的反馈，以帮助我们改善产品文档。
必要时请使用另一张纸继续 .....

附录 A：ATEX 认证

表 A-1：相关 ATEX 证书

涵盖的产品	证书编号
ABA160、 JB116 和 JB118	PTB 01 ATEX 1061 U
ABA161	PTB 98 ATEX 3101 U
ABA17x	BVS 15 ATEX E 112 U
	Presafe 14 ATEX 5378 U
CA134	LCIE 02 ATEX 6110 X
	LCIE 09 ATEX 1043 X
CA20x	LCIE 02 ATEX 6179 X
	LCIE 09 ATEX 1044 X
CA28x、CE28x 和 CE31x	KEMA 04 ATEX 1055
	LCIE 09 ATEX 1047 X
CA30x	KEMA 04 ATEX 1294
	LCIE 09 ATEX 1048 X
CA901	LCIE 08 ATEX 6017 X
	LCIE 09 ATEX 1046 X
GSI127	LCIE 13 ATEX 3037 X
IPC707	LCIE 18 ATEX 1012 X
	LCIE 18 ATEX 3026 X
电缆接头 （填料函压盖）	ITS 16 ATEX 101335 X
	ITS 16 ATEX 101336 X
	LCIE 02 ATEX 0038 U
	LCIE 03 ATEX 0033 U
	PTB 11 ATEX 1007 X
	PTB 98 ATEX 3130
	SEV 15 ATEX 0151
	SEV 15 ATEX 0152 X

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EX CERTIFICATE – ATEX

vibro-meter®

PTB 01 ATEX 1061 U
for
ABA15x, ABA160, JB116, JB118 and PA151 enclosures

Note: Although the Ex certificate may be included in more than one language, the liability of the notified body applies only on the text of the original copy of the certificate that it published.

Document reference PTB 01 ATEX 1061 U
Edition 6 – March 2022

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Physikalisch-Technische Bundesanstalt
Braunschweig und Berlin
Nationales Metrologieinstitut

EU-Baumusterprüfbescheinigung

(1)

(2) Komponente zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen
Richtlinie 2014/34/EU

(3) EU-Baumusterprüfbescheinigungsnummer

PTB 01 ATEX 1061 U **Ausgabe: 1**

(4) Produkt: Leergehäuse Typ 26.******

(5) Hersteller: ROSE Systemtechnik GmbH

(6) Anschrift: Erbeweg 13 - 15, 32457 Porta Westfalica, Deutschland

(7) Die Bauart dieses Produkts sowie die verschiedenen zulässigen Ausführungen sind in der Anlage und den darin aufgeführten Unterlagen zu dieser Baumusterprüfbescheinigung festgelegt.

(8) Die Physikalisch-Technische Bundesanstalt, notifizierte Stelle Nr. 0102 gemäß Artikel 17 der Richtlinie 2014/34/EU des Europäischen Parlaments und des Rates vom 26. Februar 2014, bescheinigt, dass dieses Produkt die grundlegenden Sicherheits- und Gesundheitsanforderungen für die Konzeption und den Bau von Produkten zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen gemäß Anhang II der Richtlinie erfüllt.

Die Ergebnisse der Prüfung sind in dem vertraulichen Prüfbericht PTB Ex 16-16032 festgehalten.

(9) Die grundlegenden Sicherheits- und Gesundheitsanforderungen werden erfüllt durch Übereinstimmung mit

EN 60079-0:2012 + A11:2013, EN 60079-7:2015, EN 60079-31:2014

(10) Das Zeichen "U" hinter der Zertifikatsnummer gibt an, dass dieses Zertifikat nicht mit einem für ein Gerät oder Schutzsystem vorgesehenen Zertifikat verwechselt werden darf. Diese Komponenten-Bescheinigung darf als Basis für die Bescheinigung eines Gerätes oder Schutzsystems verwendet werden.

(11) Diese EU-Baumusterprüfbescheinigung bezieht sich nur auf Konzeption und Prüfung des festgelegten Produkts gemäß Richtlinie 2014/34/EU. Weitere Anforderungen dieser Richtlinie gelten für die Herstellung und das Bereitstellen auf dem Markt. Diese Anforderungen werden nicht durch diese Bescheinigung abgedeckt.

(12) Die Kennzeichnung des Produkts muss die folgenden Angaben enthalten:

II 2 G Ex eb IIC Gb
II 2 D Ex tb IIIC Db

Konformitätsbewertungsstelle, Sektor Explosionsschutz Braunschweig, 7. September 2016
Im Auftrag

Dr.-Ing. D. Markus
Oberregierungsrat

ZSEx10110d c

EU-Baumusterprüfbescheinigungen ohne Unterschrift und ohne Siegel haben keine Gültigkeit.
Diese EU-Baumusterprüfbescheinigung darf nur unverändert weiterverbreitet werden.
Auszüge oder Änderungen bedürfen der Genehmigung der Physikalisch-Technischen Bundesanstalt.
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Braunschweig und Berlin
Nationales Metrologieinstitut

(13) # Anlage

(14) **EU-Baumusterprüfbescheinigung PTB 01 ATEX 1061 U, Ausgabe: 1**

(15) Beschreibung des Produkts

Leergehäuse Typ 26.****** aus Polyester, das mit Flanschen und einer Schauscheibe aus Glas oder Kunststoff ausgestattet sein kann. Es kann wahlweise mit einem Erdverbindungsbolzen in Verbindung mit / oder ohne einer Off-shore-Platte ausgestattet werden. Es können wahlweise geschraubte oder genietete Typenschilder aus Edelstahl angebracht werden.

Technische Daten

Baugrößen und Produktreihen			
Baugrößen Typ 26.08 08 06 bis 26.41 40 20 (Ex-Standard-Gehäuse)	Breite	Höhe	Tiefe
kleinste	80 mm	75 mm	56 mm
größte	400 mm	405 mm	201 mm
Baugrößen Typ 26.88 01 00 bis 26.88 04 00 (Ex-Okta Box-Gehäuse)	Breite	Höhe	Tiefe
kleinste	81 mm	81 mm	75 mm
größte	200 mm	200 mm	125 mm
Baugrößen Typ 26.14 01 00 bis 26.14 03 00 (Ex-Polyester Flansch-Gehäuse)	Breite	Höhe	Tiefe
kleinste	270 mm	170 mm	136 mm
größte	541 mm	270 mm	136 mm
Baugrößen Typ 26.12 20 00 bis 26.40 60 00 (Mini-Polyglas-Ex-Gehäuse und Polyglas-Ex-Gehäuse)	Breite	Höhe	Tiefe
kleinste	200 mm	120 mm	100 mm
größte	405 mm	605 mm	252 mm
Baugrößen Typ 26.01 22 15 bis 26.01 44 15 (Ex-Combi Box-Gehäuse)	Breite	Höhe	Tiefe
kleinste	177 mm	177 mm	145 mm
größte	360 mm	360 mm	145 mm

EU-Baumusterprüfbescheinigungen ohne Unterschrift und ohne Siegel haben keine Gültigkeit.
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Anlage zur EU-Baumusterprüfbescheinigung PTB 01 ATEX 1061 U, Ausgabe: 1

Umgebungstemperaturbereich
-55 °C bis +127 °C mit Silikondichtung
-40 °C bis +100 °C mit HF Dichtung
-40 °C bis +100 °C mit PU Schaum
-20 °C bis + 85 °C mit CR Dichtung
-20 °C bis +100 °C mit Glasscheibe
-50 °C bis +100 °C mit PC-Scheibe mono duro clear 8099 leitfähig
bis +105 °C Ex-PF-Gehäuse, Mini-Polyglas-Ex-Gehäuse and Polyglas-Ex-Gehäuse
(minimale Temperatur ist abhängig von der verwendeten Dichtung)

Schutzgrad: ..... IP 66 nach EN 60529

Gewindestift des Erdverbindungsbolzens: M6x60, M8x50, M10x60, M12x80

Typschlüssel

26.	**	**	**
1	2	3	4

1: Typ, Material Polyester
2: Höhe oder Produktreihe (siehe oben)
3: Breite oder Nummer, die von der Produktreihe abhängt
4: Tiefe oder Nummer, die von der Produktreihe abhängt

Änderungen

Neue Prüfung nach den Normen EN 60079-0:2012 + A11:2013, EN 60079-7:2015 und EN 60079-31:2014.

Dadurch ändert sich das Kennzeichen in :

II 2 G Ex eb IIC Gb

II 2 D Ex tb IIIC Db

(16) Prüfbericht PTB Ex 16-16032

(17) Einschränkungen für Herstellung, Einbau und Inbetriebnahme

Die Installation von elektrischen Bauteilen erfordert eine neue Bewertung durch eine benannte Prüfstelle.

EG-Baumusterprüfbescheinigungen ohne Unterschrift und ohne Siegel haben keine Gültigkeit.
Diese EG-Baumusterprüfbescheinigung darf nur unverändert weiterverbreitet werden.
Auszüge oder Änderungen bedürfen der Genehmigung der Physikalisch-Technischen Bundesanstalt.
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Nationales Metrologieinstitut

Anlage zur EU-Baumusterprüfbescheinigung PTB 01 ATEX 1061 U, Ausgabe: 1

(18) Grundlegende Sicherheits- und Gesundheitsanforderungen

Erfüllt durch Übereinstimmung mit den vorgenannten Normen.

Nach Artikel 41 der Richtlinie 2014/34/EU dürfen EG-Baumusterprüfbescheinigungen nach Richtlinie 94/9/EG, die bereits vor dem Datum der Anwendung von Richtlinie 2014/34/EU (20. April 2016) bestanden, so betrachtet werden, als wenn sie bereits in Übereinstimmung mit der Richtlinie 2014/34/EU ausgestellt wurden. Mit Genehmigung der Europäischen Kommission dürfen Ergänzungen zu solchen EG-Baumusterprüfbescheinigungen und neue Ausgaben solcher Zertifikate weiterhin die vor dem 20. April 2016 ausgestellte originale Zertifikatsnummer tragen.

Konformitätsbewertungsstelle, Sektor Explosionsschutz
Im Auftrag

Braunschweig, 7. Septemer 2016

Dr.-Ing. D. Markus
Oberregierungsrat

EG-Baumusterprüfbescheinigungen ohne Unterschrift und ohne Siegel haben keine Gültigkeit.
Diese EG-Baumusterprüfbescheinigung darf nur unverändert weiterverbreitet werden.
Auszüge oder Änderungen bedürfen der Genehmigung der Physikalisch-Technischen Bundesanstalt.
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EU-TYPE-EXAMINATION CERTIFICATE

(Translation)

(1)

(2) Equipment or Protective Systems Intended for Use in Potentially Explosive Atmospheres - **Directive 2014/34/EU**

(3) EU-Type Examination Certificate Number:

PTB 01 ATEX 1061 U **Issue: 1**

(4) Product: Empty enclosure type 26.******

(5) Manufacturer: ROSE Systemtechnik GmbH

(6) Address: Erbeweg 13, 32457 Porta Westfalica, Germany

(7) This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 in accordance with Article 17 of the Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres, given in Annex II to the Directive.

The examination and test results are recorded in the confidential Test Report PTB Ex 16-16032.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0:2012 + A11:2013, EN 60079-7:2015, EN 60079-31:2014

(10) If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.

(11) This EU-Type Examination Certificate relates only to the design and construction of the specified product in accordance to the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

(12) The marking of the product shall include the following:

II 2 G Ex eb IIC Gb

II 2 D Ex tb IIIC Db

ZSEx001e c

Konformitätsbewertungsstelle, Sektor Explosionsschutz Braunschweig, September 7 , 2016
On behalf of PTB:

Dr.-Ing. D. Markus
Oberregierungsrat

EU-Type Examination Certificates without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt.
In case of dispute, the German text shall prevail.

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Braunschweig und Berlin
Nationales Metrologieinstitut

(13) # SCHEDULE

(14) **EU-Type Examination Certificate Number PTB 01 ATEX 1061 U, Issue:1**

(15) Description of Product

Empty enclosure of type 26.******, made of polyester, which may be provided with flanges and a glass or plastic inspection window.

It can optionally be fitted with an earth bolt compl. with / or without off-shore plate and screwed or riveted type plates made of stainless steel.

Technical data

Sizes and Product lines				
Type 26.08 08 06 to 26.41 40 20 (Ex-standard-enclosure)		Width	Height	Depth
	min.	80 mm	75 mm	56 mm
	max.	400 mm	405 mm	201 mm
Type 26.88 01 00 to 26.88 04 00 (Ex-Okta Box-enclosure)		Width	Height	Depth
	min.	81 mm	81 mm	75 mm
	max.	200 mm	200 mm	125 mm
Type 26.14 01 00 to 26.14 03 00 (Ex-PF-enclosure)		Width	Height	Depth
	min.	270 mm	170 mm	136 mm
	max.	541 mm	270 mm	136 mm
Type 26.12 20 00 to 26.40 60 00 (Mini-Polyglas-Ex-enclosure and Polyglas-Ex-enclosure)		Width	Height	Depth
	min.	200 mm	120 mm	100 mm
	max.	405 mm	605 mm	252 mm
Type 26.01 22 15 to 26.01 44 15 (Ex-Combi Box-enclosure)		Width	Height	Depth
	min.	177 mm	177 mm	145 mm
	max.	360 mm	360 mm	145 mm

EU-Type Examination Certificates without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt.
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SCHEDULE TO EU-TYPE EXAMINATION CERTIFICATE PTB 01 ATEX 1061 U Issue: 1

Ambient temperature

-55 °C to +127 °C with Silicon gasket
-40 °C to +100 °C with HF gasket
-40 °C to +100 °C with PU foam
-20 °C to + 85 °C with CR gasket
-20 °C to +100 °C with window out of glas
-50 °C to +100 °C with PC-window mono duro clear 8099,conductive
to +105 °C Ex-PF-enclosure, Mini-Polyglas-Ex-enclosure and Polyglas-Ex-enclosure
(minimum temperature depends on the gasket used)

Ingress protection IP 66 acc. to IEC 60529

Thread stud of the earth bolt compl. .. M6x60, M8x50, M10x60, M12x80

Nomenclature

26.	**	**	**
1	2	3	4

1: Type, material polyester
2: Height or product line (see above)
3: Width or number depending on product line
4: Depth or number depending on product line

Modifications

New testing according to standard EN 60079-0:2012 + A11:2013, EN 60079-7:2015 and EN 60079-31:2014.

Therefore the marking changes to:

II 2 G Ex eb IIC Gb

II 2 D Ex tb IIIC Db

(16) Test Report PTB Ex 16-16032

(17) Specific conditions of use

Installation of electrical components requires a further assessment by an ExCB.

(18) Essential health and safety requirements

Met by compliance with the aforementioned standards.

EU-Type Examination Certificates without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt.
In case of dispute, the German text shall prevail.
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Physikalisch-Technische Bundesanstalt
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SCHEDULE TO EU-TYPE EXAMINATION CERTIFICATE PTB 01 ATEX 1061 U Issue: 1

According to Article 41 of Directive 2014/34/EU, EC-type examination certificates which have been issued according to Directive 94/9/EC prior to the date of coming into force of Directive 2014/34/EU (April 20, 2016) may be considered as if they were issued already in compliance with Directive 2014/34/EU. By permission of the European Commission supplements to such EC-type examination certificates and new issues of such certificates may continue to hold the original certificate number issued before April 20, 2016.

Konformitätsbewertungsstelle, Sektor Explosionsschutz Braunschweig, September 7, 2016
On behalf of PTB:

Dr.-Ing. D. Markus
Oberregierungsrat

EU-Type Examination Certificates without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt.
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Document reference PTB 01 ATEX 1061 U
Edition 6 - March 2022

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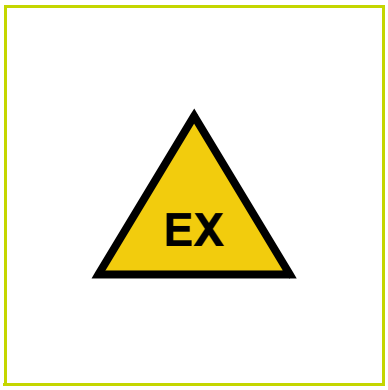
EX CERTIFICATE – ATEX

vibro-meter®

PTB 98 ATEX 3101 U
for
ABA161 and PA150 enclosures



Note: Although the Ex certificate may be included in more than one language, the liability of the notified body applies only on the text of the original copy of the certificate that it published.

Document reference PTB 98 ATEX 3101 U
Edition 5 – April 2022

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Braunschweig und Berlin
Nationales Metrologieinstitut

EU-Baumusterprüfbescheinigung

(1)

(2) Komponente zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen
Richtlinie 2014/34/EU

(3) EU-Baumusterprüfbescheinigungsnummer

PTB 98 ATEX 3101 U **Ausgabe: 1**

(4) Produkt: Leergehäuse Typ 25.******

(5) Hersteller: ROSE Systemtechnik GmbH

(6) Anschrift: Erbeweg 13 - 15, 32457 Porta Westfalica, Deutschland

(7) Die Bauart dieses Produkts sowie die verschiedenen zulässigen Ausführungen sind in der Anlage und den darin aufgeführten Unterlagen zu dieser Baumusterprüfbescheinigung festgelegt.

(8) Die Physikalisch-Technische Bundesanstalt, notifizierte Stelle Nr. 0102 gemäß Artikel 17 der Richtlinie 2014/34/EU des Europäischen Parlaments und des Rates vom 26. Februar 2014, bescheinigt, dass dieses Produkt die grundlegenden Sicherheits- und Gesundheitsanforderungen für die Konzeption und den Bau von Produkten zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen gemäß Anhang II der Richtlinie erfüllt.

Die Ergebnisse der Prüfung sind in dem vertraulichen Prüfbericht PTB Ex 16-16037 festgehalten.

(9) Die grundlegenden Sicherheits- und Gesundheitsanforderungen werden erfüllt durch Übereinstimmung mit

EN 60079-0:2012 + A11:2013, EN 60079-7:2015, EN 60079-31:2014

(10) Das Zeichen "U" hinter der Zertifikatsnummer gibt an, dass dieses Zertifikat nicht mit einem für ein Gerät oder Schutzsystem vorgesehenen Zertifikat verwechselt werden darf. Diese Komponenten-Bescheinigung darf als Basis für die Bescheinigung eines Gerätes oder Schutzsystems verwendet werden.

(11) Diese EU-Baumusterprüfbescheinigung bezieht sich nur auf Konzeption und Prüfung des festgelegten Produkts gemäß Richtlinie 2014/34/EU. Weitere Anforderungen dieser Richtlinie gelten für die Herstellung und das Bereitstellen auf dem Markt. Diese Anforderungen werden nicht durch diese Bescheinigung abgedeckt.

(12) Die Kennzeichnung des Produkts muss die folgenden Angaben enthalten:

II 2 G Ex eb IIC Gb

II 2 D Ex tb IIIC Db

Konformitätsbewertungsstelle, Sektor Explosionsschutz Braunschweig, 8. September 2016
Im Auftrag

Dr.-Ing. D. Markus
Oberregierungsrat

ZSEx10110d o

EU-Baumusterprüfbescheinigungen ohne Unterschrift und ohne Siegel haben keine Gültigkeit.
Diese EU-Baumusterprüfbescheinigung darf nur unverändert weiterverbreitet werden.
Auszüge oder Änderungen bedürfen der Genehmigung der Physikalisch-Technischen Bundesanstalt.
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Physikalisch-Technische Bundesanstalt
Braunschweig und Berlin
Nationales Metrologieinstitut

Anlage

(13)

(14) **EU-Baumusterprüfbescheinigung PTB 98 ATEX 3101 U, Ausgabe: 1**

(15) Beschreibung des Produkts

Leergehäuse Typ 25.****** aus Aluminium, das mit Flanschen und einer Schauscheibe aus Glas oder Kunststoff ausgestattet sein kann.

Technische Daten

Baugrößen.	Länge	Breite	Tiefe
kleinste	58 mm	64 mm	34 mm
größte	600 mm	600 mm	227 mm

Schutzgrad: IP66 nach EN 60529

Umgebungstemperaturbereich:
-55 °C bis +135 °C mit Silikondichtung
-40 °C bis +100 °C mit HF Dichtung
-40 °C bis +100 °C mit PU-Schaum
-20 °C bis +85 °C mit CR Dichtung
-20 °C bix +100 °C mit Glasscheibe
-50 °C bis +100 °C mit PC-Scheibe mono duro clear 8099 leitfähig.

Typschlüssel

25.	**	**	**
1	2	3	4

1: Material Aluminium
2: Höhe
3: Breite
4:Tiefe

Änderungen

Neue Prüfung nach den Normen EN 60079-0:2012 + A11:2013, EN 60079-7:2015 und EN 60079-31:2014.

Dadurch ändert sich das Kennzeichen in:

II 2 G Ex eb IIC Gb

II 2 D Ex tb IIIC Db

EU-Baumusterprüfbescheinigungen ohne Unterschrift und ohne Siegel haben keine Gültigkeit.
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Braunschweig und Berlin
Nationales Metrologieinstitut

Anlage zur EU-Baumusterprüfbescheinigung PTB 98 ATEX 3101 U, Ausgabe: 1

(16) Prüfbericht PTB Ex 16-16037

(17) Einschränkungen für Herstellung, Einbau und Inbetriebnahme

Gehäuse mit einer Lackierung dürfen nicht in Bereichen eingesetzt werden, in denen stark ladungserzeugende Prozesse, maschinelle Reib- und Trennprozesse und das Sprühen von Elektronen (z.B. im Umfeld von elektrostatischen Lackiereinrichtungen) stattfinden oder pneumatisch geförderter Staub austritt.

Die Installation von elektrischen Bauteilen erfordert eine neue Bewertung durch eine benannte Prüfstelle.

(18) Grundlegende Sicherheits- und Gesundheitsanforderungen

Erfüllt durch Übereinstimmung mit den vorgenannten Normen.

Nach Artikel 41 der Richtlinie 2014/34/EU dürfen EG-Baumusterprüfbescheinigungen nach Richtlinie 94/9/EG, die bereits vor dem Datum der Anwendung von Richtlinie 2014/34/EU (20. April 2016) bestanden, so betrachtet werden, als wenn sie bereits in Übereinstimmung mit der Richtlinie 2014/34/EU ausgestellt wurden. Mit Genehmigung der Europäischen Kommission dürfen Ergänzungen zu solchen EG-Baumusterprüfbescheinigungen und neue Ausgaben solcher Zertifikate weiterhin die vor dem 20. April 2016 ausgestellte originale Zertifikatsnummer tragen.

Konformitätsbewertungsstelle, Sektor Explosionsschutz — Braunschweig, 8. September 2016
Im Auftrag

Dr.-Ing. D. Markus
Oberregierungsrat

EG-Baumusterprüfbescheinigungen ohne Unterschrift und ohne Siegel haben keine Gültigkeit.
Diese EG-Baumusterprüfbescheinigung darf nur unverändert weiterverbreitet werden.
Auszüge oder Änderungen bedürfen der Genehmigung der Physikalisch-Technischen Bundesanstalt.
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Braunschweig und Berlin
Nationales Metrologieinstitut

EU-TYPE EXAMINATION CERTIFICATE

(Translation)

(1)

(2) Component Intended for Use in Potentially Explosive Atmospheres
Directive 2014/34/EU

(3) EU-Type Examination Certificate Number:

PTB 98 ATEX 3101 U **Issue: 1**

(4) Product: Empty Enclosure type 25.******

(5) Manufacturer: ROSE Systemtechnik GmbH

(6) Address: Erbeweg 13 - 15, 32457 Porta Westfalica, Germany

(7) This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 in accordance with Article 17 of the Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres, given in Annex II to the Directive.

The examination and test results are recorded in the confidential test report PTB Ex 16-16037.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 60079-0:2012 + A11:2013, EN 60079-7:2015, EN 60079-31:2014

(10) The sign "U" placed behind the certificate number indicates that this certificate should not be confounded with certificates issued for equipment or protective systems. This partial certification may be used as a basis for certification of an equipment or protective systems.

(11) This EU-Type Examination Certificate relates only to the design and construction of the specified product in accordance to the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

(12) The marking of the product shall include the following:

II 2 G Ex eb IIC Gb
II 2 D Ex tb IIIC Db

Konformitätsbewertungsstelle, Sektor Explosionsschutz — Braunschweig, September 8, 2016
On behalf of PTB:

Dr.-Ing. D. Markus
Oberregierungsrat

EU-Type Examination Certificates without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt.
In case of dispute, the German text shall prevail.
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Physikalisch-Technische Bundesanstalt
Braunschweig und Berlin
Nationales Metrologieinstitut

(13) **SCHEDULE**

(14) **EU-Type Examination Certificate Number PTB 98 ATEX 3101 U, Issue: 1**

(15) Description of Product

Empty enclosure type 25.******, made of aluminium, whlch may be provided with flanges and a glass or plastic inspection window.

Technical data

sizes	length	width	depth
min	58 mm	64 mm	34 mm
max	600 mm	600 mm	227 mm

Degree of protection: IP 66 acc. to IEC 60529

Ambient temperature

-55 °C to +135 °C with Silicon gasket
-40 °C to +100 °C with HF gasket
-40 °C to +100 °C with PU-foam
-20 °C to + 85 °C with CR gasket
-20 °C to +100 °C with window out of glas
-50 °C to +100 °C with PC-window mono duro clear 8099, conductive

Nomenclature

25.	**	**	**
1	2	3	4

1: Material aluminium
2: Height
3: Width
4: Depth

Details of change
New test according to EN 60079-0:2012+A11:2013, EN 60079-7:2015, EN 60079-31:2014 and changing of the marking.

II 2 G Ex eb IIC Gb
II 2 D Ex tb IIIC Db

EU-Type Examination Certificates without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt.
In case of dispute, the German text shall prevail.

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Physikalisch-Technische Bundesanstalt
Braunschweig und Berlin
Nationales Metrologieinstitut

(16) Test report PTB Ex 16-16037

(17) Notes for manufacture, installation and operation
The empty enclosure with a coating must not be used in areas affected by charge-producing processes, mechanical friction and separation processes, electron emission (e.g. in the vicinity of electrostatic coating equipment), and pneumatically conveyed dust.

Installation of electrical components requires a further assessment by an ExCB.

(18) Essential health and safety requirements

Met by compliance with the aforementioned standards.

According to Article 41 of Directive 2014/34/EU, EC-type examination certificates which have been issued according to Directive 94/9/EC prior to the date of coming into force of Directive 2014/34/EU (April 20, 2016) may be considered as if they were issued already in compliance with Directive 2014/34/EU. By permission of the European Commission supplements to such EC-type examination certificates and new issues of such certificates may continue to hold the original certificate number issued before April 20, 2016.

Konformitätsbewertungsstelle, Sektor Explosionsschutz
On behalf of PTB:

Dr.-Ing. D. Markus
Oberregierungsrat

Braunschweig, September 8, 2016

PHYSIKALISCH-TECHNISCHE BUNDESANSTALT 80

EU-Type Examination Certificates without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt.
In case of dispute, the German text shall prevail.

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ATEX certificate:

BVS 15 ATEX E 112 U

for

ABA17x

Although the certificate is available in two languages (English and German), the liability of the notified body applies only on the text of the original copy of the certificate that it published.

EN

Obwohl das Zertifikat in zwei Sprachen (Englisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

DE

EX

Meggitt SA
Route de Moncor 4
PO Box 1616
1701 Fribourg
Switzerland

energy@ch.meggitt.com
www.meggittsensing.com/energy

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EU-Baumusterprüfbescheinigung

2 **Komponenten, die zum Einbau in Geräte und Schutzsysteme vorgesehen sind Richtlinie 2014/34/EU**

3 Nr. der EU-Baumusterprüfbescheinigung: **BVS 15 ATEX E 112 U**

4 Produkt: **Leergehäuse Typ eCAM ** ** ****

5 Hersteller: **thuba AG**

6 Anschrift: **Blauensteinerstrasse 16, 4015 Basel, Schweiz**

7 Die Bauart dieses Produktes sowie die verschiedenen zulässigen Ausführungen sind in der Anlage zu dieser Baumusterprüfbescheinigung festgelegt.

8 Die Zertifizierungsstelle der DEKRA EXAM GmbH, benannte Stelle Nr. 0158 gemäß Artikel 17 der Richtlinie 2014/34/EU des Europäischen Parlaments und des Rates vom 26. Februar 2014, bescheinigt, dass das Produkt die wesentlichen Gesundheits- und Sicherheitsanforderungen für die Konzeption und den Bau von Produkten zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen gemäß Anhang II der Richtlinie erfüllt.
Die Ergebnisse der Prüfung sind in dem vertraulichen Prüfprotokoll BVS PP 16.2059 EU niedergelegt.

9 Die wesentlichen Gesundheits- und Sicherheitsanforderungen werden erfüllt durch Übereinstimmung mit den Normen:

EN 60079-0:2012 + A11:2013	**Allgemeine Anforderungen**
EN 60079-7:2015	**Erhöhte Sicherheit "e"**
EN 60079-31:2014	**Schutz durch Gehäuse "t"**

10 Das Zeichen "U" hinter der Bescheinigungsnummer gibt an, dass dieses Zertifikat nicht mit einem für ein Gerät oder Schutzsystem vorgesehenen Zertifikat verwechselt werden darf. Dieses Zertifikat darf nur als Basis für die Bescheinigung eines Gerätes oder Schutzsystems verwendet werden.

11 Diese EU-Baumusterprüfbescheinigung bezieht sich nur auf den Entwurf und Bau der beschriebenen Produkte.
Für den Herstellungsprozess und die Abgabe der Produkte sind weitere Anforderungen der Richtlinie zu erfüllen, die nicht durch diese Bescheinigung abgedeckt sind.

12 Die Kennzeichnung des Produktes muss die folgenden Angaben enthalten:

II 2G Ex eb IIC Gb
II 2D Ex tb IIIC Db

DEKRA EXAM GmbH
Bochum, den 22.04.2016

Zertifizierer

Fachzertifizierer

DEKRA EXAM GmbH, Dinnendahlstraße 9, 44809 Bochum, Deutschland
Telefon +49.234.3696-105, Telefax +49.234.3696-110, zs-exam@dekra.com

13 **Anlage zur**

14 **EU-Baumusterprüfbescheinigung**

BVS 15 ATEX E 112 U

15 **Beschreibung des Produktes**

15.1 **Gegenstand und Typ**

Leergehäuse Typ eCAM **[1] **[2] **[3]

Stahl oder Edelstahl Typ	Baugrösse Breite[1] [mm]	Höhe[2] [mm]	Tiefe[3] [mm]

Gehäuse mit verschraubtem Deckel (Abmaße Bereich)

eCAM 12 12 08	120	120	80
bis			
eCAM 40 40 20	400	400	200

Gehäuse mit Scharnier und Riegel (Abmaße Bereich)

eCAM 20 20 10	200	200	100
bis			
eCAM 100 120 50	1000	1200	500

15.2 **Beschreibung**

Das Leergehäuse Typ eCAM ** ** ** ist in der Zündschutzart Erhöhte Sicherheit „e" für den Bereich mit EPL Gb oder Schutz durch Gehäuse „t" für den Bereich mit EPL Db ausgeführt.

Das Leergehäuse ist für die Aufnahme von Energieverteilungs-, Schalt- und Steuerungskomponenten vorgesehen. Das Gehäuse besteht aus Stahl oder Edelstahl und kann mit einem verschraubten Deckel oder einem Deckel mit Verschlussscharnier ausgeführt werden.

15.3 **Kenngrößen**

Grenzen der Betriebstemperatur -55°C bis +100 °C

IP-Schutzgrad IP65

16 **Prüfprotokoll**

BVS PP 16.2059 EU, Stand 22.04.2016

17 **Verwendungshinweise**

Keine

18 **Wesentliche Gesundheits- und Sicherheitsanforderungen**

Die wesentlichen Gesundheits- und Sicherheitsanforderungen sind durch die unter Abschnitt 9 gelisteten Normen abgedeckt.

19 **Zeichnungen und Unterlagen**

Die Zeichnungen und Unterlagen sind in dem vertraulichen Prüfprotokoll gelistet.

DEKRA EXAM GmbH, Dinnendahlstraße 9, 44809 Bochum, Deutschland
Telefon +49.234.3696-105, Telefax +49.234.3696-110, zs-exam@dekra.com

Translation

EU-Type Examination Certificate

1 **Component intended for use on/in an Equipment or Protective System intended for use in potentially explosive atmospheres Directive 2014/34/EU**

2 EU-Type Examination Certificate Number: **BVS 15 ATEX E 112 U**

3 Product: **Empty enclosure type eCAM **** ****

4 Manufacturer: **thuba Ltd.**

5 Address: **Blauensteinerstrasse 16, 4015 Basel, Switzerland**

6 This product and any acceptable variation thereto are specified in the appendix to this certificate and the documents therein referred to.

7 DEKRA EXAM GmbH, Notified Body number 0158, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.
The examination and test results are recorded in the Confidential Report No. BVS PP 16.2059 EU.

8 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 60079-0:2012 + A11:2013 General requirements
EN 60079-7:2015 Increased Safety "e"
EN 60079-31:2014 Protection by Enclosure "t"

9 The sign "U" is placed after the certificate number. It indicates that this certificate must not be mistaken for a certificate intended for an equipment or protective system. This partial certification may be used as a basis for certification of an equipment or protective system respectively product.

10 This EU-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

11 The marking of the product shall include the following:

II 2G Ex eb IIC Gb
II 2D Ex tb IIIC Db

DEKRA EXAM GmbH
Bochum, 2016-04-22

Signed: Simanski
Certifier

Signed: Dr. Wittler
Approver

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DEKRA EXAM GmbH, Dinnendahlstrasse 9, 44809 Bochum, Germany,
telephone +49 234 3696-105, Fax +49 234 3696-110, zs-exam@dekra.com

13 **Appendix**

14 **EU-Type Examination Certificate**

BVS 15 ATEX E 112 U

15 **Product description**
15.1 **Subject and type**

Empty enclosure type eCAM **[1] **[2] **[3]

Steel or stainless steel	size		
Type	width[1] [mm]	height[2] [mm]	depth[3] [mm]
Enclosure with screwed fixing covers (size range)			
eCAM 12 12 08	120	120	80
up to			
eCAM 40 40 20	400	400	200
Enclosure with hinges and latches (size range)			
eCAM 20 20 10	200	200	100
up to			
eCAM 100 120 50	1000	1200	500

15.2 **Description**

The empty enclosure type eCam. ** ** ** is built in type of protection increased Safety "e" for use in areas with EPL Gb or I Protection by Enclosure "t" for use in areas with EPL Db.
The empty enclosure is used for the mounting of different switch and control apparatus. The enclosure consists of steel or stainless steel and can be constructed with a screwed fixing cover or a cover with hinges and latches.

15.3 **Parameters**

Limits of service temperature -55 °C up to +100 °C

IP protection degree IP66

16 **Report Number**

BVS PP 16.2059 EU, as of 2016-04-22

17 **Schedule of Limitations**

None

18 **Essential Health and Safety Requirements**

The Essential Health and Safety Requirements covered by the standards listed under item 9.

19 **Drawings and Documents**

Drawings and documents are listed in the confidential report.

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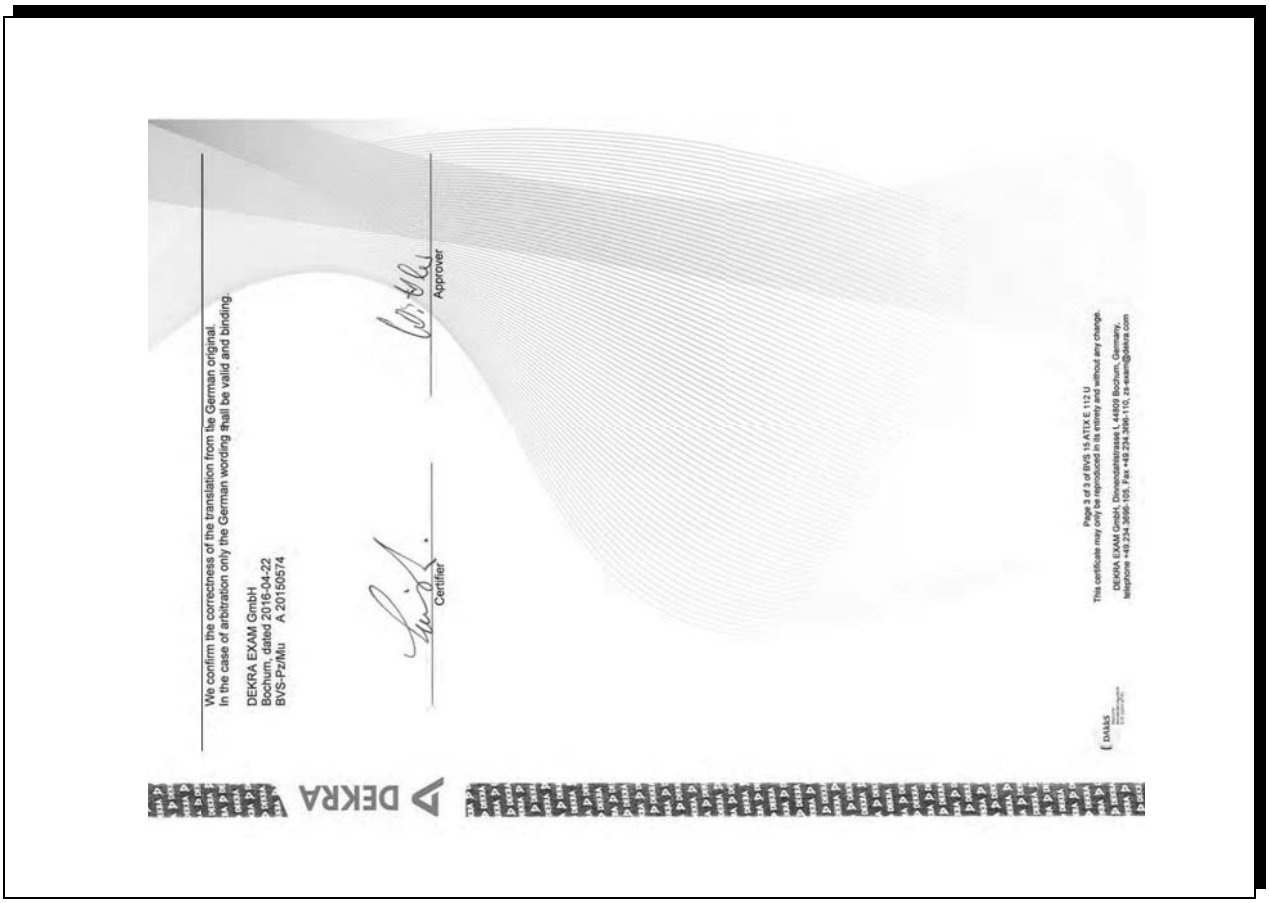
telephone +49 234 3696-105, Fax +49 234 3696-110, zs-exam@dekra.com


We confirm the correctness of the translation from the German original.
In the case of arbitration only the German wording shall be valid and binding.
DEKRA EXAM GmbH
Bochum, dated 2016-04-22
BVS-Pz/Mu A 20150574
Certifier
Approver
DEKRA
Page 3 of 3 of BVS 15 ATEX E 112 U
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telephone +49 234 3696-105, fax +49 234 3696-110, zs-exam@dekra.com

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ATEX certificate:

EN

Presafe 14 ATEX 5378 U

for

ABA 17x

Meggitt SA
Route de Moncor 4
PO Box 1616
CH - 1701 Fribourg
Switzerland

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Presafe

EC-Type Examination Certificate

[2] EQUIPMENT OR PROTECTIVE SYSTEM INTENDED FOR USE IN POTENTIALLY EXPLOSIVE ATMOSPHERES DIRECTIVE 94/9/EC

[3] **EC-Type Examination Certificate Number:** **Presafe 14 ATEX 5378U** **Issue 1**

[4] **Equipment or Protective System:** **Empty box**

[5] **Applicant – Manufacturer or Authorized representative:** **Ensto Finland Oy**

[6] **Address:** **Ensio Miettisen katu 2**
P.O.Box 77, 06101 Porvoo

[7] **This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.**

[8] **DNV Nemko Presafe AS, notified body number 2460 in accordance with Article 9 of Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.**
The examination and test results are recorded in confidential reports listed in section 14.

[9] **Compliance with the Essential Health and Safety Requirements has been assured by compliance with: EN 60079-0: 2012, EN 60079-7:2007 & EN 60079-31:2014**

[10] **If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.**

[11] **This EC-TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified equipment or protected system. If applicable, further requirements of this Directive apply to the manufacturer and supply of this equipment or protective system.**

[12] **The marking of the equipment or protective system shall include the following:**

II 2 G **Ex e IIC Gb**
II 2 D **Ex tb IIIC Db IP 64 / 66 / 67**

Bjørn Spongsveen
For DNV Nemko Presafe AS
Information on electronic signature www.presafe.com

PROD 021

Date of issue: 2014-12-10

This Certificate replaces previously certificate DNV 11 ATEX 98909U issued by DNV

Presafe

EC-Type Examination Certificate

[13] **Schedule**

[14] **EC-TYPE EXAMINATION CERTIFICATE No.:** **Presafe 14 ATEX 5378U** Issue 1

Certificate History

Issue	Description	Report no.	Issue date
0	Original issue	D0001550	2014-12-05
1	Corrected Type errors in the certificate	D0001550	2014-12-05

[15] **Description of Equipment or Protective System**

CuboX empty boxes made of stainless steel or painted steel in various sizes. Enclosures can be fitted with optional plastic window or gland plates, mounting accessories like DIN-rails, mounting plates,brackets & Metric or NPT thread coupler. Lid can be fixed by screws or combination of screws and loose hinges or quick locks. Several internal and external earthing options are provided. Sealing is ensured by high temperature silicone gasket (EPDM gasket can be used for gland plate or Combo assemblies). For information regarding tightening torques, refer to instructions for use. See attachment for more product details and rating.

Refer Product Nomenclature for the possible variants/provisions. This replaces DNV 11 ATEX 98909U

Type Identification

Operating temperature limits for plain stainless steel enclosure (with or without gland plate): -55°C to +160°C

Operating temperature limits for stainless steel enclosure with Lexan plastic window, earthing option 3:

-55°C to +100°C

Operating temperature limits for painted steel enclosure (with or without plastic window and gland plate):

-55°C to +85°C

Operating temperature EPDM gasket/and or quick locks in enclosure: -55°C to +85°C

Operating temperature plastic switch handle in enclosure: -30°C to +45°C

Degrees of protection (IP Code):

Enclosure material	Optional accessories	IP rating
Stainless steel and painted steel enclosure	Plastic window	IP66/67
Stainless steel and painted steel enclosure	Standard gland plate with silicon gasket	IP66
Stainless steel or painted steel enclosure	AISI quick locks	IP66/67
Stainless steel or painted steel enclosure	Zink quick locks	IP66
Stainless steel or painted steel enclosure	Gland plate & Combo box with EPDM gasket	IP66/67
Stainless steel or painted steel enclosure	Plastic switch handle	IP64

Presafe

EC-Type Examination Certificate

Product Nomenclature:

[X]	[Version]	[Material]	[Surface]	[Cut type]	[width] [height] [depth]	KOT8...	
							Customer specific feaatures
							(Total No. Holes/Mounting Lugs)
							Max width: 1000 mm
							Max height: 2000 mm
							No restriction on depth
							[F]: Standard flange plate
							[FC]: Custom sized flange plate(s)
							[P]: Plain walls or cut-outs
							[N]: Natural surface
							[B]: Brushed surface
							[E]: Powder coated
							[S]: Stainless steel AISI304
							[A]:Stainless steel AISI316L
							[F]: Mild steel mild steel galvanized
							[1]: Lid with screws
							[2]: Lid with screws and hinges
							[3]: Lid with quick locks
							[4]: Lid with screws and loose hinges
							[X]: Cubo X

NB. If with two doors, then end of code there will be letter 'D', if supplied with AISI-locks,
then after the code there will be letter 'S', if Combo option with EPDM gasket end letter will be 'C'.

Examples:

X2ANP303015C –Combo

X3ANP303015C –Combo with standard lock

X3ANP303015S –Box with AISI lock

X3ANP303015 –Box with Standard lock

X3ANP10010015D – Two doors with standard locks

X3ANP10010015DS – Two doors with AISI locks

DNV Nemko Presafe AS, Gaustadalléen 30, 0373 Oslo, Norway

Presafe

EC-Type Examination Certificate

[16] Project No.: D0001550

Descriptive Documents

Title:	Drawing No.:	Rev. Level:	Date:
800001	Types and general assembly	C	2013-03-03
800002	General sizing information	C	2013-03-03
800003	Earthing mounting and rivet ponding	D	2014-10-10
800004	Window and gland plates	B	2013-03-03
800005	General gasket information	B	2013-03-03
800006	Certification label and label fixing	C	2012-01-10
800009	Glanding areas	C	2014-10-31
800014	Combo enclosure and EPDM gland plate	A	2013-03-03
800015	Double door enclosure	A	2013-03-03

[17] Special Conditions for Safe Use

Potential risk of electrostatic discharge from plastic window, Refer to instructions for use.

When the plastic switch handle is installed in the electrical apparatus, care must be taken that the temperatures at the mounting place are within the temperature range of use.

[18] Essential Health and Safety Requirements

See part 9 of this certificate

END OF CERTIFICATE

DNV Nemko Presafe AS, Gaustadalléen 30, 0373 Oslo, Norway

MEGGITT

ATEX certificate:

LCIE 02 ATEX 6110 X

for CA 134

Although the certificate is available in the three languages (English, French and German), the liability of the notified body applies only on the text of the original copy of the certificate that it published.

EN

Bien que le certificat soit traduit dans les 3 langues (Anglais, Français et Allemand), seul le texte de la copie originale du certificat peut engager la responsabilité de l'organisme notifié qui l'a publié.

FR

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

DE

EX

Meggitt SA
Route de Moncor 4
PO Box 1616
CH - 1701 Fribourg
Switzerland

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CETTE PAGE EST LAISSÉE INTENTIONNELLEMENT VIDE
DIESE SEITE WURDE ABSICHTLICH LEER GELASSEN

1	**ATTESTATION D'EXAMEN CE DE TYPE**	1	**EC TYPE EXAMINATION CERTIFICATE**
2	Appareils et systèmes de protection destinés à être utilisés en atmosphères explosibles **Directive 94/9/CE**	2	Equipment or Protective System Intended for use in Potentially explosive atmospheres **Directive 94/9/EC**
3	Numéro de l'attestation CE de type **LCIE 02 ATEX 6110 X**	3	EC type Examination Certificate number **LCIE 02 ATEX 6110 X**
4	Appareil ou système de protection Capteurs d'accélération Type : CA134/CA136/CA160/CA201	4	Equipment or Protective system Accelerometers Type : CA134/CA136/CA160/CA201
5	Demandeur : VIBRO-METER S.A.	5	Applicant : VIBRO-METER S.A.
6	Adresse : BP 1071 1701 FRIBOURG - SUISSE	6	Address : BP 1071 1701 FRIBOURG - SUISSE
7	Cet appareil ou système de protection et ses variantes éventuelles acceptées est décrit dans l'annexe de la présente attestation et dans les documents descriptifs cités en annexe.	7	This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein refered to.
8	Le LCIE, organisme notifié sous la référence 0081 conformément à l'article 9 de la directive 94/9/CE du Parlement européen et du Conseil du 23 mars 1994, certifie que cet appareil ou système de protection est conforme aux exigences essentielles en ce qui concerne la sécurité et la santé pour la conception et la construction d'appareils et de systèmes de protection destinés à être utilisés en atmosphères explosibles, données dans l'annexe II de la directive. Les vérifications et épreuves figurent dans notre rapport confidentiel N° 41 031 010 K.	8	LCIE, notified body number 0081 in accordance with article 9 of the directive 94/9/EC of the European Parliament and Council of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective system intended for use in potentially explosive atmospheres, given in Annex II to the directive. The examination and test results are recorded in confidential report No 41 031 010 K.
9	Le respect des exigences essentielles en ce qui concerne la sécurité et la santé est assuré par la conformité aux documents suivants : - EN 50014 (1997) + amendements 1 et 2 - EN 50020 (1994)	9	Compliance with the Essential Health and Safety Requirements has been assured by compliance with : - EN 50014 (1997) + amendments 1 and 2 - EN 50020 (1994)
10	Le signe X lorsqu'il est placé à la suite du numéro de l'attestation, indique que ce matériel ou système de protection est soumis aux conditions spéciales pour une utilisation sûre, mentionnées dans l'annexe de la présente attestation.	10	If the sign X is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.
11	La présente attestation d'examen CE de type porte uniquement sur la conception, l'examen et l'essai de l'équipement ou du système de protection spécifié conformément à la directive 94/9/CE. Toutes autres exigences de la Directive sont applicables au procédé de fabrication et de livraison de cet équipement ou système de protection. Ces derniers ne sont pas couverts par la présente attestation.	11	This EC Type examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.
12	Le marquage de l'appareil ou du système de protection devra comporter, entre autres indications utiles, les mentions suivantes : Ex II 1G EEx ia IIC T6 à T1 pour le type CA134 EEx ia IIC T6 à T2 pour les types CA136/CA160 et CA201	12	The marking of the equipment or protective system shall include the following : Ex II 1G EEx ia IIC T6 to T1 for CA134 type EEx ia IIC T6 to T2 for CA136/CA160/CA201 type

Fontenay-aux-Roses, le 29 août 2002

Le Directeur de l'organisme certificateur
Manager of the certification body

Timbre sec/dry seal

Par délégation
Michel BRÉNON
Directeur adjoint
à la Certification

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LABORATOIRE CENTRAL DES INDUSTRIES ELECTRIQUES
Société anonyme à Directoire et Conseil de surveillance au capital de 15 745 984 euros - RCS Nanterre B 408 363 174
33, avenue du Général Leclerc - BP n° 8 - F 92266 FONTENAY-AUX-ROSES CEDEX - Tél. : +33 1 40 95 60 60

(A1)	**ANNEXE**	(A1)	**SCHEDULE**
(A2)	**ATTESTATION D'EXAMEN CE DE TYPE** **LCIE 02 ATEX 6110 X**	(A2)	**EC TYPE EXAMINATION CERTIFICATE** **LCIE 02 ATEX 6110 X**
(A3)	Description de l'équipement ou du système de protection Capteurs d'accélération Type : CA134/CA136/CA160/CA201	(A3)	Description of Equipment or protective system Accelerometers Type : CA134/CA136/CA160/CA201
	Ces capteurs sont des transducteurs électromécaniques fournissant à leurs bornes une charge électrique proportionnelle à la pression mesurée. Ce type de capteur fonctionne avec un matériau piézo-électrique monté en compression (pour le type CA134/CA136/CA160) et en cisaillement (pour le type CA201).		These sensors are electromechanic transducers delivering at their terminal blocks on electrical load proportional to the measures pressure. It works with a piezoelectric material mounted in compression (for CA134/CA136/CA160 type) and in shearing (for CA201 type).
	Le marquage sera le suivant : VIBRO-METER S.A. Adresse : ... Type :CA134 ou CA136 ou CA160 ou CA201 N° de fabrication : ... Année de fabrication : ... Ex II 1G EEx ia IIC T6 à T1 pour le type CA134 EEx ia IIC T6 à T2 pour les types CA136/CA160/CA201 LCIE 02 ATEX 6110 X Le marquage CE est accompagné du numéro d'identification de l'organisme notifié responsable de la surveillance du système approuvé de qualité (0081 pour le LCIE). Le matériel devra également comporter le marquage normalement prévu par les normes de construction du matériel électrique concerné.		The marking will be the following : VIBRO-METER S.A. Address : ... Type :CA134 or CA136 or CA160 or CA201 Serial number : ... Year of construction : ... Ex II 1G EEx ia IIC T6 to T1 for CA134 type EEx ia IIC T6 to T2 for CA136/CA160/CA201 type LCIE 02 ATEX 6110 X The CE marking shall be accompanied by the identification number of the notified body responsible for surveillance of the approved quality system (0081 for LCIE). The equipment must also carry the usual marking required by the manufacturing standards applying to such equipments.
	Paramètres spécifiques du ou des modes protection concernés : Valeurs pour capteurs seuls.		Specific parameters of the mode of protection concerned : Values for sensors only.

	CA134	CA136	CA160	CA201
Ci	0,3 nF	6 nF	0,4 nF	2,5 nF
Li	~ 0	~ 0	~ 0	~ 0

(A4)	Documents descriptifs Dossier technique N° DT 1001, rév. 1 du 14 mars 2002. Ce document comprend 19 rubriques (24 pages).	(A4)	Descriptive documents : Technical file n° DT 1001, rev. 1 dated on March 14th, 2002. This file includes 19 items (24 pages).
(A5)	Conditions spéciales pour une utilisation sûre : Le matériel ci-dessus défini est un matériel à "sécurité intrinsèque". Il peut être placé en atmosphères explosibles. Le matériel ne doit être associé qu'à un matériel [ia] ou [ib] d'un type certifié et cette association, en tenant compte de la longueur du câble de raccordement, doit être compatible du point de vue de la sécurité intrinsèque. Les caractéristiques du matériel associé ne devront excéder aucune des valeurs suivantes : $U_o \leq 28$ V, $Icc_o \leq 100$ mA (source linéaire) $U_o \leq 28$ V, $Icc_o \leq 25$ mA (source non linéaire) Doit une puissance $P_o \leq 0,7$ W	(A5)	Special conditiosn for safe use : The sensors are intrinsically safe equipment. They could be mounted in explosive atmospheres. The material must only be connected to a certified [ia] or [ib] apparatus and this combination, taking account to the length of joining cable, must be compatible as regards intrinsic safety. Specific parameters of associated apparatus must not be over than no one of following values : $U_o \leq 28$ V, $Icc_o \leq 100$ mA (linear supply) $U_o \leq 28$ V, $Icc_o \leq 25$ mA (not linear supply) And power $P_o \leq 0,7$ W

05.01

LCIE

(A1) **ANNEXE**

(A2) **ATTESTATION D'EXAMEN CE DE TYPE**
LCIE 02 ATEX 6110 X (suite)

(A6) Exigences essentielles en ce qui concerne la sécurité et la santé

a conception du matériel satisfait aux normes européennes N 50014 (1997 + amendements 1 et 2) et EN 50020 (1994).

(A1) **SCHEDULE**

(A2) **EC TYPE EXAMINATION CERTIFICATE**
LCIE 02 ATEX 6110 X (continued)

(A6) Essential Health and Safety Requirements

The design of the equipment complies to european standards EN 50014 (1997 + amendments 1 and 2) and EN 50020 (1994).

05.01

(A1) **ATTESTATION D'EXAMEN CE DE TYPE**
LCIE 02 ATEX 6110 X du 29 août 2002

AVENANT 02 ATEX 6110 X/01

(A2) DESIGNATION DE L'EQUIPEMENT OU DU SYSTEME DE PROTECTION :

Capteurs d'accélération
Type : 144-YYY-000-XXX

Construit par :
VIBRO-METER S.A

(A3) OBJET DE L'AVENANT, DESCRIPTION DE L'APPAREIL OU DU SYTEME DE PROTECTION :

Modifications des désignations des appareils CA134, CA136, CA160 et CA201 qui seront désormais respectivement les suivantes :
- 144-134-000-XXX
- 144-136-000-XXX
- 144-160-000-XXX
- 144-201-000-XXX

Ajout de variantes avec différents types de connecteurs et différentes longueurs de câbles.

Le marquage est modifié comme suit :

Type : 144-YYY-000-XXX (*)

(*): à compléter (YYY) selon modèle et (XXX) selon variante

(A4) DOCUMENTS DESCRIPTIFS :

Dossier technique n° DT 1001 / 01 rév. 2 du 16 Juillet 2003.

Ce dossier comprend 5 rubriques (6 pages).

(A5) CONDITIONS SPECIALES POUR UNE UTILISATION SURE :

Inchangées.

(A6) EXIGENCES ESSENTIELLES EN CE QUI CONCERNE LA SECURITE ET LA SANTE :

Inchangées.

Fontenay-aux-Roses, le 4 Novembre 2003

(A1) **EC TYPE EXAMINATION CERTIFICATE**
LCIE 02 ATEX 6110 X dated August 29, 2002

VARIATION 02 ATEX 6110 X/01

(A2) NAME OF EQUIPMENT OR PROTECTIVE SYSTEM :

Accelerometers
Type : 144-YYY-000-XXX

Manufactured by :
VIBRO-METER S.A

(A3) SUBJECT OF THE VARIATION, DESCRIPTION OF EQUIPMENT OR PROTECTIVE SYSTEM :

Modifications of designations of apparatuses CA134, CA136, CA160 and CA201 which will be from now on respectively the following ones.
- 144-134-000-XXX
- 144-136-000-XXX
- 144-160-000-XXX
- 144-201-000-XXX

Addition of variations with various types of connectors and various lengths of cables.

The marking is modified as follows :

Type : 144-YYY-000-XXX

(*) : supplemented (YYY) according to model and (XXX) according to variante

(A4) DESCRIPTIVE DOCUMENTS :

Certification file No. DT 1001 / 01 rév. 2 dated July 16th, 2003.

This file includes 5 items (6 pages).

(A5) SPECIAL CONDITIONS FOR SAFE USE :

Unchanged.

(A6) ESSENTIAL HEALTH AND SAFETY REQUIREMENTS :

Unchanged.

Le Directeur de l'organisme certificateur
Manager of the certification body

Timbre sec/Dry seal

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Société anonyme à directoire
et conseil de surveillance
au capital de 15 745 984 €
RCS Nanterre B 408 363 174

10-1

MEGGITT

1 **AVENANT D'ATTESTATION D'EXAMEN CE DE TYPE**

2 **Appareil ou système de protection** destiné à être utilisé en atmosphères explosibles **(Directive 94/9/CE)**

3 Numéro de l'avenant :
LCIE 02 ATEX 6110 X / 02

4 Appareil ou système de protection :
Capteurs d'accélération
Type : CA134/ CA136/ CA160/ CA210

5 Demandeur : VIBRO-METER S.A.

15 **DESCRIPTION DE L'AVENANT**

- Mise à jour normative selon les normes :
EN 60079-0 (2006) et EN 60079-11 (2007)
- Ajout de la plage de température ambiante dans les conditions spéciales d'utilisation sûres
- Mise à jour des classes de température

Les résultats des vérifications et essais figurent dans le rapport confidentiel N° 60056381-557031 / 16

Paramètres spécifiques du ou des modes de protection concerné(s) :
Inchangés

Le marquage doit être :

Seuls les éléments suivants doivent être modifiés comme suit:
Ex ia IIC T6 à T510 pour le type 144-134-000-XXX
Ex ia IIC T6 à T2 pour les autres types

Ajout de :
Uo ≤ 28V, Icco ≤ 100 mA (source linéaire)
Uo ≤ 28V, Icco ≤ 25 mA (source non linéaire)
Po ≤ 0,7W
Capteurs seuls :

	144-134-000-XXX	144-136-000-XXX	144-160-000-XXX	144-201-000-XXX
Ci	0,3 nF	6 nF	0,4 nF	0,5 nF
Li	≈0	≈0	≈0	≈0

16 **DOCUMENTS DESCRIPTIFS**
Dossier de certification N° DT 1030 du 05/03/2007.
Ce dossier comprend 2 rubriques (7 pages).

1 **SUPPLEMENTARY EC TYPE EXAMINATION CERTIFICATE**

2 **Equipment or protective system** intended for use in potentially explosive atmospheres **(Directive 94/9/EC)**

3 Supplementary certificate number :
LCIE 02 ATEX 6110 X / 02

4 Equipment or protective system :
Accelerometers
Type : CA134/ CA136/ CA160/ CA210

5 Applicant : VIBRO-METER S.A.

15 **DESCRIPTION OF THE SUPPLEMENTARY CERTIFICATE**

- Normative update according to standards' :
EN 60079-0 (2006) and EN 60079-11 (2007)
- Adding of operational temperature range in clause special conditions for safe use
- Update of temperature classes

The examination and test results are recorded in confidential report N° 60056381-557031 / 16

Specific parameters of the mode(s) of protection concerned:

Unchanged

The marking shall be :

Only following elements shall be modified as follows :

Ex ia IIC T6 to T510 for the type 144-134-000-XXX
Ex ia IIC T6 to T2 for the other types

Adding of :
Uo ≤ 28V, Icco ≤ 100 mA (linear source)
Uo ≤ 28V, Icco ≤ 25 mA (no linear source)
Po ≤ 0,7W
Only sensors :

16 **DESCRIPTIVE DOCUMENTS**
Certification file N° DT 1030 dated 2007/03/05
This file includes 2 items (7 pages).

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contact@lcie.fr
www.lcie.fr

Société par Actions Simplifiée
au Capital de 15 715 984 €
RCS Nanterre B 408 363 174

13 **ANNEXE**

14 **AVENANT D'ATTESTATION D'EXAMEN CE DE TYPE**

LCIE 02 ATEX 6110 X / 02

17 **CONDITIONS SPECIALES POUR UNE UTILISATION SURE**
Ajout de :
Pour le type 144-134-000-XXX : Ta = -200°C à +450°C (exceptionnellement durant 15 min : Ta = -200°C à +500°C)
Pour le type 144-136-000-XXX : Ta = -54°C à +260°C (exceptionnellement durant 15 min : Ta = -54°C à +280°C)
Pour le type 144-160-000-XXX : Ta = -54°C à +320°C
Pour le type 144-201-000-XXX : Ta = -54°C à +260°C

18 **EXIGENCES ESSENTIELLES DE SECURITE ET DE SANTE**
Couvertes par les normes :
EN 60079-0 (2006) et EN 60079-11 (2007)

19 **VERIFICATIONS ET ESSAIS INDIVIDUELS**
Inchangés

Fontenay-aux-Roses, le 17 décembre 2007

13 **SCHEDULE**

14 **SUPPLEMENTARY EC TYPE EXAMINATION CERTIFICATE**

LCIE 02 ATEX 6110 X / 02

17 **SPECIAL CONDITIONS FOR SAFE USE**

Adding of :
For the type 144-134-000-XXX : Ta = -200°C to +450°C (in exceptional condition during 15 min : Ta = -200°C to +500°C)
For the type 144-136-000-XXX : Ta = -54°C to +260°C (in exceptional condition during 15 min : Ta = -54°C to +280°C)
For the type 144-160-000-XXX : Ta = -54°C to +320°C
For the type 144-201-000-XXX : Ta = -54°C to +260°C

18 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS**

Covered by standards:
EN 60079-0 (2006) and EN 60079-11 (2007)

19 **ROUTINE VERIFICATIONS AND TESTS**
Unchanged

Le responsable de certification ATEX
ATEX certification manager
Marc GILLAUX

NOTIFIED BODY 0081 ORGANISME NOTIFIE

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L C I E

1 **AVENANT D'ATTESTATION D'EXAMEN CE DE TYPE**

2 **Appareil ou système de protection** destiné à être utilisé en atmosphères explosibles **(Directive 94/9/CE)**

3 Numéro de l'avenant :
LCIE 02 ATEX 6110 X / 03

4 Appareil ou système de protection :
Capteurs d'accélération
Type : 144-YYY-000-XXX

5 Demandeur : Meggitt SA
Route de Moncor 4
1752 Villars-sur-Glâne
Suisse

15 **DESCRIPTION DE L'AVENANT**

- Changement de nom et d'adresse du fabricant
- Modifications des marques commerciales déposées

Les résultats des vérifications et essais figurent dans le rapport confidentiel N° 102105-602924 / 15.

Paramètres spécifiques du ou des modes de protection concerné(s) :
Inchangés.

Le marquage doit être :

Inchangé, excepté la marque commerciale vibro-meter qui devient vibro-meter ou MEGGITT ou MFR S3960 et l'adresse.

16 **DOCUMENTS DESCRIPTIFS**

Courrier du demandeur du 07/09/2010.

17 **CONDITIONS SPECIALES POUR UNE UTILISATION SURE**
Inchangées.

18 **EXIGENCES ESSENTIELLES DE SECURITE ET DE SANTE**
Inchangées.

19 **VERIFICATIONS ET ESSAIS INDIVIDUELS**
Inchangés.

Fontenay-aux-Roses, le 25 octobre 2010.

Le responsable de certification ATEX
ATEX certification manager
Marc GILLAUX

1 **SUPPLEMENTARY EC TYPE EXAMINATION CERTIFICATE**

2 **Equipment or protective system** intended for use in potentially explosive atmospheres **(Directive 94/9/EC)**

3 Supplementary certificate number :
LCIE 02 ATEX 6110 X / 03

4 Equipment or protective system :
Accelerometers
Type : 144-YYY-000-XXX

5 Applicant : Meggitt SA
Route de Moncor 4
1752 Villars-sur-Glâne
Switzerland

15 **DESCRIPTION OF THE SUPPLEMENTARY CERTIFICATE**
- Change of legal entity name and address of applicant
- Modifications of registered trade mark

The examination and test results are recorded in confidential report N° 102105-602924 / 15.

Specific parameters of the mode(s) of protection concerned:

Unchanged.

The marking shall be :

Unchanged, except registered trade mark vibro-meter becomes vibro-meter or MEGGITT or MFR S3960 and the address.

16 **DESCRIPTIVE DOCUMENTS**

Letter of applicant from 2010/09/07.

17 **SPECIAL CONDITIONS FOR SAFE USE**

Unchanged.

18 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS**

Unchanged.

19 **ROUTINE VERIFICATIONS AND TESTS**
Unchanged.

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Laboratoire Central — BP 8 — Fax : +33 1 40 95 86 56 — au capital de 15 715 981 €
des Industries Electriques — 92260 Fontenay-aux-Roses cedex — contact@lcie.fr — RCS Nanterre B 408 363 171
Une société de Bureau Veritas — France — www.lcie.fr

L C I E

1 **AVENANT D'ATTESTATION D'EXAMEN CE DE TYPE**

2 **Appareil ou système de protection** destiné à être utilisé en atmosphères explosibles **(Directive 94/9/CE)**

3 Numéro de l'avenant :
LCIE 02 ATEX 6110 X / 04

4 Appareil ou système de protection :
Capteur d'accélération
Type : PNR 144-134-000-XXX

5 Demandeur : Meggitt SA

15 **DESCRIPTION DE L'AVENANT**

Mise à jour normative selon la norme EN 60079-0 (2009)
Suppression des types CA 136, CA 160 et CA 201

Les résultats des vérifications et essais figurent dans le rapport confidentiel N° 110055-619675 / 08

Paramètres spécifiques du ou des modes de protection concerné(s) :
Inchangés

Le marquage doit être :
Modifié comme suit :
Vibro-Meter ou MEGGITT ou MFR S3960
Adresse : ...
Type : PNR 144-134-000-XXX
N° de série :... ; Date de fabrication :...
Ⓔx II 1 G
Ex ia IIC T6 à T510°C Ga
LCIE 02 ATEX 6110 X
Ui = ... ; Pi = ... ; Ii = ... ; Ci = ... ; Li = ... (1)
(1) complété avec les paramètres électriques

16 **DOCUMENTS DESCRIPTIFS**
Lettre du demandeur du 20/10/2011 (2 pages).

17 **CONDITIONS SPECIALES POUR UNE UTILISATION SURE**
Inchangées

18 **EXIGENCES ESSENTIELLES DE SECURITE ET DE SANTE**
Couvertes par les normes EN 60079-0 (2009)
et EN 60079-11 (2007)

19 **VERIFICATIONS ET ESSAIS INDIVIDUELS**
Néant

Fontenay-aux-Roses, le 21/12/2011

Le responsable de certification ATEX
ATEX certification manager
Michel BRÉNON

1 **SUPPLEMENTARY EC TYPE EXAMINATION CERTIFICATE**

2 **Equipment or protective system** intended for use in potentially explosive atmospheres **(Directive 94/9/EC)**

3 Supplementary certificate number :
LCIE 02 ATEX 6110 X / 04

4 Equipment or protective system :
Accelerometer
Type : PNR 144-134-000-XXX

5 Applicant : Meggitt SA

15 **DESCRIPTION OF THE SUPPLEMENTARY CERTIFICATE**
Normative update according to standard EN 60079-0 (2009)
Delete types CA 136, CA 160 and CA 201

The examination and test results are recorded in confidential report N° 110055-619675 / 08

Specific parameters of the concerned protection mode:

Unchanged

The marking shall be :
Modified as follows :
Vibro-Meter or MEGGITT or MFR S3960
Address : ...
Type : PNR 144-134-000-XXX
Serial Number :... ; Date of construction :...
Ⓔx II 1 G
Ex ia IIC T6 to T510°C Ga
LCIE 02 ATEX 6110 X
Ui = ... ; Pi = ... ; Ii = ... ; Ci = ... ; Li = ... (1)
(1) completed with the electrical parameters

16 **DESCRIPTIVE DOCUMENTS**
Applicant's letter dated 2011/10/20 (2 pages).

17 **SPECIAL CONDITIONS FOR SAFE USE**

Unchanged

18 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS**

Covered by standards EN 60079-0 (2009) and
EN 60079-11 (2007)

19 **ROUTINE VERIFICATIONS AND TESTS**
None

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Laboratoire Central — BP 8 — Fax : +33 1 40 95 86 56 — au capital de 15 715 981 €
des Industries Electriques — 92260 Fontenay-aux-Roses cedex — contact@lcie.fr — RCS Nanterre B 408 363 171
Une société de Bureau Veritas — France — www.lcie.fr

L C I E

1 **AVENANT D'ATTESTATION D'EXAMEN CE DE TYPE**

2 **Appareil ou système de protection** destiné à être utilisé en atmosphères explosibles **(Directive 94/9/CE)**

3 Numéro de l'avenant :
LCIE 02 ATEX 6110 X / 05

4 Appareil ou système de protection :
Capteur d'accélération
Type : PNR 144-134-000-XXX

5 Demandeur : MEGGITT SA

15 **DESCRIPTION DE L'AVENANT**

Mise à jour normative selon les normes EN 60079-0:2012 et EN 60079-11:2012.
Modification de l'élément sensible du capteur.

Les résultats des vérifications et essais figurent dans le rapport confidentiel N°123216-647054.

Paramètres spécifiques du ou des modes de protection concerné(s) :
Modifiés comme suit :
Capteur : Ci ≤ 1,2nF, Li ≈ 0
Câble : Ci ≤ 250pF/m, Li ≈ 0
Source linéaire: Ui ≤ 28V, Ii ≤ 100mA, Pi ≤ 0,7W
Source non linéaire: Ui ≤ 28V, Ii ≤ 25mA, Pi ≤ 0,7W,

Le marquage doit être : Inchangé
Vibro-meter, MEGGITT ou MFR S3960 Adresse :...
Type : PNR 144-134-000-XXX
Numéro de fabrication :... Année de fabrication : ...
Ⓔx II 1 G Ex ia IIC T6 à T1 ou 510°C Ga
LCIE 02 ATEX 6110 X
Ui ≤ ...V, *Ii* ≤ ....mA, *Pi* ≤ ....W, *Ci* = ...µF, *Li* ≤ ...µH
(complété avec les paramètres électriques)

16 **DOCUMENTS DESCRIPTIFS**

Dossier technique n°DT 1058 rév.00 du 30/08/2013.
Ce dossier comprend 4 rubriques (6 pages).

17 **CONDITIONS SPECIALES POUR UNE UTILISATION SURE**

Inchangées. Complétées par : Classement en température T6 : Tamb < 80°C, T5 : Tamb < 95°C, T4 : Tamb < 130°C, T3 : Tamb < 195°C, T2 : Tamb < 290°C, T1 : Tamb < 440°C, 510°C : Tamb < 500°C.

18 **EXIGENCES ESSENTIELLES DE SECURITE ET DE SANTE**

Couvertes par les normes EN 60079-0:2012 et EN 60079-11:2012.

19 **VERIFICATIONS ET ESSAIS INDIVIDUELS**

Néant.

Fontenay-aux-Roses, le 25 octobre 2013

1 **SUPPLEMENTARY EC TYPE EXAMINATION CERTIFICATE**

2 **Equipment or protective system** intended for use in potentially explosive atmospheres **(Directive 94/9/EC)**

3 Supplementary certificate number :
LCIE 02 ATEX 6110 X / 05

4 Equipment or protective system :
Accelerometer
Type : PNR 144-134-000-XXX

5 Applicant : MEGGITT SA

15 **DESCRIPTION OF THE SUPPLEMENTARY CERTIFICATE**

Normative update according to EN 60079-0:2012 and EN 60079-11:2012.
Modification of the sensing part material of the sensor.

The examination and test results are recorded in confidential report N°123216-647054.

Specific parameters of the concerned protection mode:

Modified as follows :
Sensor : Ci ≤ 1,2nF, Li ≈ 0
Cable : Ci ≤ 250pF/m, Li ≈ 0
Linear source : Ui ≤ 28V, Ii ≤ 100mA, Pi ≤ 0,7W
Non linear source : Ui ≤ 28V, Ii ≤ 25mA, Pi ≤ 0,7W

The marking shall be :
Vibro-meter, MEGGITT or MFR S3960 Address : .....
Type : PNR 144-134-000-XXX
Serial number : ..... Year of construction : .....
Ⓔx II 1 G Ex ia IIC T6 to T1 or 510°C Ga
LCIE 02 ATEX 6110 X
Ui ≤ ...V, *Ii* ≤ ....mA, *Pi* ≤ ....W, *Ci* = ...µF, *Li* ≤ ...µH
(completed with the electrical parameters)

16 **DESCRIPTIVE DOCUMENTS**

Technical file n°DT 1058 rev.00 dated 2013/08/30.
This file includes 4 items (6 pages).

17 **SPECIAL CONDITIONS FOR SAFE USE**

Unchanged. Completed with : Temperature classification : T6 : Tamb < 80°C, T5 : Tamb < 95°C, T4 : Tamb < 130°C, T3 : Tamb < 195°C, T2 : Tamb < 290°C, T1 : Tamb < 440°C, 510°C : Tamb < 500°C.

18 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS**

Covered by EN 60079-0:2012 and EN 60079-11:2012 standards.

19 **ROUTINE VERIFICATIONS AND TESTS**

None.

Le Responsable de Certification ATEX
ATEX Certification Officer
Julien GAUTHIER

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des Industries Electriques — 92266 Fontenay-aux-Roses cedex — contact@lcie.fr — RCS Nanterre B 408 363 174
Une société de Bureau Veritas — France — www.lcie.fr

Deutsche Übersetzung der originalen französischen Kopie der Seite 1

1 **EG-PRÜFZERTIFIKAT**

2 Geräte und Schutzsysteme zur Verwendung in explosionsgefährdeten Bereichen - **Richtlinie 94/9/EG**

3 EG-Zertifikatnummer
LCIE 02 ATEX 6110 X

4 Gerät oder Schutzsystem
Beschleunigungsgeber
Typ: CA 134 / CA 136 / CA 160 / CA 201

5 Hersteller: VIBRO-METER S.A.

6 Adresse: BP 1071, CH-1701 FRIBOURG, SCHWEIZ

7 Dieses Gerät oder Schutzsystem und die möglichen, zulässigen Varianten sind im Anhang dieses Zertifikats und den darin aufgeführten Unterlagen beschrieben.

8 LCIE, eingetragen unter der Nummer 0081 gemäß Artikel 9 der Richtlinie 94/9/EG des Europaparlamentes und des Rates vom 23. März 1994, bestätigt, dass dieses Gerät oder Schutzsystem die wesentlichen Gesundheits- und Sicherheitsanforderungen in Bezug auf die Auslegung und die Bauart von Geräten und Schutzsystemen zur Verwendung in explosionsgefährdeten Bereichen nach Anhang II der Richtlinie erfüllt.
Die Prüf- und Testergebnisse sind im vertraulichen Bericht Nr. 41 031 010 K aufgezeichnet.

9 Die Einhaltung der wesentlichen Gesundheits- und Sicherheitsanforderungen wird durch die Übereinstimmung mit den den folgenden Dokumenten sichergestellt:
- EN 50014 (1997) + Änderungen 1 und 2
- EN 50020 (1994)

10 Ein "X" nach der Zertifikatnummer gibt an, dass für die sichere Verwendung des Gerätes oder Schutzsystemes besondere Bedingungen gemäß dem Anhang dieses Zertifikates gelten.

11 Dieses EG-Prüfzertifikat betrifft nur die Bauart und die Prüfungen und Tests des betreffenden Gerätes odder Schutzssystems nach der Richtlinie 94/9/e.g.
Alle anderen Anforderungen der Richtlinie gelten für die Fertigung und Lieferung dieses Gerätes oder Schutzsystems. Sie werden nicht von diesem Zertifikat abgedeckt.

12 Die Kennzeichnung des Gerätes oder Schutzsystems muss unter anderem die folgenden Angaben enthalten:
Ex II 1G
EEx ia IIC T6 bis T1 für den Typ CA 134
EEx ia IIC T6 bis T2 für die Typen CA 136 / CA 160 und CA 201

Fontenay-aux-Roses, 29. August 2002 Leiter Zertifizierung Leiter Zertifizierung
Trockenstempel

LCIE haftet nur für den französischen Text.
Dieses Zertifikat darf nur vollständig und ohne Änderungen vervielfältigt werden.

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

Deutsche Übersetzung der originalen französischen Kopie der Seite 1

(A1) **ANHANG**

(A2) **EG-PRÜFZERTIFIKAT**
LCIE 02 ATEX 6110 X

(A3) Beschreibung des Gerätes oder Schutzsystems
Beschleunigungsgeber
Typ: CA 134 / CA 136 / CA 160 / CA 201
Diese Geber sind elektromechanische Messwandler, die eine elektrische Ladung proportional zum gemessenen Druck an die Klemmen liefern.
Diese Art Geber arbeitet mit einem mit Druck (Typ CA134/CA136/CA160) und Schub (Typ CA 201) montierten piezoelektrischen Material.
Kennzeichnung:
VIBRO-METER S.A.
Adresse: ..
Typ: CA134 oder CA136 oder CA160 oder CA201
Herstellungsnummer: ...
Herstellungsjahr: ...

II 1G
EEx ia IIC T6 bis T1 für den Typ CA 134
EEx ia IIC T6 bis T2 für die Typen CA 136 / CA 160 und CA 201
LCIE 02 ATEX 6110 X
Die EG-Kennzeichnung wird von der Kennnummer der Stelle, die für die Überwachung des genehmigten Qualitätssystems zuständig ist (0081 für LCIE) begleitet.
Die Geräte müssen ebenfalls mit der Kennzeichnung versehen sein, die in den Herstellungsnormen der betreffenden elektrischen Geräte normalerweise vorgesehen sind.
Spezielle Parameter für die betreffende(n) Schutzart(en):
Werte nur für die Geber.

	CA 134	CA 136	CA 160	CA 201
C_i	0,3 nF	6 nF	0,4 nF	2,5 nF
L_i	~0	~0	~0	~0

(A4) Beschreibende Unterlagen
Technische Unterlagen Nr. DT 1001, Änd. 1 vom 14. März 2002.Dieses Dokument umfasst 19 Teile (24 Seiten).

(A5) Spezielle Bedingungen für eine sichere Verwendung:
Das oben definierte Gerät ist ein "eigensicheres" Gerät. Es kann in explosionsgefährdeten Bereichen verwendet werden.
Das Gerät darf nur an ein Gerät [ia] oder [ib] eines zertifizierten Typs angeschlossen werden und diese Verbindung muss unter Berücksichtigung des Anschlusskabels in Bezug auf die Eigensicherheit kompatibel sein.
Die Eigenschaften des dazugehörigen Gerätes dürfen die folgenden Werte nicht überschreiten:
$U_0 \leq 28$ V, $I_{cc0} \leq 100$ mA (lineare Quelle)
$U_0 \leq 28$ V, I_{cc0} 25 mA (nicht lineare Quelle)
Leistung $P_0 \leq 0,7$ W

Deutsche Übersetzung der originalen französischen Kopie der Seite 2

(A1) **ANHANG**

(A2) **EG-PRÜFZERTIFIKAT**
LCIE 02 ATEX 6110 X (Fortsetzung)

(A6) Wesentliche Anforderungen in Bezug auf Sicherheit und Gesundheit
Die Bauart des Gerätes entspricht den europäischen Normen EN 50014 (1997 + Änderungen 1 und 2) und EN 50020 (1994).

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

Deutsche Übersetzung der originalen französischen Kopie der Seite 2

(A1) **EG-PRÜFZERTIFIKAT**
LCIE 02 ATEX 6110 X vom 29. August 2002
NACHTRAG 02 ATEX 6110 X/01

(A2) BESCHREIBUNG DES GERÄTES ODER SCHUTZSYSTEMS:
Beschleunigungsgeber
Typ: 144-YYY-000-XXX
Hergestellt von: VIBRO-METER S.A

(A3) ZIEL DES NACHTRAGS, BESCHREIBUNG DES GERÄTES ODER SCHUTZSYSTEMS:
Änderungen der Gerätebezeichnungen CA 134, CA 136, CA 160 und CA 201, die von nun an jeweils wie folgt lauten:
144-134-000-XXX
144-136-000-XXX
144-160-000-XXX
144-201-000-XXX
Hinzufügen von Varianten mit verschiedenen Steckertypen und Kabellängen.
Die Kennzeichnung wird wie folgt geändert:
Typ: 144-YYY-000-XXX (*)
(*): je nach Modell (YYY) und Variante (XXX) zu ergänzen

(A4) BESCHREIBENDE UNTERLAGEN:
Technische Unterlagen Nr. DT 1001 / 01, Änd. 2 vom 16. Juli 2003. Dieses Dokument beinhaltet 5 Teile (6 Seiten).

(A5) SPEZIELLE BEDINGUNGEN FÜR EINE SICHERE VERWENDUNG:
Unverändert

(A6) WESENTLICHE ANFORDERUNGEN IN BEZUG AUF SICHERHEIT UND GESUNDHEIT
Unverändert

Fontenay-aux-Roses, 4. November 2003 Leiter Zertifizierung Leiter Zertifizierung
Trockenstempel

Seite 1/1

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Deutsche Übersetzung der original französisch/englischen Kopie der Seite 3

1 **ERGÄNZUNG ZUR EG-BAUMUSTERPRÜFBESCHEINIGUNG**

2 **Betriebsmittel oder Schutzsystem** zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen – **Richtlinie 94/9/EG**

3 Nummer der Ergänzungsbescheinigung:
LCIE 02 ATEX 6110 X / 02

4 Betriebsmittel oder Schutzsystem
Accelerometer
Typ: CA134 / CA136 / CA 160 / CA210

5 Hersteller: **VIBRO-METER S.A.**

15 **BESCHREIBUNG DER ERGÄNZUNGSBESCHEINIGUNG**
– Normgerechte Überarbeitung entsprechend den Normen:
EN 60079-0 (2006) und EN 60079-11 (2007)
– Betriebstemperaturbereich im Abschnitt „Besondere Bedingungen für die sichere Anwendung“ hinzugefügt
– Temperaturklassen aktualisiert
Die Ergebnisse der Prüfung sind im vertraulichen Prüfbericht Nr. 60056381-557031 / 16 festgehalten.
Spezifische Kenndaten der betroffenen Schutzarten:
Unverändert
Kennzeichnung:
Nur die folgenden Elemente werden wie folgt geändert:
Typ 144-134-000-XXX: Ex ia IIC T6 in T510
Andere Typen: Ex ia IIC T6 in T2
Zusätze:
Uo ≤ 28 V, Icco ≤ 100 mA (lineare Quelle)
Uo ≤ 28 V, Icco ≤ 25 mA (nichtlineare Quelle)
Po ≤ 0,7 W
Nur Sensoren:

	144-134-000-XXX	144-136-000-XXX	144-160-000-XXX	144-201-000-XXX
Ci	0,3 nF	6 nF	0,4 nF	0,5 nF
Li	~ 0	~ 0	~ 0	~ 0

16 **BESCHREIBENDE DOKUMENTE**
Bescheinigung Nr. DT 1030 vom 05. März 2007.
Dieses Dokument besteht aus 2 Elementen (7 Seiten).

Fontenay-aux-Roses, 17. Dezember 2007

Leiter Zertifizierung
Trockenstempel

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Deutsche Übersetzung der original französisch/englischen Kopie der Seite 3

13 **ANLAGE**

14 **ERGÄNZUNG ZUR EG-BAUMUSTERPRÜFBESCHEINIGUNG**

LCIE 07 ATEX 6110 X / 02

17 **BESONDERE BEDINGUNGEN FÜR DIE SICHERE ANWENDUNG**
Zusätze:
Für Typ 144-134-000-XXX: Ta = –200 °C bis +450 °C (unter außergewöhnlichen Bedingungen für 15 min: Ta = –200 °C bis +500 °C)
Für Typ 144-136-000-XXX: Ta = –54 °C bis +260 °C (unter außergewöhnlichen Bedingungen für 15 min: Ta = –54 °C bis +280 °C)
Typ 144-160-000-XXX: Ta = –54 °C bis +320 °C
Typ 144-201-000-XXX: Ta = –54 °C bis +260 °C

18 **GRUNDLEGENDE GESUNDHEITS- UND SICHERHEITSANFORDERUNGEN**
Abgedeckt durch die Normen: EN 60079-0 (2006) und EN 60079-11 (2007)

19 **Routinemäßige Prüfungen und Tests**
Unverändert
ATEX-Bescheinigungsbevollmächtigter
Die Haftung von LCIE beschränkt sich allein auf den französischen Originaltext. Dieses Dokument darf nur vollständig und ohne Veränderungen vervielfältigt werden.

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Deutsche Übersetzung der originalen französischen Kopie der Seite 4

1 **ZUSÄTZLICHES FREIWILLIGES TYPENPRÜFUNGSZERTIFIKAT**

2 Geräte zur Verwendung in explosionsgefährdeten Bereichen (**Richtlinie 94/9/EG**)

3 Zusätzliche Zertifikatnummer:
LCIE 02 ATEX 6110 X / 03

4 Gerät oder Schutzsystem
Beschleunigungsgeber
Typ: 144-YYY-000-XXX

5 Hersteller: MEGGITT SA
Adresse: Route de Moncor 4, 1752 Villars-sur-Glâne, Schweiz

15 **BESCHREIBUNG DES ZUSÄTZLICHEN ZERTIFIKATS**

- Änderung der juristischen Person und Addresse des Antragstellers
- Modifikation des eingetragenen Markenzeichens

Die Prüf- und Testergebnisse sind im vertraulichen Bericht Nr. 102105-602924/15 aufgezeichnet.

Spezifische Kenndaten der betroffenen Schutzarten:
Unverändert.

Die Kennzeichnung soll lauten:
Unverändert, bis auf Markenzeichen vibro-meter wird zu vibro-meter oder MEGGITT oder MFR S3960 sowie die Adressänderung.

16 **BESCHREIBENDE UNTERLAGEN**

Brief des Antragsstellers vom 07.09.2010.

17 **BESONDERE BEDINGUNGEN FÜR DIE SICHERE ANWENDUNG**

Unverändert.

18 **WESENTLICHE ANFORDERUNGEN IM BEZUG AUF SICHERHEIT UND GESUNDHEIT**

Unverändert.

19 **ROUTINEPRÜFUNGEN UND TESTS**

Unverändert.

Fontenay-aux-Roses,
am 25. Oktober 2010

Leiter Zertifizierung

Trockenstempel

Seite 1/1

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

Deutsche Übersetzung der originalen französischen Kopie der Seite 4

1 **ZUSÄTZLICHES FREIWILLIGES TYPENPRÜFUNGSZERTIFIKAT**

2 Geräte zur Verwendung in explosionsgefährdeten Bereichen (**Richtlinie 94/9/EG**)

3 Zusätzliche Zertifikatnummer:
LCIE 02 ATEX 6110 X / 04

4 Gerät oder Schutzsystem
Beschleunigungsgeber
Typ: PNR 144-134-000-XXX

5 Hersteller: MEGGITT SA

15 **BESCHREIBUNG DES ZUSÄTZLICHEN ZERTIFIKATS**

Standardaktualisierungen gemäß folgender Richtlinien: EN 60079-0 (2009)
Typ der Gerät löschen CA 136, CA 160 und CA 201

Die Prüf- und Testergebnisse sind im vertraulichen Bericht Nr. 110055-619675 / 08 aufgezeichnet.

Spezifische Kenndaten der betroffenen Schutzarten:
Unverändert.

Die Kennzeichnung lautet wie folgt:
Wie folgt modifiziert:
Vibro-Meter oder MEGGITT oder MFR S3960
Adresse: ...
Typ: PNR 144-134-000-XXX
Herstellungsnummer: ... Herstellungsjahr: ...
Ex II 1 G
Ex ia IIC T6 bis T510°C Ga
LCIE 02 ATEX 6110 X
Ui = ... ; Pi = ... ; Ii = ... ; Ci = ... ; Li = ... (1)

(1) Abhängig von der Typ der Gerät

16 **BESCHREIBENDE UNTERLAGEN**

Brief des Antragsstellers vom 20.10.2011 (2 Seiten)

17 **BESONDERE BEDINGUNGEN FÜR DIE SICHERE ANWENDUNG**

Unverändert.

18 **WESENTLICHE ANFORDERUNGEN IM BEZUG AUF SICHERHEIT UND GESUNDHEIT**

Werden von folgenden Richtlinien abgedeckt:
EN 60079-0 (2009) und EN 60079-11 (2007)

19 **ROUTINEPRÜFUNGEN UND TESTS**

Keine.

Fontenay-aux-Roses,
am 21. Dezember 2011

Leiter Zertifizierung

Trockenstempel

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Deutsche Übersetzung der originalen französischen Kopie der Seite 5

1 **ZUSÄTZLICHES FREIWILLIGES TYPENPRÜFUNGSZERTIFIKAT**

2 Geräte zur Verwendung in explosionsgefährdeten Bereichen (**Richtlinie 94/9/EG**)

3 Zusätzliche Zertifikatnummer:
LCIE 02 ATEX 6110 X / 05

4 Gerät oder Schutzsystem
Beschleunigungsgeber
Typ: PNR 144-134-000-XXX

5 Hersteller: MEGGITT SA

15 **BESCHREIBUNG DES ZUSÄTZLICHEN ZERTIFIKATS**

Standardaktualisierungen gemäß folgender Richtlinien: EN 60079-0:2012 und EN 60079-11:2012.
Änderung des Erfassungselements des Sensors.

Die Prüf- und Testergebnisse sind im vertraulichen Bericht Nr. 123216-647054 aufgezeichnet.

Spezifische Kenndaten der betroffenen Schutzarten:
Wie folgt modifiziert:
Sensor: Ci ≤ 1,2 nF, Li ≈ 0
Kabel: Ci ≤ 250 pF/m, Li ≈ 0
Stromversorgung (linear): Ui ≤ 28 V, Ii ≤ 100 mA, Pi ≤ 0,7 W
Stromversorgung (nicht-linear): Ui ≤ 28 V, Ii ≤ 25 mA, Pi ≤ 0,7 W

Die Kennzeichnung lautet wie folgt:
Vibro-Meter, MEGGITT oder MFR S3960 Adresse: ...
Typ: PNR 144-134-000-XXX
Herstellungsnummer: ... Herstellungsjahr: ...
II 1 G Ex ia IIC T6 bis T1 oder 510°C Ga
LCIE 02 ATEX 6110 X
Ui ≤ ... V, Ii ≤ ... mA, Pi ≤ ... W, Ci ≤ ... µF, Li ≤ ... µH
(Abhängig von der Typ der Gerät)

16 **BESCHREIBENDE UNTERLAGEN**

Bescheinigung Nr. DT 1058 rev.00 vom 30. August 2013.
Dieses Dokument besteht aus 4 Elementen (6 Seiten).

17 **BESONDERE BEDINGUNGEN FÜR DIE SICHERE ANWENDUNG**

Unverändert. Ergänzt mit Temperatur-Klassifizierung:
T6: Ta < 80°C, T5: Ta < 95°C, T4: Ta < 130°C,
T3: Ta < 195°C, T2: Ta < 290°C, T1: Ta < 440°C,
510°C: Ta < 500°C.

18 **WESENTLICHE ANFORDERUNGEN IM BEZUG AUF SICHERHEIT UND GESUNDHEIT**

Werden von folgenden Richtlinien abgedeckt: EN 60079-0:2012 und EN 60079-11:2012.

19 **ROUTINEPRÜFUNGEN UND TESTS**

Keine.

Fontenay-aux-Roses,
am 25. Oktober 2013

Leiter Zertifizierung

Trockenstempel

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

ATEX certificate:

LCIE 09 ATEX 1043 X

for CA 134

Although the certificate is available in the three languages (English, French and German), the liability of the notified body applies only on the text of the original copy of the certificate that it published.

EN

Bien que le certificat soit traduit dans les 3 langues (Anglais, Français et Allemand), seul le texte de la copie originale du certificat peut engager la responsabilité de l'organisme notifié qui l'a publié.

FR

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

DE

EX

Meggitt SA
Route de Moncor 4
PO Box 1616
CH - 1701 Fribourg
Switzerland

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CETTE PAGE EST LAISSÉE INTENTIONNELLEMENT VIDE
DIESE SEITE WURDE ABSICHTLICH LEER GELASSEN

L C I E

1 **ATTESTATION D'EXAMEN DE TYPE VOLONTAIRE**

2 **Appareil** destiné à être utilisé en atmosphères explosibles **(Directive 94/9/CE)**

3 Numéro de l'attestation d'examen de type
LCIE 09 ATEX 1043 X

4 Appareil
Capteur d'accélération
Type : PNR: 144-134-000-XXX

5 Demandeur : VIBRO-METER SA
Adresse : Route de Moncor 4
1701 FRIBOURG SUISSE

7 Cet appareil ou système de protection et ses variantes éventuelles acceptées sont décrits dans l'annexe de la présente attestation et dans les documents descriptifs cités en référence.

8 Le LCIE certifie que cet appareil ou système de protection est conforme aux exigences essentielles de sécurité et de santé pour la conception d'appareils ou système de protection, électriques de catégorie 3 ou non électriques de catégorie 2 et 3, destinés à être utilisés en atmosphères explosibles, données dans l'annexe II de la directive 94/9/CE du Parlement européen et du Conseil du 23 mars 1994.

Les résultats des vérifications et essais figurent dans le rapport confidentiel N°94576 - 589014/6.

9 Le respect des exigences essentielles de sécurité et de santé est assuré par la conformité à :
- EN 60079-0 (2006) - EN 60079-15 (2005)

0 Le signe X lorsqu'il est placé à la suite du numéro de l'attestation, indique que cet appareil ou système de protection est soumis aux conditions spéciales pour une utilisation sûre, mentionnées dans l'annexe de la présente attestation.

1 Cette attestation d'examen de type concerne uniquement la conception, les vérifications et essais de l'appareil ou du système de protection spécifié, conformément à la directive 94/9/CE.
Des exigences supplémentaires de la directive sont applicables pour la fabrication et la fourniture de l'appareil ou du système de protection. Ces dernières ne sont pas couvertes par la présente attestation.

2 Le marquage de l'appareil ou du système de protection doit comporter les informations détaillées au point 15.

Fontenay-aux-Roses, le 10 octobre 2009.

1 **VOLUNTARY TYPE EXAMINATION CERTIFICATE**

2 **Equipment** intended for use in potentially explosive atmospheres **(Directive 94/9/EC)**

3 Type Examination Certificate number
LCIE 09 ATEX 1043X

4 Equipment
Accelerometer
Type : PNR: 144-134-000-XXX

5 applicant : VIBRO-METER SA
Address : Route de Moncor 4
1701 FRIBOURG SUISSE

7 This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 LCIE certifies that this equipment or protective system has been found to comply with the essential Health and Safety Requirements that relate to the design of equipment or protective system, of category 3 electrical or categories 2 and 3 non electrical, which is intended for use in potentially explosive atmospheres, given in Annex II of the Directive 94/9/EC of the European Parliament and Council of 23 March 1994.

The examination and test results are recorded in confidential report N°94576 - 589014/6.

9 Compliance with the Essential Health and Safety Requirements has been assured by reference to :
- EN 60079-0 (2006) - EN 60079-15 (2005)

10 If the sign X is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

11 This type examination certificate relates only to the design, examination and tests of this specified equipment or protective system in accordance III to the directive 94/9/EC.

Further requirements of the Directive may apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

12 The marking of the equipment or protective system shall include information as detailed at 15.

e responsable de certification ATEX
ATEX certification manager

Marc GILLAUX

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Rev.A

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Société par Actions Simplifiée
au capital de 15 745 98 : €
RCS Nanterre B 408 363 177

L C I E

13 **ANNEXE**

14 **ATTESTATION D'EXAMEN DE TYPE VOLONTAIRE**

LCIE 09 ATEX 1043 X

15 **DESCRIPTION DE L'APPAREIL OU DU SYSTEME DE PROTECTION**

Capteur d'accélération
Type : PNR : 144-134-000-XXX

Le matériel est un transducteur électro-mécanique fournissant à ses bornes une charge électrique proportionnelle à la pression mesurée.

Paramètres spécifiques du ou des modes de protection concernés :
U ≤ 28V, I ≤ 100mA, P ≤ 0,7W

Le marquage doit être :
VIBRO-METER
Adresse : ... Type : PNR : 144-134-000-XXX
N° de fabrication : ... Année de fabrication : ...
II 3G Ex nA II T6 à T510
LCIE 09 ATEX 1043 X

Le marquage peut être réduit à :
VIBRO-METER
PNR : 144-134-000-XXX
II 3G LCIE 09 ATEX 1043 X

L'appareil doit également comporter le marquage normalement prévu par les normes de construction qui le concerne.

16 **DOCUMENTS DESCRIPTIFS**
Dossier de certification N°DT 1046 rev.00 du 20/07/09.
Ce document comprend 7 rubriques (9 pages).

17 **CONDITIONS SPECIALES POUR UNE UTILISATION SÛRE**
Température ambiante d'utilisation : -200°C à +500°C.
Classement en température en fonction de la température ambiante :
T6 à Tamb. + 80°C
T5 à Tamb. + 95°C
T4 à Tamb. + 130°C
T3 à Tamb. + 195°C
T2 à Tamb. + 290°C
T1 à Tamb. + 440°C
T510 à Tamb. + 500°C

18 **EXIGENCES ESSENTIELLES DE SECURITE ET DE SANTE**
Couvertes par les normes listées au point 9.

19 **VERIFICATIONS ET ESSAIS INDIVIDUELS**
Néant.

13 **SCHEDULE**

14 **VOLUNTARY TYPE EXAMINATION CERTIFICATE**

LCIE 09 ATEX 1043 X

15 **DESCRIPTION OF EQUIPMENT OR PROTECTIVE SYSTEM**

Accelerometer
Type : PNR : 144-134-000-XXX

This equipment is an electro-mechanical transducer delivering at its terminal blocks an electrical load proportional to the measured pressure.

Specific parameters of the mode(s) of protection concerned :
U ≤ 28V, I ≤ 100mA, P ≤ 0,7W

The marking shall be :
VIBRO-METER
Address : ... Type : PNR : 144-134-000-XXX
Serial number : ... Year of construction : ...
II 3G Ex nA II T6 to T510
LCIE 09 ATEX 1043 X

The marking can be reduce at :
VIBRO-METER
PNR : 144-134-000-XXX
II 3G LCIE 09 ATEX 1043 X

The equipment shall also bear the usual marking required by the manufacturing standards applying to such equipment.

16 **DESCRIPTIVE DOCUMENTS**
Certification file N°DT 1046 rev.00 dated 09/07/20.
This file includes 7 items (9 pages).

17 **SPECIAL CONDITIONS FOR SAFE USE**

Operating ambient temperature : -200°C to +500°C
Temperature classification in function of the operating temperature :
T6 at Tamb. + 80°C
T5 at Tamb. + 95°C
T4 at Tamb. + 130°C
T3 at Tamb. + 195°C
T2 at Tamb. + 290°C
T1 at Tamb. + 440°C
T510 at Tamb. + 500°C

18 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS**

Covered by standards listed at 9.

19 **ROUTINE VERIFICATIONS AND TESTS**
None.

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Rev.A

L C I E

1 **AVENANT D'ATTESTATION D'EXAMEN DE TYPE VOLONTAIRE**

2 **Appareil** destiné à être utilisé en atmosphères explosibles **(Directive 94/9/CE)**

3 Numéro de l'avenant :
LCIE 09 ATEX 1043 X / 01

4 Appareil
Capteur d'accélération
Type : PNR 144-134-000-XXX

5 demandeur : Meggitt SA
Route de Moncor 4
1752 Villars-sur-Glâne
Suisse

15 **DESCRIPTION DE L'AVENANT**

- Changement de nom et d'adresse du fabricant
- Modifications des marques commerciales déposées

Les résultats des vérifications et essais figurent dans le rapport confidentiel N° 102105 – 602924 / 16.

Paramètres spécifiques du ou des modes de protection concerné(s) :
Inchangés.

Le marquage doit être :

Inchangé, excepté la marque commerciale vibro-meter qui devient vibro-meter ou MEGGITT ou MFR S3960 et l'adresse.

16 **DOCUMENTS DESCRIPTIFS**
Lettre du demandeur du 07/09/2010.

17 **CONDITIONS SPECIALES POUR UNE UTILISATION SÛRE**
Inchangées.

18 **EXIGENCES ESSENTIELLES DE SECURITE ET DE SANTE**
Inchangées.

19 **VERIFICATIONS ET ESSAIS INDIVIDUELS**
Néant.

1 **VOLUNTARY SUPPLEMENTARY TYPE EXAMINATION CERTIFICATE**

2 **Equipment** intended for use in potentially explosive atmospheres **(Directive 94/9/EC)**

3 Supplementary certificate number :
LCIE 09 ATEX 1043 X / 01

4 Equipment
Accelerometer
Type : PNR 144-134-000-XXX

5 Applicant : Meggitt SA
Route de Moncor 4
1752 Villars-sur-Glâne
Switzerland

15 **DESCRIPTION OF THE SUPPLEMENTARY CERTIFICATE**
- Change of legal entity name and address of applicant
- Modifications of registered trade mark

The examination and test results are recorded in confidential report N°102105 – 602924 / 16.

Specific parameters of the mode(s) of protection concerned:

Unchanged.

The marking shall be :

Unchanged, except registered trade mark vibro-meter becomes vibro-meter or MEGGITT or MFR S3960 and the address.

16 **DESCRIPTIVE DOCUMENTS**
Letter of applicant from 2010/09/07.

17 **SPECIAL CONDITIONS FOR SAFE USE**
Unchanged.

18 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS**

Unchanged.

19 **ROUTINE VERIFICATIONS AND TESTS**
None.

Fontenay-aux-Roses, le 25 octobre 2010.

Le responsable de certification ATEX
ATEX certification manager
Marc GILLAUX

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Une société de Bureau Veritas — France — www.lcie.fr

L C I E

1 **AVENANT D'ATTESTATION D'EXAMEN DE TYPE VOLONTAIRE**

2 **Appareil** destiné à être utilisé en atmosphères explosibles **(Directive 94/9/CE)**

3 Numéro de l'avenant :
LCIE 09 ATEX 1043 X / 02

4 Appareil
Capteur d'accélération
Type : PNR 144-134-000-XXX

5 demandeur : Meggitt SA
Route de Moncor 4
1752 Villars-sur-Glâne
Suisse

15 **DESCRIPTION DE L'AVENANT**

Mise à jour des normes EN 60079-0 (2009) et EN 60079-15 (2010)

Les résultats des vérifications et essais figurent dans le rapport confidentiel N° 110055-619675 / 08

Paramètres spécifiques du ou des modes de protection concerné(s) :
Inchangés

Le marquage doit être :
Modifié comme suit :
Vibro-Meter ou MEGGITT ou MFR S3960
Adresse : ...
Type : PNR 144-134-000-XXX
N° de série :..., Date de fabrication : ...
II 3 G
Ex nA IIC T6 à T510°C Gc
LCIE 09 ATEX 1043 X

16 **DOCUMENTS DESCRIPTIFS**
Lettre du demandeur du 20/10/2011 (2 pages).

17 **CONDITIONS SPECIALES POUR UNE UTILISATION SÛRE**
Inchangées

18 **EXIGENCES ESSENTIELLES DE SECURITE ET DE SANTE**
Couvertes par les normes EN 60079-0 (2009) et EN 60079-15 (2010)

19 **VERIFICATIONS ET ESSAIS INDIVIDUELS**
Néant

1 **VOLUNTARY SUPPLEMENTARY TYPE EXAMINATION CERTIFICATE**

2 **Equipment** intended for use in potentially explosive atmospheres **(Directive 94/9/EC)**

3 Supplementary certificate number :
LCIE 09 ATEX 1043 X / 02

4 Equipment
Accelerometer
Type : PNR 144-134-000-XXX

5 Applicant : Meggitt SA
Route de Moncor 4
1752 Villars-sur-Glâne
Switzerland

15 **DESCRIPTION OF THE SUPPLEMENTARY CERTIFICATE**
Normative update according to EN 60079-0 (2009) and EN 60079-15 (2010)

The examination and test results are recorded in confidential report N° 110055-619675 / 08

Specific parameters of the concerned protection mode :

Unchanged

The marking shall be :
Modified as follows :
Vibro-Meter or MEGGITT or MFR S3960
Address : ...
Type : PNR 144-134-000-XXX
Serial Number:..., Year of Construction : ...
II 3 G
Ex nA IIC T6 to T510°C Gc
LCIE 09 ATEX 1043 X

16 **DESCRIPTIVE DOCUMENTS**
Applicant's letter dated 2011/10/20 (2 pages)

17 **SPECIAL CONDITIONS FOR SAFE USE**
Unchanged

18 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS**

Covered by standards EN 60079-0 (2009) and EN 60079-15 (2010)

19 **ROUTINE VERIFICATIONS AND TESTS**
None

Fontenay-aux-Roses, le 21/12/2011

Le responsable de certification ATEX
ATEX certification manager
Michel BRÉNON

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L C I E

1 **AVENANT D'ATTESTATION D'EXAMEN DE TYPE VOLONTAIRE**

2 **Appareil** destiné à être utilisé en atmosphères explosibles **(Directive 94/9/CE)**

3 Numéro de l'avenant :
LCIE 09 ATEX 1043 X / 03

4 Appareil ou système de protection :
Capteur d'accélération
Type : PNR 144-134-000-XXX

5 Demandeur : Meggitt SA

15 **DESCRIPTION DE L'AVENANT**

- Mise à jour normative selon la norme EN 60079-0:2012 + Amendement A11:2013
- Ajout d'un essai individuel de rigidité diélectrique,

Définition du type/ *Type definition*:

PNR 144-134-000-XXX
X = 0...9 : dépend du type de connecteur, du type et de la longueur du câble */ depends on the type of connector, the type and the length of cable.*

Les résultats des vérifications et essais de type sont enregistrés dans le rapport confidentiel n°130454-662462-07.

Paramètres spécifiques du ou des modes de protection concerné(s) :
U ≤28 V, I ≤100 mA, P ≤0,7 W

Le marquage doit être :
Meggitt SA ou Vibro-meter ou MFR S3960
Adresse : ...
Type : PNR 144-134-000-XXX
N° de fabrication : ...
Année de fabrication : ...
⟨Ex⟩ II 3 G
Ex nA IIC T6...510°C Gc (*)
LCIE 09 ATEX 1043 X

Le marquage peut être réduit comme suit :
Meggitt SA ou Vibro-meter ou MFR S3960
PNR 144-134-000-XXX
⟨Ex⟩ II 3 G
Ex nA IIC T6...510°C Gc (*)
LCIE 09 ATEX 1043 X

Fontenay-aux-Roses, le 02 décembre 2014

1 **VOLUNTARY SUPPLEMENTARY TYPE EXAMINATION CERTIFICATE**

2 **Equipment** intended for use in potentially explosive atmospheres **(Directive 94/9/EC)**

3 Supplementary certificate number:
LCIE 09 ATEX 1043 X / 03

4 Equipment or protective system:
Accelerometer
Type: PNR 144-134-000-XXX

5 Applicant: Meggitt SA

15 **DESCRIPTION OF THE SUPPLEMENTARY CERTIFICATE**

- Normative update according to standard EN 60079-0:2012 + Amendment A11:2013
- Add of routine dielectric strength test,

The results of type verifications and tests are recorded in confidential report n°130454-662462-07.

Specific parameters of the concerned protection mode:

U ≤28 V, I ≤100 mA, P ≤0.7 W

The marking shall be:
Meggitt SA or Vibro-meter or MFR S3960
Address: ...
Type: PNR 144-134-000-XXX
Serial number: ...
Year of construction: ...
⟨Ex⟩ II 3 G
Ex nA IIC T6...510°C Gc (*)
LCIE 09 ATEX 1043 X

The marking can be reduced as follows:
Meggitt SA or Vibro-meter or MFR S3960
PNR 144-134-000-XXX
⟨Ex⟩ II 3 G
Ex nA IIC T6...510°C Gc (*)
LCIE 09 ATEX 1043 X

Le Responsable de Certification ATEX
ATEX Certification Officer
Michel EQUI

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L C I E

13 **ANNEXE**

14 **AVENANT D'ATTESTATION D'EXAMEN DE TYPE VOLONTAIRE**

LCIE 09 ATEX 1043 X / 03

15 **DESCRIPTION DE L'AVENANT (suite)**

L'appareil doit également comporter le marquage normalement prévu par les normes de construction qui le concerne.

16 **DOCUMENTS DESCRIPTIFS**
Dossier technique n° DT 1069 rév. 00 du 25/09/2014.
Ce dossier comprend 2 rubriques (6 pages).

17 **CONDITIONS SPECIALES POUR UNE UTILISATION SURE**

1. Température ambiante d'utilisation : -200°C à +500°C

2. Classement en température en fonction de la température ambiante d'utilisation :

	T6	T5	T4	T3	T2	T1	510°C
Température ambiante d'utilisation *Ambient temperature in service*	≤+80°C	≤+95°C	≤+130°C	≤+195°C	≤+290°C	≤+440°C	≤+500°C

3. Des mesures doivent être prises afin d'éviter que la tension nominale ne soit pas dépassée par des perturbations transitoires de plus de 119 V.

18 **EXIGENCES ESSENTIELLES DE SECURITE ET DE SANTE**

Conformité aux normes européennes EN 60079-0:2012 + Amendement A11:2013 et EN 60079-15:2010.

19 **VERIFICATIONS ET ESSAIS INDIVIDUELS**

Chaque appareil doit être soumis à un essai de rigidité diélectrique sous une tension d'essai de 500 V efficace, appliquée entre les conducteurs et le châssis durant 60 s, conformément au paragraphe 6.5.1 de la norme EN 60079-15:2010.
Autrement, l'essai doit être exécuté à 600 V efficace pendant au moins 100 ms.

13 **SCHEDULE**

14 **VOLUNTARY SUPPLEMENTARY TYPE EXAMINATION CERTIFICATE**

LCIE 09 ATEX 1043 X / 03

15 **DESCRIPTION OF THE SUPPLEMENTARY CERTIFICATE (continued)**

The equipment shall also bear the usual marking required by the manufacturing standards applying to such equipment.

16 **DESCRIPTIVE DOCUMENTS**
Technical file n° DT 1069 rev. 00 dated 2014/09/25.
This file includes 2 items (6 pages).

17 **SPECIAL CONDITIONS FOR SAFE USE**

1. Ambient temperature in service: -200°C to +500°C

2. Temperature classification in function of the ambient temperature in service:

3. Provisions shall be made to prevent the rated voltage from being exceeded by transient disturbances of more than 119 V.

18 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS**

Compliance with European standards EN 60079-0:2012 + Amendment A11:2013 and EN 60079-15:2010.

19 **ROUTINE VERIFICATIONS AND TESTS**

Each equipment shall be submitted to a dielectric strength test with test voltage of 500 V r.m.s, applied between wires and body during 60 s, carried out in accordance with clause 6.5.1 standard EN 60079-15:2010.

Alternatively, a test shall be carried out at 600 V r.m.s during at least 100 ms.

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Deutsche Übersetzung der originalen französischen Kopie der Seite 1

1 **FREIWILLIGES TYPENPRÜFZERTIFIKAT**

2 Geräte zur Verwendung in explosionsgefährdeten Bereichen - **Richtlinie 94/9/EG**

3 Zertifikatnummer
LCIE 09 ATEX 1043X

4 Gerät
Beschleunigungsgeber
Type : PNR: 144-134-000-XXX

5 Hersteller: VIBRO METER
Adresse: Route de Moncor 4, 1701 FRIBOURG, SCHWEIZ

7 Dieses Gerät oder Schutzsystem und die möglichen, zulässigen Varianten sind im Anhang dieses Zertifikats und den darin aufgeführten Unterlagen beschrieben.

8 LCIE bestätigt, dass dieses Gerät oder Schutzsystem die wesentlichen Gesundheits- und Sicherheitsanforderungen in Bezug auf die Auslegung und die Bauart von Geräten und Schutzsystemen der Kategorie 3 (elektrisch) oder Kategorien 2 und 3 (nicht elektrisch) zur Verwendung in explosionsgefährdeten Bereichen nach Anhang II der Richtlinie 94/9EG des Europaparlaments und des Rats vom 23. März 1994 erfüllt.

Die Prüf- und Testergebnisse sind im vertraulichen Bericht Nr. 94576 - 589014/6 aufgezeichnet.

9 Die Einhaltung der wesentlichen Gesundheits- und Sicherheitsanforderungen wird durch die Übereinstimmung mit den folgenden Dokumenten sichergestellt:
- EN 60079-0 (2006)
- EN 60079-15 (2005)

10 Ein "X" nach der Zertifikatnummer gibt an, dass für die sichere Verwendung des Gerätes oder Schutzsystemes besondere Bedingungen gemäß dem Anhang dieses Zertifikates gelten.

11 Dieses EG-Prüfzertifikat betrifft nur die Bauart und die Prüfungen und Tests des betreffenden Geräts oder Schutzsystems gemäss Anhang III der Richtlinie 94/9/EG.

Zusätzliche Anforderungen dieser Richtlinie gelten für die Fertigung und Lieferung des Geräts oder Schutzsystems. Diese werden durch dieses Zertifikat nicht abgedeckt.

12 Die Kennzeichnung des Gerätes oder Schutzsystems muss die unter Punkt 15 erläuterten Angaben enthalten.

Fontenay-aux-Roses,
am 10. Oktober 2009

Leiter Zertifizierung

Trockenstempel

Rev.A
Seite 1/2

LCIE haftet nur für den französischen Text.
Dieses Zertifikat darf nur vollständig und ohne Änderungen vervielfältigt werden.

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

Deutsche Übersetzung der originalen französischen Kopie der Seite 1

13 **ANHANG**

14 **FREIWILLIGES TYPENPRÜFZERTIFIKAT**

LCIE 09 ATEX 1043 X

15 **BESCHREIBUNG DES GERÄTES ODER SCHUTZSYSTEMS**

Beschleunigungsgeber
Typ : PNR : 144-134-000-XXX

Das Gerät verwandelt elektrische Eingangsladung in elektrisches Ausgangssignal welches proportional zur Beschleunigung oder dem Druck ist.

Spezifische Kenndaten der betroffenen Schutzarten:

U ≤ 28 V, I ≤ 100 mA, P ≤ 0,7 W

Kennzeichnung:
VIBRO-METER Adresse: ..
Typ: PNR: 144-134-000-XXX
Herstellungsnummer: ... Herstellungsjahr: ...
II 3G Ex nA II T6 bis T510
LCIE 09 ATEX 1043 X

Die Kennzeichnung kann wiefolgt vereinfacht werden:
VIBRO-METER PNR: 144-134-000-XXX
II 3G LCIE 09 ATEX 1043 X

Die Geräte müssen ebenfalls mit der Kennzeichnung versehen sein, die in den Herstellungsnormen der betreffenden Geräte normalerweise vorgesehen sind.

16 **BESCHREIBENDE UNTERLAGEN**

Zertifizierungs-Datei-Nr. DT 1046 Ausgabe 0 vom 20. Juli 2009.
Diese Datei enthält 7 Punkte (9 Seiten).

17 **BESONDERE BEDINGUNGEN FÜR DIE SICHERE ANWENDUNG**

Umgebungstemperatur: −200 °C bis +500 °C

Temperaturklassifizierung:
T6 bis Ta = +80 °C
T5 bis Ta = +95 °C
T4 bis Ta = +130 °C
T3 bis Ta = +195 °C
T2 bis Ta = +290 °C
T1 bis Ta = +440 °C
T510 bis Ta = +500 °C

18 **WESENTLICHE ANFORDERUNGEN IM BEZUG AUF SICHERHEIT UND GESUNDHEIT**
Siehe unter Punkt 9 aufgelistete Bestimmungen.

19 **ROUTINEPRÜFUNGEN UND TESTS**

Keine.

Rev.A
Seite 2/2

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

Deutsche Übersetzung der originalen französischen Kopie der Seite 2

1 **ZUSÄTZLICHES FREIWILLIGES TYPENPRÜFUNGSZERTIFIKAT**

2 Geräte zur Verwendung in explosionsgefährdeten Bereichen (**Richtlinie 94/9/EG**)

3 Zusätzliche Zertifikatnummer:
LCIE 09 ATEX 1043 X / 01

4 Gerät
Beschleunigungsgeber
Type : PNR: 144-134-000-XXX

5 Hersteller: Meggitt SA
Adresse: Route de Moncor 4, 1752 Villars-sur-Glâne, Schweiz

15 **BESCHREIBUNG DES ZUSÄTZLICHEN ZERTIFIKATS**

- Änderung der juristischen Person und Addresse des Antragstellers
- Modifikation des eingetragenen Markenzeichens

Die Prüf- und Testergebnisse sind im vertraulichen Bericht Nr. 102105-602924/16 aufgezeichnet.

Spezifische Kenndaten der betroffenen Schutzarten:
Unverändert.

Die Kennzeichnung soll lauten:
Unverändert, bis auf Markenzeichen vibro-meter wird zu vibro-meter oder MEGGITT oder MFR S3960 sowie die Adressänderung.

16 **BESCHREIBENDE UNTERLAGEN**

Brief des Antragsstellers vom 07.09.2010.

17 **BESONDERE BEDINGUNGEN FÜR DIE SICHERE ANWENDUNG**

Unverändert.

18 **WESENTLICHE ANFORDERUNGEN IM BEZUG AUF SICHERHEIT UND GESUNDHEIT**

Unverändert.

19 **ROUTINEPRÜFUNGEN UND TESTS**

Keine.

Fontenay-aux-Roses,
am 25. Oktober 2010

Leiter Zertifizierung

Trockenstempel

Seite 1/1

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

Deutsche Übersetzung der originalen französischen Kopie der Seite 2

1 **ZUSÄTZLICHES FREIWILLIGES TYPENPRÜFUNGSZERTIFIKAT**

2 Geräte zur Verwendung in explosionsgefährdeten Bereichen (**Richtlinie 94/9/EG**)

3 Zusätzliche Zertifikatnummer:
LCIE 09 ATEX 1043 X / 02

4 Gerät
Beschleunigungsgeber
Type : PNR: 144-134-000-XXX

5 Hersteller: Meggitt SA
Adresse: Route de Moncor 4, 1752 Villars-sur-Glâne, Schweiz

15 **BESCHREIBUNG DES ZUSÄTZLICHEN ZERTIFIKATS**

Standardaktualisierungen gemäß folgender Richtlinien: EN 60079-0 (2009) und EN 60079-15 (2010)

Die Prüf- und Testergebnisse sind im vertraulichen Bericht Nr. 110055-619675 / 08 aufgezeichnet.

Spezifische Kenndaten der betroffenen Schutzarten:
Unverändert.

Die Kennzeichnung lautet wie folgt:
Wie folgt modifiziert:
Vibro-Meter oder MEGGITT oder MFR S3960
Adresse: ...
Typ: PNR 144-134-000-XXX
Herstellungsnummer: ... Herstellungsjahr: ...
Ex II 3 G
Ex nA IIC T6 bis T510°C Gc
LCIE 09 ATEX 1043 X

16 **BESCHREIBENDE UNTERLAGEN**

Brief des Antragsstellers vom 20.10.2011 (2 Seiten)

17 **BESONDERE BEDINGUNGEN FÜR DIE SICHERE ANWENDUNG**

Unverändert.

18 **WESENTLICHE ANFORDERUNGEN IM BEZUG AUF SICHERHEIT UND GESUNDHEIT**

Werden von folgenden Richtlinien abgedeckt:
EN 60079-0 (2009) und EN 60079-15 (2010)

19 **ROUTINEPRÜFUNGEN UND TESTS**

Keine.

Fontenay-aux-Roses,
am 21. Dezember 2011

Leiter Zertifizierung

Trockenstempel

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

Deutsche Übersetzung der originalen französischen Kopie der Seite 3

1 **ZUSÄTZLICHES FREIWILLIGES TYPENPRÜFUNGSZERTIFIKAT**

2 Geräte zur Verwendung in explosionsgefährdeten Bereichen (**Richtlinie 94/9/EG**)

3 Zusätzliche Zertifikatnummer:
LCIE 09 ATEX 1043 X / 03

4 Gerät
Beschleunigungsgeber
Typ: PNR 144-134-000-XXX

5 Antragsteller: Meggitt SA

15 **BESCHREIBUNG DES ZUSÄTZLICHEN ZERTIFIKATS**

– Standardaktualisierungen gemäß folgender Richtlinien:
EN 60079-0:2012 + Änderung A11:2013.
– Hinzufügen einer Stückprüfung von Durchschlagfestigkeit.

Definition von Gerät:
PNR 144-134-000-XXX
X = 0 … 9: Abhängig von der Steckertyp, Kabeltyp und Kabellänge.

Die Testergebnisse sind im vertraulichen Bericht Nr. 130454-662462-07.

Spezifische Kenndaten der betroffenen Schutzarten:
U ≤ 28 V, I ≤ 100 mA, P ≤ 0,7 W

Die Kennzeichnung wird wie folgt festgesetzt:
Meggitt SA oder Vibro-Meter oder MFR S3960
Adresse: …
Typ: PNR 144-134-000-XXX
Herstellungsnummer: … Herstellungsjahr: …
Ex II 3 G
Ex nA IIC T6…510°C Gc(*)
LCIE 09 ATEX 1043 X

Die Kennzeichnung kann wie folgt reduziert werden:
Meggitt SA oder Vibro-Meter oder MFR S3960
PNR 144-134-000-XXX
Ex II 3 G
Ex nA IIC T6…510°C Gc(*)
LCIE 09 ATEX 1043 X

(*): Siehe besondere Bedingungen für die sichere Anwendung (unter Punkt 17)

Fontenay-aux-Roses,
am 02. Dezember 2014

Leiter Zertifizierung

Trockenstempel

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Deutsche Übersetzung der originalen französischen Kopie der Seite 3

13 **ANHANG**

14 **ZUSÄTZLICHES FREIWILLIGES TYPENPRÜFUNGSZERTIFIKAT**

LCIE 09 ATEX 1043 X / 03

15 **BESCHREIBUNG DES ZUSÄTZLICHEN ZERTIFIKATS (FORTSETZUNG)**

Die Geräte müssen ebenfalls mit der Kennzeichnung versehen sein, die in den Herstellungsnormen der betreffenden elektrischen Geräte normalerweise vorgesehen sind.

16 **BESCHREIBENDE UNTERLAGEN**

Zertifizierungs-Datei-Nr. DT 1069 Ausgabe 00 vom 2014/09/25.
Diese Datei enthält 2 Punkte (6 Seiten).

17 **BESONDERE BEDINGUNGEN FÜR DIE SICHERE ANWENDUNG**

1. Umgebungstemperatur im Betrieb: −200 °C bis +500°C.

2. Temperaturklassifizierung entsprechend der Umgebungstemperatur im Betrieb:

	T6	T5	T4	T3	T2	T1	510°C
Umgebungstemperatur im Betrieb	≤ +80 °C	≤ +95°C	≤ +130 °C	≤ +195 °C	≤ +290 °C	≤ +440 °C	≤ +500 °C

3. Es müssen Vorkehrungen getroffen werden dass kurzzeitige Störungen die Nominalspannungen nicht mehr als 119 V überschreiten können.

18 **WESENTLICHE ANFORDERUNGEN IM BEZUG AUF SICHERHEIT UND GESUNDHEIT**

Werden von folgenden Richtlinien abgedeckt:
EN 60079-0:2012 + Änderung A11:2013 und EN 60079-15:2010.

19 **ROUTINEPRÜFUNGEN UND TESTS**

Jedes Gerät muss einem Durschlagsfestigkeitstest unterzogen werden. Spannung von 500 V (RMS) währen 60 Sekunden zwischen den Leitern und dem Gehäuse gemäss Norm EN 60079-15:2010.
Andernfalls muss ein Test mit 600 V (RMS) während mindestens 100 ms durchgeführt werden

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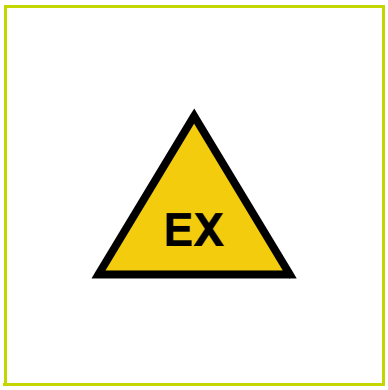
DIESE SEITE WURDE ABSICHTLICH LEER GELASSEN

EX CERTIFICATE – ATEX

vibro-meter®

LCIE 02 ATEX 6179 X
for
CA20x piezoelectric accelerometers



Note: Although the Ex certificate may be included in more than one language, the liability of the notified body applies only on the text of the original copy of the certificate that it published.

Document reference LCIE 02 ATEX 6179 X
Edition 8 – January 2021

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ATTESTATION D'EXAMEN UE DE TYPE
EU TYPE EXAMINATION CERTIFICATE

1 **Version : 05** — **LCIE 02 ATEX 6179 X** — **Issue : 05**

	Directive 2014/34/UE	**Directive 2014/34/EU**
2	Appareil ou Système de Protection destiné à être utilisé en Atmosphères Explosibles	Equipment or Protective System Intended for use in Potentially Explosive Atmospheres
3	Produit : Capteur d'accélération	Product : Acceleration transducer

Type: 144-20x-000-yyy

4	Fabricant :	Manufacturer :
	Meggitt SA	
5	Adresse :	Address :
	Route de Moncor 4 1752 Villars-sur-Glâne Switzerland	

6	Ce produit et ses variantes éventuelles acceptées sont décrits dans l'annexe de la présente attestation et dans les documents descriptifs cités en référence.	This product and any acceptable variations thereto are specified in the schedule to this certificate and the documents therein referred to.
7	Le LCIE, Organisme Notifié sous la référence 0081 conformément à l'article 17 de la directive 2014/34/UE du Parlement européen et du Conseil du 26 février 2014, certifie que ce produit est conforme aux Exigences Essentielles de Sécurité et de Santé pour la conception et la construction de produits destinés à être utilisés en atmosphères explosibles, données dans l'annexe II de la Directive. Accréditation Cofrac Certification de Produits et Services, n°5-0014. Portée disponible sur www.cofrac.fr.	LCIE, Notified Body number 0081 in accordance with article 17 of the Directive 2014/34/EU of the European Parliament and the Council of 26 February 2014 certifies that product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres, given in Annex II to the Directive. Cofrac Accreditation Product and Services Certification n°5-0014. Scope available on www.cofrac.fr.
	Les résultats des vérifications et essais figurent dans le(s) rapport(s) confidentiel(s) N° :	The examination and test results are recorded in confidential report(s) N°:
	166439-749029-M1	
8	Le respect des Exigences Essentielles de Sécurité et de Santé est assuré par la conformité à :	Compliance with the Essential Health and Safety Requirements has been assured by compliance with :
	EN IEC 60079-0:2018 EN 60079-11:2012	
9	Le signe « X » lorsqu'il est placé à la suite du numéro de l'attestation, indique que cet appareil est soumis aux conditions particulières d'utilisation, mentionnées dans l'annexe de cette attestation.	If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.
10	Cette Attestation d'Examen UE de Type concerne uniquement la conception et la construction du produit spécifié. Des exigences supplémentaires de la directive sont applicables pour la fabrication et la fourniture du produit. Ces dernières ne sont pas couvertes par la présente attestation.	This EU Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.
11	Le marquage du produit est mentionné dans l'annexe de cette attestation.	The marking of the product is specified in the schedule to this certificate.

Fontenay-aux-Roses, le 17 décembre 2020

Responsable de Certification
Certification Officer
Julien Gauthier

LABORATOIRE CENTRAL DES INDUSTRIES ELECTRIQUES
S.A.S au capital de 15.745.984 €
RCS Nanterre B 408 363 174
33 avenue du Général Leclerc
F - 92266 FONTENAY AUX ROSES

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Une société de Bureau Veritas
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92260 Fontenay-aux-Roses
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WWW.LCIE.FR

ATTESTATION D'EXAMEN UE DE TYPE - ANNEXE
EU TYPE EXAMINATION CERTIFICATE - SCHEDULE

1 **Version : 05** — **LCIE 02 ATEX 6179 X** — **Issue : 05**

12 **DESCRIPTION DU PRODUIT**

Le capteur d'accélération est composé d'un boîtier en acier inoxydable, qui abrite un dispositif piézoélectrique comme élément de détection.

Ce capteur d'accélération est un transducteur électromécanique fournissant à ses bornes une charge électrique proportionnelle à la vibration à laquelle il est soumis. Cette vibration est transmise à l'élément sensible par l'intermédiaire de masse sismique. Il fonctionne avec un matériau piézo-électrique monté en cisaillement.

Il y a deux versions:
1) Capteur d'accélération avec connecteur.
2) Capteur d'accélération avec câble intégré d'une longueur 315 mètres max.

DESCRIPTION OF PRODUCT

Acceleration transducer is composed of a stainless steel enclosure, which house a piezoelectric device as sensing element.

This acceleration sensor is an electro-mechanical transducer that supplies to its terminal an electrical charge proportional to the vibration which is submitted.
This vibration is transmitted to the sensible element by the intermediate of seismic mass. It operates with a piezo-electrical material built in shear.

There are two versions :
1) Acceleration transducer with connector.
2) Acceleration transducer with integral cable length 315 meters max.

DETAIL DE LA GAMME / **RANGE DETAILS**

144-20x-000-yyy

x	Définit la conception de la tête du capteur (x = 0 à 9) *Defines the design of the sensor head (x = 0 to 9)*
yyy	Dépend du type de connecteur et de la longueur du câble (y = 0 à 9) *Depends of the connector type and cable length (y = 0 to 9)*

CARACTERISTIQUES / **RATINGS**

Version ***Version***	**Paramètres électriques de sécurité intrinsèque** ***Intrinsic safety electrical parameters***
Connecteur / *Connector*	U_i : 28 V; I_i : 100 mA; P_i : 0.7 W; C_i : 20 nF; L_i : 0
Câble intégré / *Integral cable*	U_i : 28 V; I_i : 100 mA; P_i : 0.7 W; C_i : 20 nF + 0.2 nF/m; L_i : 1 µH/m

MARQUAGE

Le marquage du produit doit comprendre :

vibro-meter® ou MEGGIT SA ou MFR S3960
Adresse : …
Type : 144-20x-000-yyy (1)
N° de fabrication : …
Année de fabrication : …
Ex II 1 G
Ex ia IIC T6…T2 Ga (2)
LCIE 02 ATEX 6179 X
-55°C ≤ T_{amb} ≤ +260°C
U_i: … V; I_i: … mA; P_i: … mW; C_i: … nF; L_i: … µH (3)
(1): complété par la désignation de type.
(2): voir le tableau des températures.
(3): complétées par les paramètres électriques de sécurité intrinsèque de la version concernée.

MARKING

The marking of the product shall include the following :

vibro-meter® or MEGGIT SA or MFR S3960
Address: …
Type: 144-20x-000-yyy (1)
Serial number: …
Year of construction: …
Ex II 1 G
Ex ia IIC T6…T2 Ga (2)
LCIE 02 ATEX 6179 X
-55°C ≤ T_{amb} ≤ +260°C
U_i: … V; I_i: … mA; P_i: … mW; C_i: … nF; L_i: … µH (3)
(1): completed with type designation.
(2): see temperatures table.
(3): completed by intrinsic safety electrical parameters of the version concerned.

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MEGGITT
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ATTESTATION D'EXAMEN UE DE TYPE - ANNEXE
EU TYPE EXAMINATION CERTIFICATE - SCHEDULE

1 **Version : 05** — **LCIE 02 ATEX 6179 X** — **Issue : 05**

Le marquage peut être réduit ainsi :

vibro-meter® ou MEGGIT SA ou MFR S3960
Adresse : …
Type : 144-20x-000-yyy (1)
N° de fabrication : …
Année de fabrication : …
Ⓔx II 1 G
Ex ia IIC T6…T2 Ga
LCIE 02 ATEX 6179 X
(1): complété par la désignation de type.

The marking can be reduce as following:

vibro-meter® or MEGGIT SA or MFR S3960
Address: …
Type: 144-20x-000-yyy (1)
Serial number: …
Year of construction: …
Ⓔx II 1 G
Ex ia IIC T6…T2 Ga
LCIE 02 ATEX 6179 X
(1): completed with type designation.

Tableau des températures / *Temperatures table*

Température ambiante *Ambient temperature*	**Classe de température** *Temperature class*
-55°C ≤ T_{amb} ≤ +80°C	T6
-55°C ≤ T_{amb} ≤ +95°C	T5
-55°C ≤ T_{amb} ≤ +130°C	T4
-55°C ≤ T_{amb} ≤ +195°C	T3
-55°C ≤ T_{amb} ≤ +260°C	T2

L'appareil doit également comporter le marquage normalement prévu par les normes de construction qui le concernent sous la responsabilité du fabricant.

The equipment shall also bear the usual marking required by the product standards applying to such equipment under the manufacturer responsibility.

13 **CONDITIONS PARTICULIERES D'UTILISATION**

a. L'appareil ne doit être raccordé qu'à des matériels associés de sécurité intrinsèque certifiés. Cette association doit être compatible vis-à-vis de la sécurité intrinsèque conformément aux exigences de la norme EN 60079-25.

b. Température ambiante d'utilisation : -55°C à +260°C.

c. Le montage de l'appareil dans une installation doit être effectué de telle sorte que le corps métallique du capteur d'accélération et le blindage du câble soient reliés de manière fiable à la terre du système.

d. L'appareil devra être installé comme défini dans le plan n° PZ 9134 rév. 00 du 10/02/2020.

e. Le câble utilisé doit avoir une température d'utilisation compatible avec l'environnement dans lequel l'appareil est installé.

SPECIFIC CONDITIONS OF USE

The apparatus shall only be connected to associated intrinsically safe apparatus. This combination must be compatible as regard the intrinsic safety rules according to the requirements of EN 60079-25 standard.

Operating ambient temperature: -55°C to +260°C.

The mounting of the apparatus into an installation must be carried out in such a way that metallic body of acceleration transducer and cable shield are reliably connected to the system earth.

The apparatus must be installed per drawing n° PZ 9134 rev. 00 dated 2020/02/10.

The cable used must have an operating temperature compatible with the environment in which the equipment is installed.

14 **EXIGENCES ESSENTIELLES DE SANTE ET DE SECURITE**

Couvertes par les normes listées au point 8.

ESSENTIAL HEALTH AND SAFETY REQUIREMENTS

Covered by standards listed at 8.

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ATTESTATION D'EXAMEN UE DE TYPE - ANNEXE
EU TYPE EXAMINATION CERTIFICATE - SCHEDULE
1 Version : 05 — LCIE 02 ATEX 6179 X — Issue : 05

15 **DOCUMENTS DESCRIPTIFS** — **DESCRIPTIVE DOCUMENTS**

N°	Description	Reference	Rev.	Date	Page(s)
1.	Dossier technique / *Technical file*	DT-1078	00	2020/12/09	19
2.	Manuel d'instruction / *Instruction manual*	PZ 9135	–	--	--

16 **INFORMATIONS COMPLEMENTAIRES** — **ADDITIONAL INFORMATIONS**

Essais individuels

Néant.

Conditions de certification

Les détenteurs d'attestations d'examen UE de type doivent également satisfaire les exigences de contrôle de production telles que définies à l'article 13 de la Directive 2014/34/UE.

Routine tests

None.

Conditions of certification

Holders of EU type examination certificates are also required to comply with the production control requirements defined in article 13 of Directive 2014/34/EU.

17 **DETAILS DES MODIFICATIONS DE L'ATTESTATION** — **DETAILS OF CERTIFICATE CHANGES**

Version 00 : (09/01/2003)	Evaluation initiale selon les normes suivantes : - EN 50014:1997+A1 et A2, - EN 50020:1994.	Issue 00 : (2003/01/09)	Initial assessment according to following standards: - EN 50014:1997+A1 and A2, - EN 50020:1994.
Version 01 : (17/12/2007)	- Mise à jour normative selon les normes EN 60079-0:2006 et EN 60079-11:2007. - Ajout de la plage de température ambiante dans les conditions spéciale d'utilisation sûres.	Issue 01 (2007/12/17)	- Normative update according to EN 60079-0:2006 and EN 60079-11:2007 standards. - Adding of operational temperature range in clause special conditions for a safe use.
Version 02 : (25/10/2010)	- Changement de nom et d'adresse du fabricant. - Modification des marques commerciales déposées.	Issue 02 (2010/10/25)	- Change of legal entity name and address of applicant. - Modification of the registered trade mark.
Version 03 : (21/12/2011)	- Mise à jour normative selon la norme EN 60079-0:2009. - Mise à jour du type. - Correction de la classe de température.	Issue 03 (2011/12/21)	- Normative update according to EN 60079-0:2009 standard. - Type update. - Correction of the temperature classification.
Version 04 : (29/07/2014)	- Mise à jour normative selon les normes EN 60079-0:2012 et EN 60079-11:2012. - Modification des paramètres électriques. - Modification du classement en température. - Mise à jour du dossier technique.	Issue 04 (2014/07/29)	- Normative update according to EN 60079-0:2012 and EN 60079-11:2012 standards. - Modification of the electrical parameters. - Modification of the temperature classification. - Update of the technical file.
Version 05:	- Mise à jour normative selon la norme EN IEC 60079-0:2018. - Modification de la valeur de la capacité du transducteur: 20 nF au lieu de 5 nF.	Issue 05	- Normative update according to EN IEC 60079-0:2018 standard. - Modification of the transducer capacitance value: 20 nF instead of 5 nF.

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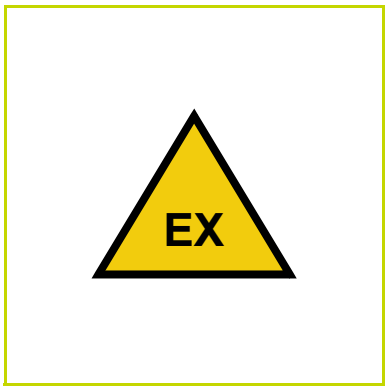
EX CERTIFICATE – ATEX

vibro-meter®

LCIE 09 ATEX 1044 X
for
CA20x piezoelectric accelerometers



Note: Although the Ex certificate may be included in more than one language, the liability of the notified body applies only on the text of the original copy of the certificate that it published.

Document reference LCIE 09 ATEX 1044 X
Edition 5 – January 2023

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ATTESTATION D'EXAMEN DE TYPE
TYPE EXAMINATION CERTIFICATE

1 **Version : 04** — **LCIE 09 ATEX 1044 X** — **Issue : 04**

	Directive 2014/34/UE	**Directive 2014/34/EU**
2	Appareil ou Système de Protection destiné à être utilisé en Atmosphères Explosibles	Equipment or Protective System Intended for use in Potentially Explosive Atmospheres
3	Produit : **Capteur d'accélération**	Product : **Accelerometer**

Type: PNR 144-20X-000-YYY

4	Fabricant :	Manufacturer :
	Meggitt SA	
5	Adresse :	Address :
	Route de Moncor 4 1752 Villars-sur-Glâne SWITZERLAND	

6	Ce produit et ses variantes éventuelles acceptées sont décrits dans l'annexe de la présente attestation et dans les documents descriptifs cités en référence.	This product and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.
7	Le LCIE certifie que ce produit est conforme aux Exigences Essentielles de Sécurité et de Santé pour la conception et la construction de produits destinés à être utilisés en atmosphères explosibles, données dans l'annexe II de la Directive. Les résultats des vérifications et essais figurent dans le(s) rapport(s) confidentiel(s) N° : 94576-589014/7; 102105-602924/18; 110055-619675/09; 130454-662562-08; 17461656-785107-M3	LCIE certifies that product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres, given in Annex II to the Directive. The examination and test results are recorded in confidential report(s) N°:
8	Le respect des Exigences Essentielles de Sécurité et de Santé est assuré par la conformité à : EN IEC 60079-0:2018 EN 60079-15:2010	Compliance with the Essential Health and Safety Requirements has been assured by compliance with :
9	Le signe « X » lorsqu'il est placé à la suite du numéro de l'attestation, indique que cet appareil est soumis aux conditions particulières d'utilisation, mentionnées dans l'annexe de cette attestation.	If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.
10	Cette Attestation d'Examen de Type concerne uniquement la conception et la construction du produit spécifié. Des exigences supplémentaires de la directive sont applicables pour la fabrication et la fourniture du produit. Ces dernières ne sont pas couvertes par la présente attestation.	This Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.
11	Le marquage du produit est mentionné dans l'annexe de cette attestation.	The marking of the product is specified in the schedule to this certificate.

Fontenay-aux-Roses, le 22 décembre 2022

Responsable de Certification
Certification Officer
Julien Gauthier

LABORATOIRE CENTRAL DES INDUSTRIES ELECTRIQUES
S.A.S au capital de 15.745.984 €
RCS Nanterre B 408 363 174
33 avenue du Général Leclerc
F - 92260 FONTENAY AUX ROSES

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Une société de Bureau Veritas
33 Avenue du Général Leclerc
92260 Fontenay-aux-Roses
FRANCE
WWW.LCIE.FR

ATTESTATION D'EXAMEN DE TYPE - ANNEXE
TYPE EXAMINATION CERTIFICATE - SCHEDULE

1 **Version : 04** — **LCIE 09 ATEX 1044 X** — **Issue : 04**

12 **DESCRIPTION DU PRODUIT**

L'accéléromètre type PNR 144-20X-000-YYY fonctionne comme un transducteur électromécanique qui fournit à ses bornes une charge électrique proportionnelle à l'accélération subie. L'équipement est équipé d'un câble câblé permanent protégé par une gaine métallique ou par un connecteur.

DETAIL DE LA GAMME

PNR 144-20X-000-YYY
X = 0...9 : définit l'exécution de la tête du capteur.
Y = 0...9 : dépend du type de connecteur et de la longueur du câble.

CARACTERISTIQUES

U ≤ 28 V, I ≤ 100 mA, P ≤ 0.7 W

MARQUAGE

Le marquage du produit doit comprendre :

Le marquage doit être :
Meggitt SA ou Vibro-meter ou MFR S3960
Adresse : …
Type : 144-20X-000-YYY
N° de fabrication : …
Année de fabrication : …
II 3 G
Ex nA IIC T6…T2 Gc (*)
LCIE 09 ATEX 1044 X

Le marquage peut être réduit comme suit :
Meggitt SA ou Vibro-meter ou MFR S3960
144-20X-000-YYY
II 3 G
Ex nA IIC T6…T2 Gc (*)
LCIE 09 ATEX 1044 X
(*) : voir conditions spéciales pour une utilisation sûre.

L'appareil doit également comporter le marquage normalement prévu par les normes de construction qui le concernent sous la responsabilité du fabricant.

13 **CONDITIONS PARTICULIERES D'UTILISATION**

a. Température ambiante en service : -55°C à +260°C.

b. Classement en température en fonction de la température ambiante d'utilisation :

DESCRIPTION OF PRODUCT

The accelerometer type PNR 144-20X-000-YYY functions as an electromechanical transducer which supplies at its terminals electrical charge proportional to the submitted acceleration. The equipment is equipped with a permanently wired cable protected by metallic sheath or with a connector.

RANGE DETAILS

PNR 144-20X-000-YYY
X = 0…9: defines the execution of the sensor head.
Y = 0…9: depends on the type of connector and cable length.

RATINGS

MARKING

The marking of the product shall include the following :

The marking shall be:
Meggitt SA or Vibro-meter or MFR S3960
Address: …
Type: 144-20X-000-YYY
Serial number: …
Year of construction: …
II 3 G
Ex nA IIC T6…T2 Gc (*)
LCIE 09 ATEX 1044 X

The marking can be reduced as follows:
Meggitt SA or Vibro-meter or MFR S3960
144-20X-000-YYY
II 3 G
Ex nA IIC T6…T2 Gc (*)
LCIE 09 ATEX 1044 X
(*): see special conditions for safe use.

The equipment shall also bear the usual marking required by the product standards applying to such equipment under the manufacturer responsibility.

SPECIFIC CONDITIONS OF USE

Ambient temperature in service: -55°C to +260°C.

Temperature classification in function of the ambient temperature in service:

	T6	T5	T4	T3	T2
Température ambiante d'utilisation *Ambient temperature in service*	≤ +80°C	≤ +95°C	≤ +130°C	≤ +195°C	≤ +260°C

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ATTESTATION D'EXAMEN DE TYPE - ANNEXE
TYPE EXAMINATION CERTIFICATE - SCHEDULE

1 **Version : 04** — **LCIE 09 ATEX 1044 X** — **Issue : 04**

c. Des mesures doivent être prises afin d'éviter que la tension nominale ne soit pas dépassée par des perturbations transitoires de plus de 119 V.

Provisions shall be made to prevent the rated voltage from being exceeded by transient disturbances of more than 119 V.

14 **EXIGENCES ESSENTIELLES DE SANTE ET DE SECURITE**

Couvertes par les normes listées au point 8.

ESSENTIAL HEALTH AND SAFETY REQUIREMENTS

Covered by standards listed at 8.

15 **DOCUMENTS DESCRIPTIFS**

DESCRIPTIVE DOCUMENTS

N°	Description	Reference	Rev.	Date	Page(s)
1.	Technical file	DT1047	00	2009/04/20	-
2.	Technical file	DT 1069	00	2014/09/25	-
3.	Technical file	DT 1084	00	2022/12/13	-
4.	User instruction	Ex MANUAL CA20x accelerometer	05	-	-

16 **INFORMATIONS COMPLEMENTAIRES**

Essais individuels

Chaque appareil doit être soumis à un essai de rigidité diélectrique sous une tension d'essai de 500 V efficace, appliquée entre les conducteurs et le châssis durant 60 s, conformément au paragraphe 6.5.1 de la norme EN 60079-15:2010. Autrement, l'essai doit être exécuté à 600 V efficace pendant au moins 100 ms

ADDITIONAL INFORMATIONS

Routine tests

Each equipment shall be submitted to a dielectric strength test with test voltage of 500 V r.m.s, applied between wires and body during 60 s, carried out in accordance with clause 6.5.1 standard EN 60079-15:2010. Alternatively, a test shall be carried out at 600 V r.m.s during at least 100 ms.

17 **DETAILS DES MODIFICATIONS DE L'ATTESTATION**

Version 00: 06/04/2009 — Évaluation initiale selon les normes EN 60079-0:2006 et EN 60079-15:2005.

Version 01: 06/04/2009 — - Changement de nom et d'adresse du demandeur personne morale,
- modifications de la marque enregistrée.

Version 02: 21/12/2011 — Mise à jour normative selon les normes EN 60079-0:2009 et EN 60079-15:2010.

Version 03: 02/12/2014 — - Mise à jour normative selon la norme EN 60079-0:2012 + amendement A11:2013.
- Ajout de l'essai de routine de rigidité diélectrique.

Version 04: — Mise à jour normative selon la norme EN IEC 60079-0:2018.

DETAILS OF CERTIFICATE CHANGES

Issue 00: — Initial assessment according to EN 60079-0:2006 and EN 60079-15:2005 standards.

Issue 01: — - Change of legal entity applicant's name and address,
- Modifications of registered trademark.

Issue 02: — Normative update according to EN 60079-0:2009 and EN 60079-15:2010 standards.

Issue 03: — - Normative update according to EN 60079-0:2012 standard + amendment A11:2013.
- Add of routine dielectric strength test.

Issue 04 : — Normative update according to EN IEC 60079-0:2018 standard.

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Original copy (French, English)
MEGGITT

ATEX certificate:

KEMA 04 ATEX 1055

for CA 28x, CE 28x and CE 31x

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EN

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FR

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

DE

EX

Meggitt SA
Route de Moncor 4
PO Box 1616
CH - 1701 Fribourg
Switzerland

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DIESE SEITE WURDE ABSICHTLICH LEER GELASSEN

CERTIFICATE

(1) EU-Type Examination

(2) **Equipment or protective systems intended for use in potentially explosive atmospheres - Directive 2014/34/EU**

(3) EU-Type Examination Certificate Number: **KEMA 04ATEX1055** Issue Number: **7**

(4) Product: **Piezoelectric Accelerometer Type 144-28.-000-..., Type 444-28.-000-... and Type 444-31.-000-...**

(5) Manufacturer: **Meggitt SA**

(6) Address: **Rte de Moncor 4, 1752 Villars-sur-Glâne, Switzerland**

(7) This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) DEKRA Certification B.V., Notified Body number 0344 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential test report number 210692400/1, issue 7.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0 : 2012 + A11 **EN 60079-11 : 2012**

except in respect of those requirements listed at item 18 of the Schedule.

(10) If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.

(11) This EU-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

(12) The marking of the product shall include the following:

II 1 G Ex ia IIC T6 ... T2 Ga

Date of certification: 24 June 2016

DEKRA Certification B.V.

R. Schuller
Certification Manager

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DEKRA Certification B.V. Meander 1051, 6825 MJ Arnhem P.O. Box 5185, 6802 ED Arnhem The Netherlands
T +31 88 96 83000 F +31 88 96 83100 www.dekra-certification.com Registered Arnhem 09085396

(13) SCHEDULE

(14) **to EU-Type Examination Certificate KEMA 04ATEX1055** Issue No. **7**

(15) **Description**

Piezoelectric Accelerometers sensor only Type 144-28.-000-..., sensor with remote Conditioner (Electronic box) Type 444-28.-000-… and sensor with integral Conditioner Type 444-31.-000-… are used for vibration monitoring.
The sensor converts mechanical forces (e.g. vibrations) of the equipment to which it is mounted into an electrical signal, that is processed externally. When a conversion module is integrated, the sensor signal is converted into a modulated current output signal.

Ambient temperature range, depending on type and application:

Type 444-28.-000-..1
Conditioner: -55 ºC to +100 ºC,
Sensor and Cable: -55 ºC to +260 ºC

Type 444-28.-000-..2 to 444-28.-000-..9
Conditioner: -55 ºC to +125 ºC,
Sensor and Cable: -55 ºC to +260 ºC

Type 444-31.-000-..1
Sensor and Integral
Conditioner:: -55 ºC to +100 ºC

Type 444-31.-000-..2 to to 444-31.-000-..9
Sensor and Integral
Conditioner:: -55 ºC to +125 ºC

Type 144-28.-000-…
Sensor only: -60 ºC to +260 ºC

The relation between maximum ambient temperature and temperature class is as follows for all devices, taking into account the above mentioned temperature ranges:

Type	T6	T5	T4	T3	T2
444-28.-000-..1 Conditioner	+80 ºC	+95 ºC	+100 ºC	-	-
444-28.-000-..2 to 444-28-000-..9 Conditioner	+65 ºC	+80 ºC	+115 ºC	+125 ºC	-
444-31.-000-..1	+80 ºC	+95 ºC	+100 ºC	-	-
444-31.-000-..2 to 444-31.-000-..9 Conditioner	+65 ºC	+80 ºC	+115 ºC	+125 ºC	-
144-28.-000-…	+80 ºC	+95 ºC	+130 ºC	+195 ºC	+260 ºC

Form 227A
Version 1 (2016-04)

DEKRA

(13) **SCHEDULE**

(14) **to EU-Type Examination Certificate KEMA 04ATEX1055** Issue No. **7**

Electrical data

Supply and output signal:
in type of protection intrinsic safety Ex ia IIC, only for connection to a certified intrinsically safe circuit, with following maximum values:

Type	U_i	I_i	P_i	L_i	C_i sensor	C_i cable
444-28.-000-..1	28 V	100 mA	0,7 W	0mH	10.5 nF	-
444-28-000-..2 to 444-28.-000-..9	28 V	100 mA	0,7 W	0mH	0 nF	-
444-31.-000-..1	28 V	100 mA	0,7 W	0mH	10.5 nF	0,25 nF/m
444-31.-000-..2 to 444-31.-000-..9	28 V	100 mA	0,7 W	0mH	0 nF	0,25 nF/m
144-28.-000-...	28 V	100 mA	0,7 W	0mH	8 nF	0,25 nF/m

Installation instructions

The instructions provided with the product shall be followed in detail to assure safe operation.

(16) **Report Number**

210692400/1, issue 7.

(17) **Specific conditions of use**

None.

(18) **Essential Health and Safety Requirements**

Covered by the standards listed at item (9).

(19) **Test documentation**

As listed in Report No. 210692400/1, issue 7.

(20) **Certificate history**

Issue 1 - 203798600 initial certificate
Issue 2 - 210692400 update of standards
Issue 3 - 212412300 Ci of the sensor changed from 6 nF to 8 nF.
Issue 4 - 213900800 Change of manufacturer name and adress
Issue 5 - 214938400: Assessment according to EN 60079-0 : 2009.
Issue 6 - 217022200 Assessment according to EN 60079-0 : 2012 and EN 60079-11 : 2012
Issue 7 - 203798600 Minor technical changes

Page 3/3

Form 227A
Version 1 (2016-04)

Traduction française de la copie originale anglaise publiée à la page 1

1 **D'EXAMEN EU de type**

2 Appareils et systèmes de protection prévus pour une utilisation dans des atmosphères potentiellement explosives **– Directive 2014/34/EU**

3 Numéro d'attestation d'examen EU de type : **KEMA 04ATEX1055 Numéro d'émission : 7**

Appareil : **Accéléromètre piézoélectrique Type 144-28.000…, Type 444-28.000… et Type 444-31.000…**

5 Fabricant : **Meggitt SA**

6 Adresse : **Rte de Moncor 4, 1752 Villars-sur-Glâne, Switzerland**

7 Cet appareil et toute variante acceptable de celuici sont spécifiés dans l'annexe de cette attestation et les documents auxquels il est fait référence.

8 Suivant l'Article 17 de la Directive du Conseil 2014/34/EU du 26 février 2014, DEKRA Certification B.V., numéro d'Organisme notifié 0344, certifie que cet appareil est conforme aux Exigences essentielles en ce qui concerne la sécurité et la santé relatives à la conception et la fabrication d'appareils et de systèmes de protection conçus pour une utilisation dans des atmosphères potentiellement explosives, suivant l'Annexe II de cette directive.
Les résultats des vérifications et des tests figurent dans le rapport confidentiel N° 210692400/1 édition 7.

9 Le respect des Exigences essentielles en ce qui concerne la sécurité et la santé est assuré par la conformité aux normes suivantes :

EN 60079-0 : 2012 + A11 **EN 60079-11 : 2012**

sauf en ce qui concerne les conditions indiquées au point 18 de l'annexe.

10 Le signe X, lorsque placé à la suite du numéro de l'attestation, indique que l'appareil est soumis aux Conditions spéciales pour une utilisation, mentionnées dans l'annexe de la présente attestation.

11 La présente Attestation d'examen EU de type porte uniquement sur la conception, la vérification et les tests de l'appareil spécifié. D'autres exigences de la Directive sont applicables au procédé de fabrication et à la livraison de l'appareil. Ces dernières ne sont pas couvertes par la présente attestation.

12 Le marquage de l'appareil devra comporter, entre autres indications utiles, les mentions suivantes :

II 1 G Ex ia IIC T6 … T2 Ga

Date de certification : le 24 juin 2016

DEKRA Certification B.V.
R. Schuller
Responsable de la certification

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T +31 88 96 83000 F +31 88 96 83100 www.dekra-certification.com Registered Arnehm 09085396

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13 **ANNEXE**

14 **Attestation d'examen EU de type KEMA 04ATEX1055 Numéro d'émission : 7**

15 **Description**

Accéléromètres piézoélectriques Type 144-28.-000-… (capteur uniquement),
capteur avec module de conversion à distance) Type 444-28.-000-… ,
et capteur avec module de conversion intégral Type 444-31.-000-… ,
utilisés pour la mesure des vibrations.
Le capteur convertit les forces mécaniques (par exemple, les vibrations) de l'appareil sur lequel il est monté en signal électrique, traité en externe. Lorsqu'un module de conversion est intégré, le signal du capteur est converti en signal de sortie sous la forme de courant modulé.

Fourchette de températures ambiantes, suivant le type et l'application :

Type 444-28.-000-..1
Module de conversion : De −55°C à +100°C
Capteur et câble : De −55°C à +260°C.

Type 444-28.-000-..2 à 444-28.-000-..9
Module de conversion : De −55°C à +125°C
Capteur et câble : De −55°C à +260°C.

Type 444-31.-000-..1
Capteur et module de conversion intégral : De −55°C à +100°C.

Type 444-31.-000-..2 à 444-31.-000-..9
Capteur et module de conversion intégral : De −55°C à +125°C.

Type 144-28.-000-…
Capteur uniquement : De −60°C à +260°C.

Pour tous les appareils et en prenant en compte les fourchettes de température mentionnées cidessus, la relation entre la température ambiante maximum et la classe de température est la suivante :

Type	T6	T5	T4	T3	T2
444-28.-000-001 Module de conversion	+80°C	+95°C	+100°C	-	-
444-28.-000-002 à 444-28.-000-009 Module de conversion	+65°C	+80°C	+115°C	+125°C	-
444-31.-000-001	+80°C	+95°C	+100°C	-	-
444-31.-000-002 à 444-31.-000-009 Module de conversion	+65°C	+80°C	+115°C	+125°C	-
144-28.-000-...	+80°C	+95°C	+130°C	+195°C	+260°C

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Traduction française de la copie originale anglaise publiée à la page 2

13 **ANNEXE**

14 **Attestation d'examen EU de type KEMA 04ATEX1055 Numéro d'émission : 7**

Données électriques

Signal d'alimentation et de sortie :
Dans le type de protection par sécurité intrinsèque Ex ia IIC, uniquement pour une connexion à un circuit sécurisé intrinsèquement, avec les valeurs maximum suivantes :

Type	Ui	Ii	Pi	Li	Ci capteur	Ci câble
444-28.-000-001	28 V	100 mA	0,7 W	0 mH	10,5 nF	-
444-28.-000-002 à 444-28.-000-009	28 V	100 mA	0,7 W	0 mH	0 nF	-
444-31.-000-001	28 V	100 mA	0,7 W	0 mH	10,5 nF	0,25 nF/m
444-31.-000-002 à 444-31.-000-009	28 V	100 mA	0,7 W	0 mH	0 nF	0,25 nF/m
144-28.-000-...	28 V	100 mA	0,7 W	0 mH	8 nF	0,25 nF/m

Instructions d'installation

Les instructions du manuel fourni avec l'appareil devront être suivies précisément pour une utilisation sûre.

16 **Numéro de rapport**
No. 210692400/1 édition 7.

17 **Conditions spéciales pour une utilisation**
Néant

18 **Exigences essentielles en ce qui concerne la sécurité et la santé**
Couvertes par les normes répertoriées en (9)

19 **Documentation de test**
Comme répertoriée dans le Rapport de test N° 210692400/1 édition 7.

20 **Historique de certificat**

Edition 1 – 203798600 Certificat initial
Edition 2 – 210692400 Mise à jour des normes
Edition 3 – 212412300 Ci (capacitance) du capteur passe de 6 nF à 8 nF
Edition 4 – 213900800 Changement de nom et adresse du fabricant
Edition 5 – 214938400 Évaluation selon la norme EN 60079-0 : 2009
Edition 6 – 217022200 Évaluation selon les normes EN 60079-0 : 2012 et EN 60079-11 : 2012
Edition 7 – 203798600 Modifications techniques mineures

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Deutsche Übersetzung der original englischen Kopie der Seite 1

1 **EGBAUMUSTERPRÜFBESCHEINIGUNG**

2 Betriebsmittel und Schutzsysteme zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen – Richtlinie 2014/34/EU

3 EGBaumusterprüfbescheinigung Nummer: **KEMA 04ATEX1055** Versionsnummer: **7**

4 Betriebsmittel oder Schutzsystem: **Piezoelektrisches Accelerometer**, **Typ 144-28.000...**, **Typ 444-28.000...** und **Typ 444-31.000...**

5 Hersteller: **Meggitt SA**

6 Adresse: **Rte de Moncor 4, 1752 Villars-sur-Glâne, Schweiz**

7 Die Bauart dieses Geräts oder Schutzsystems sowie die verschiedenen zulässigen Ausführungen sind in der Anlage zu dieser EGBaumusterprüfbescheinigung und in den zugehörigen Unterlagen festgelegt.

8 DEKRA Certification B.V. bescheinigt als benannte Stelle Nr. 0344 nach Artikel 17 der Richtlinie 2014/34/EU des Rates der Europäischen Gemeinschaft vom 26. Februar 2014 die Erfüllung der grundlegenden Sicherheits und Gesundheitsanforderungen für die Konzeption und die Herstellung von Betriebsmitteln und Schutzsystemen zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen gemäß Anhang II der Richtlinie.
Die Ergebnisse der Prüfung sind im vertraulichen Prüfbericht Nr. 210692400/1 Ausgabe 7 festgehalten.

9 Die grundlegenden Sicherheits und Gesundheitsanforderungen werden erfüllt durch Übereinstimmung mit:
EN 60079-0: 2012 + A11 **EN 60079-11: 2012**

außer in Bezug auf diese Anforderungen unter Punkt 18 aufgeführten der Zeitplan.

10 Falls das Zeichen „X“ hinter der Bescheinigungsnummer steht, wird auf besondere Bedingungen für die sichere Anwendung dieses Betriebsmittels oder Schutzsystems in der Anlage zu dieser Bescheinigung hingewiesen.

11 Diese EGBaumusterprüfbescheinigung bezieht sich nur auf Konzeption, Bau und Prüfung des bezeichneten Betriebsmittels oder Schutzsystems gemäß Richtlinie 94/9/EG. Weitere Anforderungen dieser Richtlinie gelten für den Herstellungsprozess und das Inverkehrbringen dieses Betriebsmittels oder Schutzsystems. Diese Anforderungen werden von dieser Bescheinigung nicht abgedeckt.

12 Die Kennzeichnung des Betriebsmittels oder Schutzsystems muss die folgenden Angaben enthalten:
II 1 G Ex ia IIC T6 ... T2 Ga

Zeit der Zertifizierung: 24. Juni 2016

DEKRA Certification B.V.
R. Schuller
Certification Manager

DEKRA Certification B.V. Meander 1051, 6825 MJ Arnhem Postfach 5185, 6802 ED Arnhem Die Niederlande
T +31 88 96 83000 F +31 88 96 83100 www.dekra-certification.com Handelsregistereintrag Arnhem 09085396

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Deutsche Übersetzung der original englischen Kopie der Seite 1

13 **ANLAGE**

14 **zur EGBaumusterprüfbescheinigung KEMA 04ATEX1055** Version **7**

15 **Beschreibung**

Piezoelektrische Accelerometer der Typen 144-28.-000-... (nur Sensor) ,
Sensor mit externem Konvertierungsmodul der Typen 444-28.-000-... ,
und Sensor mit integriertem Konvertierungsmodul der Typen 444-31.-000-... ,
werden für die Schwingungsüberwachung verwendet.
Der Sensor wandelt mechanische Kräfte (z. B. Schwingungen), die auf das Betriebsmittel wirken, an dem der Sensor befestigt ist, in ein elektrisches Signal, das extern weiterverarbeitet wird. Wenn ein Konvertierungsmodul integriert ist, wird das Sensorsignal in ein strommoduliertes Ausgangssignal umgewandelt.

Umgebungstemperaturbereiche nach Typ und Anwendung:

Typ 444-28.-000-..1
Konvertierungsmodul: –55°C bis +100°C
Sensor und Kabel: –55°C bis +260°C.

Typ 444-28.-000-..2 bis Typ 444-28.-000-..9
Konvertierungsmodul: –55°C bis +125°C
Sensor und Kabel: –55°C bis +260°C.

Typ 444-31.-000-..1
Sensor und integriertes Konvertierungsmodul: –55°C bis +100°C.

Typ 444-31.-000-..2 bis Typ 444-31.-000-..9
Sensor und integriertes Konvertierungsmodul: –55°C bis +125°C.

Typ 444-28.-000-...
Nur Sensor: –60°C bis +260°C.

Der Zusammenhang zwischen maximaler Umgebungstemperatur und Temperaturklasse gilt für alle Geräte gemäß der nachstehenden Tabelle. Dabei sind die oben genannten Temperaturbereiche zu berücksichtigen:

Typ	T6	T5	T4	T3	T2
444-28.-000-001 Konvertierungsmodul	+80°C	+95°C	+100°C	-	-
444-28.-000-002 à 444-28.-000-009 Konvertierungsmodul	+65°C	+80°C	+115°C	+125°C	-
444-31.-000-001	+80°C	+95°C	+100°C	-	-
444-31.-000-002 à 444-31.-000-009 Konvertierungsmodul	+65°C	+80°C	+115°C	+125°C	-
144-28.-000-...	+80°C	+95°C	+130°C	+195°C	+260°C

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Deutsche Übersetzung der original englischen Kopie der Seite 2

13 **ANLAGE**

14 **zur EGBaumusterprüfbescheinigung KEMA 04ATEX1055** Version **7**

Elektrische Daten

Versorgungsspannung und Ausgangssignal:
In Zündschutzart Eigensicherheit Ex ia IIC, nur zum Anschluss an einen bescheinigten eigensicheren Stromkreis mit folgenden Höchstwerten:

Typ	Ui	Ii	Pi	Li	Ci sensor	Ci kabel
444-28.-000-001	28 V	100 mA	0,7 W	0 mH	10,5 nF	-
444-28.-000-002 à 444-28.-000-009	28 V	100 mA	0,7 W	0 mH	0 nF	-
444-31.-000-001	28 V	100 mA	0,7 W	0 mH	10,5 nF	0,25 nF/m
444-31.-000-002 à 444-31.-000-009	28 V	100 mA	0,7 W	0 mH	0 nF	0,25 nF/m
144-28.-000-...	28 V	100 mA	0,7 W	0 mH	8 nF	0,25 nF/m

Installationsanweisungen

Zur sicheren Bedienung sind die Anweisungen im mitgelieferten Handbuch zur beachten.

16 **Berichtsnummer**
Nr. 210692400/1 Ausgabe 7.

17 **Besondere Bedingungen für die sichere Anwendung**
Keine

18 **GRUNDLEGENDE GESUNDHEITS UND SICHERHEITSANFORDERUNGEN**
Abgedeckt durch die unter 9 aufgeführten Normen.

19 **Prüfungsunterlagen**
Gemäß Aufstellung in Prüfbericht Nr. 210692400/1 Ausgabe 7.

20 **Zertifikat Geschichte**

Ausgabe 1 – 203798600 Ursprüngliche
Ausgabe 2 – 210692400 Aktualisierung von Standards
Ausgabe 3 – 212412300 Kapazität (Ci) des Sensors 6 nF bis 8 nF geändert
Ausgabe 4 – 213900800 Änderung des Namens und Anschrift des Herstellers
Ausgabe 5 – 214938400 Beurteilung selon Standard EN 60079-0 : 2009
Ausgabe 6 – 217022200 Beurteilung selon den Standards EN 60079-0 : 2012 und EN 60079-11 : 2012
Ausgabe 7 – 203798600 Geringfügige technische Austausch

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

ATEX certificate:

LCIE 09 ATEX 1047 X

for CA 28x, CE 28x and CE 31x

Although the certificate is available in the three languages (English, French and German), the liability of the notified body applies only on the text of the original copy of the certificate that it published.

EN

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FR

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

DE

EX

Meggitt SA
Route de Moncor 4
PO Box 1616
CH - 1701 Fribourg
Switzerland

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CETTE PAGE EST LAISSÉE INTENTIONNELLEMENT VIDE
DIESE SEITE WURDE ABSICHTLICH LEER GELASSEN

L C I E

1 **ATTESTATION D'EXAMEN DE TYPE VOLONTAIRE**

2 **Appareil** destiné à être utilisé en atmosphères explosibles **(Directive 94/9/CE)**

3 Numéro de l'attestation d'examen de type
LCIE 09 ATEX 1047 X

4 Appareil
Capteur d'accélération
Types PNR: 444-28X-000-YYY
: 444-31X-000-YYY
144-28X-000-YYY

5 Demandeur : VIBRO-METER SA
Adresse : Route de Moncor 4
1701 FRIBOURG SUISSE

7 Cet appareil ou système de protection et ses variantes éventuelles acceptées sont décrits dans l'annexe de la présente attestation et dans les documents descriptifs cités en référence.

8 Le LCIE certifie que cet appareil ou système de protection est conforme aux exigences essentielles de sécurité et de santé pour la conception d'appareils ou système de protection, électriques de catégorie 3 ou non électriques de catégorie 2 et 3, destinés à être utilisés en atmosphères explosibles, données dans l'annexe II de la directive 94/9/CE du Parlement européen et du Conseil du 23 mars 1994.

Les résultats des vérifications et essais figurent dans le rapport confidentiel N°94576/589014/10.

9 Le respect des exigences essentielles de sécurité et de santé est assuré par la conformité à :
- EN 60079-0 (2006) - EN 60079-15 (2005)

10 Le signe X lorsqu'il est placé à la suite du numéro de l'attestation, indique que cet appareil ou système de protection est soumis aux conditions spéciales pour une utilisation sûre, mentionnées dans l'annexe de la présente attestation.

11 Cette attestation d'examen de type concerne uniquement la conception, les vérifications et essais de l'appareil ou du système de protection spécifié, conformément à la directive 94/9/CE.
Des exigences supplémentaires de la directive sont applicables pour la fabrication et la fourniture de l'appareil ou du système de protection. Ces dernières ne sont pas couvertes par la présente attestation.

12 Le marquage de l'appareil ou du système de protection doit comporter les informations détaillées au point 15.

Fontenay-aux-Roses, le 10 octobre 2009

Le responsable de certification ATEX
ATEX certification manager

Marc GILLAUX

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Société par Actions Simplifiée
au capital de 15 245 981 €
RCS Nanterre B 408 363 177

1 **VOLUNTARY TYPE EXAMINATION CERTIFICATE**

2 **Equipment** intended for use in potentially explosive atmospheres **(Directive 94/9/EC)**

3 Type Examination Certificate number
LCIE 09 ATEX 1047X

4 Equipment
Accelerometer
Types PNR: 444-28X-000-YYY
: 444-31X-000-YYY
144-28X-000-YYY

5 applicant : VIBRO-METER SA
Address : Route de Moncor 4
1701 FRIBOURG SUISSE

7 This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 LCIE certifies that this equipment or protective system has been found to comply with the essential Health and Safety Requirements that relate to the design of equipment or protective system, of category 3 electrical or categories 2 and 3 non electrical, which is intended for use in potentially explosive atmospheres, given in Annex II of the Directive 94/9/EC of the European Parliament and Council of 23 March 1994.

The examination and test results are recorded in confidential report N°94576/589014/10.

9 Compliance with the Essential Health and Safety Requirements has been assured by reference to :
- EN 60079-0 (2006) - EN 60079-15 (2005)

10 If the sign X is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

11 This type examination certificate relates only to the design, examination and tests of this specified equipment or protective system in accordance III to the directive 94/9/EC.

Further requirements of the Directive may apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

12 The marking of the equipment or protective system shall include information as detailed at 15.

L C I E

13 **ANNEXE**

14 **ATTESTATION D'EXAMEN DE TYPE VOLONTAIRE**

LCIE 09 ATEX 1047 X

15 **DESCRIPTION DE L'APPAREIL OU DU SYSTEME DE PROTECTION**

Capteur d'accélération
Type : PNR : 444-28X-000-YYY
444-31X-000-YYY
144-28X-000-YYY

Le matériel est un transducteur électro-mécanique fournissant à ses bornes une charge électrique proportionnelle à la pression mesurée.

Paramètres spécifiques du ou des modes de protection concernés :

U ≤ 28V, I ≤ 100mA, P ≤ 0,7W

Le marquage doit être :

VIBRO-METER
Adresse : ...
Type : PNR : 444-28X-000-YYY, 444-31X-000-YYY,
144-28X-000-YYY
N° de fabrication : ... Année de fabrication : ...
II 3G Ex nA II T6 à T4 ou T6 à T2 (1)
LCIE 09 ATEX 1047 X

Le marquage peut être réduit à :

VIBRO-METER
444-28X-000-YYY, 444-31X-000-YYY,144-28X-000-YYY
II 3G LCIE 09 ATEX 1047 X

Note (1):
PNR 444-31X-000-YYY : T6 à T4.
PNR 444-28X-000-YYY et PNR 144-28X-000-YYY : T6 à T2

L'appareil doit également comporter le marquage normalement prévu par les normes de construction qui le concerne.

16 **DOCUMENTS DESCRIPTIFS**

Dossier de certification N°DT 1039 rev.00 du 20/07/09.
Ce document comprend 7 rubriques (12 pages).
Dossier de certification N°DT 1040 rev.00 du 20/07/09.
Ce document comprend 7 rubriques (11 pages).
Dossier de certification N°DT 1048 rev.00 du 20/07/09.
Ce document comprend 3 rubriques (5 pages).

13 **SCHEDULE**

14 **VOLUNTARY TYPE EXAMINATION CERTIFICATE**

LCIE 09 ATEX 1047 X

15 **DESCRIPTION OF EQUIPMENT OR PROTECTIVE SYSTEM**

Accelerometer
Type : PNR : 444-28X-000-YYY
444-31X-000-YYY
144-28X-000-YYY

This equipment is an electro-mechanical transducer delivering at its terminal blocks an electrical load proportional to the measured pressure.

Specific parameters of the mode(s) of protection concerned :

U ≤ 28V, I ≤ 100mA, P ≤ 0,7W

The marking shall be :

VIBRO-METER
Address : ...
Type : PNR : 444-28X-000-YYY, 444-31X-000-YYY,
144-28X-000-YYY
Serial number : ... Year of construction : ...
II 3G Ex nA II T6 to T4 or T6 to T2 (1)
LCIE 09 ATEX 1047 X

The marking can be reduce at :

VIBRO-METER
444-28X-000-YYY, 444-31X-000-YYY,144-28X-000-YYY
Ex nA LCIE 09 ATEX 1047 X

Note (1):
PNR 444-31X-000-YYY : T6 to T4.
PNR 444-28X-000-YYY and PNR 144-28X-000-YYY : T6 to T2.

The equipment shall also bear the usual marking required by the manufacturing standards applying to such equipment.

16 **DESCRIPTIVE DOCUMENTS**

Certification file N°DT 1039 rev.00 dated 09/07/20.
This file includes 7 items (12 pages).
Certification file N°DT 1040 rev.00 dated 09/07/20.
This file includes 7 items (11 pages).
Certification file N°DT 1048 rev.00 dated 09/07/20.
This file includes 3 items (5 pages).

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Rev.A

L C I E

1 **AVENANT D'ATTESTATION D'EXAMEN DE TYPE VOLONTAIRE**

2 **Appareil** destiné à être utilisé en atmosphères explosibles **(Directive 94/9/CE)**

3 Numéro de l'avenant :
LCIE 09 ATEX 1047 X / 01

4 Appareil
Capteur d'accélération
Type : PNR : 444-28X-000-YYY
444-31X-000-YYY
144-28X-000-YYY

5 demandeur : Meggitt SA
Route de Moncor 4
1752 Villars-sur-Glâne
Suisse

15 **DESCRIPTION DE L'AVENANT**

- Changement de nom et d'adresse du fabricant
- Modifications des marques commerciales déposées

Les résultats des vérifications et essais figurent dans le rapport confidentiel N° 102105 – 602924 / 19.

Paramètres spécifiques du ou des modes de protection concerné(s) :
Inchangés.

Le marquage doit être :

Inchangé, excepté la marque commerciale vibro-meter qui devient vibro-meter ou MEGGITT ou MFR S3960 et l'adresse.

16 **DOCUMENTS DESCRIPTIFS**
Courrier du demandeur du 07/09/2010.

17 **CONDITIONS SPECIALES POUR UNE UTILISATION SÛRE**
Inchangées.

18 **EXIGENCES ESSENTIELLES DE SECURITE ET DE SANTE**
Inchangées.

19 **VERIFICATIONS ET ESSAIS INDIVIDUELS**
Néant.

1 **VOLUNTARY SUPPLEMENTARY TYPE EXAMINATION CERTIFICATE**

2 **Equipment** intended for use in potentially explosive atmospheres **(Directive 94/9/EC)**

3 Supplementary certificate number :
LCIE 09 ATEX 1047 X / 01

4 Equipment
Accelerometer
Type : PNR : 444-28X-000-YYY
444-31X-000-YYY
144-28X-000-YYY

5 Applicant : Meggitt SA
Route de Moncor 4
1752 Villars-sur-Glâne
Switzerland

15 **DESCRIPTION OF THE SUPPLEMENTARY CERTIFICATE**
- Change of legal entity name and address of applicant
- Modifications of registered trade mark

The examination and test results are recorded in confidential report N°102105 – 602924 / 19.

Specific parameters of the mode(s) of protection concerned:

Unchanged.

The marking shall be :

Unchanged, except registered trade mark vibro-meter becomes vibro-meter or MEGGITT or MFR S3960 and the address.

16 **DESCRIPTIVE DOCUMENTS**
Letter of applicant from 2010/09/07.

17 **SPECIAL CONDITIONS FOR SAFE USE**
Unchanged.

18 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS**

Unchanged.

19 **ROUTINE VERIFICATIONS AND TESTS**
None.

Fontenay-aux-Roses, le 25 octobre 2010.

Le responsable de certification ATEX
ATEX certification manager
Marc GILLAUX

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13 **ANNEXE (suite)**

14 **ATTESTATION D'EXAMEN DE TYPE VOLONTAIRE**

LCIE 09 ATEX 1047 X

17 **CONDITIONS SPECIALES POUR UNE UTILISATION SÛRE**
Capteur 444-28X-000-YYY :

Température ambiante d'utilisation :
- Capteur et câble : -55°C à +260°C
- Conditionneur : -55°C à +100°C

Classement en température en fonction de la température ambiante :
T6 à Tamb. + 80°C
T5 à Tamb. + 95°C
T4 à Tamb. + 130°C
T3 à Tamb. + 195°C
T2 à Tamb. + 260°C

Capteur 444-31X-000-YYY :

Température ambiante d'utilisation :
- Capteur : -55°C à +125°C
- Câble : -55°C à +125°C

Classement en température en fonction de la température ambiante :
T6 à Tamb. + 80°C
T5 à Tamb. + 95°C
T4 à Tamb. + 125°C

Capteur 144-28X-000-YYY :

Température ambiante d'utilisation :
- Capteur et câble : -55°C à +260°C

Classement en température en fonction de la température ambiante :
T6 à Tamb. + 80°C
T5 à Tamb. + 95°C
T4 à Tamb. + 130°C
T3 à Tamb. + 195°C
T2 à Tamb. + 260°C

18 **EXIGENCES ESSENTIELLES DE SECURITE ET DE SANTE**
Couvertes par les normes listées au point 9.

19 **VERIFICATIONS ET ESSAIS INDIVIDUELS**
Néant.

13 **SCHEDULE (continued)**

14 **VOLUNTARY TYPE EXAMINATION CERTIFICATE**

LCIE 09 ATEX 1047 X

17 **SPECIAL CONDITIONS FOR SAFE USE**

Sensor 444-28X-000-YYY :

Operating ambient temperature :
- Sensor and cable : -55°C to +260°C
- Conditioner : -55°C to +100°C

Temperature classification as a function of the ambient temperature :
T6 to Tamb. + 80°C
T5 to Tamb. + 95°C
T4 to Tamb. + 130°C
T3 to Tamb. + 195°C
T2 to Tamb. + 260°C

Sensor 444-31X-000-YYY :

Operating ambient temperature :
- Sensor : -55°C to +125°C
- Cable : -55°C to +125°C

Temperature classification as a function of the ambient temperature :
T6 to Tamb. + 80°C
T5 to Tamb. + 95°C
T4 to Tamb. + 125°C

Sensor 144-28X-000-YYY :

Operating ambient temperature :
- Sensor and cable : -55°C to +260°C

Temperature classification in function of the operating temperature :
T6 to Tamb. + 80°C
T5 to Tamb. + 95°C
T4 to Tamb. + 130°C
T3 to Tamb. + 195°C
T2 to Tamb. + 260°C

18 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS**

Covered by standards listed at 9.

19 **ROUTINE VERIFICATIONS AND TESTS**
None.

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Rev.A

L C I E

1 **AVENANT D'ATTESTATION D'EXAMEN DE TYPE VOLONTAIRE**

2 **Appareil** destiné à être utilisé en atmosphères explosibles **(Directive 94/9/CE)**

3 Numéro de l'avenant :
LCIE 09 ATEX 1047 X / 02

4 Appareil
Capteur d'accélération
Type : PNR 444-28X-000-YYY
PNR 444-31X-000-YYY
PNR 144-28X-000-YYY

5 Demandeur : Meggitt SA

15 **DESCRIPTION DE L'AVENANT**

Mise à jour des normes EN 60079-0 (2009) et EN 60079-15 (2010)

Les résultats des vérifications et essais figurent dans le rapport confidentiel N° 110055-619675 / 10

Paramètres spécifiques du ou des modes de protection concerné(s) :
Inchangés

Le marquage doit être :
Modifié comme suit
Vibro-Meter ou MEGGITT ou MFR S3960
Adresse : ...
Type : PNR 444-28X-000-YYY
PNR 444-31X-000-YYY
PNR 144-28X-000-YYY
N° de série :..., Date de fabrication : ...
Ex II 3 G
Ex nA IIC T6 à T4 ou T2 Gc (1)
LCIE 09 ATEX 1047 X
(1) dépend du type

16 **DOCUMENTS DESCRIPTIFS**
Lettre du demandeur du 20/10/2011 (2 pages).

17 **CONDITIONS SPECIALES POUR UNE UTILISATION SÛRE**
Inchangées

18 **EXIGENCES ESSENTIELLES DE SECURITE ET DE SANTE**
Couvertes par les normes EN 60079-0 (2009) et EN 60079-15 (2010)

19 **VERIFICATIONS ET ESSAIS INDIVIDUELS**
Néant

Fontenay-aux-Roses, le 21/12/2011

1 **VOLUNTARY SUPPLEMENTARY TYPE EXAMINATION CERTIFICATE**

2 **Equipment** intended for use in potentially explosive atmospheres **(Directive 94/9/EC)**

3 Supplementary certificate number :
LCIE 09 ATEX 1047 X / 02

4 Equipment
Accelerometer
Type : PNR 444-28X-000-YYY
PNR 444-31X-000-YYY
PNR 144-28X-000-YYY

5 Applicant : Meggitt SA

15 **DESCRIPTION OF THE SUPPLEMENTARY CERTIFICATE**
Normative update according to EN 60079-0 (2009) and EN 60079-15 (2010)

The examination and test results are recorded in confidential report N° 110055-619675 / 10

Specific parameters of the concerned protection mode :

Unchanged

The marking shall be :
Modified as follows
Vibro-Meter or MEGGITT or MFR S3960
Address : ...
Type : PNR 444-28X-000-YYY
PNR 444-31X-000-YYY
PNR 144-28X-000-YYY
Serial Number:..., Year of Construction : ...
Ex II 3 G
Ex nA IIC T6 to T4 or T2 Gc (1)
LCIE 09 ATEX 1047 X
(1) depending on type

16 **DESCRIPTIVE DOCUMENTS**
Applicant's letter dated 2011/10/20 (2 pages).

17 **SPECIAL CONDITIONS FOR SAFE USE**
Unchanged

18 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS**

Covered by standards EN 60079-0 (2009) and EN 60079-15 (2010)

19 **ROUTINE VERIFICATIONS AND TESTS**
None

Michel BRÉNON
Le responsable de certification ATEX
ATEX certification manager

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des Industries Electriques — 92260 Fontenay-aux-Roses cedex — contact@lcie.fr — RCS Nanterre B 408 363 174
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L C I E

1 **AVENANT D'ATTESTATION D'EXAMEN DE TYPE VOLONTAIRE**

2 **Appareil** destiné à être utilisé en atmosphères explosibles **(Directive 94/9/CE)**

3 Numéro de l'avenant :
LCIE 09 ATEX 1047 X / 03

4 Appareil ou système de protection :
Capteurs d'accélération
Type : PNR 444-28X-000-YY1, PNR 444-31X-000-YY1, PNR 144-28X-000-YYY

5 Demandeur : Meggitt SA

15 **DESCRIPTION DE L'AVENANT**

- Mise à jour normative selon la norme EN 60079-0:2012 + Amendement A11:2013,
- Types PNR 444-XXX-000-YYY deviennent PNR 444-XXX-000-YY1,
- Ajout d'un essai individuel de rigidité diélectrique,

Définition du type/ *Type definition*:

PNR 444-28X-000-YY1, PNR 444-31X-000-YY1, PNR 144-28X-000-YYY
X = 0...9 : définit l'exécution de la tête du capteur / *defines the execution of the sensor head.*
Y = 0...9 : dépend du type de connecteur et de la longueur du câble / *depends on the type of connector and cable length.*

Les résultats des vérifications et essais de type sont enregistrés dans le rapport confidentiel n°130454-662462-11.

Paramètres spécifiques du ou des modes de protection concerné(s) :
U ≤28 V, I ≤100 mA, P ≤0,7 W

Le marquage doit être :
Meggitt SA ou Vibro-meter ou MFR S3960
Adresse : ...
Type : PNR 444-28X-000-YY1, PNR 444-31X-000-YY1, PNR 144-28X-000-YYY
N° de fabrication : ...
Année de fabrication : ...
Ex II 3 G
Ex nA IIC T6...T4 ou T6...T2 Gc (*)
LCIE 09 ATEX 1047 X
(*) : voir conditions spéciales pour une utilisation sûre.

Fontenay-aux-Roses, le 02 décembre 2014

1 **VOLUNTARY SUPPLEMENTARY TYPE EXAMINATION CERTIFICATE**

2 **Equipment** intended for use in potentially explosive atmospheres **(Directive 94/9/EC)**

3 Supplementary certificate number:
LCIE 09 ATEX 1047 X / 03

4 Equipment or protective system:
Accelerometers
Type: PNR 444-28X-000-YY1, PNR 444-31X-000-YY1, PNR 144-28X-000-YYY

5 Applicant: Meggitt SA

15 **DESCRIPTION OF THE SUPPLEMENTARY CERTIFICATE**

- Normative update according to standard EN 60079-0:2012 + Amendment A11:2013,
- Types PNR 444-XXX-000-YYY become PNR 444-XXX-000-YY1,
- Add of routine dielectric strength test,

The results of type verifications and tests are recorded in confidential report n°130454-662462-11.

Specific parameters of the concerned protection mode:

U ≤28 V, I ≤100 mA, P ≤0.7 W

The marking shall be:
Meggitt SA or Vibro-meter or MFR S3960
Address: ...
Type: PNR 444-28X-000-YY1, PNR 444-31X-000-YY1, PNR 144-28X-000-YYY
Serial number: ...
Year of construction: ...
Ex II 3 G
Ex nA IIC T6...T4 or T6...T2 Gc (*)
LCIE 09 ATEX 1047 X
(*): see special conditions for safe use.

Le Responsable de Certification ATEX
ATEX Certification Officer
Michel EQUI

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13 ANNEXE

14 AVENANT D'ATTESTATION D'EXAMEN DE TYPE VOLONTAIRE

LCIE 09 ATEX 1047 X / 03

15 DESCRIPTION DE L'AVENANT (suite)

Le marquage peut être réduit comme suit :
Megglit SA ou Vibro-meter ou MFR S3960
PNR 444-28X-000-YY1, PNR 444-31X-000-YY1, PNR 144-28X-000-YYY
Ⓔ II 3 G
Ex nA IIC T6...T4 ou T6...T2 Gc (*)
LCIE 09 ATEX 1047 X
(*) : voir conditions spéciales pour une utilisation sûre.

L'appareil doit également comporter le marquage normalement prévu par les normes de construction qui le concerne.

16 DOCUMENTS DESCRIPTIFS
Dossier technique n° DT 1069 rév. 00 du 25/09/2014.
Ce dossier comprend 2 rubriques (6 pages).

17 CONDITIONS SPECIALES POUR UNE UTILISATION SURE

1. Température ambiante d'utilisation / *Ambient temperature in service:*

Type	Câble / *Cable*	Capteur / *Sensor*	Conditionneur / *Conditioner*
PNR 444-28X-000-YY1	-55°C à/*to* +260°C	-55°C à/*to* +260°C	-55°C à/*to* +100°C
PNR 444-31X-000-YY1	-55°C à/*to* +125°C	-55°C à/*to* +125°C	
PNR 144-28X-000-YYY	-55°C à/*to* +260°C	-55°C à/*to* +260°C	

2. Classement en température / *Temperature classification:*

Classe de température / *Temperature class* / Température ambiante d'utilisation / *Ambient temperature in service*	T6	T5	T4	T3	T2
PNR 444-28X-000-YY1	≤+80°C	≤+95°C	≤+130°C	≤+195°C	≤+260°C
PNR 444-31X-000-YY1	≤+80°C	≤+95°C	≤+125°C		
PNR 144-28X-000-YYY	≤+80°C	≤+95°C	≤+130°C	≤+195°C	≤+260°C

3. Des mesures doivent être prises afin d'éviter que la tension nominale ne soit pas dépassée par des perturbations transitoires de plus de 119 V. / 3. Provisions shall be made to prevent the rated voltage from being exceeded by transient disturbances of more than 119 V.

18 EXIGENCES ESSENTIELLES DE SECURITE ET DE SANTE

Conformité aux normes européennes EN 60079-0:2012 + Amendement A11:2013 et EN 60079-15:2010.

18 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS

Compliance with European standards EN 60079-0:2012 + Amendment A11:2013 and EN 60079-15:2010.

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13 ANNEXE (suite)

14 AVENANT D'ATTESTATION D'EXAMEN DE TYPE VOLONTAIRE

LCIE 09 ATEX 1047 X / 03

19 VERIFICATIONS ET ESSAIS INDIVIDUELS

Chaque appareil doit être soumis à un essai de rigidité diélectrique sous une tension d'essai de 500 V efficace, appliquée entre les conducteurs et le châssis durant 60 s, conformément au paragraphe 6.5.1 de la norme EN 60079-15:2010.
Autrement, l'essai doit être exécuté à 600 V efficace pendant au moins 100 ms.

13 SCHEDULE (continued)

14 VOLUNTARY SUPPLEMENTARY TYPE EXAMINATION CERTIFICATE

LCIE 09 ATEX 1047 X / 03

19 ROUTINE VERIFICATIONS AND TESTS

Each equipment shall be submitted to a dielectric strength test with test voltage of 500 V r.m.s, applied between wires and body during 60 s, carried out in accordance with clause 6.5.1 of standard EN 60079-15:2010.
Alternatively, a test shall be carried out at 600 V r.m.s during at least 100 ms.

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1 **AVENANT D'ATTESTATION D'EXAMEN DE TYPE VOLONTAIRE**

2 **Appareil** destiné à être utilisé en atmosphères explosibles **(Directive 94/9/CE)**

3 Numéro de l'avenant :
LCIE 09 ATEX 1047 X / 04

4 Appareil : Accéléromètres CE28X et CE31X

Type : - PNR 444-28X-000-YY1 à YY9,
- PNR 444-31X-000-YY1 à YY9,
- PNR 144-28X-000-YYY.

5 Demandeur : Meggitt SA

15 **DESCRIPTION DE L'AVENANT**

Nouveau développement de l'électronique du conditionneur, les nouveaux types sont :
- PNR 444-28X-000-YY2 à YY9,
- PNR 444-31X-000-YY2 à YY9.

Les résultats des vérifications et essais figurent dans le rapport confidentiel N°129425-660044

Paramètres spécifiques du ou des modes de protection concerné(s) :
-PNR 444-28X-000-YY1 :
U ≤ 28V, I ≤ 100mA, P ≤ 0,7W
-PNR 444-28X-000-YY2 à YY9 :
U ≤ 28V, I ≤ 8mA, P ≤ 224mW
-PNR 444-31X-000-YY1 :
U ≤ 28V, I ≤ 100mA, P ≤ 0,7W
-PNR 444-31X-000-YY2 à YY9 :
U ≤ 28V, I ≤ 8mA, P ≤ 224mW
-PNR 144-28X-000-YYY :
U ≤ 28V, I ≤ 100mA, P ≤ 0,7W

Le marquage doit être : Modifié comme suit
VIBRO-METER ou MEGGITT SA ou MFR S3960
Adresse : ...
Type : PNR 444-28X-000-YY1 à YY9 ou
PNR 444-31X-000-YY1 à YY9 ou
PNR 144-28X-000-YYY
Numéro de série : ...
Année de fabrication : ...
Ⓔx II 3 G
Ex nA IIC T6... T2 Gc (voir conditions spéciales)
LCIE 09 ATEX 1047 X

16 **DOCUMENTS DESCRIPTIFS**
Dossier de certification n° DT 1039 Rev.01 du 05-05-2014.
Ce document comprend 5 rubriques (10 pages).
Dossier de certification n° DT 1040 Rev.01 du 05-05-2014.
Ce document comprend 5 rubriques (10 pages).

Fontenay-aux-Roses, le 27 janvier 2015

1 **VOLUNTARY SUPPLEMENTARY TYPE EXAMINATION CERTIFICATE**

2 **Equipment** intended for use in potentially explosive atmospheres **(Directive 94/9/EC)**

3 Supplementary certificate number :
LCIE 09 ATEX 1047 X / 04

4 Equipment: CE28X and CE31X accelerometers.

Type : - PNR 444-28X-000-YY1 to YY9,
- PNR 444-31X-000-YY1 to YY9,
- PNR 144-28X -000-YYY.

5 Applicant : Meggitt SA

15 **DESCRIPTION OF THE SUPPLEMENTARY CERTIFICATE**
New design of conditioner electronic , new types are :
- PNR 444-28X-000-YY2 to YY9,
- PNR 444-31X-000-YY2 to YY9.

The examination and test results are recorded in confidential report N°129425-660044.

Specific parameters of the concerned protection mode :

-PNR 444-28X-000-YY1 :
U ≤ 28V, I ≤ 100mA, P ≤ 0,7W
-PNR 444-28X-000-YY2 à YY9 :
U ≤ 28V, I ≤ 8mA, P ≤ 224mW
-PNR 444-31X-000-YY1 :
U ≤ 28V, I ≤ 100mA, P ≤ 0,7W
-PNR 444-31X-000-YY2 à YY9 :
U ≤ 28V, I ≤ 8mA, P ≤ 224mW
-PNR 144-28X-000-YYY :
U ≤ 28V, I ≤ 100mA, P ≤ 0,7W

The marking shall be : Modified as follows
VIBRO-METER or MEGGITT SA or MFR S3960
Address: ...
Type: PNR 444-28X-000-YY1 to YY9 or
PNR 444-31X-000-YY1 to YY9 or
PNR 144-28X-000-YYY
Serial number: ...
Year of construction: ...
Ⓔx II 3 G
Ex nA IIC T6... T2 Gc (see special conditons)
LCIE 09 ATEX 1047 X

16 **DESCRIPTIVE DOCUMENTS**
Certification file n° DT 1039, Rev.01 dated 2014-05-05
This file includes 5 items (10 pages).
Certification file n° DT 1040, Rev.01 dated 2014-05-05
This file includes 5 items (10 pages).

Le Responsable de Certification ATEX
ATEX Certification Officer
Julien GAUTHIER

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... par Actions Simplifiée
au capital de 15 ... 85 984 €
RCS Nanterre B 408 363 17...

13 **ANNEXE**

14 **AVENANT D'ATTESTATION D'EXAMEN DE TYPE VOLONTAIRE**

LCIE 09 ATEX 1047 X / 04

17 **CONDITIONS SPECIALES POUR UNE UTILISATION SÛRE**

- L'installation électrique doit fournir une protection contre les transitoires de tensions supérieures à 119V.
- PNR 444-28X-000-YY1 à YY9, plages de températures de fonctionnement (Ta) :
  - Capteur et câble: -55°C ≤ Ta ≤+260°C
  - Conditionneur PNR 444-28X-000-YY1 : -55°C ≤ Ta ≤ +100°C
  - Conditionneur PNR 444-28X-000-YY2 to YY9 : -55°C ≤ Ta ≤ +125°C
- PNR 444-31X-000-YY1, -55°C ≤ Ta ≤ +125°C.
- PNR 444-31X-000-YY2 à YY9, -55°C ≤ Ta ≤ +125°C.
- PNR 144-28X-000-YYY, -55°C ≤ Ta ≤ +260°C
- Classement en température en fonction des températures de fonctionnement maximum du conditionneur, du câble et du capteur, voir tableau ci-dessous :

13 **SCHEDULE**

14 **VOLUNTARY SUPPLEMENTARY TYPE EXAMINATION CERTIFICATE**

LCIE 09 ATEX 1047 X / 04

17 **SPECIAL CONDITIONS FOR SAFE USE**

- The electrical installation must provide a protection against voltage transients greater than 119V.
- PNR 444-28X-000-YY1 to YY9, operating temperature (Ta) ranges:
  - Sensor and cable: -55°C ≤ Ta ≤ +260°C.
  - PNR 444-28X-000-YY1 conditioner: -55°C ≤ Ta ≤ +100°C
  - PNR 444-31X-000-YY2 to YY9 conditioner: -55°C ≤ Ta ≤ +125°C.
- PNR 444-31X-000-YY1, -55°C ≤ Ta ≤ +125°C.
- PNR 444-31X-000-YY2 to YY9, -55°C ≤ Ta ≤ +125°C.
- PNR 144-28X-000-YYY, -55°C ≤ Ta ≤ +260°C
- Temperature classes depending on maximum operating temperatures of conditioner, cable and sensor, see table below:

	T6	T5	T4	T3	T2
PNR 444-28X-000-YY1 ... YY9 Capteur et cable / *Sensor and cable:*	+ 80°C	+ 95°C	+ 130°C	+ 195°C	+ 260°C
PNR 444-28X-000-YY1 Conditionneur / *Conditioner*	+ 80°C	+ 95°C	+ 100°C	--	--
PNR 444-28X-000-YY2 ... YY9 Conditionneur / *Conditioner*	+ 65°C	+ 80°C	+ 115°C	+125°C	--
PNR 444-31X-000-YY1	+ 80°C	+ 95°C	+ 125°C	--	--
PNR 444-31X-000-YY2 ... YY9	+ 65°C	+ 80°C	+ 115°C	+125°C	--
PNR 144-28X-000-YYY	+ 80°C	+ 95°C	+ 130°C	+ 195°C	+ 260°C

18 **EXIGENCES ESSENTIELLES DE SECURITE ET DE SANTE**

Couvertes par les normes EN 60079-0:2012/A11:2013 et EN 60079-15:2010.

19 **VERIFICATIONS ET ESSAIS INDIVIDUELS**

- Chaque produit devra être soumis à une épreuve de rigidité diélectrique de 500VAC pendant une minute, comme définie dans le paragraphe § 6.5 de la norme EN 60079-15:2010, appliqué entre les connections d'entrée et les parties métalliques externes.
- Comme alternative l'essai peut être réalisé à 600VAC pendant au moins 100ms.

18 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS**

Covered by standards EN 60079-0:2012/A11:2013 and EN 60079-15:2010.

19 **ROUTINE VERIFICATIONS AND TESTS**

- Each product shall be submitted to the dielectric strength test at 500VAC during one minute, as defined in the clause § 6.5 of the EN 60079-15:2010 standard, applied between input connections and external metallic parts.
- As an alternative the test can be done at 600VAC during at least 100 ms.

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Deutsche Übersetzung der originalen französischen Kopie der Seite 1

1 **FREIWILLIGES TYPENPRÜFZERTIFIKAT**

2 Geräte zur Verwendung in explosionsgefährdeten Bereichen - **Richtlinie 94/9/EG**

3 Zertifikatnummer
LCIE 09 ATEX 1047X

4 Gerät
Beschleunigungsgeber
PNR: 444-28X-000-YYY
PNR: 444-31X-000-YYY
PNR: 144-28X-000-YYY

5 Hersteller: VIBRO METER
Adresse: Route de Moncor 4, 1701 FRIBOURG, SCHWEIZ

7 Dieses Gerät oder Schutzsystem und die möglichen, zulässigen Varianten sind im Anhang dieses Zertifikats und den darin aufgeführten Unterlagen beschrieben.

8 LCIE bestätigt, dass dieses Gerät oder Schutzsystem die wesentlichen Gesundheits- und Sicherheitsanforderungen in Bezug auf die Auslegung und die Bauart von Geräten und Schutzsystemen der Kategorie 3 (elektrisch) oder Kategorien 2 und 3 (nicht elektrisch) zur Verwendung in explosionsgefährdeten Bereichen nach Anhang II der Richtlinie 94/9EG des Europaparlaments und des Rats vom 23. März 1994 erfüllt.

Die Prüf- und Testergebnisse sind im vertraulichen Bericht Nr. 94576/589014/10 aufgezeichnet.

9 Die Einhaltung der wesentlichen Gesundheits- und Sicherheitsanforderungen wird durch die Übereinstimmung mit den folgenden Dokumenten sichergestellt:
- EN 60079-0 (2006)
- EN 60079-15 (2005)

10 Ein "X" nach der Zertifikatnummer gibt an, dass für die sichere Verwendung des Gerätes oder Schutzsystemes besondere Bedingungen gemäß dem Anhang dieses Zertifikates gelten.

11 Dieses Typenprüfzertifikat betrifft nur die Bauart und die Prüfungen und Tests des betreffenden Geräts oder Schutzsystems gemäß Richtlinie 94/9/EG.
Zusätzliche Anforderungen dieser Richtlinie gelten für die Fertigung und Lieferung des Geräts oder Schutzsystems. Diese werden durch dieses Zertifikat nicht abgedeckt.

12 Die Kennzeichnung des Gerätes oder Schutzsystems muss die unter Punkt 15 erläuterten Angaben enthalten.

Fontenay-aux-Roses,
am 10. Oktober 2009

Leiter Zertifizierung

Trockenstempel

LCIE haftet nur für den französischen Text.
Dieses Zertifikat darf nur vollständig und ohne Änderungen vervielfältigt werden.

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

Deutsche Übersetzung der originalen französischen Kopie der Seite 1

13 **ANHANG**

14 **FREIWILLIGES TYPENPRÜFZERTIFIKAT**

LCIE 09 ATEX 1047 X

15 **BESCHREIBUNG DES GERÄTES ODER SCHUTZSYSTEMS**

Beschleunigungsgeber
Typ : PNR : 444-28X-000-YYY
PNR : 444-31X-000-YYY
PNR : 144-28X-000-YYY

Das Gerät verwandelt elektrische Eingangsladung in elektrisches Ausgangssignal welches proportional zur Beschleunigung oder dem Druck ist.

Spezifische Kenndaten der betroffenen Schutzarten:

U ≤ 28 V, I ≤ 100 mA, P ≤ 0,7 W

Kennzeichnung:
VIBRO-METER Adresse: ..
Typ: PNR: 444-28X-000-YYY, 444-31X-000-YYY,
144-28X-000-YYY
Herstellungsnummer: ... Herstellungsjahr: ...
Ex 3G Ex nA II T6 bis T4 oder T2
LCIE 09 ATEX 1047 X

Die Kennzeichnung kann wiefolgt vereinfacht werden:
VIBRO-METER
444-28X-000-YYY, 444-31X-000-YYY, 144-28X-000-YYY
Ex II 3G LCIE 09 ATEX 1047 X

Die Geräte müssen ebenfalls mit der Kennzeichnung versehen sein, die in den Herstellungsnormen der betreffenden Geräte normalerweise vorgesehen sind.

16 **BESCHREIBENDE UNTERLAGEN**

Zertifizierungs-Datei-Nr. DT 1039 Ausgabe 0 vom 20. Juli 2009.
Diese Datei enthält 7 Punkte (12 Seiten).

Zertifizierungs-Datei-Nr. DT 1040 Ausgabe 0 vom 20. Juli 2009.
Diese Datei enthält 7 Punkte (11 Seiten).

Zertifizierungs-Datei-Nr. DT 1048 Ausgabe 0 vom 20. Juli 2009.
Diese Datei enthält 3 Punkte (5 Seiten).

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Deutsche Übersetzung der originalen französischen Kopie der Seite 2

13 **ANHANG**

14 **FREIWILLIGES TYPENPRÜFZERTIFIKAT**

LCIE 09 ATEX 1047 X

17 **BESONDERE BEDINGUNGEN FÜR DIE SICHERE ANWENDUNG**

Sensor 444-28X-000-YYY :

Umgebungstemperatur:
- Sensor: −55 °C bis +260 °C
- Kabel: −55 °C bis +260 °C
- Signalaufbereiter: −55 °C bis +100 °C

Temperaturklassifizierung:
T6 bis Ta = +80 °C
T5 bis Ta = +95 °C
T4 bis Ta = +130 °C
T3 bis Ta = +195 °C
T2 bis Ta = +260 °C

Sensor 444-31X-000-YYY :

Umgebungstemperatur:
- Sensor: −55 °C bis +125 °C
- Kabel: −55 °C bis +125 °C

Temperaturklassifizierung:
T6 bis Ta = +80 °C
T5 bis Ta = +95 °C
T4 bis Ta = +125 °C

Sensor 144-28X-000-YYY :

Umgebungstemperatur:
- Sensor und Kabel: −55 °C bis +260 °C

Temperaturklassifizierung:
T6 bis Ta = +80 °C
T5 bis Ta = +95 °C
T4 bis Ta = +130 °C
T3 bis Ta = +195 °C
T2 bis Ta = +260 °C

18 **WESENTLICHE ANFORDERUNGEN IM BEZUG AUF SICHERHEIT UND GESUNDHEIT**
Siehe unter Punkt 9 aufgelistete Bestimmungen.

19 **ROUTINEPRÜFUNGEN UND TESTS**

Keine.

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

Deutsche Übersetzung der originalen französischen Kopie der Seite 2

1 **ZUSÄTZLICHES FREIWILLIGES TYPENPRÜFUNGSZERTIFIKAT**

2 Geräte zur Verwendung in explosionsgefährdeten Bereichen (**Richtlinie 94/9/EG**)

3 Zusätzliche Zertifikatnummer:
LCIE 09 ATEX 1047 X / 01

4 Gerät
Beschleunigungsgeber
PNR: 444-28X-000-YYY
PNR: 444-31X-000-YYY
PNR: 144-28X-000-YYY

5 Hersteller: Meggitt SA
Adresse: Route de Moncor 4, 1752 Villars-sur-Glâne, Schweiz

15 **BESCHREIBUNG DES ZUSÄTZLICHEN ZERTIFIKATS**

- Änderung der juristischen Person und Addresse des Antragstellers
- Modifikation des eingetragenen Markenzeichens

Die Prüf- und Testergebnisse sind im vertraulichen Bericht Nr. 102105-602924/19 aufgezeichnet.

Spezifische Kenndaten der betroffenen Schutzarten:
Unverändert.

Die Kennzeichnung soll lauten:
Unverändert, bis auf Markenzeichen vibro-meter wird zu vibro-meter oder MEGGITT oder MFR S3960 sowie die Adressänderung.

16 **BESCHREIBENDE UNTERLAGEN**

Brief des Antragsstellers vom 07.09.2010.

17 **BESONDERE BEDINGUNGEN FÜR DIE SICHERE ANWENDUNG**

Unverändert.

18 **WESENTLICHE ANFORDERUNGEN IM BEZUG AUF SICHERHEIT UND GESUNDHEIT**

Unverändert.

19 **ROUTINEPRÜFUNGEN UND TESTS**

Keine.

Fontenay-aux-Roses,
am 25. Oktober 2010

Leiter Zertifizierung

Trockenstempel

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

Deutsche Übersetzung der originalen französischen Kopie der Seite 3

1 **ZUSÄTZLICHES FREIWILLIGES TYPENPRÜFUNGSZERTIFIKAT**

2 Geräte zur Verwendung in explosionsgefährdeten Bereichen (**Richtlinie 94/9/EG**)

3 Zusätzliche Zertifikatnummer:
LCIE 09 ATEX 1047 X / 02

4 Gerät
Beschleunigungsgeber
PNR: 444-28X-000-YYY
PNR: 444-31X-000-YYY
PNR: 144-28X-000-YYY

5 Hersteller: Meggitt SA

15 **BESCHREIBUNG DES ZUSÄTZLICHEN ZERTIFIKATS**

Standardaktualisierungen gemäß folgender Richtlinien:
EN 60079-0 (2009) und EN 60079-15 (2010)

Die Prüf- und Testergebnisse sind im vertraulichen Bericht Nr. 110055-619675 / 10 aufgezeichnet.

Spezifische Kenndaten der betroffenen Schutzarten:
Unverändert.

Die Kennzeichnung lautet wie folgt:
Wie folgt modifiziert:
Vibro-Meter oder MEGGITT oder MFR S3960
Adresse: ...
Typ: PNR: 444-28X-000-YYY
PNR: 444-31X-000-YYY
PNR: 144-28X-000-YYY
Herstellungsnummer: ... Herstellungsjahr: ...
II 3 G
Ex nA IIC T6 bis T4 oder T2 Gc (1)
LCIE 09 ATEX 1047 X

(1) Abhängig von der Typ der Gerät

16 **BESCHREIBENDE UNTERLAGEN**

Brief des Antragsstellers vom 20.10.2011 (2 Seiten)

17 **BESONDERE BEDINGUNGEN FÜR DIE SICHERE ANWENDUNG**

Unverändert.

18 **WESENTLICHE ANFORDERUNGEN IM BEZUG AUF SICHERHEIT UND GESUNDHEIT**

Werden von folgenden Richtlinien abgedeckt:
EN 60079-0 (2009) und EN 60079-15 (2010)

19 **ROUTINEPRÜFUNGEN UND TESTS**

Keine.

Fontenay-aux-Roses,
am 21. Dezember 2011

Leiter Zertifizierung

Trockenstempel

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

Deutsche Übersetzung der originalen französischen Kopie der Seite 3

1 **ZUSÄTZLICHES FREIWILLIGES TYPENPRÜFUNGSZERTIFIKAT**

2 Geräte zur Verwendung in explosionsgefährdeten Bereichen (**Richtlinie 94/9/EG**)

3 Zusätzliche Zertifikatnummer:
LCIE 09 ATEX 1047 X / 03

4 Gerät
Beschleunigungsgeber
Typ: PNR 444-28X-000-YY1, PNR 444-31X-000-YY1, PNR 144-28X-000-YYY

5 Antragsteller: Meggitt SA

15 **BESCHREIBUNG DES ZUSÄTZLICHEN ZERTIFIKATS**

– Standardaktualisierungen gemäß folgender Richtlinien:
EN 60079-0:2012 + Änderung A11:2013.
– PNR 444-XXX-000-YYY wird PNR 444-XXX-000-YY1.
– Hinzufügen einer Stückprüfung von Durchschlagfestigkeit.

Definition von Gerät:
PNR 444-28X-000-YY1, PNR 444-31X-000-YY1, PNR 144-28X-000-YYY
X = 0 … 9: Definiert das Design des Sensorkopfes
Y = 0 … 9: Abhängig von der Steckertyp und Kabellänge.

Die Testergebnisse sind im vertraulichen Bericht Nr. 130454-662462-11.

Spezifische Kenndaten der betroffenen Schutzarten:
U ≤ 28 V, I ≤ 100 mA, P ≤ 0,7 W

Die Kennzeichnung wird wie folgt festgesetzt:
Meggitt SA oder Vibro-Meter oder MFR S3960
Adresse: …
Typ: PNR 444-28X-000-YY1, PNR 444-31X-000-YY1, PNR 144-28X-000-YYY
Herstellungsnummer: … Herstellungsjahr: …
Ex II 3 G
Ex nA IIC T6…T4 oder T6…T2 Gc(*)
LCIE 09 ATEX 1047 X

(*): Siehe besondere Bedingungen für die sichere Anwendung (unter Punkt 17)

Fontenay-aux-Roses,
am 02. Dezember 2014

Leiter Zertifizierung

Trockenstempel

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

Deutsche Übersetzung der originalen französischen Kopie der Seite 4

13 **ANHANG**

14 **ZUSÄTZLICHES FREIWILLIGES TYPENPRÜFUNGSZERTIFIKAT**

LCIE 09 ATEX 1047 X / 03

15 **BESCHREIBUNG DES ZUSÄTZLICHEN ZERTIFIKATS (FORTSETZUNG)**

Die Kennzeichnung kann wie folgt reduziert werden:
Meggitt SA oder Vibro-Meter oder MFR S3960
PNR 444-28X-000-YY1, PNR 444-31X-000-YY1, PNR 144-28X-000-YYY
Ex II 3 G
Ex nA IIC T6…T4 oder T6…T2 Gc(*)
LCIE 09 ATEX 1047 X
(*): Siehe besondere Bedingungen für die sichere Anwendung (unter Punkt 17)

Die Geräte müssen ebenfalls mit der Kennzeichnung versehen sein, die in den Herstellungsnormen der betreffenden elektrischen Geräte normalerweise vorgesehen sind.

16 **BESCHREIBENDE UNTERLAGEN**

Zertifizierungs-Datei-Nr. DT 1069 Ausgabe 00 vom 2014/09/25.
Diese Datei enthält 2 Punkte (6 Seiten).

17 **BESONDERE BEDINGUNGEN FÜR DIE SICHERE ANWENDUNG**

1. Umgebungstemperatur im Betrieb:

PNR 444-28X-000-YY1:
– Sensor und Kabel: −55 °C bis +260 °C
– Signalaufbereiter: −55 °C bis +100 °C

PNR 444-31X-000-YY1:
– Sensor und Kabel: −55 °C bis +125 °C

PNR 144-28X-000-YYY:
– Sensor und Kabel: −55 °C bis +260 °C

2. Temperaturklassifizierung entsprechend der Umgebungstemperatur im Betrieb:

	T6	T5	T4	T3	T2
PNR 444-28X-000-YY1	≤ +80 °C	≤ +95 °C	≤ +130 °C	≤ +195 °C	≤ +260 °C
PNR 444-31X-000-YY1	≤ +80 °C	≤ +95 °C	≤ +125 °C		
PNR 144-28X-000-YYY	≤ +80 °C	≤ +95 °C	≤ +130 °C	≤ +195 °C	≤ +260 °C

3. Es müssen Vorkehrungen getroffen werden dass kurzzeitige Störungen die Nominalspannungen nicht mehr als 119 V überschreiten können.

18 **WESENTLICHE ANFORDERUNGEN IM BEZUG AUF SICHERHEIT UND GESUNDHEIT**

Werden von folgenden Richtlinien abgedeckt:
EN 60079-0:2012 + Änderung A11:2013 und EN 60079-15:2010.

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

Deutsche Übersetzung der originalen französischen Kopie der Seite 4

13 **ANHANG**

14 **ZUSÄTZLICHES FREIWILLIGES TYPENPRÜFUNGSZERTIFIKAT**

LCIE 09 ATEX 1047 X / 03

19 **ROUTINEPRÜFUNGEN UND TESTS**

Jedes Gerät muss einem Durschlagsfestigkeitstest unterzogen werden. Spannung von 500 V (RMS) währen 60 Sekunden zwischen den Leitern und dem Gehäuse gemäss Norm EN 60079-15:2010.
Andernfalls muss ein Test mit 600 V (RMS) während mindestens 100 ms durchgeführt werden

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

Deutsche Übersetzung der originalen französischen Kopie der Seite 5

1 **ZUSÄTZLICHES FREIWILLIGES TYPENPRÜFUNGSZERTIFIKAT**

2 Geräte zur Verwendung in explosionsgefährdeten Bereichen (**Richtlinie 94/9/EG**)

3 Zusätzliche Zertifikatnummer:
LCIE 09 ATEX 1047 X / 04

4 Gerät: CE 28X und CE 31X Beschleunigungsgeber
Typ: – PNR 444-28X-000-YY1 bis YY9,
– PNR 444-31X-000-YY1 bis YY9,
– PNR 144-28X-000-YYY.

5 Antragsteller: Meggitt SA

15 **BESCHREIBUNG DES ZUSÄTZLICHEN ZERTIFIKATS**

Neue Beschleunigungsgeber Elektronik für neue typen, wie:
– PNR 444-28X-000-YY2 bis YY9,
– PNR 444-31X-000-YY2 bis YY9.

Die Prüf- und Testergebnisse sind im vertraulichen Bericht Nr. 129425-660044.

Spezifische Kenndaten der betroffenen Schutzarten:

– PNR 444-28X-000-YY1:
U ≤ 28 V, I ≤ 100 mA, P ≤ 0,7 W
– PNR 444-28X-000-YY2 bis YY9:
U ≤ 28 V, I ≤ 8 mA, P ≤ 224 mW
– PNR 444-31X-000-YY1:
U ≤ 28 V, I ≤ 100 mA, P ≤ 0,7 W
– PNR 444-31X-000-YY2 bis YY9:
U ≤ 28 V, I ≤ 8 mA, P ≤ 224 mW
– PNR 144-28X-000-YYY:
U ≤ 28 V, I ≤ 100 mA, P ≤ 0,7 W

Die Kennzeichnung wird wie folgt festgesetzt: Wie folgt modifiziert:
VIBRO-METER oder MEGGITT SA oder MFR S3960
Adresse: …
Typ: PNR 444-28X-000-YY1 bis YY9 oder
PNR 444-31X-000-YY1 bis YY9 oder
PNR 144-28X-000-YYY
Herstellungsnummer: …
Herstellungsjahr: …
Ex II 3 G
Ex nA IIC T6 …T2 Gc (siehe besondere Bedingungen für die sichere Anwendung (unter Punkt 17))
LCIE 09 ATEX 1047 X

16 **BESCHREIBENDE UNTERLAGEN**

Zertifizierungs-Datei-Nr. DT 1039 Ausgabe 01 vom 2014/05/05.
Diese Datei enthält 5 Punkte (10 Seiten).
Zertifizierungs-Datei-Nr. DT 1040 Ausgabe 01 vom 2014/05/05.
Diese Datei enthält 5 Punkte (10 Seiten).

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

Deutsche Übersetzung der originalen französischen Kopie der Seite 5

13 **ANHANG**

14 **ZUSÄTZLICHES FREIWILLIGES TYPENPRÜFUNGSZERTIFIKAT**

LCIE 09 ATEX 1047 X / 04

17 **BESONDERE BEDINGUNGEN FÜR DIE SICHERE ANWENDUNG**

– Es müssen Vorkehrungen getroffen werden dass kurzzeitige Störungen die Nominalspannungen nicht mehr als 119 V überschreiten können.

– PNR 444-28X-000-YY1 bis YY9 Umgebungstemperatur (Ta) im Betrieb:
  – Sensor und Kabel:
    −55 °C ≤ Ta ≤ +260 °C
  – PNR 444-28X-000-YY1 Signalaufbereiter:
    −55 °C ≤ Ta ≤ +100 °C
  – PNR 444-28X-000-YY2 bis YY9 Signalaufbereiter:
    −55 °C ≤ Ta ≤ +125 °C

PNR 444-31X-000-YY1: −55 °C ≤ Ta ≤ +125 °C
PNR 444-31X-000-YY2 bis YY9: −55 °C ≤ Ta ≤ +125 °C
PNR 144-28X-000-YYY: −55 °C ≤ Ta ≤ +260 °C

– Temperaturklassifizierung entsprechend der Umgebungstemperatur von Signalaufbereiter, Kabel und Sensor im Betrieb:

	T6	T5	T4	T3	T2
PNR 444-28X-000-YY1 bis YY9 Sensor und Kabel	+80 °C	+95 °C	+130 °C	+195 °C	+260 °C
PNR 444-28X-000-YY1 Signalaufbereiter	+80 °C	+95 °C	+100 °C		
PNR 444-28X-000-YY2 bis YY9 Signalaufbereiter	+65 °C	+80 °C	+115 °C	+125 °C	
PNR 444-31X-000-YY1	+80 °C	+95 °C	+125 °C		
PNR 444-31X-000-YY2 bis YY9	+65 °C	+80 °C	+115 °C	+125 °C	
PNR 144-28X-000-YYY	+80 °C	+95 °C	+130 °C	+195 °C	+260 °C

18 **WESENTLICHE ANFORDERUNGEN IM BEZUG AUF SICHERHEIT UND GESUNDHEIT**

Werden von folgenden Richtlinien abgedeckt:
EN 60079-0:2012 + Änderung A11:2013 und EN 60079-15:2010.

19 **ROUTINEPRÜFUNGEN UND TESTS**

– Jedes Gerät muss einem Durschlagsfestigkeitstest unterzogen werden. Spannung von 500 V (RMS) währen 60 Sekunden zwischen den Leitern und dem Gehäuse (äußeren Metallteile) gemäss Norm EN 60079-15:2010.

– Andernfalls muss ein Test mit 600 V (RMS) während mindestens 100 ms durchgeführt werden.

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

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CETTE PAGE EST LAISSÉE INTENTIONNELLEMENT VIDE
DIESE SEITE WURDE ABSICHTLICH LEER GELASSEN

ATEX certificate:

KEMA 04 ATEX 1294

for CA 30x

Although the certificate is available in the three languages (English, French and German), the liability of the notified body applies only on the text of the original copy of the certificate that it published.

EN

Bien que le certificat soit traduit dans le 3 langues (Anglais, Français et Allemand), seul le texte de la copie originale du certificat peut engager la responsabilité de l'organisme notifié qui l'a publié.

FR

Obwohl das Zertifikat in 3 Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

DE

EX

Meggitt SA
Route de Moncor 4
PO Box 1616
CH - 1701 Fribourg
Switzerland

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CETTE PAGE EST LAISSÉE INTENTIONNELLEMENT VIDE
DIESE SEITE WURDE ABSICHTLICH LEER GELASSEN

CERTIFICATE

(1) EC-Type Examination

(2) **Equipment and protective systems intended for use in potentially explosive atmospheres - Directive 94/9/EC**

(3) EC-Type Examination Certificate Number: **KEMA 04ATEX1294** Issue Number: **5**

(4) Equipment: **Accelerometer Type 144-30.-000-...**

(5) Manufacturer: **Meggitt SA**

(6) Address: **Rte de Moncor 4, 1752 Villars-sur-Glâne, Switzerland**

(7) This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) DEKRA Certification B.V., notified body number 0344 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the directive.

The examination and test results are recorded in confidential test report number 210692400/2 issue 4.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0 : 2012 **EN 60079-11 : 2012** **EN 60079-26 : 2007**

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EC-Type Examination Certificate relates only to the design, examination and tests of the specified equipment according to the Directive 94/9/EC. Further requirements of the directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

(12) The marking of the equipment shall include the following:

II 1 G Ex ia IIC T6 ... T1 or 450 °C ... 510 °C Ga

This certificate is issued on 28 May 2014 and, as far as applicable, shall be revised before the date of cessation of presumption of conformity of (one of) the standards mentioned above as communicated in the Official Journal of the European Union.

DEKRA Certification B.V.

R. Schuller
Certification Manager

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DEKRA Certification B.V. Meander 1051, 6825 MJ Arnhem P.O. Box 5185, 6802 ED Arnhem The Netherlands
T +31 88 96 83000 F +31 88 96 83100 www.dekra-certification.com Registered Arnhem 09085396

DEKRA

(13) SCHEDULE

(14) **to EC-Type Examination Certificate KEMA 04ATEX1294** Issue No. **5**

(15) **Description**

Accelerometer Type 144-30.-000-... is used for vibration monitoring of the equipment to which it is mounted.
A piezo electrical sensor converts mechanical forces (e.g. vibrations) into an electrical signal that is processed externally.

Ambient temperature range:
-30 °C to +80 °C, if an explosive atmosphere may be present continuously or frequently and during long periods;
-54 °C to +500 °C, for sensor and cable;
-54 °C to +500 °C, for high temperature VM connector;
-54 °C to +260 °C, for standard temperature VM connector;
-65 °C to +200 °C, for connector type M83723/98Y1020 or equivalent;
-65 °C to +150 °C, for LEMO connector type 0 or equivalent

The temperature class, depending on the ambient temperature, respectively depending on the process temperature, is listed in following table:

Temperature class	Ambient temperature, respectively process temperature
T6	≤ 75 °C
T5	≤ 90 °C
T4	≤ 125 °C
T3	≤ 190 °C
T2	≤ 290 °C
T1	≤ 440 °C

For an ambient temperature, respectively a process temperature over 440 °C, the temperature of the sensor exceeds that temperature by 10 K.

Electrical data

Output circuit (connector):
in type of protection intrinsic safety Ex ia IIC, only for connection to a certified intrinsically safe circuit, with following maximum values:
U_i = 28 V; I_i = 100 mA (linear characteristic), I_i = 25 mA (non-linear characteristic);
P_i = 0,7 W; L_i = 0 mH; C_i = 2 nF + C_{cable};
the capacitance of the integral cable is 0,2 nF/m.

Installation instructions

The manual provided with the equipment shall be followed in detail to assure safe operation.

Form 100
Version 5 (2013-07)

DEKRA

(13) **SCHEDULE**

(14) **to EC-Type Examination Certificate KEMA 04ATEX1294** Issue No. **5**

(16) **Test Report**

No. 210692400/2 Issue 4.

(17) **Special conditions for safe use**

None.

(18) **Essential Health and Safety Requirements**

Covered by the standards listed at (9).

(19) **Test documentation**

As listed in Test Report No. 210692400/2 Issue 4.

Page 3/3

Form 100
Version 5 (2013-07)

Traduction française de la copie originale anglaise publiée à la page 1

1 **ATTESTATION D'EXAMEN CE de type**

2 Appareils et systèmes de protection prévus pour une utilisation dans des atmosphères potentiellement explosives – Directive 94/9/CE

3 Numéro d'attestation d'examen CE de type : **KEMA 04ATEX1294** Numéro d'émission : **5**

4 Appareil :**Accéléromètre Type 144-30.-000-…**

5 Fabricant : **Meggitt SA**

6 Adresse : **Rte de Moncor 4, 1752 Villars-sur-Glâne, Switzerland**

7 Cet appareil et toute variante acceptable de celui-ci sont spécifiés dans l'annexe de cette attestation et les documents auxquels il est fait référence.

8 Suivant l'Article 9 de la Directive du Conseil 94/9/CE du 23 mars 1994, DEKRA Certification B.V., numéro d'Organisme notifié 0344, certifie que cet appareil est conforme aux Exigences essentielles en ce qui concerne la sécurité et la santé relatives à la conception et la fabrication d'appareils et de systèmes de protection conçus pour une utilisation dans des atmosphères potentiellement explosives, suivant l'Annexe II de cette directive.
Les résultats des vérifications et des tests figurent dans le rapport confidentiel N° 210692400/2 édition 4.

9 Le respect des Exigences essentielles en ce qui concerne la sécurité et la santé est assuré par la conformité aux normes suivantes :
EN 60079-0 : 2012 **EN 60079-11 : 2012** **EN 60079-26 : 2007**

10 Le signe X, lorsque placé à la suite du numéro de l'attestation, indique que l'appareil est soumis aux Conditions spéciales pour une utilisation sûre, mentionnées dans l'annexe de la présente attestation.

11 La présente Attestation d'examen CE de type porte uniquement sur la conception, la vérification et les tests de l'appareil spécifié, conformément à la Directive 94/9/CE. D'autres exigences de la Directive sont applicables au procédé de fabrication et à la livraison de l'appareil. Ces dernières ne sont pas couvertes par la présente attestation.

12 Le marquage de l'appareil devra comporter, entre autres indications utiles, les mentions suivantes :
II 1 G Ex ia IIC T6 … T1 ou 450°C … 510°C Ga
Cette attestation a été délivrée le 28 mai 2014 et, quand applicable, sera révisée avant la date de cessation de la présomption de conformité des (de l'une des) normes mentionnées ci-dessus, comme communiqué dans le Journal officiel de l'Union européenne.

DEKRA Certification B.V.
R.Schuller
Responsable de la certification

(c) Ce certificat ne peut être reproduit que dans sa totalité et sans aucune modification.

Traduction française de la copie originale anglaise publiée à la page 1

13 **ANNEXE**

14 **Attestation d'examen CE de type - KEMA 04ATEX1294** Numéro d'émission : **5**

15 **Description**
Accéléromètre Type 144-30.-000-… utilisé pour la mesure des vibrations de l'appareil sur lequel il est monté.
Un capteur piézo-électrique convertit les forces mécaniques (par exemple, les vibrations) en signal électrique, traité en externe.
Fourchette de température ambiante :
-30 °C…+80 °Cdans le cas d'une atmosphère explosive présente en permanence ou pendant de longues périodes ou fréquemment
De -54 °C à +500 °C pour le capteur et le câble ;
De -54 °C à +500 °C pour le connecteur VM – température élevée ;
De -54 °C à +260 °C pour le connecteur VM – température standard ;
De -65 °C à +200 °C pour le connecteur Type M83723/98Y1020 ou équivalent ;
De -65 °C à +150 °C pour le connecteur LEMO Type 0 ou équivalent.
Les classes de température sont répertoriées dans le tableau ci-dessous, en fonction de la température ambiante/process :

Classe de température	Température ambiante/process
T6	≤75 °C
T5	≤90 °C
T4	≤125 °C
T3	≤190 °C
T2	≤290 °C
T1	≤440 °C

Pour une température ambiante/process supérieure à 440 °C, la température du capteur dépasse cette température de 10 K.
Données électriques
Circuit de sortie (connecteur) :
Dans le type de protection par sécurité intrinsèque Ex ia IIC, uniquement pour une connexion à un circuit sécurisé intrinsèquement, avec les valeurs maximum suivantes :
U = 28 V ; I = 100 mA (caractéristique linéaire) ; I = 25 mA (caractéristique non linéaire) ; P = 0,7 W ; L = 0 mH ; C = 2 nF + C câble ;
La capacitance du câble intégral est de 0,2 nF/m.
Instructions d'installation
Les instructions du manuel fourni avec l'appareil devront être suivies précisément pour une utilisation sûre.

Bien que le certificat soit traduit dans les 3 langues (Anglais, Français et Allemand), seul le texte de la copie originale du certificat peut engager la responsabilité de l'organisme notifié qui l'a publié.

Traduction française de la copie originale anglaise publiée à la page 2

13 **ANNEXE**

14 **Attestation d'examen CE de type - KEMA 04ATEX1294** Numéro d'émission : **5**

16 **Rapport de test**
No. 210692400/2 édition 4.

17 **Conditions spéciales pour une utilisation sûre**
Néant.

18 **Exigences essentielles en ce qui concerne la sécurité et la santé**
Couvertes par les normes répertoriées en (9).

19 **Documentation de test**
Comme répertoriée dans le Rapport de test N° 210692400/2 édition 4.

Bien que le certificat soit traduit dans les 3 langues (Anglais, Français et Allemand), seul le texte de la copie originale du certificat peut engager la responsabilité de l'organisme notifié qui l'a publié.

Deutsche Übersetzung der original englischen Kopie der Seite 1

1 **EG-BAUMUSTERPRÜFBESCHEINIGUNG**

2 Betriebsmittel und Schutzsysteme zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen – Richtlinie 94/9/EG

3 EG-Baumusterprüfbescheinigung Nummer: **KEMA 04ATEX1294** Versionsnummer: **5**

4 Betriebsmittel oder Schutzsystem:**Accelerometer Typ 144-30.-000-...**

5 Hersteller: **Meggitt SA**

6 Adresse: **Rte de Moncor 4, 1752 Villars-sur-Glâne, Schweiz**

7 Die Bauart dieses Geräts oder Schutzsystems sowie die verschiedenen zulässigen Ausführungen sind in der Anlage zu dieser EG-Baumusterprüfbescheinigung und in den zugehörigen Unterlagen festgelegt.

8 DEKRA Certification B.V. bescheinigt als benannte Stelle Nr. 0344 nach Artikel 9 der Richtlinie 94/9/EG des Rates der Europäischen Gemeinschaft vom 23. März 1994 die Erfüllung der grundlegenden Sicherheits- und Gesundheitsanforderungen für die Konzeption und die Herstellung von Betriebsmitteln und Schutzsystemen zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen gemäß Anhang II der Richtlinie.
Die Ergebnisse der Prüfung sind im vertraulichen Prüfbericht Nr. 210692400/2 Ausgabe 4 festgehalten.

9 Die grundlegenden Sicherheits- und Gesundheitsanforderungen werden erfüllt durch Übereinstimmung mit:
EN 60079-0 : 2012 **EN 60079-11 : 2012** **EN 60079-26 : 2007**

10 Falls das Zeichen „X“ hinter der Bescheinigungsnummer steht, wird auf besondere Bedingungen für die sichere Anwendung dieses Betriebsmittels oder Schutzsystems in der Anlage zu dieser Bescheinigung hingewiesen.

11 Diese EG-Baumusterprüfbescheinigung bezieht sich nur auf Konzeption, Bau und Prüfung des bezeichneten Betriebsmittels oder Schutzsystems gemäß Richtlinie 94/9/EG. Weitere Anforderungen dieser Richtlinie gelten für den Herstellungsprozess und das Inverkehrbringen dieses Betriebsmittels oder Schutzsystems. Diese Anforderungen werden von dieser Bescheinigung nicht abgedeckt.

12 Die Kennzeichnung des Betriebsmittels oder Schutzsystems muss die folgenden Angaben enthalten:
II 1 G Ex ia IIC T6 … T1 oder 450°C … 510°C Ga
Diese Bescheinigung wurde am 28. Mai 2014 ausgestellt und muss gegebenenfalls revidiert werden, wenn in den offiziellen Mitteilungen der Europäischen Union angekündigt wird, dass eine der oben genannten Normen, auf der die Konformität basiert, ihre Gültigkeit verliert.

DEKRA Certification B.V.
R.Schuller
Certification Manager

(c) Die vollständige Veröffentlichung dieser Bescheinigung und der begleitenden Berichte ist zulässig. Diese Bescheinigung darf nur ungekürzt und unverändert weitergegeben werden.

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

Deutsche Übersetzung der original englischen Kopie der Seite 1

13 **ANLAGE**

14 **zur EG-Baumusterprüfbescheinigung KEMA 04ATEX1294** Versionsnummer: **5**

15 **Beschreibung**

Das Accelerometer Typ 144-30.-000- wird zur Überwachung der Schwingungen des Betriebsmittels verwendet, an dem der Sensor befestigt ist.

Ein piezoelektrischer Sensor wandelt mechanische Kräfte (z. B. Schwingungen) in ein elektrisches Signal, das extern weiterverarbeitet wird.

Umgebungstemperaturbereich:

–30 °C bis +80 °CIn ständiger oder häufiger und andauernder Anwesenheit einer explosionsgefährdeten Umgebung
–54 °C bis +500 °C für Sensor und Kabel
–54 °C bis +500 °C für VM-Hochtemperaturanschluss
–54 °C bis +260 °C für VM-Standardtemperaturanschluss
–65 °C bis +200 °C für Anschlusstyp M83723/98Y1020 oder gleichwertig
–65 °C bis +150 °C für LEMO-Anschlusstyp 0 oder gleichwertig

In der folgenden Tabelle sind die Temperaturklassen in Abhängigkeit von der Umgebungstemperatur sowie von der Prozesstemperatur zusammengestellt:

Temperaturklasse	Umgebungstemperatur bzw. Prozesstemperatur
T6	≤75 °C
T5	≤90 °C
T4	≤125 °C
T3	≤190 °C
T2	≤290 °C
T1	≤440 °C

Bei Umgebungstemperaturen bzw. Prozesstemperaturen über 440 °C liegt die Sensortemperatur 10 K über dieser Temperatur.

Elektrische Daten

Ausgangskreis (Anschluss):

In Zündschutzart Eigensicherheit Ex ia IIC, nur zum Anschluss an einen bescheinigten eigensicheren Stromkreis mit folgenden Höchstwerten:

Ui = 28 V, Ii = 100 mA (lineare Charakteristik), Ii = 25 mA (nichtlineare Charakteristik),
Pi = 0,7 W, Li = 0 mH, Ci ~ 2 nF + CKabel
Kapazität des integriertes Kabels: 0,2 nF/m

Installationsanweisungen

Zur sicheren Bedienung sind die Anweisungen im mitgelieferten Handbuch zur beachten.

Deutsche Übersetzung der original englischen Kopie der Seite 2

13 **ANLAGE**

14 **zur EG-Baumusterprüfbescheinigung KEMA 04ATEX1294** Versionsnummer: **5**

Prüfbericht

Nr. 210692400/2 Ausgabe 4.

17 **Besondere Bedingungen für die sichere Anwendung**

Keine.

18 **GRUNDLEGENDE GESUNDHEITS- UND SICHERHEITSANFORDERUNGEN**

Abgedeckt durch die unter 9 aufgeführten Normen.

19 **Prüfungsunterlagen**

Gemäß Aufstellung in Prüfbericht Nr. 210692400/2 Ausgabe 4.

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

ATEX certificate:

LCIE 09 ATEX 1048 X

for CA 30x

Although the certificate is available in the three languages (English, French and German), the liability of the notified body applies only on the text of the original copy of the certificate that it published.

EN

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FR

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

DE

EX

Meggitt SA
Route de Moncor 4
PO Box 1616
CH - 1701 Fribourg
Switzerland

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CETTE PAGE EST LAISSÉE INTENTIONNELLEMENT VIDE
DIESE SEITE WURDE ABSICHTLICH LEER GELASSEN

L C I E

Team ATEX Ex

1 **ATTESTATION D'EXAMEN DE TYPE VOLONTAIRE**

2 **Appareil** destiné à être utilisé en atmosphères explosibles **(Directive 94/9/CE)**

3 Numéro de l'attestation d'examen de type
LCIE 09 ATEX 1048 X

4 Appareil
Capteur d'accélération
Type : PNR: 144-30X-000-YYY

5 Demandeur : VIBRO-METER SA
Adresse : Route de Moncor 4
1701 FRIBOURG SUISSE

7 Cet appareil ou système de protection et ses variantes éventuelles acceptées sont décrits dans l'annexe de la présente attestation et dans les documents descriptifs cités en référence.

8 Le LCIE certifie que cet appareil ou système de protection est conforme aux exigences essentielles de sécurité et de santé pour la conception d'appareils ou système de protection, électriques de catégorie 3 ou non électriques de catégorie 2 et 3, destinés à être utilisés en atmosphères explosibles, données dans l'annexe II de la directive 94/9/CE du Parlement européen et du Conseil du 23 mars 1994.

Les résultats des vérifications et essais figurent dans le rapport confidentiel N°94576 - 589014/11.

9 Le respect des exigences essentielles de sécurité et de santé est assuré par la conformité à :
- EN 60079-0 (2006) - EN 60079-15 (2005)

10 Le signe X lorsqu'il est placé à la suite du numéro de l'attestation, indique que cet appareil ou système de protection est soumis aux conditions spéciales pour une utilisation sûre, mentionnées dans l'annexe de la présente attestation.

11 Cette attestation d'examen de type concerne uniquement la conception, les vérifications et essais de l'appareil ou du système de protection spécifié, conformément à la directive 94/9/CE.
Des exigences supplémentaires de la directive sont applicables pour la fabrication et la fourniture de l'appareil ou du système de protection. Ces dernières ne sont pas couvertes par la présente attestation.

12 Le marquage de l'appareil ou du système de protection doit comporter les informations détaillées au point 15.

Fontenay-aux-Roses, le 10 octobre 2009

Le responsable de certification ATEX
ATEX certification manager

Marc GILLAUX

1 **VOLUNTARY TYPE EXAMINATION CERTIFICATE**

2 **Equipment** intended for use in potentially explosive atmospheres **(Directive 94/9/EC)**

3 Type Examination Certificate number
LCIE 09 ATEX 1048X

4 Equipment
Accelerometer
Type : PNR: 144-30X-000-YYY

5 applicant : VIBRO-METER SA
Address : Route de Moncor 4
1701 FRIBOURG SUISSE

7 This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 LCIE certifies that this equipment or protective system has been found to comply with the essential Health and Safety Requirements that relate to the design of equipment or protective system, of category 3 electrical or categories 2 and 3 non electrical, which is intended for use in potentially explosive atmospheres, given in Annex II of the Directive 94/9/EC of the European Parliament and Council of 23 March 1994.

The examination and test results are recorded in confidential report N°94576 - 589014/11.

9 Compliance with the Essential Health and Safety Requirements has been assured by reference to :
- EN 60079-0 (2006) - EN 60079-15 (2005)

10 If the sign X is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

11 This type examination certificate relates only to the design, examination and tests of this specified equipment or protective system in accordance III to the directive 94/9/EC.

Further requirements of the Directive may apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

12 The marking of the equipment or protective system shall include informations as detailed at 15.

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Rev.A

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au capital de 15 [illegible] €
RCS Nanterre B [illegible]

L C I E

Team ATEX Ex

13 **ANNEXE**

14 **ATTESTATION D'EXAMEN DE TYPE VOLONTAIRE**

LCIE 09 ATEX 1048 X

15 **DESCRIPTION DE L'APPAREIL OU DU SYSTEME DE PROTECTION**

Capteur d'accélération
Type : PNR : 144-30X-000-YYY

Le matériel est un transducteur électro-mécanique fournissant à ses bornes une charge électrique proportionnelle à la pression mesurée.

Paramètres spécifiques du ou des modes de protection concernés :
U ≤ 30V, I ≤ 130mA, P ≤ 0,8W

Le marquage doit être :
VIBRO-METER
Adresse : ... Type : PNR : 144-30X-000-YYY
N° de fabrication : ... Année de fabrication : ...
Ex II 3G Ex nA II T6 à T1 ou T510
LCIE 09 ATEX 1048 X

Le marquage peut être réduit à :
VIBRO-METER
PNR : 144-30X-000-YYY
Ex II 3G LCIE 09 ATEX 1048 X

L'appareil doit également comporter le marquage normalement prévu par les normes de construction qui le concerne.

6 **DOCUMENTS DESCRIPTIFS**
Dossier de certification N°DT 1049 rev.00 du 20/07/09.
Ce document comprend 3 rubriques (5 pages).

7 **CONDITIONS SPECIALES POUR UNE UTILISATION SÛRE**
Température ambiante d'utilisation :
- Capteur et câble : -54°C à +500°C
- Connecteurs :
connecteur Lemo type 0 ou équivalent: -65°C à +150°C
connecteur M83723/89Y1020 ou équivalent: -65°C à +200°C
connecteur VM température standard : -54°C à +260°C
connecteur VM haute température: -54°C à +500°C

Classement en température en fonction de la température ambiante :
T6 à Tamb. + 75°C
T5 à Tamb. + 90°C
T4 à Tamb. + 125°C
T3 à Tamb. + 190°C
T2 à Tamb. + 290°C
T1 à Tamb. + 440°C
T510°C à Tamb. +500°C

8 **EXIGENCES ESSENTIELLES DE SECURITE ET DE SANTE**
Couvertes par les normes listées au point 9.

9 **VERIFICATIONS ET ESSAIS INDIVIDUELS**
Néant.

13 **SCHEDULE**

14 **VOLUNTARY TYPE EXAMINATION CERTIFICATE**

LCIE 09 ATEX 1048 X

15 **DESCRIPTION OF EQUIPMENT OR PROTECTIVE SYSTEM**

Accelerometer
Type : PNR : 144-30X-000-YYY
This equipment is an electro-mechanical transducer delivering at its terminal blocks an electrical load proportional to the measured pressure.

Specific parameters of the mode(s) of protection concerned :
U ≤ 30V, I ≤ 130mA, P ≤ 0,8W

The marking shall be :
VIBRO-METER
Address : ... Type : PNR : 144-30X-000-YYY
Serial number : ... Year of construction : ...
Ex II 3G Ex nA II T6 to T1 or T510
LCIE 09 ATEX 1048 X

The marking can be reduce at :
VIBRO-METER
PNR : 144-30X-000-YYY
Ex II 3G LCIE 09 ATEX 1048 X

The equipment shall also bear the usual marking required by the manufacturing standards applying to such equipment.

16 **DESCRIPTIVE DOCUMENTS**
Certification file N°DT 1049 rev.00 dated 09/07/20.
This file includes 3 items (5 pages).

17 **SPECIAL CONDITIONS FOR SAFE USE**
Operating ambient temperature :
- Sensor and cable : -54°C to +500°C
- Connectors :
connector Lemo type 0 or equivalent: -65°C to +150°C
connector M83723/89Y1020 or equivalent: -65°C to +200°C
connector VM standard temperature: -54°C to +260°C
connector VM high temperature: -54°C to +500°C

Temperature classification as a function of the operating temperature :
T6 at Tamb. + 75°C
T5 at Tamb. + 90°C
T4 at Tamb. + 125°C
T3 at Tamb. + 190°C
T2 at Tamb. + 290°C
T1 at Tamb. + 440°C
T510°C at Tamb. +500°C

18 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS**
Covered by standards listed at 9.

19 **ROUTINE VERIFICATIONS AND TESTS**
None.

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Rev.A

L C I E

1 AVENANT D'ATTESTATION D'EXAMEN DE TYPE VOLONTAIRE

2 **Appareil** destiné à être utilisé en atmosphères explosibles **(Directive 94/9/CE)**

3 Numéro de l'avenant :
LCIE 09 ATEX 1048 X / 01

4 Appareil
Capteur d'accélération
Type : PNR : 144-30X-000-YYY

5 demandeur : Meggitt SA
Route de Moncor 4
1752 Villars-sur-Glâne
Suisse

15 **DESCRIPTION DE L'AVENANT**

- Changement de nom et d'adresse du fabricant
- Modifications des marques commerciales déposées

Les résultats des vérifications et essais figurent dans le rapport confidentiel N° 102105 – 602924 / 20.

Paramètres spécifiques du ou des modes de protection concerné(s) :
Inchangés.

Le marquage doit être :

Inchangé, excepté la marque commerciale vibro-meter qui devient vibro-meter ou MEGGITT ou MFR S3960 et l'adresse.

16 **DOCUMENTS DESCRIPTIFS**
Courrier du demandeur du 07/09/2010.

17 **CONDITIONS SPECIALES POUR UNE UTILISATION SÛRE**
Inchangées.

18 **EXIGENCES ESSENTIELLES DE SECURITE ET DE SANTE**
Inchangées.

19 **VERIFICATIONS ET ESSAIS INDIVIDUELS**
Néant.

1 VOLUNTARY SUPPLEMENTARY TYPE EXAMINATION CERTIFICATE

2 **Equipment** intended for use in potentially explosive atmospheres **(Directive 94/9/EC)**

3 Supplementary certificate number :
LCIE 09 ATEX 1048 X / 01

4 Equipment
Accelerometer
Type : PNR : 144-30X-000-YYY

5 Applicant : Meggitt SA
Route de Moncor 4
1752 Villars-sur-Glâne
Switzerland

15 **DESCRIPTION OF THE SUPPLEMENTARY CERTIFICATE**
- Change of legal entity name and address of applicant
- Modifications of registered trade mark

The examination and test results are recorded in confidential report N°102105 – 602924 / 20.

Specific parameters of the mode(s) of protection concerned:

Unchanged.

The marking shall be :

Unchanged, except registered trade mark vibro-meter becomes vibro-meter or MEGGITT or MFR S3960 and the address.

16 **DESCRIPTIVE DOCUMENTS**
Letter of applicant from 2010/09/07.

17 **SPECIAL CONDITIONS FOR SAFE USE**
Unchanged.

18 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS**

Unchanged.

19 **ROUTINE VERIFICATIONS AND TESTS**
None.

Fontenay-aux-Roses, le 25 octobre 2010.

Le responsable de certification ATEX
ATEX certification manager
Marc GILLAUX

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L C I E

1 AVENANT D'ATTESTATION D'EXAMEN DE TYPE VOLONTAIRE

2 **Appareil** destiné à être utilisé en atmosphères explosibles **(Directive 94/9/CE)**

3 Numéro de l'avenant :
LCIE 09 ATEX 1048 X / 02

4 Appareil
Capteur d'accélération
Type : PNR 144-30X-000-YYY

5 Demandeur : Meggitt SA

15 **DESCRIPTION DE L'AVENANT**

Mise à jour des normes EN 60079-0 (2009) et EN 60079-15 (2010)

Les résultats des vérifications et essais figurent dans le rapport confidentiel N° 110055-619675 / 11

Paramètres spécifiques du ou des modes de protection concerné(s) :
Inchangés

Le marquage doit être :
Modifié comme suit
Vibro-Meter ou MEGGITT ou MFR S3960
Adresse : ...
Type : PNR 144-30X-000-YYY
N° de série :..., Date de fabrication : ...
II 3 G
Ex nA IIC T6 à T510°C Gc
LCIE 09 ATEX 1048 X

16 **DOCUMENTS DESCRIPTIFS**
Lettre du demandeur du 20/10/2011 (2 pages).

17 **CONDITIONS SPECIALES POUR UNE UTILISATION SÛRE**
Inchangées

18 **EXIGENCES ESSENTIELLES DE SECURITE ET DE SANTE**
Couvertes par les normes EN 60079-0 (2009) et EN 60079-15 (2010)

19 **VERIFICATIONS ET ESSAIS INDIVIDUELS**
Néant

1 VOLUNTARY SUPPLEMENTARY TYPE EXAMINATION CERTIFICATE

2 **Equipment** intended for use in potentially explosive atmospheres **(Directive 94/9/EC)**

3 Supplementary certificate number :
LCIE 09 ATEX 1048 X / 02

4 Equipment
Accelerometer
Type : PNR 144-30X-000-YYY

5 Applicant : Meggitt SA

15 **DESCRIPTION OF THE SUPPLEMENTARY CERTIFICATE**
Normative update according to EN 60079-0 (2009) and EN 60079-15 (2010)

The examination and test results are recorded in confidential report N° 110055-619675 / 11

Specific parameters of the concerned protection mode :

Unchanged

The marking shall be :
Modified as follows
Vibro-Meter or MEGGITT or MFR S3960
Address : ...
Type : PNR 144-30X-000-YYY
Serial Number:..., Year of Construction : ...
II 3 G
Ex nA IIC T6 to T510°C Gc
LCIE 09 ATEX 1048 X

16 **DESCRIPTIVE DOCUMENTS**
Applicant's letter dated 2011/10/20 (2 pages).

17 **SPECIAL CONDITIONS FOR SAFE USE**
Unchanged

18 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS**

Covered by standards EN 60079-0 (2009) and EN 60079-15 (2010)

19 **ROUTINE VERIFICATIONS AND TESTS**
None

Fontenay-aux-Roses, le 21/12/2011

Le responsable de certification ATEX
ATEX certification manager
Michel BRÉNON

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des Industries Electriques — 92260 Fontenay-aux-Roses cedex — contact@lcie.fr — RCS Nanterre B 408 363 174
Une société de Bureau Veritas — France — www.lcie.fr

MEGGITT

L C I E

1 **AVENANT D'ATTESTATION D'EXAMEN DE TYPE VOLONTAIRE**

2 **Appareil** destiné à être utilisé en atmosphères explosibles **(Directive 94/9/CE)**

3 Numéro de l'avenant :
LCIE 09 ATEX 1048 X / 03

4 Appareil ou système de protection :
Capteur d'accélération
Type : PNR 144-30X-000-YYY

5 Demandeur : Meggitt SA

15 **DESCRIPTION DE L'AVENANT**

- Mise à jour normative selon la norme EN 60079-0:2012 + Amendement A11:2013
- Ajout d'un essai individuel de rigidité diélectrique,

Définition du type/ *Type definition*:

PNR 144-30X-000-YYY
X = 0...9 : définit l'exécution de la tête du capteur / *defines the execution of the sensor head.*
Y = 0...9 : dépend du type de connecteur et de la longueur du câble / *depends on the type of connector and cable length.*

Les résultats des vérifications et essais de type sont enregistrés dans le rapport confidentiel n°130454-662462-12.

Paramètres spécifiques du ou des modes de protection concerné(s) :
U ≤30 V, I ≤130 mA, P ≤0,8 W

Le marquage doit être :
Meggitt SA ou Vibro-meter ou MFR S3960
Adresse : ...
Type : PNR 144-30X-000-YYY
N° de fabrication : ... Année de fabrication : ...
Ⓔ II 3 G
Ex nA IIC T6...510°C Gc (*)
LCIE 09 ATEX 1048X

Le marquage peut être réduit comme suit :
Meggitt SA ou Vibro-meter ou MFR S3960
PNR 144-30X-000-YYY
Ⓔ II 3 G Ex nA IIC T6...510°C Gc (*)
LCIE 09 ATEX 1048 X
(*) voir conditions spéciales pour une utilisation sûre.

Fontenay-aux-Roses, le 02 décembre 2014

1 **VOLUNTARY SUPPLEMENTARY TYPE EXAMINATION CERTIFICATE**

2 **Equipment** intended for use in potentially explosive atmospheres **(Directive 94/9/EC)**

3 Supplementary certificate number:
LCIE 09 ATEX 1048 X / 03

4 Equipment or protective system:
Accelerometer
Type: PNR 144-30X-000-YYY

5 Applicant: Meggitt SA

15 **DESCRIPTION OF THE SUPPLEMENTARY CERTIFICATE**

- Normative update according to standard EN 60079-0:2012 + Amendment A11:2013
- Add of routine dielectric strength test,

The results of type verifications and tests are recorded in confidential report n°130454-662462-12.

Specific parameters of the concerned protection mode:
U ≤30 V, I ≤130 mA, P ≤0.8 W

The marking shall be:
Meggitt SA or Vibro-meter or MFR S3960
Address: ...
Type: PNR 144-30X-000-YYY
Serial number: ... Year of construction: ...
Ⓔ II 3 G
Ex nA IIC T6...510°C Gc (*)
LCIE 09 ATEX 1048 X

The marking can be reduced as follows:
Meggitt SA or Vibro-meter or MFR S3960
PNR 144-30X-000-YYY
Ⓔ II 3 G Ex nA IIC T6...510°C Gc (*)
LCIE 09 ATEX 1048 X
(*) see special conditions for safe use.

Le Responsable de Certification ATEX
ATEX Certification Officer
Michel EQUI

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au capital de 15 745 984 €
RCS Nanterre B 408 363 174

L C I E

13 **ANNEXE**

14 **AVENANT D'ATTESTATION D'EXAMEN DE TYPE VOLONTAIRE**

LCIE 09 ATEX 1048 X / 03

15 **DESCRIPTION DE L'AVENANT (suite)**

L'appareil doit également comporter le marquage normalement prévu par les normes de construction qui le concerne.

16 **DOCUMENTS DESCRIPTIFS**
Dossier technique n° DT 1069 rév. 00 du 25/09/2014.
Ce dossier comprend 2 rubriques (6 pages).

17 **CONDITIONS SPECIALES POUR UNE UTILISATION SURE**

1. Température ambiante d'utilisation :
- Capteur : -54°C à +500°C
- Câble : -54°C à +500°C
- Connecteur Lemo type 0 ou équivalent : -65°C à +150°C
- Connecteur M83723/89Y1020 ou équivalent : -65°C à +200°C
- Connecteur VM température standard : -54°C à +260°C
- Connecteur VM haute température : -54°C à +500°C

2. Classement en température en fonction de la température ambiante d'utilisation :

Classe de température / Température ambiante d'utilisation / *Temperature class / Ambient temperature in service*	T6	T5	T4	T3	T2	T1	510°C
Capteur/ *Sensor*	≤+80°C	≤+95°C	≤+130°C	≤+195°C	≤+290°C	≤+440°C	≤+500°C
Câble/ *Cable*	≤+80°C	≤+95°C	≤+130°C	≤+195°C	≤+290°C	≤+440°C	≤+500°C
Connecteur Lemo type 0 ou équivalent *Connector Lemo type 0 or equivalent*	≤+80°C	≤+95°C	≤+130°C	≤+150°C	-	-	-
Connecteur M83723/89Y1020 ou équivalent *Connector M83723/89Y1020 or equivalent*	≤+80°C	≤+95°C	≤+130°C	≤+195°C	≤+200°C	-	-
Connecteur VM température standard *Connector VM standard temperature*	≤+80°C	≤+95°C	≤+130°C	≤+195°C	≤+260°C	-	-
Connecteur VM haute température *Connector VM high temperature*	≤+80°C	≤+95°C	≤+130°C	≤+195°C	≤+290°C	≤+440°C	≤+500°C

3. Des mesures doivent être prises afin d'éviter que la tension nominale ne soit pas dépassée par des perturbations transitoires de plus de 119 V.

13 **SCHEDULE**

14 **VOLUNTARY SUPPLEMENTARY TYPE EXAMINATION CERTIFICATE**

LCIE 09 ATEX 1048 X / 03

15 **DESCRIPTION OF THE SUPPLEMENTARY CERTIFICATE (continued)**

The equipment shall also bear the usual marking required by the manufacturing standards applying to such equipment.

16 **DESCRIPTIVE DOCUMENTS**
Technical file n° DT 1069 rev. 00 dated 2014/09/25.
This file includes 2 items (6 pages).

17 **SPECIAL CONDITIONS FOR SAFE USE**

1. Ambient temperature in service:
- Sensor: -54°C to +500°C
- Cable: -54°C to +500°C
- Connector Lemo type 0 or equivalent: -65°C to +150°C
- Connector M83723/89Y1020 or equivalent: -65°C to +200°C
- Connector VM standard temperature: -54°C to +260°C
- Connector VM high temperature: -54°C to +500°C

2. Temperature classification in function of the ambient temperature in service:

3. Provisions shall be made to prevent the rated voltage from being exceeded by transient disturbances of more than 119 V.

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MEGGiTT

LCIE 09 ATEX 1048 X (FR, EN)
[Original copy]
CA 30x

13 ANNEXE (suite)

13 SCHEDULE (continued)

14 AVENANT D'ATTESTATION D'EXAMEN DE TYPE VOLONTAIRE

LCIE 09 ATEX 1048 X / 03

14 VOLUNTARY SUPPLEMENTARY TYPE EXAMINATION CERTIFICATE

LCIE 09 ATEX 1048 X / 03

18 EXIGENCES ESSENTIELLES DE SECURITE ET DE SANTE

Conformité aux normes européennes EN 60079-0:2012 + Amendement A11:2013 et EN 60079-15:2010.

18 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS

Compliance with European standards EN 60079-0:2012 + Amendment A11:2013 and EN 60079-15:2010.

19 VERIFICATIONS ET ESSAIS INDIVIDUELS

Chaque appareil doit être soumis à un essai de rigidité diélectrique sous une tension d'essai de 500 V efficace, appliquée entre les conducteurs et le châssis durant 60 s, conformément au paragraphe 6.5.1 de la norme EN 60079-15:2010.
Autrement, l'essai doit être exécuté à 600 V efficace pendant au moins 100 ms.

19 ROUTINE VERIFICATIONS AND TESTS

Each equipment shall be submitted to a dielectric strength test with test voltage of 500 V r.m.s, applied between wires and body during 60 s, carried out in accordance with clause 6.5.1 of standard EN 60079-15:2010.
Alternatively, a test shall be carried out at 600 V r.m.s during at least 100 ms.

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Deutsche Übersetzung der originalen französischen Kopie der Seite 1

1 **FREIWILLIGES TYPENPRÜFZERTIFIKAT**

2 Geräte zur Verwendung in explosionsgefährdeten Bereichen - **Richtlinie 94/9/EG**

3 Zertifikatnummer
LCIE 09 ATEX 1048X

4 Gerät
Beschleunigungsgeber
PNR: 144-30X-000-YYY

5 Hersteller: VIBRO METER
Adresse: Route de Moncor 4, 1701 FRIBOURG, SCHWEIZ

7 Dieses Gerät oder Schutzsystem und die möglichen, zulässigen Varianten sind im Anhang dieses Zertifikats und den darin aufgeführten Unterlagen beschrieben.

8 LCIE bestätigt, dass dieses Gerät oder Schutzsystem die wesentlichen Gesundheits- und Sicherheitsanforderungen in Bezug auf die Auslegung und die Bauart von Geräten und Schutzsystemen der Kategorie 3 (elektrisch) oder Kategorien 2 und 3 (nicht elektrisch) zur Verwendung in explosionsgefährdeten Bereichen nach Anhang II der Richtlinie 94/9EG des Europaparlaments und des Rats vom 23. März 1994 erfüllt.

Die Prüf- und Testergebnisse sind im vertraulichen Bericht Nr. 94576 - 589014/11 aufgezeichnet.

9 Die Einhaltung der wesentlichen Gesundheits- und Sicherheitsanforderungen wird durch die Übereinstimmung mit den folgenden Dokumenten sichergestellt:
- EN 60079-0 (2006)
- EN 60079-15 (2005)

10 Ein "X" nach der Zertifikatnummer gibt an, dass für die sichere Verwendung des Gerätes oder Schutzsystemes besondere Bedingungen gemäß dem Anhang dieses Zertifikates gelten.

11 Dieses Typenprüfzertifikat betrifft nur die Bauart und die Prüfungen und Tests des betreffenden Geräts oder Schutzsystems gemäß Richtlinie 94/9/EG.
Zusätzliche Anforderungen dieser Richtlinie gelten für die Fertigung und Lieferung des Geräts oder Schutzsystems. Diese werden durch dieses Zertifikat nicht abgedeckt.

12 Die Kennzeichnung des Gerätes oder Schutzsystems muss die unter Punkt 15 erläuterten Angaben enthalten.

Fontenay-aux-Roses,
am 10. Oktober 2009

Leiter Zertifizierung

Trockenstempel

Rev.A
Seite 1/2

LCIE haftet nur für den französischen Text.
Dieses Zertifikat darf nur vollständig und ohne Änderungen vervielfältigt werden.

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

Deutsche Übersetzung der originalen französischen Kopie der Seite 1

13 **ANHANG**

14 **FREIWILLIGES TYPENPRÜFZERTIFIKAT**
LCIE 09 ATEX 1048 X

15 **BESCHREIBUNG DES GERÄTES ODER SCHUTZSYSTEMS**

Beschleunigungsgeber
PNR : 144-30X-000-YYY

Das Gerät verwandelt elektrische Eingangsladung in elektrisches Ausgangssignal welches proportional zur Beschleunigung oder dem Druck ist.

Spezifische Kenndaten der betroffenen Schutzarten:

U ≤ 30 V, I ≤ 130 mA, P ≤ 0,8 W

Kennzeichnung:
VIBRO-METER Adresse: ..
Typ: PNR: 144-30X-000-YYY
Herstellungsnummer: ... Herstellungsjahr: ...
II 3G Ex nA II T6 bis T1 oder T510
LCIE 09 ATEX 1048 X

Die Kennzeichnung kann wiefolgt vereinfacht werden:
VIBRO-METER PNR: 144-30X-000-YYY
II 3G LCIE 09 ATEX 1048 X

Die Geräte müssen ebenfalls mit der Kennzeichnung versehen sein, die in den Herstellungsnormen der betreffenden Geräte normalerweise vorgesehen sind.

16 **BESCHREIBENDE UNTERLAGEN**

Zertifizierungs-Datei-Nr. DT 1049 Ausgabe 0 vom 20. Juli 2009.
Diese Datei enthält 3 Punkte (5 Seiten).

17 **BESONDERE BEDINGUNGEN FÜR DIE SICHERE ANWENDUNG**

Umgebungstemperatur:
- Sensor und Kabel: −54 °C bis +500 °C
Stecker:
- Stecker LEMO Typ O oder Äquivalent: −65 °C bis +150 °C
- Stecker M83723/89Y1020 oder Äquivalent: −65 °C bis +200 °C
- Standardtemperatur VM-Stecker: −54 °C bis +260 °C
- Hochtemperatur VM-Stecker: −54 °C bis +500 °C

Temperaturklassifizierung:
T6 bis Ta = +75 °C
T5 bis Ta = +90 °C
T4 bis Ta = +125 °C
T3 bis Ta = +190 °C
T2 bis Ta = +290 °C
T1 bis Ta = +440 °C
T510 bis Ta = +500 °C

18 **WESENTLICHE ANFORDERUNGEN IM BEZUG AUF SICHERHEIT UND GESUNDHEIT**
Siehe unter Punkt 9 aufgelistete Bestimmungen.

19 **ROUTINEPRÜFUNGEN UND TESTS**
Keine.

Rev.A
Seite 2/2

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

Deutsche Übersetzung der originalen französischen Kopie der Seite 2

1 **ZUSÄTZLICHES FREIWILLIGES TYPENPRÜFUNGSZERTIFIKAT**

2 Geräte zur Verwendung in explosionsgefährdeten Bereichen (**Richtlinie 94/9/EG**)

3 Zusätzliche Zertifikatnummer:
LCIE 09 ATEX 1048 X / 01

4 Gerät
Beschleunigungsgeber
Type : PNR: 144-30X-000-YYY

5 Hersteller: Meggitt SA
Adresse: Route de Moncor 4, 1752 Villars-sur-Glâne, Schweiz

15 **BESCHREIBUNG DES ZUSÄTZLICHEN ZERTIFIKATS**

- Änderung der juristischen Person und Addresse des Antragstellers
- Modifikation des eingetragenen Markenzeichens

Die Prüf- und Testergebnisse sind im vertraulichen Bericht Nr. 102105-602924/20 aufgezeichnet.

Spezifische Kenndaten der betroffenen Schutzarten:
Unverändert.

Die Kennzeichnung soll lauten:
Unverändert, bis auf Markenzeichen vibro-meter wird zu vibro-meter oder MEGGITT oder MFR S3960 sowie die Adressänderung.

16 **BESCHREIBENDE UNTERLAGEN**

Brief des Antragsstellers vom 07.09.2010.

17 **BESONDERE BEDINGUNGEN FÜR DIE SICHERE ANWENDUNG**

Unverändert.

18 **WESENTLICHE ANFORDERUNGEN IM BEZUG AUF SICHERHEIT UND GESUNDHEIT**

Unverändert.

19 **ROUTINEPRÜFUNGEN UND TESTS**

Keine.

Fontenay-aux-Roses,
am 25. Oktober 2010

Leiter Zertifizierung

Trockenstempel

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

Deutsche Übersetzung der originalen französischen Kopie der Seite 2

1 **ZUSÄTZLICHES FREIWILLIGES TYPENPRÜFUNGSZERTIFIKAT**

2 Geräte zur Verwendung in explosionsgefährdeten Bereichen (**Richtlinie 94/9/EG**)

3 Zusätzliche Zertifikatnummer:
LCIE 09 ATEX 1048 X / 02

4 Gerät
Beschleunigungsgeber
Type : PNR 144-30X-000-YYY

5 Hersteller: Meggitt SA

15 **BESCHREIBUNG DES ZUSÄTZLICHEN ZERTIFIKATS**

Standardaktualisierungen gemäß folgender Richtlinien: EN 60079-0 (2009) und EN 60079-15 (2010)

Die Prüf- und Testergebnisse sind im vertraulichen Bericht Nr. 110055-619675 / 11 aufgezeichnet.

Spezifische Kenndaten der betroffenen Schutzarten:
Unverändert.

Die Kennzeichnung lautet wie folgt:
Wie folgt modifiziert:
Vibro-Meter oder MEGGITT oder MFR S3960
Adresse: ...
Typ: PNR 144-30X-000-YYY
Herstellungsnummer: ... Herstellungsjahr: ...
Ex II 3 G
Ex nA IIC T6 bis T510°C Gc
LCIE 09 ATEX 1048 X

16 **BESCHREIBENDE UNTERLAGEN**

Brief des Antragsstellers vom 20.10.2011 (2 Seiten)

17 **BESONDERE BEDINGUNGEN FÜR DIE SICHERE ANWENDUNG**

Unverändert.

18 **WESENTLICHE ANFORDERUNGEN IM BEZUG AUF SICHERHEIT UND GESUNDHEIT**

Werden von folgenden Richtlinien abgedeckt:
EN 60079-0 (2009) und EN 60079-15 (2010)

19 **ROUTINEPRÜFUNGEN UND TESTS**

Keine.

Fontenay-aux-Roses,
am 21. Dezember 2011

Leiter Zertifizierung

Trockenstempel

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

Deutsche Übersetzung der originalen französischen Kopie der Seite 3

1 **ZUSÄTZLICHES FREIWILLIGES TYPENPRÜFUNGSZERTIFIKAT**

2 Geräte zur Verwendung in explosionsgefährdeten Bereichen (**Richtlinie 94/9/EG**)

3 Zusätzliche Zertifikatnummer:
LCIE 09 ATEX 1048 X / 03

4 Gerät
Beschleunigungsgeber
Typ: PNR 144-30X-000-YYY

5 Antragsteller: Meggitt SA

15 **BESCHREIBUNG DES ZUSÄTZLICHEN ZERTIFIKATS**

– Standardaktualisierungen gemäß folgender Richtlinien:
EN 60079-0:2012 + Änderung A11:2013.
– Hinzufügen einer Stückprüfung von Durchschlagfestigkeit.

Definition von Gerät:
PNR 144-30X-000-YYY
X = 0 … 9: Definiert das Design des Sensorkopfes
Y = 0 … 9: Abhängig von der Steckertyp und Kabellänge.

Die Testergebnisse sind im vertraulichen Bericht Nr. 130454-662462-12.

Spezifische Kenndaten der betroffenen Schutzarten:
U ≤ 30 V, I ≤ 130 mA, P ≤ 0,8 W

Die Kennzeichnung wird wie folgt festgesetzt:
Meggitt SA oder Vibro-Meter oder MFR S3960
Adresse: …
Typ: PNR 144-30X-000-YYY
Herstellungsnummer: … Herstellungsjahr: …
Ex II 3 G
Ex nA IIC T6…510°C Gc(*)
LCIE 09 ATEX 1048 X

Die Kennzeichnung kann wie folgt reduziert werden:
Meggitt SA oder Vibro-Meter oder MFR S3960
PNR 144-30X-000-YYY
Ex II 3 G Ex nA IIC T6…510°C Gc(*)
LCIE 09 ATEX 1048 X

(*): Siehe besondere Bedingungen für die sichere Anwendung (unter Punkt 17)

Fontenay-aux-Roses,
am 02. Dezember 2014

Leiter Zertifizierung

Trockenstempel

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Deutsche Übersetzung der originalen französischen Kopie der Seite 3

13 **ANHANG**

14 **ZUSÄTZLICHES FREIWILLIGES TYPENPRÜFUNGSZERTIFIKAT**

LCIE 09 ATEX 1048 X / 03

15 **BESCHREIBUNG DES ZUSÄTZLICHEN ZERTIFIKATS (FORTSETZUNG)**

Die Geräte müssen ebenfalls mit der Kennzeichnung versehen sein, die in den Herstellungsnormen der betreffenden elektrischen Geräte normalerweise vorgesehen sind.

16 **BESCHREIBENDE UNTERLAGEN**

Zertifizierungs-Datei-Nr. DT 1069 Ausgabe 00 vom 2014/09/25.
Diese Datei enthält 2 Punkte (6 Seiten).

17 **BESONDERE BEDINGUNGEN FÜR DIE SICHERE ANWENDUNG**

1. Umgebungstemperatur im Betrieb:
– Sensor: −54 °C bis +500 °C
– Kabel: −54 °C bis +500 °C
– Stecker LEMO Typ O oder Äquivalent: −65 °C bis +150 °C
– Stecker M83723/89Y1020 oder Äquivalent: −65 °C bis +200 °C
– Standardtemperatur VM-Stecker: −54 °C bis +260 °C
– Hochtemperatur VM-Stecker: −54 °C bis +500 °C

2. Temperaturklassifizierung entsprechend der Umgebungstemperatur im Betrieb:

	T6	T5	T4	T3	T2	T1	510°C
Sensor	≤ +80 °C	≤ +95 °C	≤ +130 °C	≤ +195 °C	≤ +290 °C	≤ +440 °C	≤ +500 °C
Kabel	≤ +80 °C	≤ +95 °C	≤ +130 °C	≤ +195 °C	≤ +290 °C	≤ +440 °C	≤ +500 °C
Stecker LEMO Typ O oder Äquivalent	≤ +80 °C	≤ +95 °C	≤ +130 °C	≤ +150 °C			
Stecker M83723/89Y1020 oder Äquivalent	≤ +80 °C	≤ +95 °C	≤ +130 °C	≤ +195 °C	≤ +200 °C		
Standardtemperatur VM-Stecker	≤ +80 °C	≤ +95 °C	≤ +130 °C	≤ +195 °C	≤ +260 °C		
Hochtemperatur VM-Stecker	≤ +80 °C	≤ +95 °C	≤ +130 °C	≤ +195 °C	≤ +290 °C	≤ +440 °C	≤ +500 °C

3. Es müssen Vorkehrungen getroffen werden dass kurzzeitige Störungen die Nominalspannungen nicht mehr als 119 V überschreiten können.

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

Deutsche Übersetzung der originalen französischen Kopie der Seite 4

13 **ANHANG**

14 **ZUSÄTZLICHES FREIWILLIGES TYPENPRÜFUNGSZERTIFIKAT**

LCIE 09 ATEX 1048 X / 03

18 **WESENTLICHE ANFORDERUNGEN IM BEZUG AUF SICHERHEIT UND GESUNDHEIT**

Werden von folgenden Richtlinien abgedeckt:
EN 60079-0:2012 + Änderung A11:2013 und EN 60079-15:2010.

19 **ROUTINEPRÜFUNGEN UND TESTS**

Jedes Gerät muss einem Durschlagsfestigkeitstest unterzogen werden. Spannung von 500 V (RMS) währen 60 Sekunden zwischen den Leitern und dem Gehäuse gemäss Norm EN 60079-15:2010.
Andernfalls muss ein Test mit 600 V (RMS) während mindestens 100 ms durchgeführt werden

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

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ATEX certificate:

LCIE 08 ATEX 6017 X

for CA 901

Although the certificate is available in the three languages (English, French and German), the liability of the notified body applies only on the text of the original copy of the certificate that it published.

EN

Bien que le certificat soit traduit dans les 3 langues (Anglais, Français et Allemand), seul le texte de la copie originale du certificat peut engager la responsabilité de l'organisme notifié qui l'a publié.

FR

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

DE

EX

Meggitt SA
Route de Moncor 4
PO Box 1616
CH - 1701 Fribourg
Switzerland

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CETTE PAGE EST LAISSÉE INTENTIONNELLEMENT VIDE
DIESE SEITE WURDE ABSICHTLICH LEER GELASSEN

ATTESTATION D'EXAMEN CE DE TYPE

1 **EC TYPE EXAMINATION CERTIFICATE**

Appareil ou système de protection destiné à être utilisé en atmosphères explosibles **(Directive 94/9/CE)**

2 **Equipment or protective system** intended for use in potentially explosive atmospheres **(Directive 94/9/EC)**

Numéro de l'attestation d'examen CE de type
LCIE 08 ATEX 6017 X

3 EC type examination certificate number
LCIE 08 ATEX 6017 X

Appareil ou système de protection :
Accéléromètre
Type : CA 901 modèle : 144-901-000-XXX

4 Equipment or protective system :
Acceleration transducer
Type : CA 901 model : 144-901-000-XXX

Demandeur : VIBRO METER
Adresse : BP 1071 1701 FRIBOURG
SUISSE

5 Applicant : VIBRO METER
Address : BP 1071 1701 FRIBOURG
SUISSE

Fabricant : VIBRO METER
Adresse : BP 1071 1701 FRIBOURG
SUISSE

6 Manufacturer : VIBRO METER
Address : BP 1071 1701 FRIBOURG
SUISSE

Cet appareil ou système de protection et ses variantes éventuelles acceptées sont décrits dans l'annexe de la présente attestation et dans les documents descriptifs cités en référence.

7 This equipment or protective system and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

Le LCIE, organisme notifié sous la référence 0081 conformément à l'article 9 de la directive 94/9/CE du Parlement européen et du Conseil du 23 mars 1994, certifie que cet appareil ou système de protection est conforme aux exigences essentielles de sécurité et de santé pour la conception et la construction d'appareils et de systèmes de protection destinés à être utilisés en atmosphères explosibles, données dans l'annexe II de la directive.
Les résultats des vérifications et essais figurent dans le rapport confidentiel N° 77907/566467.

8 LCIE, notified body number 0081 in accordance with article 9 of the Directive 94/9/EC of the European Parliament and the Council of 23 March 1994. certifies that this equipment or protective system has been found to comply with the essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II to the Directive.
The examination and test results are recorded in confidential report N° 77907/566467.

Le respect des exigences essentielles de sécurité et de santé est assuré par la conformité à :
- EN 60079-0 (2004)
- EN 60079-11 (2007)

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with :
- EN 60079-0 (2004)
- EN 60079-11 (2007)

Le signe X lorsqu'il est placé à la suite du numéro de l'attestation, indique que cet appareil ou système de protection est soumis aux conditions spéciales pour une utilisation sûre, mentionnées dans l'annexe de la présente attestation.

10 If the sign X is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

Cette attestation d'examen CE de type concerne uniquement la conception et la construction de l'appareil ou du système de protection spécifié, conformément à l'annexe III de la directive 94/9/CE.
Des exigences supplémentaires de la directive sont applicables pour la fabrication et la fourniture de l'appareil ou du système de protection. Ces dernières ne sont pas couvertes par la présente attestation.

11 This EC type examination certificate relates only to the design and construction of this specified equipment or protective system in accordance with annex III to the directive 94/9/EC.
Further requirements of the directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

Le marquage de l'appareil ou du système de protection doit comporter les informations détaillées au point 15.

12 The marking of the equipment or protective system shall include informations as detailed at 15.

Fontenay-aux-Roses, le 23 février 2008

Le responsable de certification ATEX
ATEX certification manager

Henri CERVELLO

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13 **ANNEXE**

14 **ATTESTATION D'EXAMEN CE DE TYPE**

LCIE 08 ATEX 6017 X

15 **DESCRIPTION DE L'APPAREIL OU DU SYSTEME DE PROTECTION**

Accéléromètre
Type : CA 901 modèle : 144-901-000-XXX
Le capteur est un transducteur électro-mécanique fournissant à ses bornes une charge électrique proportionnelle à l'accélération à laquelle il est soumis.
Le câble à isolant minéral et le connecteur font partie intégrante du capteur.

Paramètres spécifiques du ou des modes de protection concernés :
Capteur : Ci = 80pF, Li ≈ 0
Câble : Ci = 200pF/m, Li ≈ 0
Source linéaire : Ui ≤ 28V, Ii ≤ 100mA, Pi ≤ 0,7W
Source non linéaire : Ui ≤ 28V, Ii ≤ 25mA, Pi ≤ 0,7W

Le marquage doit être :
VIBRO METER Adresse : ...
Type : 144-901-000-XXX
N° de fabrication : ... Année de fabrication : ...
Ex II 1G Ex ia IIC T6 à T710°C
LCIE 08 ATEX 6017 X

L'appareil doit également comporter le marquage normalement prévu par les normes de construction qui le concerne.

16 **DOCUMENTS DESCRIPTIFS**
Dossier de certification N° DT 1032 rev1 du 19/11/07.
Ce document comprend 6 rubriques (8 pages).

17 **CONDITIONS SPECIALES POUR UNE UTILISATION SÛRE**
Le capteur ne peut être raccordé qu'à un équipement certifié de sécurité intrinsèque. Cette association doit être compatible vis-à-vis de la sécurité intrinsèque (voir les paramètres électriques au paragraphe 15).
Température ambiante d'utilisation :
- capteur et câble : - 196°C à + 700°C
- connecteur :
  - 65°C à + 150°C : connecteur LEMO type O ou équivalent
  - 65°C à + 200°C : connecteur M83723/89Y1020 ou équivalent
  - 54°C à + 260°C : connecteur VM standard
  - 196°C à + 700°C : connecteur VM haute température

Classement en température :
T6 jusqu'à Ta = + 80°C, T5 jusqu'à Ta = + 95°C,
T4 jusqu'à Ta = + 130°C, T3 jusqu'à Ta = + 195°C,
T2 jusqu'à Ta = + 290°C, T1 jusqu'à Ta = + 440°C
Au-delà de Ta = + 440°C et jusqu'à +700°C : T...°C = Ta +10°C.

18 **EXIGENCES ESSENTIELLES DE SECURITE ET DE SANTE**
Couvertes par les normes listées au point 9.

19 **VERIFICATIONS ET ESSAIS INDIVIDUELS**
Néant.

13 **SCHEDULE**

14 **EC TYPE EXAMINATION CERTIFICATE**

LCIE 08 ATEX 6017 X

15 **DESCRIPTION OF EQUIPMENT OR PROTECTIVE SYSTEM**

Acceleration transducer
Type : CA 901 model : 144-901-000-XXX
The sensor is an electro-mechanical transducer delivering at its terminal blocks an electrical load proportional to the acceleration which it is submitted.
The mineral insulating cable and the connector are fully in a part of the sensor.

Specific parameters of the mode(s) of protection concerned :
Sensor : Ci = 80pF, Li ≈ 0
Cable Ci = 200pF/m, Li ≈ 0
Linear power supply : Ui ≤ 28V, Ii ≤ 100mA, Pi ≤ 0,7W
Non linear power supply : Ui ≤ 28V, Ii ≤ 25mA, Pi ≤ 0,7W

The marking shall be :
VIBRO METER Address : ...
Type : 144-901-000-XXX
Serial number : ... Year of construction : ...
Ex II 1G Ex ia IIC T6 to T710°C
LCIE 08 ATEX 6017 X

The equipment shall also bear the usual marking required by the manufacturing standards applying to such equipment.

16 **DESCRIPTIVE DOCUMENTS**
Certification file N° DT 1032 rev1 dated 19/11/07.
This file includes 6 items (8 pages).

17 **SPECIAL CONDITIONS FOR SAFE USE**

The sensor shall be only connected to an intrinsically safe certified equipment. This combination shall be compatible as regard the intrinsic safety rules (see electrical parameters clause 15).
Operating ambient temperature :
- sensor and cable : - 196°C to + 700°C
- connector :
  - 65°C to + 150°C : connector LEMO type O or equivalent
  - 65°C to + 200°C : connector M83723/89Y1020 or equivalent
  - 54°C to + 260°C : standard temperature VM connector
  - 196°C to + 700°C : high temperature VM connector

Temperature classification:
T6 up to Ta = + 80°C, T5 up to Ta = + 95°C,
T4 up to Ta = + 130°C, T3 up to Ta = + 195°C,
T2 up to Ta = + 290°C, T1 up to Ta = + 440°C
Above Ta = + 440°C and up to +700°C : T...°C = Ta + 10°C.

18 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS**

Covered by standards listed at 9.

19 **ROUTINE VERIFICATIONS AND TESTS**
None.

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L C I E

1 **AVENANT D'ATTESTATION D'EXAMEN CE DE TYPE**

2 **Appareil ou système de protection** destiné à être utilisé en atmosphères explosibles **(Directive 94/9/CE)**

3 Numéro de l'avenant :
LCIE 08 ATEX 6017 X / 01

4 Appareil ou système de protection :
Accéléromètre
Type : CA901 model 144-901-000-XXX

5 Demandeur : Meggitt SA
Route de Moncor 4
1752 Villars-sur-Glâne
Suisse

15 **DESCRIPTION DE L'AVENANT**

- Mise à jour normative selon la norme EN 60079-0 (2006)
- Mise à jour des documents fabricant
- Changement de nom et d'adresse du fabricant
- Modifications des marques commerciales déposées

Les résultats des vérifications et essais figurent dans le rapport confidentiel N° 102105-602924 / 21.

Paramètres spécifiques du ou des modes de protection concerné(s) :
Inchangés, excepté
Capteur qui devient Tête de capteur : Ci = 80pF
Câble qui devient Câble intégral : Ci = 200pF/m

Le marquage doit être :

Inchangé, excepté la marque commerciale vibro-meter qui devient vibro-meter ou MEGGITT ou MFR S3960 et l'adresse.

16 **DOCUMENTS DESCRIPTIFS**

Dossier de certification N° DT 1032 - 01 Rev. 02 du 01/12/2010.
Ce dossier comprend 04 rubriques (14 pages).

17 **CONDITIONS SPECIALES POUR UNE UTILISATION SURE**
Inchangées.

18 **EXIGENCES ESSENTIELLES DE SECURITE ET DE SANTE**
Couvertes par les normes EN 60079-0 (2006) et EN 60079-11 (2007).

19 **VERIFICATIONS ET ESSAIS INDIVIDUELS**
Néant.

Fontenay-aux-Roses, le 03 décembre 2010.

Le responsable de certification ATEX
ATEX certification manager
Marc GILLAUX

1 **SUPPLEMENTARY EC TYPE EXAMINATION CERTIFICATE**

2 **Equipment or protective system** intended for use in potentially explosive atmospheres **(Directive 94/9/EC)**

3 Supplementary certificate number :
LCIE 08 ATEX 6017 X / 01

4 Equipment or protective system :
Acceleration transducer
Type : CA901 model 144-901-000-XXX

5 Applicant : Meggitt SA
Route de Moncor 4
1752 Villars-sur-Glâne
Switzerland

15 **DESCRIPTION OF THE SUPPLEMENTARY CERTIFICATE**
- Normative update according to standard EN 60079-0 (2006)
- Update of the manufacturer documents
- Change of legal entity name and address of applicant
- Modifications of registered trade mark

The examination and test results are recorded in confidential report N° 102105-602924 / 21.

Specific parameters of the mode(s) of protection concerned:

Unchanged, except
Sensor becomes sensor heat : Ci = 80pF
Cable becomes integral cable : Ci = 200pF/m

The marking shall be :

Unchanged, except registered trade mark vibro-meter becomes vibro-meter or MEGGITT or MFR S3960 and the address.

16 **DESCRIPTIVE DOCUMENTS**

Certification file N° DT 1032 - 01 Rev.02 dated 2010/12/01.

This file includes 04 items (14 pages).

17 **SPECIAL CONDITIONS FOR SAFE USE**

Unchanged.

18 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS**

Covered by standards EN 60079-0 (2006) and EN 60079-11 (2007).

19 **ROUTINE VERIFICATIONS AND TESTS**
None.

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L C I E

1 **AVENANT D'ATTESTATION D'EXAMEN CE DE TYPE**

2 **Appareil ou système de protection** destiné à être utilisé en atmosphères explosibles **(Directive 94/9/CE)**

3 Numéro de l'avenant :
LCIE 08 ATEX 6017 X / 02

4 Appareil ou système de protection :
Capteur d'accélération
Type : PNR 144-901-000-XXX

5 Demandeur : Meggitt SA

15 **DESCRIPTION DE L'AVENANT**

Mise à jour normative selon la norme EN 60079-0 (2009)
Mise à jour du type

Les résultats des vérifications et essais figurent dans le rapport confidentiel N° 110055-619675 / 12

Paramètres spécifiques du ou des modes de protection concerné(s) :
Inchangés

Le marquage doit être :
Modifié comme suit :
Vibro-Meter ou MEGGITT ou MFR S3960
Adresse : ...
Type : PNR 144-901-000-XXX
N° de série :... ; Date de fabrication :...
Ex II 1 G
Ex ia IIC T6 à T710°C Ga
LCIE 08 ATEX 6017 X
Ui = ... ; Pi = ... ; Ii = ... ; Ci = ... ; Li = ... (1)
(1) complété avec les paramètres électriques

16 **DOCUMENTS DESCRIPTIFS**
Lettre du demandeur du 20/10/2011 (2 pages).

17 **CONDITIONS SPECIALES POUR UNE UTILISATION SURE**
Inchangées

18 **EXIGENCES ESSENTIELLES DE SECURITE ET DE SANTE**
Couvertes par les normes EN 60079-0 (2009) et EN 60079-11 (2007)

19 **VERIFICATIONS ET ESSAIS INDIVIDUELS**
Néant

Fontenay-aux-Roses, le 21/12/2011

Le responsable de certification ATEX
ATEX certification manager
Michel BRÉNON

1 **SUPPLEMENTARY EC TYPE EXAMINATION CERTIFICATE**

2 **Equipment or protective system** intended for use in potentially explosive atmospheres **(Directive 94/9/EC)**

3 Supplementary certificate number :
LCIE 08 ATEX 6017 X / 02

4 Equipment or protective system :
Acceleration transducer
Type : PNR 144-901-000-XXX

5 Applicant : Meggitt SA

15 **DESCRIPTION OF THE SUPPLEMENTARY CERTIFICATE**
Normative update according to standard EN 60079-0 (2009)
Type update

The examination and test results are recorded in confidential report N° 110055-619675 / 12

Specific parameters of the concerned protection mode:

Unchanged

The marking shall be :
Modified as follows :
Vibro-Meter or MEGGITT or MFR S3960
Address : ...
Type : PNR 144-901-000-XXX
Serial Number :... ; Date of construction :...
Ex II 1 G
Ex ia IIC T6 to T710°C Ga
LCIE 08 ATEX 6017 X
Ui = ... ; Pi = ... ; Ii = ... ; Ci = ... ; Li = ... (1)
(1) completed with the electrical parameters

16 **DESCRIPTIVE DOCUMENTS**
Applicant's letter dated 2011/10/20 (2 pages).

17 **SPECIAL CONDITIONS FOR SAFE USE**

Unchanged

18 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS**

Covered by standards EN 60079-0 (2009) and EN 60079-11 (2007)

19 **ROUTINE VERIFICATIONS AND TESTS**
None

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1 **AVENANT D'ATTESTATION D'EXAMEN CE DE TYPE**

2 **Appareil ou système de protection** destiné à être utilisé en atmosphères explosibles **(Directive 94/9/CE)**

3 Numéro de l'avenant :
LCIE 08 ATEX 6017 X / 03

4 Appareil ou système de protection :
Capteur d'accélération
Type : PNR 144-901-000-XXX

5 Demandeur : Meggitt SA

15 **DESCRIPTION DE L'AVENANT**

Mise à jour normative selon les normes EN 60079-0:2012 et EN 60079-11:2012.
Modification du capteur (la valeur capacitive maximale du capteur est de 200pF au lieu de 80pF).
Modification du paramètre électrique suivant :
Tête de capteur : Ci = 200pF.
Mise à jour du dossier technique.

Les résultats des vérifications et essais figurent dans le rapport confidentiel N°128022-656776.

Paramètres spécifiques du ou des modes de protection concerné(s) :
Modifié comme suit :
Tête de capteur : Ci = 200pF, Li ≈ 0
Câble intégral : Ci = 200pF/m, Li ≈ 0
Source linéaire : Ui ≤ 28V, Ii ≤ 100mA, Pi ≤ 0,7W
Source non linéaire : Ui ≤ 28V, Ii ≤ 25mA, Pi ≤ 0,7W

Le marquage doit être :
Vibro-Meter ou MEGGITT ou MFR S3960
Adresse : ...
Type : PNR 144-901-000-XXX
N° de fabrication : ...
Année de fabrication : ...
Ex II 1 G
Ex ia IIC T6 à 710°C Ga
LCIE 08 ATEX 6017 X
Ui = ..., Ii = ..., PI = ..., Ci = ..., Li = ... (1)
(1)complété avec les paramètres électriques

16 **DOCUMENTS DESCRIPTIFS**

Dossier de certification N° DT 1032 Rév.03 du 02/07/2014.
Ce dossier comprend 5 rubriques (7 pages).

Fontenay-aux-Roses, le 18 juillet 2014

1 **SUPPLEMENTARY EC TYPE EXAMINATION CERTIFICATE**

2 **Equipment or protective system** intended for use in potentially explosive atmospheres **(Directive 94/9/EC)**

3 Supplementary certificate number :
LCIE 08 ATEX 6017 X / 03

4 Equipment or protective system :
Acceleration transducer
Type : PNR 144-901-000-XXX

5 Applicant : Meggitt SA

15 **DESCRIPTION OF THE SUPPLEMENTARY CERTIFICATE**

Normative update according to EN 60079-0:2012 and EN 60079-11:2012 standards.
Modification of the sensor (the maximum sensor capacitance is 200pF instead of 80pF).
Modification of the following electrical parameter :
Sensor head: Ci = 200pF.
Update of the technical file.

The examination and test results are recorded in confidential report N°128022-656776.

Specific parameters of the concerned protection mode:

Modified as follows :
Sensor head : Ci = 200pF, Li ≈ 0
Integral cable : Ci = 200pF/m, Li ≈ 0
Linear power supply : Ui ≤ 28V, Ii ≤ 100mA, Pi ≤ 0,7W
Non linear power supply : Ui ≤ 28V, Ii ≤ 25mA, Pi ≤ 0,7W

The marking shall be :
Vibro-Meter or MEGGITT or MFR S3960
Address : ...
Type : PNR 144-901-000-XXX
Serial number : ...
Year of construction : ...
Ex II 1 G
Ex ia IIC T6 to 710°C Ga
LCIE 08 ATEX 6017 X
Ui = ..., Ii = ..., Pi = ..., Ci = ..., Li = ... (1)
(1)completed with the electrical parameters

16 **DESCRIPTIVE DOCUMENTS**

Certification file N° DT 1032 Rev.03 dated 2014/07/02.

This file includes 5 items (7 pages).

Le Responsable de Certification ATEX
ATEX Certification Officer
Julien GAUTHIER

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13 **ANNEXE**

14 **AVENANT D'ATTESTATION D'EXAMEN CE DE TYPE**

LCIE 08 ATEX 6017 X / 03

17 **CONDITIONS SPECIALES POUR UNE UTILISATION SURE**
Inchangées.

18 **EXIGENCES ESSENTIELLES DE SECURITE ET DE SANTE**
Couvertes par les normes EN 60079-0:2012 et EN 60079-11:2012.

19 **VERIFICATIONS ET ESSAIS INDIVIDUELS**
Néant.

Désignation du type :

PNR 144-901-000-XXX :
XXX : dépend du type de connecteur et de la longueur du câble : X = 0 à 9.

13 **SCHEDULE**

14 **SUPPLEMENTARY EC TYPE EXAMINATION CERTIFICATE**

LCIE 08 ATEX 6017 X / 03

17 **SPECIAL CONDITIONS FOR SAFE USE**

Unchanged

18 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS**

Covered by EN 60079-0:2012 and EN 60079-11:2012 standards.

19 **ROUTINE VERIFICATIONS AND TESTS**
None.

Type designation :

PNR 144-901-000-XXX :
XXX : depend of the connector type and cable length : X = 0 to 9.

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Deutsche Übersetzung der original französisch/englischen Kopie der Seite 1

1 **EG-PRÜFZERTIFIKAT**

2 **Geräte oder Schutzsysteme** zur bestimmungsgemässen Verwendung in explosionsgefährdeten Bereichen - **(Richtlinie 94/9/EG)**

3 Nummer der EG-Baumusterprüfbescheinigung
LCIE 08 ATEX 6017 X

4 Geräte oder Schutzsystem
Beschleunigungswandler
Typ: CA 901 Modell: 144-901-000-XXX

5 Antragsteller: VIBRO-METER
Adresse: BP 10171701 FRIBOURG
SCHWEIZ

6 Hersteller: VIBRO-METER
Adresse: BP 10171701 FRIBOURG
SCHWEIZ

7 Dieses Gerät oder Schutzsystem und die verschiedenen zulässigen Varianten sind im Anhang dieses Zertifikats und den darin aufgeführten Unterlagen beschrieben.

8 LCIE, eingetragen unter der Nummer 0081 gemäss Artikel 9 der Richtlinie 94/9/EG des Europaparlaments und des Rates vom 23. März 1994, bestätigt, dass dieses Gerät oder Schutzsystem die wesentlichen Gesundheits- und Sicherheitsanforderungen in Bezug auf die Auslegung und Bauart von Geräten und Schutzsystemen zur Verwendung in explosionsgefährdeten Bereichen nach Anhang II der Richtlinie erfüllt.
Die Prüf- und Testergebnisse sind im vertraulichen Bericht Nr. 77907/566467 aufgezeichnet.

9 Die Einhaltung der wesentlichen Gesundheits- und Sicherheitsanforderungen wird durch die Übereinstimmung mit den folgenden Dokumenten sichergestellt:
- EN 60079-0 (2004)
- EN 60079-11 (2007)

10 Ein "X" nach der Zertifikatnummer gibt an, dass die für die sichere Verwendung des Geräts oder Schutzsystems besondere Bedingungen gemäss dem Anhang dieses Zertifikats gelten.

11 Dieses EG-Prüfzertifikat betrifft nur die Bauart und die Prüfungen und Tests des betreffenden Geräts oder Schutzsystems gemäss Anhang III der Richtlinie 94/9/EG.
Zusätzliche Anforderungen dieser Richtlinie gelten für die Fertigung und Lieferung des Geräts oder Schutzsystems. Diese werden durch dieses Zertifikat nicht abgedeckt.

12 Die Kennzeichnung des Geräts oder Schutzsystems muss die unter Punkt 15 festgelegten Angaben enthalten.

Leiter Zertifizierung

LCIE haftet nur für den französischen Text.
Dieses Zertifikat darf nur vollständig und ohne Änderungen vervielfältigt werden.

Seite 1/2

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Deutsche Übersetzung der originalen französischen Kopie der Seite 1

13 **ANHANG**

14 **EG-PRÜFZERTIFIKAT**

LCIE 08 ATEX 6017 X

15 **BESCHREIBUNG DES GERÄTS ODER SCHUTZSYSTEMS**

Beschleunigungswandler
Typ: CA 901 Modell: 144-901-000 XXX
Der Sensor ist ein elektromechanischer Wandler, der seinen Klemmenblöcken eine elektrische Last liefert, die der aufgetretenen Beschleunigung proportional ist.
Das mineralisch isolierte Kabel und der Stecker sind Teil des Sensors.
Spezielle Parameter für die betreffende(n) Schutzart(en):

Sensor: Ci = 80 pF, Li ≈ 0
Kabel: Ci = 200 pF/m, Li ≈ 0
Lineare Stromversorgung: Ui ≤ 28 V, Ii ≤ 100 mA, Pi ≤ 0,7 W
Nicht lineare Stromversorgung: Ui ≤ 28 V, Ii ≤ 25 mA, Pi ≤ 0,7 W
Kennzeichnung:
VIBRO-METERAdresse:...
Typ: 144-901-000-XXX
Seriennummer:... Baujahr:...
(Ex) II 1G Ex ia IIC T6 bis T710 °C
LCIE 08 ATEX 6017 X

Die Geräte müssen ebenfalls mit der Kennzeichnung versehen sein, die in den Herstellungsnormen der betreffenden Geräte normalerweise vorgesehen ist.

16 **BESCHREIBENDE UNTERLAGEN**

Zertifizierungsdatei-Nr. DT 1032 rev1 vom 19.11.07
Diese Datei enthält 6 Teile (8 Seiten).

17 **SPEZIELLE BEDINGUNGEN FÜR EINEN SICHEREN BETRIEB**

Der Sensor darf nur an eigensichere Geräte angeschlossen werden. Diese Verbindung muss mit den Sicherheitsbestimmungen für Eigensicherheit kompatibel sein (siehe Absatz 15 bezüglich elektrischer Parameter).
Betriebstemperatur:
- Sensor und Kabel: -196 °C bis +700 °C
- Stecker:
  - 65 °C bis + 150 °C: Stecker LEMO Typ O oder Äquivalent
  - 65 °C bis + 200 °C: Stecker M83723/89Y1020 oder Äquivalent
  - 54 °C bis + 260 °C: Standardtemperatur VM-Stecker
  - 196 °C bis + 700 °C: Hochtemperatur VM-Stecker

Temperatureinteilung:
T6 bis Ta = +80 °C, T5 bis Ta = +95 °C,
T4 bis Ta = +130 °C, T3 bis Ta = +195 °C,
T2 bis Ta = +290 °C, T1 bis Ta = + 440 °C
Über Ta = +440 °C und bis +700 °C : T...°C = Ta +10 °C.

18 **WESENTLICHE ANFORDERUNGEN IM BEZUG AUF SICHERHEIT UND GESUNDHEIT**

Siehe unter Punkt 9 aufgelistete Bestimmungen.

19 **ROUTINEPRÜFUNGEN UND TESTS**

Keine.

Fontenay-aux-Roses, 23. Februar 2008

Leiter Zertifizierung
Trockenstempel

LCIE haftet nur für den französischen Text.
Dieses Zertifikat darf nur vollständig und ohne Änderungen vervielfältigt werden.

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

Deutsche Übersetzung der originalen französischen Kopie der Seite 2

1 **ZUSÄTZLICHES FREIWILLIGES TYPENPRÜFUNGSZERTIFIKAT**

2 Geräte zur Verwendung in explosionsgefährdeten Bereichen (**Richtlinie 94/9/EG**)

3 Zusätzliche Zertifikatnummer:
LCIE 08 ATEX 6017 X / 01

4 Gerät
Beschleunigungswandler
Type : PNR: 144-901-000-XXX

5 Hersteller: MEGGITT SA
Adresse: Route de Moncor 4, 1752 Villars-sur-Glâne, Schweiz

15 **BESCHREIBUNG DES ZUSÄTZLICHEN ZERTIFIKATS**

- Normierte Aktualisierung gemäss der Norm EN 60079-0 (2006)
- Aktualisierung der Dokumentation des Herstellers
- Änderung der juristischen Person und Addresse des Antragstellers
- Modifikation des eingetragenen Markenzeichens

Die Prüf- und Testergebnisse sind im vertraulichen Bericht Nr. 102105-602924/21 aufgezeichnet.

Spezifische Kenndaten der betroffenen Schutzarten:
Unverändert, bis auf
Messgeber wird zu Messgeberkopf : Ci = 80 pF
Kabel wird zu Integralkabel : Ci = 200pF/m

Die Kennzeichnung soll lauten:
Unverändert, bis auf Markenzeichen vibro-meter wird zu vibro-meter oder MEGGITT oder MFR S3960 sowie die Adressänderung.

16 **BESCHREIBENDE UNTERLAGEN**

Zertifizierungsdatei-Nr. DT 1032 - 01 rev2 vom 01.12.2010.
Diese Datei enthält 4 Teile (14 Seiten).

17 **BESONDERE BEDINGUNGEN FÜR DIE SICHERE ANWENDUNG**

Unverändert.

18 **WESENTLICHE ANFORDERUNGEN IM BEZUG AUF SICHERHEIT UND GESUNDHEIT**

Behandelt in den Normen EN 60079-0 (2006) und EN 60079-11 (2007).

19 **ROUTINEPRÜFUNGEN UND TESTS**

Keine.

Fontenay-aux-Roses,
am 03. Dezember 2010

Leiter Zertifizierung

Trockenstempel

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

Deutsche Übersetzung der originalen französischen Kopie der Seite 2

1 **ZUSÄTZLICHES FREIWILLIGES TYPENPRÜFUNGSZERTIFIKAT**

2 Geräte zur Verwendung in explosionsgefährdeten Bereichen (**Richtlinie 94/9/EG**)

3 Zusätzliche Zertifikatnummer:
LCIE 08 ATEX 6017 X / 02

4 Gerät
Beschleunigungswandler
Type : PNR 144-901-000-XXX

5 Hersteller: MEGGITT SA

15 **BESCHREIBUNG DES ZUSÄTZLICHEN ZERTIFIKATS**

Standardaktualisierungen gemäß folgender Richtlinien: EN 60079-0 (2009)
Typ der Gerät update

Die Prüf- und Testergebnisse sind im vertraulichen Bericht Nr. 110055-619675 / 12 aufgezeichnet.

Spezifische Kenndaten der betroffenen Schutzarten:
Unverändert.

Die Kennzeichnung lautet wie folgt:
Wie folgt modifiziert:
Vibro-Meter oder MEGGITT oder MFR S3960
Adresse: ...
Typ: PNR 144-901-000-XXX
Herstellungsnummer: ... Herstellungsjahr: ...
Ex II 1 G
Ex ia IIC T6 bis T710°C Ga
LCIE 08 ATEX 6017 X
Ui = ... ; Pi = ... ; Ii = ... ; Ci = ... ; Li = ... (1)

(1) Abhängig von der Typ der Gerät

16 **BESCHREIBENDE UNTERLAGEN**

Brief des Antragsstellers vom 20.10.2011 (2 Seiten)

17 **BESONDERE BEDINGUNGEN FÜR DIE SICHERE ANWENDUNG**

Unverändert.

18 **WESENTLICHE ANFORDERUNGEN IM BEZUG AUF SICHERHEIT UND GESUNDHEIT**

Werden von folgenden Richtlinien abgedeckt:
EN 60079-0 (2009) und EN 60079-11 (2007)

19 **ROUTINEPRÜFUNGEN UND TESTS**

Keine.

Fontenay-aux-Roses,
am 21. Dezember 2011

Leiter Zertifizierung

Trockenstempel

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

Deutsche Übersetzung der originalen französischen Kopie der Seite 4

1 **ZUSÄTZLICHES FREIWILLIGES TYPENPRÜFUNGSZERTIFIKAT**

2 Betriebsmittel oder Schutzsystem zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen - **Richtlinie 94/9/EG**

3 Zusätzliche Zertifikatnummer:

LCIE 08 ATEX 6017 X / 03

4 Gerät

Beschleunigungswandler
Type : PNR 144-901-000-XXX

5 Hersteller: Meggitt SA

15 **BESCHREIBUNG DES ZUSÄTZLICHEN ZERTIFIKATS**

Standardaktualisierungen gemäß folgender Richtlinien: EN 60079-0:2012 und EN 60079-11:2012.

Modifikationen des Sensors (der maximale Sensorkapazität 200 pF statt 80 pF).
Änderungen der folgenden elektrischen Werten:
Sensorkopf: Ci = 200 pF.
Update der technischen Unterlagen.

Die Prüf- und Testergebnisse sind im vertraulichen Bericht Nr. 128022-656776 aufgezeichnet.

Spezifische Kenndaten der betroffenen Schutzarten:

Wie folgt modifiziert:
Sensorkopf: Ci = 200 pF, Li ≈ 0
Integralkabel: Ci = 200 pF/m, Li ≈ 0
Lineare Stromversorgung: Ui ≤ 28 V, Ii ≤ 100 mA, Pi ≤ 0,7 W
Nicht lineare Stromversorgung: Ui ≤ 28 V, Ii ≤ 25 mA, Pi ≤ 0,7 W

Die Kennzeichnung lautet wie folgt:
Vibro-Meter oder MEGGITT oder MFR S3960
Adresse: ...
Typ: PNR 144-901-000-XXX
Herstellungsnummer: ... Herstellungsjahr: ...
II 1 G
Ex ia IIC T6 bis T710°C Ga
LCIE 08 ATEX 6017 X
Ui = ... ; Ii = ... ; Pi = ... ; Ci = ... ; Li = ... (1)

(1) Abhängig von der Typ der Gerät

16 **BESCHREIBENDE UNTERLAGEN**

Zertifizierungs-Datei-Nr. DT 1032 Ausgabe 03 vom 02. Juli 2014.
Diese Datei enthält 5 Punkte (7 Seiten).

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Deutsche Übersetzung der originalen französischen Kopie der Seite 4

13 **ANHANG**

14 **ZUSÄTZLICHES FREIWILLIGES TYPENPRÜFUNGSZERTIFIKAT**

LCIE 08 ATEX 6017 X / 03

17 **BESONDERE BEDINGUNGEN FÜR DIE SICHERE ANWENDUNG**

Unverändert.

18 **WESENTLICHE ANFORDERUNGEN IM BEZUG AUF SICHERHEIT UND GESUNDHEIT**

Werden von folgenden Richtlinien abgedeckt: EN 60079-0:2012 und EN 60079-11:2012.

19 **ROUTINEPRÜFUNGEN UND TESTS**

Keine.

Typenbezeichnung:

PNR 144-901-000-XXX:
XXX: abhängig von der Steckertyp und Kabellänge (X = 0 bis 9)

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

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DIESE SEITE WURDE ABSICHTLICH LEER GELASSEN

ATEX certificate:

LCIE 09 ATEX 1046 X

for CA 901

Although the certificate is available in the three languages (English, French and German), the liability of the notified body applies only on the text of the original copy of the certificate that it published.

EN

Bien que le certificat soit traduit dans les 3 langues (Anglais, Français et Allemand), seul le texte de la copie originale du certificat peut engager la responsabilité de l'organisme notifié qui l'a publié.

FR

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DE

EX

Meggitt SA
Route de Moncor 4
PO Box 1616
CH - 1701 Fribourg
Switzerland

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CETTE PAGE EST LAISSÉE INTENTIONNELLEMENT VIDE
DIESE SEITE WURDE ABSICHTLICH LEER GELASSEN

1 **ATTESTATION D'EXAMEN DE TYPE VOLONTAIRE**

2 **Appareil** destiné à être utilisé en atmosphères explosibles **(Directive 94/9/CE)**

3 Numéro de l'attestation d'examen de type
LCIE 09 ATEX 1046 X

4 Appareil
Capteur d'accélération
Type : PNR: 144-901-000-XXX

5 Demandeur : VIBRO-METER SA
Adresse : Route de Moncor 4
1701 FRIBOURG SUISSE

7 Cet appareil ou système de protection et ses variantes éventuelles acceptées sont décrits dans l'annexe de la présente attestation et dans les documents descriptifs cités en référence.

8 Le LCIE certifie que cet appareil ou système de protection est conforme aux exigences essentielles de sécurité et de santé pour la conception d'appareils ou système de protection, électriques de catégorie 3 ou non électriques de catégorie 2 et 3, destinés à être utilisés en atmosphères explosibles, données dans l'annexe II de la directive 94/9/CE du Parlement européen et du Conseil du 23 mars 1994.

Les résultats des vérifications et essais figurent dans le rapport confidentiel N°94576 - 589014/9

9 Le respect des exigences essentielles de sécurité et de santé est assuré par la conformité à :
- EN 60079-0 (2006) - EN 60079-15 (2005)

10 Le signe X lorsqu'il est placé à la suite du numéro de l'attestation, indique que cet appareil ou système de protection est soumis aux conditions spéciales pour une utilisation sûre, mentionnées dans l'annexe de la présente attestation.

11 Cette attestation d'examen de type concerne uniquement la conception, les vérifications et essais de l'appareil ou du système de protection spécifié, conformément à la directive 94/9/CE.
Des exigences supplémentaires de la directive sont applicables pour la fabrication et la fourniture de l'appareil ou du système de protection. Ces dernières ne sont pas couvertes par la présente attestation.

12 Le marquage de l'appareil ou du système de protection doit comporter les informations détaillées au point 15.

Fontenay-aux-Roses, le 10 octobre 2009

Le responsable de certification ATEX
ATEX certification manager

Marc GILLAUX

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Rev.A

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des Industries Electriques — 92260 Fontenay-aux-Roses cedex — contact@lcie.fr — RCS Nanterre B 408 363 177
Une société de Bureau Veritas — France — www.lcie.fr

13 **ANNEXE**

14 **ATTESTATION D'EXAMEN DE TYPE VOLONTAIRE**

LCIE 09 ATEX 1046 X

15 **DESCRIPTION DE L'APPAREIL OU DU SYSTEME DE PROTECTION**

Capteur d'accélération
Type : PNR : 144-901-000-XXX
Le matériel est un transducteur électro-mécanique fournissant à ses bornes une charge électrique proportionnelle à la pression mesurée.

Paramètres spécifiques du ou des modes de protection concernés :
U ≤ 30V, I ≤ 130mA, P ≤ 0,8W

Le marquage doit être :
VIBRO-METER
Adresse : ... Type : PNR : 144-901-000-XXX
N° de fabrication : ... Année de fabrication : ...
Ex II 3G Ex nA II T6 à T710
LCIE 09 ATEX 1046 X

Le marquage peut être réduit à :
VIBRO-METER PNR : 144-901-000-XXX
Ex II 3G LCIE 09 ATEX 1046 X

L'appareil doit également comporter le marquage normalement prévu par les normes de construction qui le concerne.

16 **DOCUMENTS DESCRIPTIFS**
Dossier de certification N°DT 1050 rev.00 du 20/07/09.
Ce document comprend 3 rubriques (5 pages).

17 **CONDITIONS SPECIALES POUR UNE UTILISATION SÛRE**
Température ambiante d'utilisation :
- Capteur : -196°C à +700°C
- Câble : -196°C à +700°C
- Connecteur :
connecteur Lemo type 0 ou équivalent: -65°C à +150°C
connecteur M83723/89Y1020 ou équivalent: -65°C à +200°C
connecteur VM température standard : -54°C à +260°C
connecteur VM haute température : -196°C à +700°C

Classement en température en fonction de la température ambiante :
T6 à Tamb. + 80°C
T5 à Tamb. + 95°C
T4 à Tamb. + 130°C
T3 à Tamb. + 195°C
T2 à Tamb. + 290°C
T1 à Tamb. + 440°C
T710°C à Tamb. +700°C

8 **EXIGENCES ESSENTIELLES DE SECURITE ET DE SANTE**
Couvertes par les normes listées au point 9.

9 **VERIFICATIONS ET ESSAIS INDIVIDUELS**
Néant.

13 **SCHEDULE**

14 **VOLUNTARY TYPE EXAMINATION CERTIFICATE**

LCIE 09 ATEX 1046 X

15 **DESCRIPTION OF EQUIPMENT OR PROTECTIVE SYSTEM**

Accelerometer
Type : PNR : 144-901-000-XXX
This equipment is an electro-mechanical transducer delivering at its terminal blocks an electrical load proportional to the measured pressure.

Specific parameters of the mode(s) of protection concerned :

U ≤ 30V, I ≤ 130mA, P ≤ 0,8W

The marking shall be :
VIBRO-METER
Address : ... Type : PNR : 144-901-000-XXX
Serial number : ... Year of construction: ...
Ex II 3G Ex nA II T6 to T710
LCIE 09 ATEX 1046 X

The marking can be reduce at :
VIBRO-METER PNR : 144-901-000-XXX
Ex II 3G LCIE 09 ATEX 1046 X

The equipment shall also bear the usual marking required by the manufacturing standards applying to such equipment.

16 **DESCRIPTIVE DOCUMENTS**
Certification file N°DT 1050 rev.00 dated 09/07/20.
This file includes 3 items (5 pages).

17 **SPECIAL CONDITIONS FOR SAFE USE**

Operating ambient temperature :
- Sensor : -196°C to +700°C
- Cable : -196°C to +700°C
- Connector :
connector Lemo type 0 or equivalent: -65°C to +150°C
connector M83723/89Y1020 or equivalent: -65°C to +200°C
connector VM standard temperature: -54°C to +260°C
connector VM high température : -196°C to +700°C

Temperature classification in function of the operating temperature :
T6 at Tamb. + 80°C
T5 at Tamb. + 95°C
T4 at Tamb. + 130°C
T3 at Tamb. + 195°C
T2 at Tamb. + 290°C
T1 at Tamb. + 440°C
T710°C at Tamb. +700°C

18 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS**

Covered by standards listed at 9.

19 **ROUTINE VERIFICATIONS AND TESTS**
None.

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Rev.A

MEGGiTT

LCIE 09 ATEX 1046 X (FR, EN)
(Original copy)
CA 901

L C I E

1 **AVENANT D'ATTESTATION D'EXAMEN DE TYPE VOLONTAIRE**

2 **Appareil** destiné à être utilisé en atmosphères explosibles **(Directive 94/9/CE)**

3 Numéro de l'avenant :
LCIE 09 ATEX 1046 X / 01

4 Appareil
Capteur d'accélération
Type : PNR : 144-901-000-XXX

5 demandeur : Meggitt SA
Route de Moncor 4
1752 Villars-sur-Glâne
Suisse

15 **DESCRIPTION DE L'AVENANT**

- Changement de nom et d'adresse du fabricant
- Modifications des marques commerciales déposées

Les résultats des vérifications et essais figurent dans le rapport confidentiel N° 102105 – 602924 / 22.

Paramètres spécifiques du ou des modes de protection concerné(s) :
Inchangés.

Le marquage doit être :

Inchangé, excepté la marque commerciale vibro-meter qui devient vibro-meter ou MEGGITT ou MFR S3960 et l'adresse.

16 **DOCUMENTS DESCRIPTIFS**
Courrier du demandeur du 07/09/2010.

17 **CONDITIONS SPECIALES POUR UNE UTILISATION SÛRE**
Inchangées.

18 **EXIGENCES ESSENTIELLES DE SECURITE ET DE SANTE**
Inchangées.

19 **VERIFICATIONS ET ESSAIS INDIVIDUELS**
Néant.

Fontenay-aux-Roses, le 25 octobre 2010.

Le responsable de certification ATEX
ATEX certification manager
Marc GILLAUX

1 **VOLUNTARY SUPPLEMENTARY TYPE EXAMINATION CERTIFICATE**

2 **Equipment** intended for use in potentially explosive atmospheres **(Directive 94/9/EC)**

3 Supplementary certificate number :
LCIE 09 ATEX 1046 X / 01

4 Equipment
Accelerometer
Type : PNR : 144-901-000-XXX

5 Applicant : Meggitt SA
Route de Moncor 4
1752 Villars-sur-Glâne
Switzerland

15 **DESCRIPTION OF THE SUPPLEMENTARY CERTIFICATE**
- Change of legal entity name and address of applicant
- Modifications of registered trade mark

The examination and test results are recorded in confidential report N°102105 – 602924 / 22.

Specific parameters of the mode(s) of protection concerned:

Unchanged.

The marking shall be :

Unchanged, except registered trade mark vibro-meter becomes vibro-meter or MEGGITT or MFR S3960 and the address.

16 **DESCRIPTIVE DOCUMENTS**
Letter of applicant from 2010/09/07.

17 **SPECIAL CONDITIONS FOR SAFE USE**
Unchanged.

18 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS**

Unchanged.

19 **ROUTINE VERIFICATIONS AND TESTS**
None.

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L C I E

1 **AVENANT D'ATTESTATION D'EXAMEN DE TYPE VOLONTAIRE**

2 **Appareil** destiné à être utilisé en atmosphères explosibles **(Directive 94/9/CE)**

3 Numéro de l'avenant :
LCIE 09 ATEX 1046 X / 02

4 Appareil
Capteur d'accélération
Type : PNR 144-901-000-XXX

5 demandeur : Meggitt SA
Route de Moncor 4
1752 Villars-sur-Glâne
Suisse

15 **DESCRIPTION DE L'AVENANT**

Mise à jour des normes EN 60079-0 (2009) et EN 60079-15 (2010)

Les résultats des vérifications et essais figurent dans le rapport confidentiel N° 110055-619675 / 12

Paramètres spécifiques du ou des modes de protection concerné(s) :
Inchangés

Le marquage doit être :
Modifié comme suit :
MEGGITT SA, Adresse : ...
Type : PNR 144-901-000-XXX
N° de série :..., Date de fabrication : ...
Ex II 3 G
Ex nA IIC T6 à T710°C Gc
LCIE 09 ATEX 1046 X

16 **DOCUMENTS DESCRIPTIFS**
Lettre du demandeur du 20/10/2011 (2 pages).

17 **CONDITIONS SPECIALES POUR UNE UTILISATION SÛRE**
Inchangées

18 **EXIGENCES ESSENTIELLES DE SECURITE ET DE SANTE**
Couvertes par les normes EN 60079-0 (2009) et EN 60079-15 (2010)

19 **VERIFICATIONS ET ESSAIS INDIVIDUELS**
Néant

Fontenay-aux-Roses, le 21/12/2011

Le responsable de certification ATEX
ATEX certification manager
Michel BRENON

1 **VOLUNTARY SUPPLEMENTARY TYPE EXAMINATION CERTIFICATE**

2 **Equipment** intended for use in potentially explosive atmospheres **(Directive 94/9/EC)**

3 Supplementary certificate number :
LCIE 09 ATEX 1046 X / 02

4 Equipment
Accelerometer transducer
Type : PNR 144-901-000-XXX

5 Applicant : Meggitt SA
Route de Moncor 4
1752 Villars-sur-Glâne
Switzerland

15 **DESCRIPTION OF THE SUPPLEMENTARY CERTIFICATE**
Normative update according to EN 60079-0 (2009) and EN 60079-15 (2010)

The examination and test results are recorded in confidential report N° 110055-619675 / 12

Specific parameters of the concerned protection mode :

Unchanged

The marking shall be :
Modified as follows :
Vibro-Meter or MEGGITT or MFR S3960
Address : ...
Type : PNR 144-901-000-XXX
Serial Number:..., Year of Construction : ...
Ex II 3 G
Ex nA IIC T6 to T710°C Gc
LCIE 09 ATEX 1046 X

16 **DESCRIPTIVE DOCUMENTS**
Applicant's letter dated 2011/10/20 (2 pages)

17 **SPECIAL CONDITIONS FOR SAFE USE**
Unchanged

18 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS**

Covered by standards EN 60079-0 (2009) and EN 60079-15 (2010)

19 **ROUTINE VERIFICATIONS AND TESTS**
None

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Une société de Bureau Veritas — France — www.lcie.fr

LCIE

1 **AVENANT D'ATTESTATION D'EXAMEN DE TYPE VOLONTAIRE**

2 **Appareil** destiné à être utilisé en atmosphères explosibles **(Directive 94/9/CE)**

3 Numéro de l'avenant :
LCIE 09 ATEX 1046 X / 03

4 Appareil ou système de protection :
Capteur d'accélération
Type : PNR 144-901-000-XXX

5 Demandeur : Meggitt SA

15 **DESCRIPTION DE L'AVENANT**

- Mise à jour normative selon la norme EN 60079-0:2012 + Amendement A11:2013
- Ajout d'un essai individuel de rigidité diélectrique,

Définition du type/ *Type definition*:

PNR 144-901-000-XXX
X = 0...9 : dépend du type de connecteur et de la longueur du câble / *depends on the type of connector and cable length.*

Les résultats des vérifications et essais de type sont enregistrés dans le rapport confidentiel n°130454-662462-10.

Paramètres spécifiques du ou des modes de protection concerné(s) :
U ≤30 V, I ≤130 mA, P ≤0,8 W

Le marquage doit être :
Meggitt SA ou Vibro-meter ou MFR S3960
Adresse : ...
Type : PNR 144-901-000-XXX
N° de fabrication : ... Année de fabrication : ...
Ⓔx II 3 G
Ex nA IIC T6...710°C Gc (*)
LCIE 09 ATEX 1046X

Le marquage peut être réduit comme suit :
Meggitt SA ou Vibro-meter ou MFR S3960
PNR 144-901-000-XXX
Ⓔx II 3 G
Ex nA IIC T6...710°C Gc (*)
LCIE 09 ATEX 1046 X
(*) voir conditions spéciales pour une utilisation sûre.

Fontenay-aux-Roses, le 02 décembre 2014

1 **VOLUNTARY SUPPLEMENTARY TYPE EXAMINATION CERTIFICATE**

2 **Equipment** intended for use in potentially explosive atmospheres **(Directive 94/9/EC)**

3 Supplementary certificate number:
LCIE 09 ATEX 1046 X / 03

4 Equipment or protective system:
Accelerometer
Type: PNR 144-901-000-XXX

5 Applicant: Meggitt SA

15 **DESCRIPTION OF THE SUPPLEMENTARY CERTIFICATE**

- Normative update according to standard EN 60079-0:2012 + Amendment A11:2013
- Add of routine dielectric strength test,

The results of type verifications and tests are recorded in confidential report n°130454-662462-10.

Specific parameters of the concerned protection mode:

U ≤30 V, I ≤130 mA, P ≤0.8 W

The marking shall be:
Meggitt SA or Vibro-meter or MFR S3960
Address: ...
Type: PNR 144-901-000-XXX
Serial number: ... Year of construction: ...
Ⓔx II 3 G
Ex nA IIC T6...710°C Gc (*)
LCIE 09 ATEX 1046 X

The marking can be reduced as follows:
Meggitt SA or Vibro-meter or MFR S3960
PNR 144-901-000-XXX
Ⓔx II 3 G
Ex nA IIC T6...710°C Gc (*)
LCIE 09 ATEX 1046 X
(*) see special conditions for safe use.

Le Responsable de Certification ATEX
ATEX Certification Officer
Michel EQUI

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au capital de 15 745 984 €
RCS Nanterre B 408 363 174

LCIE

13 **ANNEXE**

14 **AVENANT D'ATTESTATION D'EXAMEN DE TYPE VOLONTAIRE**

LCIE 09 ATEX 1046 X / 03

15 **DESCRIPTION DE L'AVENANT (suite)**

L'appareil doit également comporter le marquage normalement prévu par les normes de construction qui le concerne.

16 **DOCUMENTS DESCRIPTIFS**
Dossier technique n° DT 1069 rév. 00 du 25/09/2014.
Ce dossier comprend 2 rubriques (6 pages).

17 **CONDITIONS SPECIALES POUR UNE UTILISATION SURE**

1. Température ambiante d'utilisation :
- Capteur : -196°C à +700°C
- Câble : -196°C à +700°C
- Connecteur Lemo type 0 ou équivalent : -65°C à +150°C
- Connecteur M83723/89Y1020 ou équivalent : -65°C à +200°C
- Connecteur VM temperature standard : -54°C à +260°C
- Connecteur VM haute température : -196°C à +700°C

2. Classement en température en fonction de la température ambiante d'utilisation :

13 **SCHEDULE**

14 **VOLUNTARY SUPPLEMENTARY TYPE EXAMINATION CERTIFICATE**

LCIE 09 ATEX 1046 X / 03

15 **DESCRIPTION OF THE SUPPLEMENTARY CERTIFICATE (continued)**

The equipment shall also bear the usual marking required by the manufacturing standards applying to such equipment.

16 **DESCRIPTIVE DOCUMENTS**
Technical file n° DT 1069 rev. 00 dated 2014/09/25.
This file includes 2 items (6 pages).

17 **SPECIAL CONDITIONS FOR SAFE USE**

1. Ambient temperature in service:
- Sensor: -196°C to +700°C
- Cable: -196°C to +700°C
- Connector Lemo type 0 or equivalent: -65°C to +150°C
- Connector M83723/89Y1020 or equivalent: -65°C to +200°C
- Connector VM standard temperature: -54°C to +260°C
- Connector VM high temperature: -196°C to +700°C

2. Temperature classification in function of the ambient temperature in service:

Température ambiante d'utilisation / *Ambient temperature in service* — Classe de température / *Temperature class*	T6	T5	T4	T3	T2	T1	710°C
Capteur/ *Sensor*	≤+80°C	≤+95°C	≤+130°C	≤+195°C	≤+290°C	≤+440°C	≤+700°C
Câble/ *Cable*	≤+80°C	≤+95°C	≤+130°C	≤+195°C	≤+290°C	≤+440°C	≤+700°C
Connecteur Lemo type 0 ou équivalent *Connector Lemo type 0 or equivalent*	≤+80°C	≤+95°C	≤+130°C	≤+150°C	-	-	-
Connecteur M83723/89Y1020 ou équivalent *Connector M83723/89Y1020 or equivalent*	≤+80°C	≤+95°C	≤+130°C	≤+195°C	≤+200°C	-	-
Connecteur VM température standard *Connector VM standard temperature*	≤+80°C	≤+95°C	≤+130°C	≤+195°C	≤+260°C	-	-
Connecteur VM haute température *Connector VM high temperature*	≤+80°C	≤+95°C	≤+130°C	≤+195°C	≤+290°C	≤+440°C	≤+700°C

3. Des mesures doivent être prises afin d'éviter que la tension nominale ne soit pas dépassée par des perturbations transitoires de plus de 119 V.

3. Provisions shall be made to prevent the rated voltage from being exceeded by transient disturbances of more than 119 V.

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MEGGiTT

LCIE 09 ATEX 1046 X (FR, EN)
[Original copy]
CA 901

13 ANNEXE (suite)

13 SCHEDULE (continued)

14 AVENANT D'ATTESTATION D'EXAMEN DE TYPE VOLONTAIRE

LCIE 09 ATEX 1046 X / 03

14 VOLUNTARY SUPPLEMENTARY TYPE EXAMINATION CERTIFICATE

LCIE 09 ATEX 1046 X / 03

18 EXIGENCES ESSENTIELLES DE SECURITE ET DE SANTE

Conformité aux normes européennes EN 60079-0:2012 + Amendement A11:2013 et EN 60079-15:2010.

18 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS

Compliance with European standards EN 60079-0:2012 + Amendment A11:2013 and EN 60079-15:2010.

19 VERIFICATIONS ET ESSAIS INDIVIDUELS

Chaque appareil doit être soumis à un essai de rigidité diélectrique sous une tension d'essai de 500 V efficace, appliquée entre les conducteurs et le châssis durant 60 s, conformément au paragraphe 6.5.1 de la norme EN 60079-15:2010.
Autrement, l'essai doit être exécuté à 600 V efficace pendant au moins 100 ms.

19 ROUTINE VERIFICATIONS AND TESTS

Each equipment shall be submitted to a dielectric strength test with test voltage of 500 V r.m.s. applied between wires and body during 60 s, carried out in accordance with clause 6.5.1 standard EN 60079-15:2010.
Alternatively, a test shall be carried out at 600 V r.m.s during at least 100 ms.

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Deutsche Übersetzung der originalen französischen Kopie der Seite 1

1 **FREIWILLIGES TYPENPRÜFZERTIFIKAT**

2 Geräte zur Verwendung in explosionsgefährdeten Bereichen - **Richtlinie 94/9/EG**

3 Zertifikatnummer
LCIE 09 ATEX 1046 X

4 Gerät
Beschleunigungsgeber
Type : PNR: 144-901-000-XXX

5 Hersteller: VIBRO METER
Adresse: Route de Moncor 4, 1701 FRIBOURG, SCHWEIZ

7 Dieses Gerät oder Schutzsystem und die möglichen, zulässigen Varianten sind im Anhang dieses Zertifikats und den darin aufgeführten Unterlagen beschrieben.

8 LCIE bestätigt, dass dieses Gerät oder Schutzsystem die wesentlichen Gesundheits- und Sicherheitsanforderungen in Bezug auf die Auslegung und die Bauart von Geräten und Schutzsystemen der Kategorie 3 (elektrisch) oder Kategorien 2 und 3 (nicht elektrisch) zur Verwendung in explosionsgefährdeten Bereichen nach Anhang II der Richtlinie 94/9EG des Europaparlaments und des Rats vom 23. März 1994 erfüllt.

Die Prüf- und Testergebnisse sind im vertraulichen Bericht Nr. 94576 - 589014/9 aufgezeichnet.

9 Die Einhaltung der wesentlichen Gesundheits- und Sicherheitsanforderungen wird durch die Übereinstimmung mit den folgenden Dokumenten sichergestellt:
- EN 60079-0 (2006)
- EN 60079-15 (2005)

10 Ein "X" nach der Zertifikatnummer gibt an, dass für die sichere Verwendung des Gerätes oder Schutzsystemes besondere Bedingungen gemäß dem Anhang dieses Zertifikates gelten.

11 Dieses Typenprüfzertifikat betrifft nur die Bauart und die Prüfungen und Tests des betreffenden Geräts oder Schutzsystems gemäß Richtlinie 94/9/EG.
Zusätzliche Anforderungen dieser Richtlinie gelten für die Fertigung und Lieferung des Geräts oder Schutzsystems. Diese werden durch dieses Zertifikat nicht abgedeckt.

12 Die Kennzeichnung des Gerätes oder Schutzsystems muss die unter Punkt 15 erläuterten Angaben enthalten.

Fontenay-aux-Roses,
am 10. Oktober 2009

Leiter Zertifizierung

Trockenstempel

Rev.A
Seite 1/2

LCIE haftet nur für den französischen Text.
Dieses Zertifikat darf nur vollständig und ohne Änderungen vervielfältigt werden.

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

Deutsche Übersetzung der originalen französischen Kopie der Seite 1

13 **ANHANG**

14 **FREIWILLIGES TYPENPRÜFZERTIFIKAT**
LCIE 09 ATEX 1046 X

15 **BESCHREIBUNG DES GERÄTES ODER SCHUTZSYSTEMS**

Beschleunigungsgeber
Typ : PNR : 144-901-000-XXX

Das Gerät verwandelt elektrische Eingangsladung in elektrisches Ausgangssignal welches proportional zur Beschleunigung oder dem Druck ist.

Spezifische Kenndaten der betroffenen Schutzarten:
U ≤ 30 V, I ≤ 130 mA, P ≤ 0,8 W

Kennzeichnung:
VIBRO-METER Adresse: ..
Typ: PNR: 144-901-000-XXX
Herstellungsnummer: ... Herstellungsjahr: ...
Ex II 3G Ex nA II T6 bis T710
LCIE 09 ATEX 1046 X

Die Kennzeichnung kann wiefolgt vereinfacht werden:
VIBRO-METER PNR: 144-901-000-XXX
Ex II 3G LCIE 09 ATEX 1046 X

Die Geräte müssen ebenfalls mit der Kennzeichnung versehen sein, die in den Herstellungsnormen der betreffenden Geräte normalerweise vorgesehen sind.

16 **BESCHREIBENDE UNTERLAGEN**

Zertifizierungs-Datei-Nr. DT 1050 Ausgabe 0 vom 20. Juli 2009.
Diese Datei enthält 3 Punkte (5 Seiten).

17 **BESONDERE BEDINGUNGEN FÜR DIE SICHERE ANWENDUNG**

Umgebungstemperatur:
- Sensor: −196 °C bis +700 °C
- Kabel: −196 °C bis +700 °C
- Stecker:
  Stecker LEMO Typ O oder Äquivalent: −65 °C bis +150 °C
  Stecker M83723/89Y1020 oder Äquivalent: −65 °C bis +200 °C
  Standardtemperatur VM-Stecker: −54 °C bis +260 °C
  Hochtemperatur VM-Stecker: −196 °C bis +700 °C

Temperaturklassifizierung:
T6 bis Ta = +80 °C
T5 bis Ta = +95 °C
T4 bis Ta = +130 °C
T3 bis Ta = +195 °C
T2 bis Ta = +290 °C
T1 bis Ta = +440 °C
T710 bis Ta = +700 °C

18 **WESENTLICHE ANFORDERUNGEN IM BEZUG AUF SICHERHEIT UND GESUNDHEIT**
Siehe unter Punkt 9 aufgelistete Bestimmungen.

19 **ROUTINEPRÜFUNGEN UND TESTS**
Keine.

Rev.A
Seite 2/2

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

Deutsche Übersetzung der originalen französischen Kopie der Seite 2

1 **ZUSÄTZLICHES FREIWILLIGES TYPENPRÜFUNGSZERTIFIKAT**

2 Geräte zur Verwendung in explosionsgefährdeten Bereichen (**Richtlinie 94/9/EG**)

3 Zusätzliche Zertifikatnummer:
LCIE 09 ATEX 1046 X / 01

4 Gerät
Beschleunigungsgeber
Type : PNR: 144-901-000-XXX

5 Hersteller: Meggitt SA
Adresse: Route de Moncor 4, 1752 Villars-sur-Glâne, Schweiz

15 **BESCHREIBUNG DES ZUSÄTZLICHEN ZERTIFIKATS**

- Änderung der juristischen Person und Addresse des Antragstellers
- Modifikation des eingetragenen Markenzeichens

Die Prüf- und Testergebnisse sind im vertraulichen Bericht Nr. 102105-602924/22 aufgezeichnet.

Spezifische Kenndaten der betroffenen Schutzarten:
Unverändert.

Die Kennzeichnung soll lauten:
Unverändert, bis auf Markenzeichen vibro-meter wird zu vibro-meter oder MEGGITT oder MFR S3960 sowie die Adressänderung.

16 **BESCHREIBENDE UNTERLAGEN**

Brief des Antragsstellers vom 07.09.2010.

17 **BESONDERE BEDINGUNGEN FÜR DIE SICHERE ANWENDUNG**

Unverändert.

18 **WESENTLICHE ANFORDERUNGEN IM BEZUG AUF SICHERHEIT UND GESUNDHEIT**

Unverändert.

19 **ROUTINEPRÜFUNGEN UND TESTS**

Keine.

Fontenay-aux-Roses,
am 25. Oktober 2010

Leiter Zertifizierung

Trockenstempel

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

Deutsche Übersetzung der originalen französischen Kopie der Seite 2

1 **ZUSÄTZLICHES FREIWILLIGES TYPENPRÜFUNGSZERTIFIKAT**

2 Geräte zur Verwendung in explosionsgefährdeten Bereichen (**Richtlinie 94/9/EG**)

3 Zusätzliche Zertifikatnummer:
LCIE 09 ATEX 1046 X / 02

4 Gerät
Beschleunigungsgeber
Type : PNR 144-901-000-XXX

5 Hersteller: Meggitt SA
Adresse: Route de Moncor 4, 1752 Villars-sur-Glâne, Schweiz

15 **BESCHREIBUNG DES ZUSÄTZLICHEN ZERTIFIKATS**

Standardaktualisierungen gemäß folgender Richtlinien: EN 60079-0 (2009) und EN 60079-15 (2010)

Die Prüf- und Testergebnisse sind im vertraulichen Bericht Nr. 110055-619675 / 12 aufgezeichnet.

Spezifische Kenndaten der betroffenen Schutzarten:
Unverändert.

Die Kennzeichnung lautet wie folgt:
Wie folgt modifiziert:
Vibro-Meter oder MEGGITT oder MFR S3960
Adresse: ...
Typ: PNR 144-901-000-XXX
Herstellungsnummer: ... Herstellungsjahr: ...
Ex II 3 G
Ex nA IIC T6 bis T710°C Gc
LCIE 09 ATEX 1046 X

16 **BESCHREIBENDE UNTERLAGEN**

Brief des Antragsstellers vom 20.10.2011 (2 Seiten)

17 **BESONDERE BEDINGUNGEN FÜR DIE SICHERE ANWENDUNG**

Unverändert.

18 **WESENTLICHE ANFORDERUNGEN IM BEZUG AUF SICHERHEIT UND GESUNDHEIT**

Werden von folgenden Richtlinien abgedeckt:
EN 60079-0 (2009) und EN 60079-15 (2010)

19 **ROUTINEPRÜFUNGEN UND TESTS**

Keine.

Fontenay-aux-Roses,
am 21. Dezember 2011

Leiter Zertifizierung

Trockenstempel

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

Deutsche Übersetzung der originalen französischen Kopie der Seite 3

1 **ZUSÄTZLICHES FREIWILLIGES TYPENPRÜFUNGSZERTIFIKAT**

2 Geräte zur Verwendung in explosionsgefährdeten Bereichen (**Richtlinie 94/9/EG**)

3 Zusätzliche Zertifikatnummer:
LCIE 09 ATEX 1046 X / 03

4 Gerät
Beschleunigungsgeber
Typ: PNR 144-901-000-XXX

5 Antragsteller: Meggitt SA

15 **BESCHREIBUNG DES ZUSÄTZLICHEN ZERTIFIKATS**

– Standardaktualisierungen gemäß folgender Richtlinien:
EN 60079-0:2012 + Änderung A11:2013.
– Hinzufügen einer Stückprüfung von Durchschlagfestigkeit.

Definition von Gerät:
PNR 144-901-000-XXX
X = 0 … 9: Abhängig von der Steckertyp und Kabellänge.

Die Testergebnisse sind im vertraulichen Bericht Nr. 130454-662462-10.

Spezifische Kenndaten der betroffenen Schutzarten:
U ≤ 30 V, I ≤ 130 mA, P ≤ 0,8 W

Die Kennzeichnung wird wie folgt festgesetzt:
Meggitt SA oder Vibro-Meter oder MFR S3960
Adresse: …
Typ: PNR 144-901-000-XXX
Herstellungsnummer: … Herstellungsjahr: …
II 3 G
Ex nA IIC T6…710°C Gc(*)
LCIE 09 ATEX 1046 X

Die Kennzeichnung kann wie folgt reduziert werden:
Meggitt SA oder Vibro-Meter oder MFR S3960
PNR 144-901-000-XXX
II 3 G
Ex nA IIC T6…710°C Gc(*)
LCIE 09 ATEX 1046 X

(*): Siehe besondere Bedingungen für die sichere Anwendung (unter Punkt 17)

Fontenay-aux-Roses,
am 02. Dezember 2014

Leiter Zertifizierung

Trockenstempel

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

Deutsche Übersetzung der originalen französischen Kopie der Seite 3

13 **ANHANG**

14 **ZUSÄTZLICHES FREIWILLIGES TYPENPRÜFUNGSZERTIFIKAT**

LCIE 09 ATEX 1046 X / 03

15 **BESCHREIBUNG DES ZUSÄTZLICHEN ZERTIFIKATS (FORTSETZUNG)**

Die Geräte müssen ebenfalls mit der Kennzeichnung versehen sein, die in den Herstellungsnormen der betreffenden elektrischen Geräte normalerweise vorgesehen sind.

16 **BESCHREIBENDE UNTERLAGEN**

Zertifizierungs-Datei-Nr. DT 1069 Ausgabe 00 vom 2014/09/25.
Diese Datei enthält 2 Punkte (6 Seiten).

17 **BESONDERE BEDINGUNGEN FÜR DIE SICHERE ANWENDUNG**

1. Umgebungstemperatur im Betrieb:
– Sensor: −196 °C bis +700 °C
– Kabel: −196 °C bis +700 °C
– Stecker LEMO Typ O oder Äquivalent: −65 °C bis +150 °C
– Stecker M83723/89Y1020 oder Äquivalent: −65 °C bis +200 °C
– Standardtemperatur VM-Stecker: −54 °C bis +260 °C
– Hochtemperatur VM-Stecker: −196 °C bis +700 °C

2. Temperaturklassifizierung entsprechend der Umgebungstemperatur im Betrieb:

	T6	T5	T4	T3	T2	T1	710 °C
Sensor	≤ +80 °C	≤ +95 °C	≤ +130 °C	≤ +195 °C	≤ +290 °C	≤ +440 °C	≤ +700 °C
Kabel	≤ +80 °C	≤ +95 °C	≤ +130 °C	≤ +195 °C	≤ +290 °C	≤ +440 °C	≤ +700 °C
Stecker LEMO Typ O oder Äquivalent	≤ +80 °C	≤ +95 °C	≤ +130 °C	≤ +150 °C			
Stecker M83723/89Y1020 oder Äquivalent	≤ +80 °C	≤ +95 °C	≤ +130 °C	≤ +195 °C	≤ +200 °C		
Standardtemperatur VM-Stecker	≤ +80 °C	≤ +95 °C	≤ +130 °C	≤ +195 °C	≤ +260 °C		
Hochtemperatur VM-Stecker	≤ +80 °C	≤ +95 °C	≤ +130 °C	≤ +195 °C	≤ +290 °C	≤ +440 °C	≤ +700 °C

3. Es müssen Vorkehrungen getroffen werden dass kurzzeitige Störungen die Nominalspannungen nicht mehr als 119 V überschreiten können.

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

Deutsche Übersetzung der originalen französischen Kopie der Seite 4

13 **ANHANG**

14 **ZUSÄTZLICHES FREIWILLIGES TYPENPRÜFUNGSZERTIFIKAT**

LCIE 09 ATEX 1046 X / 03

18 **WESENTLICHE ANFORDERUNGEN IM BEZUG AUF SICHERHEIT UND GESUNDHEIT**

Werden von folgenden Richtlinien abgedeckt:
EN 60079-0:2012 + Änderung A11:2013 und EN 60079-15:2010.

19 **ROUTINEPRÜFUNGEN UND TESTS**

Jedes Gerät muss einem Durschlagsfestigkeitstest unterzogen werden. Spannung von 500 V (RMS) währen 60 Sekunden zwischen den Leitern und dem Gehäuse gemäss Norm EN 60079-15:2010.
Andernfalls muss ein Test mit 600 V (RMS) während mindestens 100 ms durchgeführt werden

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

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ATEX certificate:

LCIE 13 ATEX 3037 X

for

GSI 127

Although the certificate is available in the three languages (English, French and German), the liability of the notified body applies only on the text of the original copy of the certificate that it published.

EN

Bien que le certificat soit traduit dans les 3 langues (Anglais, Français et Allemand), seul le texte de la copie originale du certificat peut engager la responsabilité de l'organisme notifié qui l'a publié.

FR

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

DE

EX

Meggitt SA
Route de Moncor 4
PO Box 1616
CH - 1701 Fribourg
Switzerland

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CETTE PAGE EST LAISSÉE INTENTIONNELLEMENT VIDE
DIESE SEITE WURDE ABSICHTLICH LEER GELASSEN

ATTESTATION D'EXAMEN UE DE TYPE
EU TYPE EXAMINATION CERTIFICATE

1 **Version : 01** — **LCIE 13 ATEX 3037 X** — **Issue : 01**

	Directive 2014/34/UE	**Directive 2014/34/EU**
2	Appareil ou Système de Protection destiné à être utilisé en Atmosphères Explosibles	Equipment or Protective System Intended for use in Potentially Explosive Atmospheres
3	Produit : **Interface GSI 127**	Product : **GSI 127 interface**
	Type: 244-127-000-XXX-A2-BYY	
4	Fabricant :	Manufacturer :
	MEGGITT SA	
5	Adresse :	Address :
	Route de Moncor 4 1752 Villars-sur-Glâne SUISSE	
6	Ce produit et ses variantes éventuelles acceptées sont décrits dans l'annexe de la présente attestation et dans les documents descriptifs cités en référence.	This product any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
7	Le LCIE, Organisme Notifié sous la référence 0081 conformément à l'article 17 de la directive 2014/34/UE du Parlement européen et du Conseil du 26 février 2014, certifie que ce produit est conforme aux Exigences Essentielles de Sécurité et de Santé pour la conception et la construction de produits destinés à être utilisés en atmosphères explosibles, données dans l'annexe II de la Directive. Les résultats des vérifications et essais figurent dans le(s) rapport(s) confidentiel(s) N° :	LCIE, Notified Body number 0081 in accordance with article 17 of the Directive 2014/34/EU of the European Parliament and the Council of 26 February 2014 certifies that product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres, given in Annex II to the Directive. The examination and test results are recorded in confidential report(s) N°:
	108046-614947; 141529-685013	
8	Le respect des Exigences Essentielles de Sécurité et de Santé est assuré par la conformité à :	Compliance with the Essential Health and Safety Requirements has been assured by compliance with :
	EN 60079-0:2012 + A11:2013 EN 60079-11:2012 EN 60079-15:2010	
9	Le signe « X » lorsqu'il est placé à la suite du numéro de l'attestation, indique que cet appareil est soumis aux conditions particulières d'utilisation, mentionnées dans l'annexe de cette attestation.	If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.
10	Cette Attestation d'Examen UE de Type concerne uniquement la conception et la construction du produit spécifié. Des exigences supplémentaires de la directive sont applicables pour la fabrication et la fourniture du produit. Ces dernières ne sont pas couvertes par la présente attestation.	This EU Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.
11	Le marquage du produit est mentionné dans l'annexe de cette attestation.	The marking of the product is specified in the schedule to this certificate.

Fontenay-aux-Roses, le 30 novembre 2016

Responsable de Certification
Certification Officer
Julien Gauthier

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CERT-ATEX-FORM 04 Rev. 02

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ATTESTATION D'EXAMEN UE DE TYPE - ANNEXE
EU TYPE EXAMINATION CERTIFICATE - SCHEDULE

1 **Version : 01** — **LCIE 13 ATEX 3037 X** — **Issue : 01**

	DESCRIPTION DU PRODUIT	**DESCRIPTION OF PRODUCT**
12	L'interface GSI 127 fournit une isolation galvanique entre le circuit d'alimentation ou le circuit de traitement de signal (Ex nA) et un capteur ou un conditionneur (Ex ia). L'appareil se compose d'une carte électronique et des bornes à vis montées dans un boîtier plastique. Un revêtement conforme est appliqué sur deux faces de la carte.	The GSI 127 interface provides galvanic insolation between power supply circuit or signal treatment circuit (Ex nA) and a sensor or a conditioner (Ex ia). The equipment consists of electronic board and screwed terminals blocks mounted inside a plastic enclosure. Conformal coating is applied on both sides of the electronic board.
	DETAIL DE LA GAMME	**RANGE DETAILS**
	244-127-000-XXX-A2-BYY XXX définit la version du produit (X = 0 à 9). YY définit le mode de transfert (YY = 01 à 19 pour la spécification actuelle; YY = 20 à 39 pour la spécification alternative).	**244-127-000-XXX-A2-BYY** XXX defines the version of the product (X = 0 to 9). YY defines the transfer mode (YY = 01 to 19 for actual specification; YY = 20 to 39 for alternate specification).
	MARQUAGE Le marquage du produit doit comprendre : MEGGITT SA ou VIBRO-METER ou MFR S3960 Adresse : ..... Type : 244-127-000-XXX-A2-BYY N° de fabrication : ... Année de fabrication : ... Ⓔx II 3 (1) G Ex nA [ia Ga] IIC T4 Gc LCIE 13 ATEX 3037 X Alimentation : U ≤ 30 V, I ≤ 150 mA Capteur ou conditionneur : Pour 244-127-000-XXX-A2-B01 à B19: U_o: 25,2 V; I_o: 60 mA; P_o: 0,7 W; C_o: 95 nF; L_o: 5 mH Pour 244-127-000-XXX-A2-B20 à B39: U_o: 25,2 V; I_o: 45 mA; P_o: 0,5 W; C_o: 95 nF; L_o: 10 mH L'appareil doit également comporter le marquage normalement prévu par les normes de construction qui le concernent sous la responsabilité du fabricant.	**MARKING** The marking of the product shall include the following : MEGGITT SA or VIBRO-METER or MFR S3960 Address: ... Type: 244-127-000-XXX-A2-BYY Serial number: ... Year of construction: ... Ⓔx II 3 (1) G Ex nA [ia Ga] IIC T4 Gc LCIE 13 ATEX 3037 X Power supply : U ≤ 30 V, I ≤ 150 mA Sensor or conditioner : For 244-127-000-XXX-A2-B01 to B19: U_o: 25.2 V; I_o: 60 mA; P_o: 0.7 W; C_o: 95 nF; L_o: 5 mH For 244-127-000-XXX-A2-B20 to B39: U_o: 25.2 V; I_o: 45 mA; P_o: 0.5 W; C_o: 95 nF; L_o: 10 mH The equipment shall also bear the usual marking required by the product standards applying to such equipment under the manufacturer responsibility.
13	**CONDITIONS PARTICULIERES D'UTILISATION**	**SPECIFIC CONDITIONS OF USE**
a.	L'appareil ne doit être raccordé qu'à des matériels de sécurité intrinsèque certifiés ou à un appareil simple. Cette association doit être compatible vis-à-vis de la sécurité intrinsèque.	The equipment shall only be connected to associated intrinsically safe certified equipment or simple apparatus. This combination must be compatible as regard the intrinsic safety rules.
b.	L'appareil doit être installé dans une enveloppe conforme aux exigences de la norme EN 60079-0 et ayant un degré de protection minimal IP54.	The apparatus shall be installed in an enclosure conform to the requirements of standard EN 60079-0 and with ingress protection at least IP54.
c	Température ambiante d'utilisation : -40°C à +70°C.	Operating ambient temperature: -40°C to +70°C.
14	**EXIGENCES ESSENTIELLES DE SANTE ET DE SECURITE**	**ESSENTIAL HEALTH AND SAFETY REQUIREMENTS**
	Couvertes par les normes listées au point 8.	Covered by standards listed at 8.

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CERT-ATEX-FORM 04 Rev. 02

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ATTESTATION D'EXAMEN UE DE TYPE - ANNEXE
EU TYPE EXAMINATION CERTIFICATE - SCHEDULE

1 **Version : 01** — **LCIE 13 ATEX 3037 X** — **Issue : 01**

15 **DOCUMENTS DESCRIPTIFS** / **DESCRIPTIVE DOCUMENTS**

N°	Description	Reference	Rev.	Date	Page(s)
1.	Technical file	DT 1052	01	2016-10-24	36
2.	User manual (extract)	PZ 8763	00	2016-09-06	1

16 **INFORMATIONS COMPLEMENTAIRES** / **ADDITIONAL INFORMATIONS**

Essais individuels

Chaque transformateur T1 devra être soumis à un essai diélectrique sous tension d'essai de 1500 V ; 50/60 Hz appliquée entre l'enroulement primaire et les enroulements secondaires pendant au moins 60 s conformément au paragraphe 11.2 de la norme EN 60079-11:2012.

Conditions de certification

Les détenteurs d'attestations d'examen UE de type doivent également satisfaire les exigences de contrôle de production telles que définies à l'article 13 de la Directive 2014/34/UE.

En accord avec l'Article 41 de la Directive 2014/34/UE, les attestations d'examen CE de type mentionnant la Directive 94/9/CE émises avant la date d'application de la Directive 2014/34/UE (20 avril 2016) peuvent être considérées comme émises en accord avec la Directive 2014/34/UE. Les nouvelles versions de ces attestations peuvent conserver le numéro de l'attestation d'origine émise avant le 20 avril 2016.

Routine tests

Each transformer T1 shall be submitted to dielectric strength test under test voltage of 1500 V; 50/60 Hz applied between the primary winding and the secondary windings during at least 60 s in accordance with clause 11.2 of EN 60079-11:2012 standard.

Conditions of certification

Holders of EU type examination certificates are also required to comply with the production control requirements defined in article 13 of Directive 2014/34/EU.

In accordance with Article 41 of Directive 2014/34/EU, EC-Type Examination Certificates referring to Directive 94/9/EC that were in existence prior to the date of application of Directive 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. New issues of such certificates may continue to bear the original certificate number issued prior to 20 April 2016.

17 **DETAILS DES MODIFICATIONS** / **DETAILS OF CHANGES**

Version 00 : (31/05/2013) Evaluation de la conformité selon les normes EN 60079-0:2012, EN 60079-11:2012 et EN 60079-15:2010.

Version 01 :
- Mise à jour normative selon la norme EN 60079-0:2012 + A11:2013.
- Nouvelle plage de température ambiante d'utilisation : -40°C à +70°C
- Mise à jour de la désignation du type pour différencier deux spécifications.

Issue 00 : (2013/05/31) Conformity assessment according to EN 60079-0:2012, EN 60079-11:2012 and EN 60079-15:2010 standards.

Issue 01 :
- Normative update according to EN 60079-0:2012 + A11:2013 standard.
- New operating ambient temperature range: -40°C to +70°C.
- Update of type designation to differentiate two specifications.

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MEGGITT

Deutsche Übersetzung der originalen französischen Kopie der Seite 1

EG-PRÜFZERTIFIKAT

1 **Version: 01** **LCIE 13 ATEX 3037 X** **Ausgabe: 01**

2 **Richtlinie 2014/34/EU**
Geräte und Schutzsysteme zur Verwendung in explosionsgefährdeten Bereichen

3 Produkt:
GSI 127 Galvanisches Trennmodul
Typ: 244-127-000-XXX-A2-BYY

4 Hersteller: Meggitt SA

5 Adresse: Route de Moncor 4, BP 1752 Villars-sur-Glâne, Schweiz

6 Dieses Gerät und die möglichen, zulässigen Varianten sind im Anhang dieses Zertifikats und den darin aufgeführten Unterlagen beschrieben.

7 LCIE, eingetragen unter der Nummer 0081 gemäß Artikel 17 der Richtlinie 2014/34/EU des Europaparlamentes und des Rates vom 26. Februar 2014, bestätigt, dass dieses Gerät oder Schutzsystem die wesentlichen Gesundheits- und Sicherheitsanforderungen in Bezug auf die Auslegung und die Bauart von Geräten und Schutzsystemen zur Verwendung in explosionsgefährdeten Bereichen nach Anhang II der Richtlinie erfüllt.
Die Prüf- und Testergebnisse sind im vertraulichen Bericht Nr. 108046/614947 ; 141529-685013 aufgezeichnet.

8 Die Einhaltung der wesentlichen Gesundheits- und Sicherheitsanforderungen wird durch die Übereinstimmung mit den folgenden Dokumenten sichergestellt:
EN 60079-0:2012 + A11:2013
EN 60079-11:2012
EN 60079-15:2010

9 Ein "X" nach der Zertifikatnummer gibt an, dass für die sichere Verwendung des Gerätes besondere Bedingungen gemäß dem Anhang dieses Zertifikates gelten.

10 Dieses Typenprüfzertifikat betrifft nur die Bauart und die Prüfungen und Tests des betreffenden Geräts gemäß Richtlinie 2014/34/EU.
Zusätzliche Anforderungen dieser Richtlinie gelten für die Fertigung und Lieferung des Geräts oder Schutzsystems. Diese werden durch dieses Zertifikat nicht abgedeckt.

11 Die Kennzeichnung des Gerätes muss die in der Anlage zu dieser Bescheinigung enthaltenen Angaben enthalten.

Fontenay-aux-Roses,
am 30. November 2016

Leiter Zertifizierung

Trockenstempel

LCIE haftet nur für den französischen Text.
Dieses Zertifikat darf nur vollständig und ohne Änderungen vervielfältigt werden.

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

Deutsche Übersetzung der originalen französischen Kopie der Seite 1

EG-PRÜFZERTIFIKAT

1 **Version: 01** **LCIE 13 ATEX 3037 X** **Ausgabe: 01**

12 **BESCHREIBUNG DES PRODUKTS**

Die GSI 127 Galvanisches Trennmodul bietet eine galvanische Trennung (isolation) zwischen dem Stromversorgungskreis oder dem Signalbehandlungskreis (Ex nA) und einem Sensor- oder Signalaufbereiter (Ex iA).
Das Gerät besteht aus einer elektronischen Platine und Schraubklemmen, die in einem Kunststoffgehäuse montiert sind.
Eine konforme Beschichtung erfolgt auf beiden Seiten der elektronischen Leiterplatte.

PRODUKTÜBERSICHT

244-127-000-XXX-A2-BYY

XXX definiert die Version des Produkts (X = 0 bis 9).
YY definiert die Übertragungsfunktion (Konfiguration) des Produkts (YY = 01 bis 19 für die Ist-Spezifikation, YY = 20 bis 39 für eine alternative Spezifikation).

KENNZEICHNIUNG

Die Kennzeichnung des Erzeugnisses muss die folgenden Angaben enthalten:

MEGGITT SA oder VIBRO-METER oder MFR S3960
Adresse: ...
Typ: 244-127-000-XXX-A2-BYY
Herstellungsnummer: ... Herstellungsjahr: ...
II 3 (1) G
Ex nA [ia Ga] IIC T4 Gc
LCIE 13 ATEX 3037 X
Stromversorgung: U ≤ 30 V, I ≤ 150 mA
Sensor oder Signalconditioner Ausgang:
Für 244-127-000-XXX-A2-B01 to B19:
Uo: 25,2 V, Io: 60 mA, Po: 0,7 W, Co: 95 nF, Lo: 5mH
Für 244-127-000-XXX-A2-B20 to B39:
Uo: 25,2 V, Io: 45 mA, Po: 0,5 W, Co: 95 nF, Lo: 10mH

Die Geräte müssen ebenfalls mit der Kennzeichnung versehen sein, die in den Herstellungsnormen der betreffenden Geräte normalerweise vorgesehen sind.

13 **BESONDERE BEDINGUNGEN FÜR DIE SICHERE ANWENDUNG**

a. Das Gerät darf nur mit zugehörigen eigensicheren zertifizierten Geräten oder einem einfachen Gerät verbunden sein. Diese Kombination muss mit den Regeln der Eigensicherheit vereinbar sein.
b. Der Benutzer muss sicherstellen, die Lage des Modul entspricht den Anforderungen der Norm EN 60079-0 und der Schutzklasse IP54 oder gleichwertig.
c. Umgebungstemperatur betreiben: −40 bis +70 °C

14 **WESENTLICHE ANFORDERUNGEN IM BEZUG AUF SICHERHEIT UND GESUNDHEIT**

Abgedeckt nach den Normen aufgeführt unter Punkt 8.

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

Deutsche Übersetzung der originalen französischen Kopie der Seite 2

EG-PRÜFZERTIFIKAT

1 **Version: 01** **LCIE 13 ATEX 3037 X** **Ausgabe: 01**

15 **BESCHREIBENDE UNTERLAGEN**

Nummer (Nr.)	Beschreibung	Referenz	Revision	Datum	Seiten
1.	Technische Datei	DT 1052	01	2016-10-24	36
2.	Benutzerhandbuch (Auszug)	PZ 8763	00	2016-09-06	1

16 **ZUSÄTZLICHE INFORMATION**

RoutinePrüfungen und Tests
Jeder Transformator T1 muss einer Spannungsfestigkeit Test dauert 60 Sekunden eingereicht werden, mit einer 50/60 Hz Sinus von 1500 VRMS zwischen der Primärwicklung und der secondard Wicklungen, gemäß Abschnitt 11.2 der Norm EN 60079-11:2012.

Zertifizierungsbedingungen
Inhaber von Typenprüfzertifikaten (EG-Prèufzertifikaten) müssen die Anforderungen an die Produktionssteuerung nach Artikel 13 der Richtlinie 2014/34/EU erfüllen.
Gemäß Artikel 41 der Richtlinie 2014/34/EU können Typenprüfzertifikaten, die sich auf 94/9/EU beziehen, die vor dem Tag der Anwendung der Richtlinie 2014/34/EU (20. April 2016) vorliegen, referenziert werden Als ob sie gemäß der Richtlinie 2014/34/EU ausgestellt würden. Neue Emissionen dieser Zertifikate können weiterhin die ursprüngliche Zertifikatsnummer tragen, die vor dem 20. April 2016 ausgestellt wurde.

Details der Änderungen
Ausgabe 00:
Konformitätsbewertung nach den Normen EN 60079-0:2012, EN 60079-11:2012 und EN 60079-15:2010.

Ausgabe 01:
Normative Aktualisierung nach der Norm EN 60079-0:2012 + A11:2013.
Neuer Umgebungstemperatur betreiben: −40 bis +70 °C.
Aktualisierung der Typbezeichnung zur Unterscheidung von zwei Spezifikationen.

Obwohl das Zertifikat in drei Sprachen (Englisch, Französisch und Deutsch) übersetzt ist, können nur die bescheinigten Behörden, die den Text auf der Originalausgabe des Zertifikates herausgegeben haben, zur rechtlichen Verantwortung gezogen werden.

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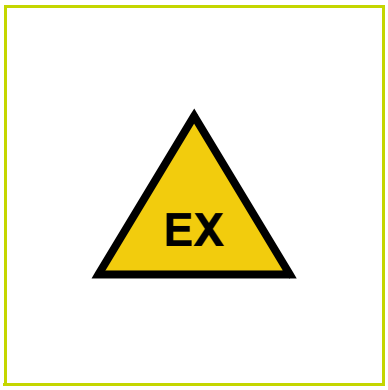
EX CERTIFICATE – ATEX

vibro-meter®

LCIE 18 ATEX 1012 X
for
IPC707 signal conditioner



Note: Although the Ex certificate may be included in more than one language, the liability of the notified body applies only on the text of the original copy of the certificate that it published.

Document reference LCIE 18 ATEX 1012 X
Edition 2 – April 2022

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ATTESTATION D'EXAMEN DE TYPE
TYPE EXAMINATION CERTIFICATE

1 **Version : 01** — **LCIE 18 ATEX 1012 X** — **Issue : 01**

	Directive 2014/34/UE	**Directive 2014/34/EU**
2	Appareil ou Système de Protection destiné à être utilisé en Atmosphères Explosibles	Equipment or Protective System Intended for use in Potentially Explosive Atmospheres
3	Produit : **Conditionneur de signal, IPC 707**	Product : **Signal conditioner, IPC 707**
	Type: 244-707-000-xxx-A3	
4	Fabricant :	Manufacturer : **MEGGITT SA**
5	Adresse :	Address : Route de Moncor 4 1752 Villars-sur-Glâne SUISSE
6	Ce produit et ses variantes éventuelles acceptées sont décrits dans l'annexe de la présente attestation et dans les documents descriptifs cités en référence.	This product and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.
7	Le LCIE certifie que ce produit est conforme aux Exigences Essentielles de Sécurité et de Santé pour la conception et la construction de produits destinés à être utilisés en atmosphères explosibles, données dans l'annexe II de la Directive. Les résultats des vérifications et essais figurent dans le(s) rapport(s) confidentiel(s) N° :	LCIE certifies that product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres, given in Annex II to the Directive. The examination and test results are recorded in confidential report(s) N°: 140555-682752 ; 173139-767045-M1
8	Le respect des Exigences Essentielles de Sécurité et de Santé est assuré par la conformité à :	Compliance with the Essential Health and Safety Requirements has been assured by compliance with : EN IEC 60079-0:2018 EN 60079-7:2015+A11:2018
9	Le signe « X » lorsqu'il est placé à la suite du numéro de l'attestation, indique que cet appareil est soumis aux conditions particulières d'utilisation, mentionnées dans l'annexe de cette attestation.	If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.
10	Cette Attestation d'Examen de Type concerne uniquement la conception et la construction du produit spécifié. Des exigences supplémentaires de la directive sont applicables pour la fabrication et la fourniture du produit. Ces dernières ne sont pas couvertes par la présente attestation.	This Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.
11	Le marquage du produit est mentionné dans l'annexe de cette attestation.	The marking of the product is specified in the schedule to this certificate.

Fontenay-aux-Roses, le 1er avril 2022

Responsable de Certification
Certification Officer
Julien Gauthier

LABORATOIRE CENTRAL DES INDUSTRIES ELECTRIQUES
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ATTESTATION D'EXAMEN DE TYPE - ANNEXE
TYPE EXAMINATION CERTIFICATE - SCHEDULE

1 **Version : 01** — **LCIE 18 ATEX 1012 X** — **Issue : 01**

12 **DESCRIPTION DU PRODUIT**

Le conditionneur de signal IPC 707 est un conditionneur électronique analogique qui convertit les charges électriques provenant d'un capteur piézoélectrique (côté capteur) en un signal de tension ou de courant analogique (côté signal).

Le circuit électronique du conditionneur de signal IPC 707 est incorporé dans une enveloppe en aluminium.

Le conditionneur de signal IPC 707 est équipé de bornes (côté capteur et côté signal) et d'un clip optionnel pour rail DIN.

Les configurations de sortie, côté signal, sont les suivantes :
- sortie de tension : mode de transmission à 3 fils,
- sortie de courant : mode de transmission à 2 fils.

DESCRIPTION OF PRODUCT

IPC 707 signal conditioner is an analogue electronic conditioner which converts the electrical charges coming from a piezoelectric sensor (sensor side) into an analogue voltage or current signal (signal side).

The electronic circuitry of the IPC 707 signal conditioner is incorporated into an aluminium enclosure.

IPC 707 signal conditioner is equipped with terminals (sensor side and signal side) and with an optional clip for DIN rail.

Signal side output configurations could be as following:
- voltage output: 3-wires transmission mode,
- current output: 2-wires transmission mode.

DETAIL DE LA GAMME / **RANGE DETAILS**

244 – 707 - 000 ** * A3

- Numéro de modification mineure/ Minor modification number = 0 à/*to* 9 (le numéro est incrémenté à chaque modification / *Each modification increase the number by 1*)
- Version personnalisée (transfert, filtre, installation) / *Customized version (transfer, filter, installation)* = 00 à/*to* 99
- Type du produit / *Product Type*

CARACTERISTIQUES

Bornier signal (SUP, COM, OUT) : U_{max} : 30 V, I_{max} : 20 mA.

RATINGS

Signal terminal (SUP, COM, OUT): U_{max} : 30 V, I_{max} : 20 mA.

MARQUAGE

Le marquage du produit doit comprendre :

Marquage complet :

Vibro-Meter ou MEGGITT SA ou MFR S3960
Adresse : …
Type : 244-707-000-xxx-A3
N° de fabrication : …
Année de fabrication : …
Ex II 3 G
Ex ec IIC T6…T4 Gc (*)
LCIE 18 ATEX 1012 X
-40°C ≤ Tamb ≤ +85°C
U_{max} : 30 V, I_{max} : 20 mA.
AVERTISSEMENT - NE PAS SEPARER SOUS TENSION.
AVERTISSEMENT – SEPARER UNIQUEMENT DANS UN EMPLACEMENT NON DANGEREUX.

MARKING

The marking of the product shall include the following:

Complete marking:

Vibro-Meter or MEGGITT SA or MFR S3960
Address: …
Type: 244-707-000-xxx-A3
Serial number: …
Year of construction: …
Ex II 3 G
Ex ec IIC T6…T4 Gc (*)
LCIE 18 ATEX 1012 X
-40°C ≤ Tamb ≤ +85°C
U_{max} : 30 V, I_{max} : 20 mA.
WARNING – DO NOT SEPARATE WHEN ENERGIZED.
WARNING – SEPARATE ONLY IN A NON-HAZARDOUS AREA.

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ATTESTATION D'EXAMEN DE TYPE - ANNEXE
TYPE EXAMINATION CERTIFICATE - SCHEDULE

1 **Version : 01** — **LCIE 18 ATEX 1012 X** — **Issue : 01**

Marquage réduit :

Vibro-Meter ou MEGGITT SA ou MFR S3960
Adresse : …
Type : 244-707-000-xxx-A3
N° de fabrication : …
Année de fabrication : …
Ex II 3 G
Ex ec IIC T6…T4 Gc (*)
LCIE 18 ATEX 1012 X

(*) La classification en température est réalisée comme suit :

Reduced marking:

Vibro-Meter or MEGGITT SA or MFR S3960
Address: …
Type: 244-707-000-xxx-A3
Serial number: …
Year of construction: …
Ex II 3 G
Ex ec IIC T6…T4 Gc (*)
LCIE 18 ATEX 1012 X

(*) Temperature classification shall be as following:

Classification en température *Temperature classification*	Température ambiante d'utilisation *Ambient operating temperature range*
T6	-40°C ≤ Tamb ≤ +65°C
T5	-40°C ≤ Tamb ≤ +80°C
T4	-40°C ≤ Tamb ≤ +85°C

L'appareil doit également comporter le marquage normalement prévu par les normes de construction qui le concernent sous la responsabilité du fabricant.

The equipment shall also bear the usual marking required by the product standards applying to such equipment under the manufacturer responsibility.

13 **CONDITIONS PARTICULIERES D'UTILISATION**

a. Température ambiante d'utilisation : -40°C à +85°C

b. L'utilisateur final devra prendre toutes les précautions nécessaires pour installer l'appareil dans une enveloppe IP54 et maintenir le degré de protection minimum IP54 de la connexion du capteur lors de son raccordement selon les préconisations de la norme EN 60079-14.

c. L'appareil devra être raccordé conformément au manuel d'instruction.

d. Le matériel doit être utilisé dans une zone assurant au moins un degré de pollution 2, tel que défini dans la norme EN 60664-1.

e. La protection contre les transitoires doit être fournie à un niveau défini ne dépassant pas 140% de la valeur de crête de la tension assignée aux bornes d'alimentation vers le matériel.

SPECIFIC CONDITIONS OF USE

a. Ambient temperature range: -40°C to +85°C.

b. For final installation, final end user shall take any precautions to install the apparatus into an IP54 enclosure and keep it connected in compliance with EN 60079-14 requirements, providing and maintaining degree of protection at least IP54.

c. The apparatus must be connected according to instruction manual.

d. The equipment shall only be used in an area of at least pollution degree 2, as defined in EN 60664-1 standard.

e. Transient protection shall be provided that is set at a level not exceeding 140% of the peak rated voltage value at the supply terminals to the equipment.

14 **EXIGENCES ESSENTIELLES DE SANTE ET DE SECURITE**

Couvertes par les normes listées au point 8.

ESSENTIAL HEALTH AND SAFETY REQUIREMENTS

Covered by standards listed at 8.

15 **DOCUMENTS DESCRIPTIFS**

DESCRIPTIVE DOCUMENTS

N°	Description	Reference	Rev.	Date	Page(s)
1.	Dossier technique/*Technical file*	DT-1071	01	2022/03/09	-
2.	Extrait de la notice utilisateur/*Extract of user manual*	PZ 8782	-	-	-

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Une société de Bureau Veritas
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92260 Fontenay-aux-Roses
FRANCE
WWW.LCIE.FR

ATTESTATION D'EXAMEN DE TYPE - ANNEXE
TYPE EXAMINATION CERTIFICATE - SCHEDULE

1 **Version : 01** — **LCIE 18 ATEX 1012 X** — **Issue : 01**

16 **INFORMATIONS COMPLEMENTAIRES**

Essais individuels

Néant.

ADDITIONAL INFORMATIONS

Routine tests

None.

17 **DETAILS DES MODIFICATIONS DE L'ATTESTATION**

Version 00 : 30/08/2018	Evaluation initiale selon les normes EN 60079-0 :2012 + A11 : 2013 et EN 60079-7 : 2015
Version 01	Mise à jour normative selon les normes EN IEC 60079-0 :2018 et EN 60079-7 :2015 + A1 : 2018. Extension de la gamme, la référence 244-707-000-012-A3 devient 244-707-000-xxx-A3.

DETAILS OF CERTIFICATE CHANGES

Issue 00: 2018/08/30	Initial assessment according to EN 60079-0:2012 + A11:2013 and EN 60079-7:2015 standards.
Issue 01	Normative update according to EN IEC 60079-0:2018 and EN 60079-7:2015+A1:2018 standards. Extension of the range, Reference 244-707-000-012-A3 becomes 244-707-000-xxx-A3.

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CERT-ATEX-FORM 05 Rev. 05

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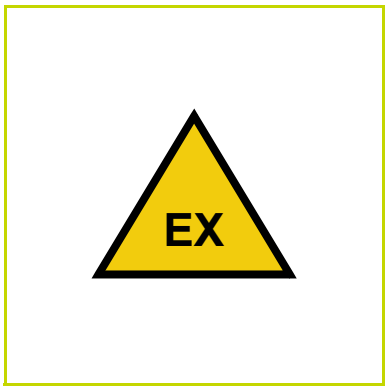
EX CERTIFICATE – ATEX

vibro-meter®

LCIE 18 ATEX 3026 X
for
IPC707 signal conditioner



Note: Although the Ex certificate may be included in more than one language, the liability of the notified body applies only on the text of the original copy of the certificate that it published.

Document reference LCIE 18 ATEX 3026 X
Edition 2 – April 2022

Meggitt SA, Route de Moncor 4, Case postale, 1701 Fribourg, Switzerland

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www.meggitt.com

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ATTESTATION D'EXAMEN UE DE TYPE
EU TYPE EXAMINATION CERTIFICATE

1 **Version : 02** — **LCIE 18 ATEX 3026 X** — **Issue : 02**

2

	Directive 2014/34/UE	**Directive 2014/34/EU**
2	Appareil ou Système de Protection destiné à être utilisé en Atmosphères Explosibles	Equipment or Protective System Intended for use in Potentially Explosive Atmospheres
3	Produit : Conditionneur de signal, IPC 707	Product : Signal Conditioner, IPC 707

Type: 244-707-000-xxx-A2

4	Fabricant :	Manufacturer :
	MEGGITT SA	
5	Adresse :	Address :
	Route de Moncor 4 1752 Villars-sur-Glâne SUISSE	

6 Ce produit et ses variantes éventuelles acceptées sont décrits dans l'annexe de la présente attestation et dans les documents descriptifs cités en référence.

This product and any acceptable variations thereto are specified in the schedule to this certificate and the documents therein referred to.

7 Le LCIE, Organisme Notifié sous la référence 0081 conformément à l'article 17 de la directive 2014/34/UE du Parlement européen et du Conseil du 26 février 2014, certifie que ce produit est conforme aux Exigences Essentielles de Sécurité et de Santé pour la conception et la construction de produits destinés à être utilisés en atmosphères explosibles, données dans l'annexe II de la Directive.
Accréditation Cofrac Certification de Produits et Services, n°5-0014. Portée disponible sur www.cofrac.fr.

LCIE, Notified Body number 0081 in accordance with article 17 of the Directive 2014/34/EU of the European Parliament and the Council of 26 February 2014 certifies that product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres, given in Annex II to the Directive.
Cofrac Accreditation Product and Services Certification n°5-0014. Scope available on www.cofrac.fr.

Les résultats des vérifications et essais figurent dans le(s) rapport(s) confidentiel(s) N° :

The examination and test results are recorded in confidential report(s) N°:

140555-682748 ; 173139-767047-M1

8 Le respect des Exigences Essentielles de Sécurité et de Santé est assuré par la conformité à :

Compliance with the Essential Health and Safety Requirements has been assured by compliance with :

EN IEC 60079-0:2018
EN 60079-11:2012

9 Le signe « X » lorsqu'il est placé à la suite du numéro de l'attestation, indique que cet appareil est soumis aux conditions particulières d'utilisation, mentionnées dans l'annexe de cette attestation.

If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.

10 Cette Attestation d'Examen UE de Type concerne uniquement la conception et la construction du produit spécifié.
Des exigences supplémentaires de la directive sont applicables pour la fabrication et la fourniture du produit. Ces dernières ne sont pas couvertes par la présente attestation.

This EU Type Examination Certificate relates only to the design and construction of the specified product.
Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

11 Le marquage du produit est mentionné dans l'annexe de cette attestation.

The marking of the product is specified in the schedule to this certificate.

Fontenay-aux-Roses, le 1er avril 2022

Responsable de Certification
Certification Officer
Julien Gauthier

LABORATOIRE CENTRAL DES INDUSTRIES ELECTRIQUES
S.A.S au capital de 15.745.984 €
RCS Nanterre B 408 363 174
33 avenue du Général Leclerc
F - 92260 FONTENAY AUX ROSES

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ATTESTATION D'EXAMEN UE DE TYPE - ANNEXE
EU TYPE EXAMINATION CERTIFICATE - SCHEDULE

1 **Version : 02** — **LCIE 18 ATEX 3026 X** — **Issue : 02**

12 **DESCRIPTION DU PRODUIT**

Le Conditionneur de Signal IPC 707 est un conditionneur électronique analogique qui convertit les charges électriques provenant d'un capteur piézoélectrique (côté capteur) en un signal de tension ou de courant analogique (côté signal).

Le circuit électronique du conditionneur de signal IPC 707 est entièrement enrobé et incorporé dans une enveloppe en aluminium.

Le conditionneur de signal IPC 707 est équipé de bornes (côté capteur et côté signal) et d'un clip optionnel pour rail DIN.

Les configurations de sortie, côté signal, sont les suivantes:
- sortie de tension: mode de transmission à 3 fils,
- sortie de courant: mode de transmission à 2 fils.

DESCRIPTION OF PRODUCT

IPC 707 Signal Conditioner is an analogue electronic conditioner which converts the electrical charges coming from a piezoelectric sensor (sensor side) into an analogue voltage or current signal (signal side).

The electronic circuitry of the IPC 707 signal conditioner is totally potted and incorporated into an aluminium enclosure.

IPC 707 Signal Conditioner is equipped with terminals (sensor side and signal side) and with an optional clip for DIN rail.

Signal side output configurations could be as following :
- voltage output : 3-wires transmission mode,
- current output : 2-wires transmission mode.

DETAIL DE LA GAMME

RANGE DETAILS

244 – 707 - 000 ** * A2

- A2 : Type du produit / *Product Type*
- * : Version personnalisée (transfert, filtre, installation) / *Customized version (transfer, filter, installation)* = 00 à/*to* 99
- ** : Numéro de modification mineure/ Minor modification number = 0 à/*to* 9 (le numéro est incrémenté à chaque modification / *Each modification increase the number by 1*)

CARACTERISTIQUES

Paramètres électriques :

Borne Signal (SUP, COM) :
U_i : 28V, I_i : 100 mA, P_i : 700 mW, C_i : 2,2 nF, L_i : 1 µH

RATINGS

Electrical parameters :

Signal side terminals (SUP, COM) :
U_i : 28V, I_i : 100 mA, P_i : 700 mW, C_i : 2,2 nF, L_i : 1 µH.

MARQUAGE

Le marquage du produit doit comprendre :

Marquage complet :

Vibro-Meter ou MEGGITT SA ou MFR S3960
Adresse : …
Type : 244-707-000-xxx-A2
N° de fabrication : …
Année de fabrication : …
Ⓔ II 1 G
Ex ia IIC T6 … T4 Ga (*)
LCIE 18 ATEX 3026 X
-40°C ≤ Tamb ≤ +85°C
U_i : …, I_i : … , P_i : …, C_i : …, L_i : … (**)
U_o : …, I_o : …, P_o : …, C_o : …, L_o : …

MARKING

The marking of the product shall include the following :

Complete marking:

Vibro-Meter or MEGGITT SA or MFR S3960
Address: …
Type: 244-707-000-xxx-A2
Serial number: …
Year of construction: …
Ⓔ II 1 G
Ex ia IIC T6 … T4 Ga (*)
LCIE 18 ATEX 3026 X
-40°C ≤ Tamb ≤ +85°C
U_i : …, I_i : … , P_i : …, C_i : …, L_i : … (**)
U_o : …, I_o : …, P_o : …, C_o : …, L_o : …

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ATTESTATION D'EXAMEN UE DE TYPE - ANNEXE
EU TYPE EXAMINATION CERTIFICATE - SCHEDULE

1 **Version : 02** — **LCIE 18 ATEX 3026 X** — **Issue : 02**

Marquage réduit :

Vibro-Meter ou MEGGITT SA ou MFR S3960
Adresse : …
Type : 244-707-000-xxx-A2
N° de fabrication : …
Année de fabrication : …
Ⓔ II 1 G
Ex ia IIC T6 … T4 Ga (*)
LCIE 18 ATEX 3026 X

(**) Les paramètres de sécurité intrinsèque sont identifiés comme suit :

Borne / *Terminal*	Paramètres électriques de sécurité intrinsèque / *Intrinsic safety electrical parameters*	
J0 (SUP, COM)	U_i : 28V, I_i : 100 mA, P_i : 700 mW	C_i : 2,2 nF, L_i : 1 µH.
J0 (OUT, COM)		C_i : 9,6 nF, L_i : 565 µH.
J1 (IN+, COM) (IN-, COM)	U_o : 6,6V, I_o : 66 mA, P_o : 107 mW, C_o : 5,69 µF, L_o : 3,435 mH.	

(*) La classification en température est réalisée comme suit :

Classification en température / *Temperature classification*	Température ambiante d'utilisation / *Ambient operating temperature range*
T6	-40°C ≤ Tamb ≤ +70°C
T5	-40°C ≤ Tamb ≤ +80°C
T4	-40°C ≤ Tamb ≤ +85°C

L'appareil doit également comporter le marquage normalement prévu par les normes de construction qui le concernent sous la responsabilité du fabricant.

13 **CONDITIONS PARTICULIERES D'UTILISATION**

a. Température ambiante d'utilisation : de -40°C à +85°C

b. L'appareil ne peut être raccordé qu'à des équipements certifiés de sécurité intrinsèque. Ces associations doivent répondre aux exigences de la norme EN 60079-25.

c. L'appareil devra être raccordé conformément au manuel d'instruction.

d. L'équipement contient plus de 15% d'aluminium. Il doit être monté de manière à éviter le risque d'étincelle par frottement ou impact.

e. La mise à la terre des circuits de sécurité intrinsèque (borne SHD) doit être conforme aux exigences du chapitre 16.2.3 de la norme EN 60079-14.

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ATTESTATION D'EXAMEN UE DE TYPE - ANNEXE
EU TYPE EXAMINATION CERTIFICATE - SCHEDULE

1 **Version : 02** — **LCIE 18 ATEX 3026 X** — **Issue : 02**

Reduced markin :

Vibro-Meter or MEGGITT SA or MFR S3960
Address: …
Type: 244-707-000-xxx-A2
Serial number: …
Year of construction: …
Ⓔ II 1 G
Ex ia IIC T6 … T4 Ga (*)
LCIE 18 ATEX 3026 X

(**) Intrinsic safety electrical parameters are identified as following:

(*) Temperature classification shall be as following:

The equipment shall also bear the usual marking required by the product standards applying to such equipment under the manufacturer responsibility.

SPECIFIC CONDITIONS OF USE

Ambient temperature range: -40°C to +85°C.

The intrinsic safety terminal blocks (IS boards) must be connected only to an intrinsically safe certified apparatus. These combinations shall comply with the requirements of the standard EN 60079-25.

The apparatus must be connected according to instruction manual.

The equipment contains more than 15% of aluminium. It must be mounted in such a manner as to eliminate the risk of sparks caused by friction or impact.

The grounding of the intrinsically safe circuits must be in accordance with requirements of clause 16.2.3 of EN 60079-14 standard.

14 **EXIGENCES ESSENTIELLES DE SANTE ET DE SECURITE**

Couvertes par les normes listées au point 8.

ESSENTIAL HEALTH AND SAFETY REQUIREMENTS

Covered by standards listed at 8.

15 **DOCUMENTS DESCRIPTIFS**

N°	Description	Reference	Rev.	Date	Page(s)
1.	Dossier technique/Technical file	DT-107*0*	01	2022/03/09	-
2.	Extrait de la notice utilisateur/Extract of user manual	PZ 8*954*	-	-	-

DESCRIPTIVE DOCUMENTS

16 **INFORMATIONS COMPLEMENTAIRES**

Essais individuels

Néant.

ADDITIONAL INFORMATIONS

Routine tests

None.

17 **DETAILS DES MODIFICATIONS DE L'ATTESTATION**

Version 00 : 27/07/2018 — Evaluation initiale selon les normes EN 60079-0:2012+A11:2013 et EN 60079-11:2012.

Version 01 : 30/08/2018 — Clarification du modèle de l'appareil. La référence 244-707-000-xxx devient 244-707-000-012-A2.

Version 02 — Mise à jour normative selon la norme EN IEC 60079-0 :2018. Extension de la gamme, la référence 244-707-000-012-A2 devient 244-707-000-xxx-A2.

DETAILS OF CERTIFICATE CHANGES

Issue 00 : 2018/07/27 — Initial assessment according to standards EN 60079-0:2012+A11:2013 and EN 60079-11:2012 requirements.

Issue 01 : 2018/08/30 — Clarification of apparatus type. Reference 244-707-000-xxx becomes 244-707-000-012-A2.

Issue 02 — Normative update according to EN IEC 60079-0:2018 standard. Extension of the range, Reference 244-707-000-012-A2 becomes 244-707-000-xxx-A2.

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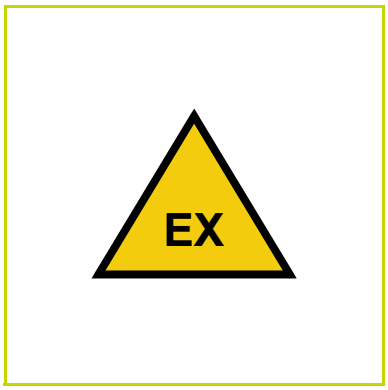
Original copy (French / English)
MEGGITT

EX CERTIFICATE – ATEX

vibro-meter®

ITS 16 ATEX 101335 X
for
cable fittings (stuffing glands)



Note: Although the Ex certificate may be included in more than one language, the liability of the notified body applies only on the text of the original copy of the certificate that it published.

Document reference ITS 16 ATEX 101335 X
Edition 2 – January 2022

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intertek
Total Quality. Assured.

EU TYPE-EXAMINATION CERTIFICATE

1. **EU type-examination Certificate (Module B)**
2. **Equipment or Protective System intended for use in potentially explosive atmospheres (Directive 2014/34/EU)**
3. **EU type examination certificate Nr** **ITS 16 ATEX 101335 X**
4. **Product:** Types CB, CF, CK, CQ, CY, PD-E-4, PD-U, PH-E, PA-D and PB-D Stopping plugs.
5. **Manufacturer:** EATON ELECTRICAL SYSTEMS Ltd Trading as Redapt or Raxton
   Applicant: EATON ELECTRICAL SYSTEMS Ltd Trading as Redapt or Raxton
6. **Address:** Kingsway South, Westgate, Aldridge, West Midlands, WS9 8FS
   Address: Kingsway South, Westgate, Aldridge, West Midlands, WS9 8FS
7. This product and any acceptable variation thereto are specified in the schedule to this certificate and therein referred to.
8. INTERTEK ITALIA S.p.A., Notified Body n° 2575 in accordance with article 17 of the Directive 2014/34/EU of the European Parliament and Council of the 26 February 2014, certifies that the equipment or protective system has been found to comply with the essential Health and Safety Requirements relating to the design and construction of equipment and protective system intended for use in potentially explosive atmosphere, given in Annex II of the Directive.

   The examination and tests results are recorded in confidential technical evaluation Intertek Report Nr. G102174344A Issue 1 dated December 2016 and G103326724 Issue 1 dated April 2018
9. Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN 60079-0:2012, EN 60079-1:2014, EN 60079-7:2015 and EN 60079-31:2014 except in respect of those requirements referred to at item 16 of the Schedule.
10. If the sign X is placed after the certificate number, it indicates that the product is subject to Special Conditions for Safe Use specified in the schedule to this certificate.
11. This EU-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.
12. The marking of the product shall include the following:

I M2 Ex d I Mb
I M2 Ex e I Mb

II 2G Ex d IIC Gb
II 2G Ex e IIC Gb
II 2D Ex tb IIIC Db IP66

(Group I marking does not apply to CY or PD-E-4 Stopping Plugs) (Ex d marking does not apply to PD-E-4)
Ta = (Dependant on construction material and O-ring fitted – See equipment sections)
Ta =-20°C, or +5°C to +65°C (from Nylon PD-E-4 versions, refer to Conditions of Certification 6) See equipment section

04-10-2019
Certificate issue date

Alessandro Savio
Certification Officer
Intertek Italia S.p.A. (NB 2575)

ACCREDIA
L'ENTE ITALIANO DI ACCREDITAMENTO
PDR N° 277B
Membro degli Accordi di Mutuo Riconoscimento EA, IAF e ILAC
Signatory of EA, IAF and ILAC Mutual Recognition Agreements

This certificate has been issued by Intertek Italia S.p.A. NB 2575 on transfer from Intertek Testing & Certification Ltd. (NB 0359) using the same issued original certificate number.

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate and then only in its entirety. Any use of the Intertek n\ame or one of its marks for the sale or advertisement of the tested material, product or service must first\ be approved in writing by Intertek.

Intertek Italia S.p.A. Via Miglioli, 2/A - 20063 Cernusco sul Naviglio, Milano - Italy

SCHEDULE

EU TYPE EXAMINATION CERTIFICATE NUMBER: ITS 16 ATEX 101335 X

13. **DESCRIPTION OF THE EQUIPMENT OR PROTECTIVE SYSTEM**

The stopping plugs are threaded and are used to fill unused entries in associated apparatus. They have thread forms between M12 and M 110 and are briefly described as follows:
Type CF: Round/hexagon socket/internal mounting
Type CB: Round/hexagon socket/external mounting
Type CK: Hexagon head
Type CQ: 'Mushroom' head
Type CY: Similar to Type CK with a hollow threaded section
The PD-U series stopping plugs comprise of metallic round bodies with a dome head having a hexagonal key-way recess for tightening. They may optionally be machined with a groove to fit an 'o' ring seal. Coded: Exd I/IIC Mb/Gb, Ex e I/IIC Mb/Gb, Ex tb IIIC Db IP6X
The PA-D and PB-D Series stopping plugs comprise of metallic round bodies with a thread run out to shoulder having a hexagonal key-way recess for internal or external tightening. Coded: Ex d I/IIC Mb/Gb, Ex e I/IIC Mb/Gb Ex tb IIIC Db IP6X

The PH-E Series are ranges of 'Ex e' threaded stopping plugs each comprising a threaded body with either a hexagonal head or socket for tightening.
Design Options:
Threadforms Options: ISO Metric (to BS3463)
PG to DIN40430
NPT (ANSI/ASME B1.20.1)
NPS (ANSI/ASME B1.20.1)
ISO Pipe Thread (BS21) BSPP/BSPT
Imperial conduit ET BS31
BSP to BS21
Any threadform conforming to Table 3 of EN 60079-1
Material Options: Brass BS 2874 (CZ121)
Mild Steel to BS970 (EN1A)
Stainless Steel to BS970 (316)
Aluminium HE30 (BS754 Parts 1,2,3 & 6/BS755 1,2,3 & 6)
Plating Options: Metallic variants may be suitably plated to the appropriate British, European or ISO recognized standards
Types PD-E-4 Stopping Plugs: these are a range of threaded stopping plugs that are used to fill unused entries in the associated apparatus. The PD-E-4 has a 'mushroom' head, there is also a version made from Durethan BKV 30 N1 30% Glass Filled Nylon 6 which are intended for Ex e only.
Material options
- Brass BS 2872 (CZI 21)
- Mild Steel to BS970 (EN1A)
- Stainless Steel to BS970 (316)
- Aluminium BS1474, 6082T6
- Type Durethan BKV 30 N1 Glass Filled Nylon 6
- Type Durethan BKV 140 Glass Filled Nylon 6

Surface Coating: Nickel, Zinc, Electroless Nickel

Entry threads options:

SCHEDULE

EU TYPE EXAMINATION CERTIFICATE NUMBER: ITS 16 ATEX 101335 X

- Metric to BS 3643:
- ET Conduit to BS 31:
- PG to DIN 40430:
- BSP to BS 2779
- BSPT to BS 21
- NPT to ANSI/ASME B1.20.1

Design options
* The materials of construction may be brass, stainless steel or mild steel.
* Entry threads may be Metric to ISO 965, Pg to DIN 40430, BSPP to BS 31, ET (British Conduit) to ET 31, NPS to ANSI/ASME B1.20.1 or thread forms complying with Table 3 of IEC 60079-1.
Material options O-ring and options Entry thread options
Brass CZ121/CZ122 EPDM (standard) Metric to ISO PT 173
Stainless steel 316 Nitrile PG to DIN 40430:1971
Aluminium BS 1474, 6082T6 Neoprene BSPP to BS 2779
Aluminium bronze BS 1400B2 (JM-03 or LM7-16) Viton BSPT to BS21
Silicone ET Conduit to BS 31

Conditions of manufacture
The Manufacturer shall comply with the following for the stopping plugs:
1. The DP-E stopping plugs manufactured from Nylon shall not be marked with any information that indicates that they are suitable for Group I use.
2. The manufacturer shall take all reasonable steps to ensure that the user can comply with the special conditions for safe use and shall advise the user in respect of the materials that are used in the construction of the devices.
3. These products shall be marked in accordance with the information as specified in this certificate and related reports.
4. When these entry devices are manufactured in Type BKV 30 or 140 material, they shall be to be marked with BKV 30 or140 as applicable.
5. These products shall be marked in accordance with the information as specified in this certificate and related reports.
6. Aluminium variants, where applicable, are not permitted for Group I applications. The manufacturer shall ensure that the equipment is marked appropriately
7. In accordance with IEC 60079-1, the coating on joint surfaces of metallic devices that are electroplated shall be no more than 0.008mm thick.

CE Marking shall be accompanied by the identification number of the Notified Body responsible for surveillance of production.

14. **DRAWINGS AND DOCUMENTS**

TITLE	DOCUMENT Nr	LEVEL	DATE
Stopping Plugs (CB& CF Tapered	CB-CF	1	05/04/16
Stopping Plugs (CQ, CK & CY)	CQ-CK-CY	1	18/04/11

SCHEDULE

EU TYPE EXAMINATION CERTIFICATE NUMBER: ITS 16 ATEX 101335 X

TITLE	DOCUMENT Nr	LEVEL	DATE
Exe Glass Filled Nylon Stopping Plugs	CQ-M	1	05/04/16
EExe II Dome Head Stopping Plugs	PD-E	1	28/03/16
Exd I&IIC & Exe IIC Domehead Stopping Plugs	PD-U	1	28/03/16
Exe II Hex Head Stopping Plugs	PH-E	1	04/04/16
Marking Drawing	IECExITS16.0012X, ITS16ATEX101335X	1	15/11/16
*Exd I & IIC Certified Parallel Stopping Plugs	80-B-6	1	08/03/16
*Exd I&IIc Certified NPT Stopping Plugs	PA-D PB-D	1	08/03/16

Copies of the above listed documents are kept at Intertek Italia S.p.A. archive.

15. **SPECIAL CONDITIONS FOR SAFE USE**

1. If a stopping plug is machined with an undercut and is used for an Ex d application, then the wall of the enclosure into which it is fitted shall be such as to maintain five full threads engagement.
2. When used for increased safety or Ex e or protection by enclosure Ex tb applications, a suitable method of sealing to the associated enclosure shall be fitted
3. The stopping plugs shall not be used with any form of adaptors or reducers.
4. The interfaces between these devices and the associated enclosure cannot be defined; therefore, it is the user's responsibility to ensure that the appropriate ingress protection level is maintained at these interfaces.
5. The stopping plugs, when manufactured from non-metallic material, are only suitable for installation in areas considered to be a low risk from mechanical impact
6. The stopping plugs, when manufactured from non-metallic material, shall be adequately protected from direct exposure to sunlight
7. The stopping plugs, when construction from non-metallic material, shall only be cleaned with a damp cloth.
8. The stopping plugs are suitable for use at -50°C to +200°C at their point of mounting (Note: this is reduced when the stopping plugs are fitted with 'O' rings, see below).

'O'-ring Material	Limiting temperature
None	-50°C to +200°C
Nitrile	-20°C to +80°C
EPDM	-30°C to +125°C
Neoprene	-20°C to +100°C
Viton	-5°C to +180°C
Silicone	-30°C to +180°C
Fluorosilicone	-50°C to +150°C

Note: The maximum temperature is limited to 150°C in Group I application (Coal dust, Mining)

Original copy (English)
MEGGITT

SCHEDULE

EU TYPE EXAMINATION CERTIFICATE NUMBER: ITS 16 ATEX 101335 X

PD-E-4 Nylon Stopping Plugs

9. When manufactured in BKV 30 NI type material, the entry devices are suitable for a service temperature range of -20°C to +65°C. items made from this material are marked with 'BKV 30'.
10. When manufactured in BKV 140 type material, the entry devices are suitable for a service temperature range of -20°C to +45°C; items made from this material are marked with 'BKV 140'.
11. At their point of mounting, these devices are suitable for use at either -20°C to +65°C or 5°C to +65°C when using Viton seals. The clearance holes for metric male threaded products, suitable for clearance hole applications of increased safety enclosures are to have a dimeter of 0.3 to 0.5mm larger than the major diameter of the male thread. PD-E-4 stopping plugs employing parallel threads without seals shall have at least eight full threads of engagement, with a minimum tolerance according to ISO 965-1 and ISO 965-3.

PD-U Stopping Plugs

12. When installed in Group I applications, adaptors manufactured in brass shall be installed where the risk of impact is low

PA-D and PB-D Stopping Plugs

13. At their point of mounting, these devices are suitable for use at -50°C to +180°C for Group II applications and -50°C to +150°C for Group I applications

16. **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS**

The relevant essential Health and Safety Requirements have been identified and assessed in Intertek Report Nr. G102174344A Issue: 1 Dated: December 2016 and G103326724 Issue 1 dated April 2018

17. **ROUTINE (FACTORY) TESTS**

None

18. **DETAIL OF CERTIFICATE CHANGES**

None

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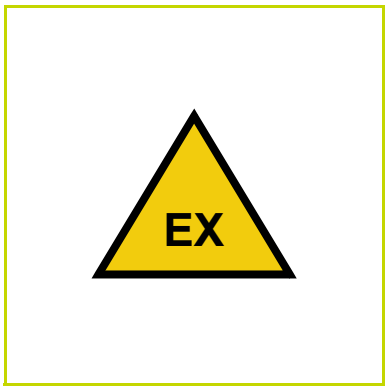
EX CERTIFICATE – ATEX

vibro-meter®

ITS 16 ATEX 101336 X
for
cable fittings (stuffing glands)



Note: Although the Ex certificate may be included in more than one language, the liability of the notified body applies only on the text of the original copy of the certificate that it published.

Document reference ITS 16 ATEX 101336 X
Edition 2 – January 2022

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EU TYPE-EXAMINATION CERTIFICATE

1. **EU type-examination Certificate (Module B)**
2. **Equipment or Protective System intended for use in potentially explosive atmospheres (Directive 2014/34/EU)**
3. **EU type examination certificate Nr** **ITS16ATEX101336X**
4. **Product:** Type AR Male/Male and types AU / AX Female/ Female Union Adaptors. Types AB and AJ Gland Adaptors, Types BB and BJ Gland Reducers and DG / DN Earthlead Adaptors and Reducers
5. **Manufacturer:** EATON ELECTRICAL SYSTEMS Ltd Trading as Redapt or Raxton
6. **Address:** Kingsway South
   Westgate, Aldridge
   West Midlands
   WS9 8FS
7. This product and any acceptable variation thereto are specified in the schedule to this certificate and therein referred to.
8. INTERTEK ITALIA S.p.A., Notified Body n° 2575 in accordance with article 17 of the Directive 2014/34/EU of the European Parliament and Council of the 26 February 2014, certifies that the equipment or protective system has been found to comply with the essential Health and Safety Requirements relating to the design and construction of equipment and protective system intended for use in potentially explosive atmosphere, given in Annex II of the Directive.

   The examination and tests results are recorded in confidential technical evaluation Intertek Report Nr. G102174344B Issue 1 dated September 2016 and Report 10439337LHD-001b dated August 2019.
9. Compliance with the Essential Health and Safety Requirements has been assured by compliance with standards EN 60079-0:2012+A11:2013, EN 60079-1:2014, EN 60079-7:2015+A1:2018 and EN 60079-31:2014 except in respect of those requirements referred to at item 16 of the Schedule.
10. If the sign X is placed after the certificate number, it indicates that the product is subject to Special Conditions for Safe Use specified in the schedule to this certificate.
11. This EU-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.
12. The marking of the product shall include the following:

Types AR and BJ Male/Male and type AU and AX Female/Female Union Adaptors, Types AB and AJ Gland Adaptors, Types BB and BJ Gland Reducers and DG and DN Earthlead Adaptors and Reducers
I M2 Ex db I Mb
II 2 G Ex db IIC Gb
I M2 Ex eb I Mb
II 2 G Ex eb IIC Gb
II 2D Ex tb IIIC Db IP6X Ta = see schedule
Type AB & AJ Adapters, Type BB & BJ Reducers
II 2G Ex eb IIC Gb
II 2D Ex t IIIC Db IP 66 Ta = see schedule

September 1, 2020
Certificate issue date

Alessandro Savio
Certification Officer
Intertek Italia S.p.A. (NB 2575)

ACCREDIA
L'ENTE ITALIANO DI ACCREDITAMENTO
PDR N° 277B
Membro degli Accordi di Mutuo Riconoscimento EA, IAF e ILAC
Signatory of EA, IAF and ILAC Mutual Recognition Agreements

This certificate has been issued by Intertek Italia S.p.A. NB 2575 on transfer from Intertek Testing & Certification Ltd. (NB 0359) using the same issued original certificate number.

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

SCHEDULE

EU TYPE EXAMINATION CERTIFICATE NUMBER: ITS16ATEX101336X

13. **DESCRIPTION OF THE EQUIPMENT OR PROTECTIVE SYSTEM**

The Types AR, BJ, AB, AU, AX, AJ Adaptors, Types BB & BJ Reducers and Types DG and DN Earthlead Adaptors are designed to convert an existing cable entry aperture, in the associated apparatus, to a different thread form and/or size. Each device comprises a hollow body with a male thread at one end and a female thread at the other. Entry threads are between M12 and M120 (M16 to M75 for Glass Filled Nylon and M20 to M32 for DG/DN).
The Type AR and BJ Male/Male Adaptor and Types AU and AX Female/Female Adaptors have thread forms of between M12 and M120. Thread combinations are such that a maximum of two 'standard' size differences is maintained for Increase in thread and no restriction on reduction. Type designations determine thread combinations and body profiles.

Material Options
Brass to BS 2874
Brass BS 2872
Stainless Steel
Mild Steel
Aluminium
Bronze
30 % Glass Filled Nylon
40% Glass Filled Nylon
Surface Coating: Nickel, Zinc, Electroless Nickel

Thread Options
Metric to BS 3643
ET Conduit to BS 31
PG to DIN 40430
BSPP to BS 2779
BSPT to BS 21
NPT to ANSI/ASME B1.20.1
In addition any other thread form that also complies with the requirements of IEC 60079-1 tables 3 or 4 and clause C2.2 (as applicable) are also permitted.

CE Marking shall be accompanied by the identification number of the Notified Body responsible for surveillance of production.

14. **DRAWINGS AND DOCUMENTS**

TITLE	DOCUMENT Nr	LEVEL	DATE
AB & AJ SERIES ADAPTORS	AB-AJ	1	05-04-2016
AB-AJ & BB-BJ SERIES ADAPTORS & REDUCERS	AB-AJ- BB-BJ	2	08-07-2018
AR-AU-AX SERIES ADAPTORS	AR-AU-AX	1	05-04-2016
BB-BJ SERIES REDUCERS	BB-BJ	1	05-04-2016
DG SERIES	DG	2	01-02-2012
MARKING DRAWING	IECExITS16.0011X ITS16ATEX101336X	1	15-11-2016

Copies of the above listed documents are kept at Intertek Italia S.p.A. archive.

SCHEDULE

EU TYPE EXAMINATION CERTIFICATE NUMBER: ITS16ATEX101336X

15. **SPECIAL CONDITIONS FOR SAFE USE**

1. When used for Increased Safety ('Ex e') or Protection by enclosure (Ex tb) applications, a suitable method of sealing to the associated enclosure shall be provided.

2. Products constructed from Aluminium are to be positioned where they are subject to low risk of mechanical impact only and shall not be marked as suitable for Group I.

Type AB & AJ Adapters, Type BB & BJ Reducers

1 All entry devices shall only be installed where there is a low risk from mechanical impact.

2 Only one adaptor or reducer is to be used with any single cable entry on the associated equipment.

3 The interfaces between these devices and the associated enclosure cannot be defined; therefore, it is the user's responsibility to ensure that the appropriate ingress protection level is maintained at these interfaces.

4 When manufactured in 30% Glass Filled Nylon material, the entry devices are suitable for a service temperature range of -30°C to +90°C.

5 When manufactured in 40% Glass Filed Nylon material, the entry devices are suitable for a service temperature range of -20°C to +45°C.

6 When the entry devices are manufactured in 40% Glass Filled Nylon material, they shall be protected from exposure to light; items made from this material are marked with '40% Glass Filled Nylon'.

7 Service temperature ranges have been applied as follows:

O-ring Service temperature

Material	Service Temperature
None fitted	-60°C to 200°C*
EPDM	-50°C to +100°C
Nitrile	-20°C to +80°C
Neoprene	-40°C to +80°C
Viton	-20°C to +180°C*
Silicone	-60°C to +180°C *
Fluorosilicone	-60°C to +130°C

Note:. The limiting temperatures specified above are de-rated by 20K according to Clause 7.2.2 'Material Selection' of EN 60079-0.
Note: The maximum temperature is limited to 150°C in Group I application (Coal dust, Mining) O-ring materials affect marked with '*' above.
Note: Unless fitted with an interface sealing O-ring with lower properties, temperatures shall then be limited as per the manufacturer's instructions.

16. **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS**

The relevant essential Health and Safety Requirements have been identified and assessed in Intertek Report Nr. G102174344B Issue 1 dated September 2016 and Report 10439337LHD-001b dated August 2019.

SCHEDULE

EU TYPE EXAMINATION CERTIFICATE NUMBER: ITS16ATEX101336X

17. **ROUTINE (FACTORY) TESTS**

None.

18. **DETAIL OF CERTIFICATE CHANGES**

None.

ATEX certificate:

LCIE 02 ATEX 0038 U

for

Cable stuffing glands

Although the certificate is available in two languages (English and French), the liability of the notified body applies only on the text of the original copy of the certificate that it published.

EN

Bien que le certificat soit traduit dans les 2 langues (Anglais et Français), seul le texte de la copie originale du certificat peut engager la responsabilité de l'organisme notifié qui l'a publié.

FR

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www.meggittsensing.com/energy

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L C I E

1	**ATTESTATION D'EXAMEN CE DE TYPE**	**EC TYPE EXAMINATION CERTIFICATE**
2	Composants destinés à être utilisés en atmosphères explosibles **Directive 94/9/CE**	Components Intended for use in Potentially explosive atmospheres **Directive 94/9/EC**
3	Numéro de l'attestation CE de type **LCIE 02 ATEX 0038U**	EC type Examination Certificate number **LCIE 02 ATEX 0038U**
4	Accessoires Type : EExe	Accessories Type : EExe
5	Demandeur : SIB-ADR	Applicant : SIB-ADR
6	Adresse : 50, rue du Capitaine Maillard 57220 BOULAY - FRANCE	Address : 50, rue du Capitaine Maillard 57220 BOULAY - FRANCE
7	Ce composant ou système de protection et ses variantes éventuelles acceptées est décrit dans l'annexe de la présente attestation et dans les documents descriptifs cités en annexe.	This component and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein refered to.
8	Le LCIE, organisme notifié sous la référence 0081 conformément à l'article 9 de la directive 94/9/CE du Parlement européen et du Conseil du 23 mars 1994, certifie que ce composant est conforme aux exigences essentielles en ce qui concerne la sécurité et la santé pour la conception et la construction de composants destinés à être utilisés en atmosphères explosibles, données dans l'annexe II de la directive. Les vérifications et épreuves figurent dans notre rapport confidentiel N° 60000011/2.	LCIE, notified body number 0081 in accordance with article 9 of the directive 94/9/EC of the European Parliament and the Council of 23 March 1994, certifies that this component has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of component intended for use in potentially explosive atmospheres, given in Annex II to the directive. The examination and test results are recorded in confidential report No 60000011/2.
9	Le respect des exigences essentielles en ce qui concerne la sécurité et la santé est assuré par la conformité aux documents suivants : - EN 50014 (1997) + Amendements 1 et 2 (1999) - EN 50019 (2000) - EN 50281-1-1 (1998)	Compliance with the Essential Health and Safety Requirements has been assured by compliance with : - EN 50014 (1997) + Amendments 1 and 2 (1999) - EN 50019 (2000) - EN 50281-1-1 (1998)
10	Le signe U lorsqu'il est placé à la suite du numéro de l'attestation, indique que cette attestation ne doit pas être confondue avec celle destinée à un appareil ou un système de protection. Cette attestation partielle peut être utilisée comme base pour l'attestation d'un appareil ou d'un système de protection.	The sign U placed after the certificate number indicates that this certificate must not be mistaken with a certificate intended for an Equipment or Protective system. This partial certification may be used as a basis for certification of an Equipment or Protective system.
11	La présente attestation d'examen CE de type porte uniquement sur la conception, l'examen et l'essai de l'équipement ou du système de protection spécifié conformément à la directive 94/9/CE. Toutes autres exigences de la Directive sont applicables au procédé de fabrication et de livraison de cet équipement ou système de protection. Ces derniers ne sont pas couverts par la présente attestation.	This EC Type examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.
12	Le marquage du composant devra comporter, entre autres indications utiles, les mentions suivantes : II 2 G/D EEx e II IP6X	The marking of the equipment or protective system shall include the following : II 2 G/D EEx e II IP6X

Fontenay-aux-Roses, le 23 janvier 2003

Le Directeur de l'organisme certificateur
Manager of the certification body

Isabelle HELLER

Timbre sec/dry seal

Page 1/2

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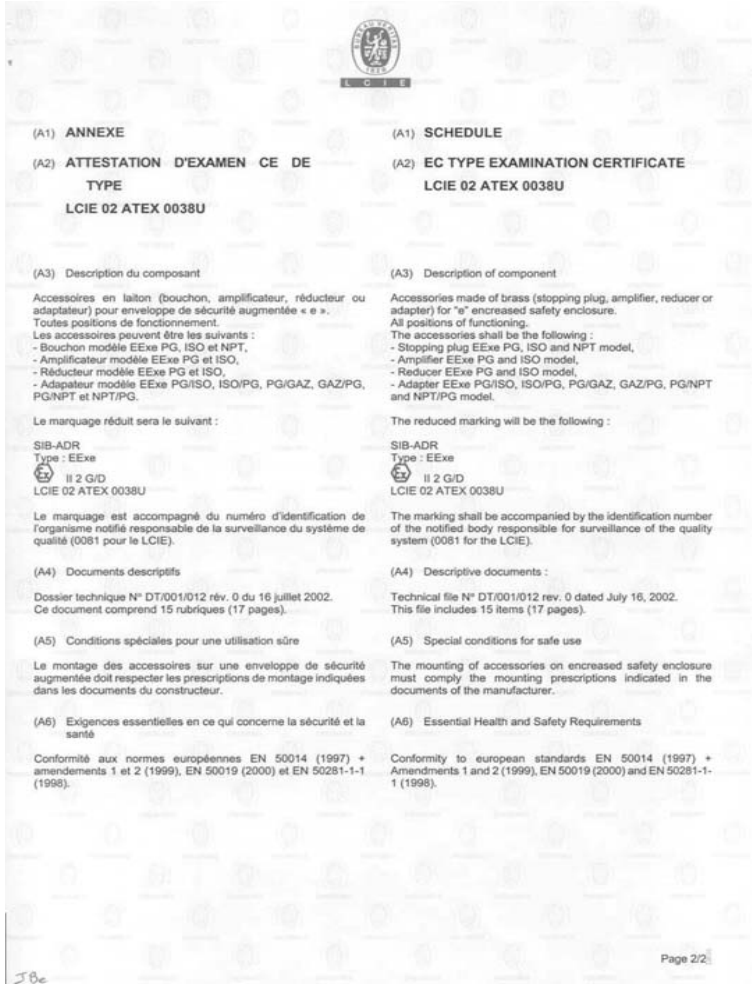
Laboratoire Central des Industries Electriques — BP 8 — 92260 Fontenay-aux-Roses cedex — Fax : +33 1 40 95 86 56 — contact@lcie.fr — et conseil de surveillance — au capital de 15 745 984 €
Une société de Bureau Veritas — France — www.lcie.fr — RCS Nanterre B 408 363 174

JBe



L C I E

(A1)	**ANNEXE**	**SCHEDULE**
(A2)	**ATTESTATION D'EXAMEN CE DE TYPE** **LCIE 02 ATEX 0038U**	**EC TYPE EXAMINATION CERTIFICATE** **LCIE 02 ATEX 0038U**
(A3)	Description du composant	Description of component
	Accessoires en laiton (bouchon, amplificateur, réducteur ou adaptateur) pour enveloppe de sécurité augmentée « e ». Toutes positions de fonctionnement. Les accessoires peuvent être les suivants : - Bouchon modèle EExe PG, ISO et NPT, - Amplificateur modèle EExe PG et ISO, - Réducteur modèle EExe PG et ISO, - Adapateur modèle EExe PG/ISO, ISO/PG, PG/GAZ, GAZ/PG, PG/NPT et NPT/PG.	Accessories made of brass (stopping plug, amplifier, reducer or adapter) for "e" encreased safety enclosure. All positions of functioning. The accessories shall be the following : - Stopping plug EExe PG, ISO and NPT model, - Amplifier EExe PG and ISO model, - Reducer EExe PG and ISO model, - Adapter EExe PG/ISO, ISO/PG, PG/GAZ, GAZ/PG, PG/NPT and NPT/PG model.
	Le marquage réduit sera le suivant : SIB-ADR Type : EExe II 2 G/D LCIE 02 ATEX 0038U	The reduced marking will be the following : SIB-ADR Type : EExe II 2 G/D LCIE 02 ATEX 0038U
	Le marquage est accompagné du numéro d'identification de l'organisme notifié responsable de la surveillance du système de qualité (0081 pour le LCIE).	The marking shall be accompanied by the identification number of the notified body responsible for surveillance of the quality system (0081 for the LCIE).
(A4)	Documents descriptifs	Descriptive documents :
	Dossier technique N° DT/001/012 rév. 0 du 16 juillet 2002. Ce document comprend 15 rubriques (17 pages).	Technical file N° DT/001/012 rev. 0 dated July 16, 2002. This file includes 15 items (17 pages).
(A5)	Conditions spéciales pour une utilisation sûre	Special conditions for safe use
	Le montage des accessoires sur une enveloppe de sécurité augmentée doit respecter les prescriptions de montage indiquées dans les documents du constructeur.	The mounting of accessories on encreased safety enclosure must comply the mounting prescriptions indicated in the documents of the manufacturer.
(A6)	Exigences essentielles en ce qui concerne la sécurité et la santé	Essential Health and Safety Requirements
	Conformité aux normes européennes EN 50014 (1997) + amendements 1 et 2 (1999), EN 50019 (2000) et EN 50281-1-1 (1998).	Conformity to european standards EN 50014 (1997) + Amendments 1 and 2 (1999), EN 50019 (2000) and EN 50281-1-1 (1998).

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JBe

L C I E

1 AVENANT D'ATTESTATION D'EXAMEN CE DE TYPE

2 Appareil ou système de protection destiné à être utilisé en atmosphères explosibles (Directive 94/9/CE)

3 Numéro de l'avenant :
LCIE 02 ATEX 0038 U / 01

4 Appareil ou système de protection :
Composants
Type : EEXe ; modèles Bouchon, Réducteur, Amplificateur

5 Demandeur : SIB ADR

15 DESCRIPTION DE L'AVENANT
Mise à jour des normes

Les résultats des vérifications et essais figurent dans le rapport confidentiel N° 600551O6-555530 / 04

Le marquage doit être :

SIB ADR (ou logo SIB)
II 2 G/ D
Ex e II
Ex tD A21
LCIE 02 ATEX 0038 U
Type et pas du filetage

L'appareil doit également comporter le marquage normalement prévu par les normes de construction qui le concerne.

16 DOCUMENTS DESCRIPTIFS
Dossier de certification N° DA/007/04 rev 0 du 12 février 2007. Ce dossier comprend 15 rubriques (17 pages).

13 ANNEXE

14 AVENANT D'ATTESTATION D'EXAMEN CE DE TYPE
LCIE 02 ATEX 0038 U / 01

17 CONDITIONS SPECIALES POUR UNE UTILISATION SURE
Lors du montage des bouchons, des réducteurs ou des amplificateurs sur des enveloppes de sécurité augmentée « e » (pour les atmosphères Gaz) ou sur des enveloppes protégées « IP6X » (pour les atmosphères Poussières), l'implantation et les assemblages réalisés devront être conformes aux documents descriptifs du constructeur.

Gamme de température d'utilisation comprise entre :
– 20 °C et + 80 °C.

18 EXIGENCES ESSENTIELLES DE SECURITE ET DE SANTE
Le respect des exigences essentielles de sécurité et de santé est assuré par la conformité à :
- EN 60079-0 (2004)
- EN 60079-7 (2003)
- EN 61241-0 (2004)
- EN 61241-1 (2004)

19 VERIFICATIONS ET ESSAIS INDIVIDUELS
Néant

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03A-Annexe III_CE_ep_ar - rev0.DOC

Page 2 sur 2

L C I E

1 SUPPLEMENTARY EC TYPE EXAMINATION CERTIFICATE

2 Equipment or protective system intended for use in potentially explosive atmospheres (Directive 94/9/EC)

3 Supplementary certificate number :
LCIE 02 ATEX 0038 U / 01

4 Equipment or protective system :
Components
Type : EEXe ; Cap, Reducer or Amplifier models

5 Applicant : SIB ADR

15 DESCRIPTION OF THE SUPPLEMENTARY CERTIFICATE
Update standards

The examination and test results are recorded in confidential report N° 600551O6-555530 / 04

The marking shall be :

SIB ADR (or SIB logo)
II 2 G/ D
Ex e II
Ex tD A21
LCIE 02 ATEX 0038 U
Type and size of thread

The equipment shall also bear the usual marking required by the manufacturing standards applying to such equipment.

16 DESCRIPTIVE DOCUMENTS
Certification file N° DA/007/04 rev 0 dated February 12th, 2007. This file includes 15 items (17 pages).

13 SCHEDULE

14 SUPPLEMENTARY EC TYPE EXAMINATION CERTIFICATE
LCIE 02 ATEX 0038 U / 01

17 SPECIAL CONDITIONS FOR SAFE USE
For the assembling of the caps, reducers or amplifiers on "e" increased safety enclosures (for Gas atmospheres) or on IP6X protected enclosures (for Dust atmospheres), the fitting up and the assembling realized shall must be in accordance with the descriptive documents on the manufacturer.

Using ambient temperature range between :
– 20 °C and + 80 °C.

18 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS
Compliance with the Essential Health and Safety Requirements has been assured by compliance with :
- EN 60079-0 (2004)
- EN 60079-7 (2003)
- EN 61241-0 (2004)
- EN 61241-1 (2004)

19 ROUTINE VERIFICATIONS AND TESTS
None

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03A-Annexe III_CE_ep_ar - rev0.DOC

Page 1 sur 2

Fontenay-aux-Roses, le 4 mai 2007

Le responsable de certification ATEX
ATEX certification manager

Hervé CERVELLE

1 **AVENANT D'ATTESTATION D'EXAMEN CE DE TYPE**

2 **Composant** destiné à être utilisé en atmosphères explosibles **(Directive 94/9/CE)**

3 Numéro de l'avenant :
LCIE 02 ATEX 0038 U / 02

4 Composant :

Type : EEX e
Modèles: Bouchon, réducteur, amplificateur et adaptateur en métal

5 Demandeur : S.I.B. (Schlemmer Industry & Building Parts)
25 Rue Théophile Somborn
57 220 BOULAY – MOSELLE France

15 **DESCRIPTION DE L'AVENANT**
Mise à jour normative suivant les normes :
EN 60079-0:2012 + A11:2013, EN 60079-7:2007, EN 60079-31:2009
Mise à jour du marquage
Mise à jour de la raison sociale

Les résultats des vérifications et essais figurent dans le rapport confidentiel N° 133536-668141-05

Paramètres spécifiques du ou des modes de protection concerné(s) :
Néant

Le marquage doit être :
SIB
Adresse : ...
Type : EEx e
N° de fabrication : ...
Année de fabrication : ...
Ex II 2 GD
Ex eb IIC
Ex tb IIIC
IP6X
LCIE 02 ATEX 0038 U

Fontenay-aux-Roses, le 6 mai 2015

Le Responsable de Certification ATEX
ATEX Certification Officer
Julien Gauthier

1 **SUPPLEMENTARY EC TYPE EXAMINATION CERTIFICATE**

2 **Component** Intended for use in Potentially explosive atmospheres **(Directive 94/9/EC)**

3 Supplementary certificate number :
LCIE 02 ATEX 0038 U / 02

4 Component :

Type : EEX e
Models: Metallic cap , reducer, amplifier and adaptor

5 Applicant : S.I.B. (Schlemmer Industry & Building Parts)
25 Rue Théophile Somborn
57 220 BOULAY – MOSELLE France

15 **DESCRIPTION OF THE SUPPLEMENTARY CERTIFICATE**
Update according to the standards :
EN 60079-0:2012 + A11:2013, EN 60079-7:2007, EN 60079-31:2009
Update of marking
Update of company name

The examination and test results are recorded in confidential report N° 133536-668141-05

Specific parameters of the concerned protection mode :

None

The marking shall be:
SIB
Address...
Type : EEx e
N° de fabrication : ...
Année de fabrication : ...
Ex II 2 GD
Ex eb IIC
Ex tb IIIC
IP6X
LCIE 02 ATEX 0038 U

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Société par Actions Simplifiée
au capital de 15 745 984 €
RCS Nanterre B 408 363 174

13 **ANNEXE**

14 **AVENANT D'ATTESTATION D'EXAMEN CE DE TYPE**

LCIE 02 ATEX 0038 U / 02

16 **DOCUMENTS DESCRIPTIFS**
Dossier de certification N° DA/002/02 rév.2 du 13/02/2015
Ce document comprend 2 rubriques (4 pages).

17 **CONDITIONS SPECIALES POUR UNE UTILISATION SURE**
Lors du montage des bouchons, des réducteurs ou des amplificateurs sur les enveloppes de sécurité augmentée ou sur les enveloppes protégées contre les inflammations de poussières par enveloppe Ex t, l'implantation et les assemblages réalisés devront être conformes aux documents descriptifs du constructeur.

Gamme de température de service :
- 20°C ≤ $T_{service}$ ≤ +80°C

18 **EXIGENCES ESSENTIELLES DE SECURITE ET DE SANTE**
Couverte par les normes listées au point 15

19 **VERIFICATIONS ET ESSAIS INDIVIDUELS**
Néant

13 **SCHEDULE**

14 **SUPPLEMENTARY EC TYPE EXAMINATION CERTIFICATE**

LCIE 02 ATEX 0038 U / 02

16 **DESCRIPTIVE DOCUMENTS**
Certification file N° DA/002/02 rev.2 dated 2015/02/13
This file includes 2 items (4 pages).

17 **SPECIAL CONDITIONS FOR SAFE USE**

For the assembling of the caps, reducers or amplifiers on increased safety enclosures (for Gas atmospheres) or on Ex t enclosures (for Dust atmospheres), the fitting up and the assembling realized shall must be in accordance with the descriptive documents on the manufacturer.

Using service temperature range between :
- 20°C ≤ $T_{service}$ ≤ +80°C

18 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS**

Covered by standards listed at 15

19 **ROUTINE VERIFICATIONS AND TESTS**
None

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ATEX certificate:

LCIE 03 ATEX 0033 U

for

Stuffing gland

Although the certificate is available in two languages (English and French), the liability of the notified body applies only on the text of the original copy of the certificate that it published.

EN

Bien que le certificat soit traduit dans les 2 langues (Anglais et Français), seul le texte de la copie originale du certificat peut engager la responsabilité de l'organisme notifié qui l'a publié.

FR

Meggitt SA
Route de Moncor 4
PO Box 1616
CH - 1701 Fribourg
Switzerland

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CETTE PAGE EST LAISSÉE INTENTIONNELLEMENT VIDE
DIESE SEITE WURDE ABSICHTLICH LEER GELASSEN

L C I E

1 **ATTESTATION D'EXAMEN CE DE TYPE**

2 Composants destinés à être utilisés en atmosphères explosibles
Directive 94/9/CE

3 Numéro de l'attestation CE de type
LCIE 03 ATEX 0033 U

4 Composant
Composants
Type : EEXe ; modèles Bouchon, Réducteur ou Amplificateur

5 Demandeur : S.I.B.-A.D.R.

6 Adresse : 50, Rue du Capitaine Maillard
57220 BOULAY
FRANCE

7 Ce composant ou système de protection et ses variantes éventuelles acceptées est décrit dans l'annexe de la présente attestation et dans les documents descriptifs cités en annexe.

8 Le LCIE, organisme notifié sous la référence 0081 conformément à l'article 9 de la directive 94/9/CE du Parlement européen et du Conseil du 23 mars 1994, certifie que ce composant est conforme aux exigences essentielles en ce qui concerne la sécurité et la santé pour la conception et la construction de composants destinés à être utilisés en atmosphères explosibles, données dans l'annexe II de la directive. Les vérifications et épreuves figurent dans notre rapport confidentiel N° 60004606/1.

9 Le respect des exigences essentielles en ce qui concerne la sécurité et la santé est assuré par la conformité aux documents suivants :
- EN 50014 (1997) + amendements 1 et 2 (1999)
- EN 50019 (2000)
- EN 50281-1-1 (1998) + amendement 1 (2002)

10 Le signe U lorsqu'il est placé à la suite du numéro de l'attestation, indique que cette attestation ne doit pas être confondue avec celle destinée à un appareil ou un système de protection. Cette attestation partielle peut être utilisée comme base pour l'attestation d'un appareil ou d'un système de protection.

11 La présente attestation d'examen CE de type porte uniquement sur la conception, l'examen et l'essai du composant spécifié conformément à la directive 94/9/CE.
D'autres exigences de la Directive sont applicables au procédé de fabrication et de livraison du composant.
Ces dernières ne sont pas couvertes par la présente attestation.

12 Le marquage du composant devra comporter, entre autres indications utiles, les mentions suivantes :

Ex II 2 G/D
EEx e II – IP6X

Fontenay-aux-Roses, le 09 janvier 2004

Le Directeur de l'organisme certificateur
Manager of the certification body

Timbre sec/dry seal

1 **EC TYPE EXAMINATION CERTIFICATE**

2 Components Intended for use in Potentially explosive atmospheres
Directive 94/9/EC

3 EC type Examination Certificate number
LCIE 03 ATEX 0033 U

4 Component
Components
Type : EEXe ; Cap, Reducer or Amplifier models

5 Applicant : S.I.B.-A.D.R.

6 Address : 50, Rue du Capitaine Maillard
57220 BOULAY
FRANCE

7 This component and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein refered to.

8 LCIE, notified body number 0081 in accordance with article 9 of the directive 94/9/EC of the European Parliament and the Council of 23 March 1994, certifies that this component has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of component intended for use in potentially explosive atmospheres, given in Annex II to the directive.
The examination and test results are recorded in confidential report N° 60004606/1.

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with :

10
- EN 50014 (1997) + Amendments 1 and 2 (1999)
- EN 50019 (2000)
- EN 50281-1-1 (1998) + Amendment 1 (2002)

10 If the sign U is placed after the certificate number it indicates that this certificate must not be mistaken with a certificate intended for an Equipment or Protective system. This partial certification may be used as a basis for certification of an Equipment or Protective system.

11 This EC Type examination certificate relates only to the design, examination and tests of the specified component in accordance to the directive 94/9/EC.
Further requirements of the Directive apply to the manufacturing process and supply of this component.. These are not covered by this certificate.

12 The marking of the equipment or protective system shall include the following :

Ex II 2 G/D
EEx e II – IP6X

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L C I E

(A1) **ANNEXE**

(A2) **ATTESTATION D'EXAMEN CE DE TYPE**
LCIE 03 ATEX 0033 U

(A3) DESCRIPTION DU COMPOSANT

Les bouchons permettent d'obturer une enveloppe non équipée d'entrée de câble.
Les réducteurs et amplificateurs permettent le montage d'entrée de câble d'un diamètre inférieur ou supérieur au diamètre du trou de passage de l'enveloppe.

Toutes positions de fonctionnement

Les composants comprennent les éléments suivants :
- le bouchon à fente, le réducteur ou l'amplificateur, fileté PG ou ISO en matière plastique PC ou PA6,
- un joint plat en néoprène,
- un contre écrou hexagonal fileté PG ou ISO en laiton.

Le marquage réduit est le suivant :

S.I.B.-A.D.R.
Type : EEXe
Ex II 2 G/D
EEx e II
IP6X
LCIE 03 ATEX 0033U

Le marquage devra être accompagné du numéro d'identification de l'organisme notifié responsable de la surveillance du système approuvé de qualité (0081 pour le LCIE).
Le matériel devra également comporter le marquage normalement prévu par les normes de construction du matériel électrique concerné.

(A4) DOCUMENTS DESCRIPTIFS

Dossier technique N° DT/001/03 rév. 0 du 25 novembre 2003.
Ce document comprend 8 rubriques (13 pages).

(A5) CONDITIONS SPECIALES POUR UTILISATION SURE

Lors du montage des bouchons, des réducteurs ou des amplificateurs sur des enveloppes de sécurité augmentée « e » (pour les atmosphères Gaz) ou sur des enveloppes protégées « IP6X » (pour les atmosphères Poussières), l'implantation et les assemblages réalisés devront être conformes aux documents descriptifs du constructeur.

Gamme de température ambiante d'utilisation comprise entre :
– 20 °C et + 55 °C.

(A1) **SCHEDULE**

(A2) **EC TYPE EXAMINATION CERTIFICATE**
LCIE 03 ATEX 0033 U

(A3) DESCRIPTION OF COMPONENT

The caps allow to seal an enclosure no equipped of cable gland.

The reducers and the amplifiers allow the assembling of cable gland of less or higher diameter of the enclosure crossing hole diameter.

All positions of functioning

The components including the following elements :
- the groove cap, the reducer or the amplifier, threaded PG or ISO made of PC or PA6 plastic,
- a flat gasket made of neoprene,
- an hexagon PG or ISO threaded counternut made of brass.

The reduced marking is the following:

S.I.B.-A.D.R.
Type : EEXe
Ex II 2 G/D
EEx e II
IP6X
LCIE 03 ATEX 0033U

The marking shall be accompanied by the identification number of the notified body responsible for surveillance of the approved quality system (0081 for the LCIE).
The equipment must also carry the usual marking required by the manufacturing standards applying to such equipments concerned.

(A4) DESCRIPTIVE DOCUMENTS

Technical file N° DT/001/03 rev 0 dated November 25, 2003.
This file includes 8 items (13 pages).

(A5) SPECIAL CONDITIONS FOR SAFE USE

For the assembling of the caps, reducers or amplifiers on "e" increased safety enclosures (for Gas atmospheres) or on IP6X protected enclosures (for Dust atmospheres), the fitting up and the assembling realized shall must be in accordance with the descriptive documents on the manufacturer.

Using ambient temperature range between :
– 20 °C and + 55 °C.

L C I E

1 **AVENANT D'ATTESTATION D'EXAMEN CE DE TYPE**

2 **Appareil ou système de protection** destiné à être utilisé en atmosphères explosibles (**Directive 94/9/CE**)

3 Numéro de l'avenant :
LCIE 03 ATEX 0033 U / 01

4 Appareil ou système de protection :
Composants
Type : EEXe ; modèles Bouchon, Réducteur, Amplificateur

5 Demandeur : SIB ADR

15 **DESCRIPTION DE L'AVENANT**
Mise à jour des normes

Les résultats des vérifications et essais figurent dans le rapport confidentiel N° 600551O6-555530 / 03

Le marquage doit être :

SIB ADR (ou logo SIB)
II 2 G/ D
Ex e II
Ex tD A21
LCIE 03 ATEX 0033 U
Type et pas du filetage

L'appareil doit également comporter le marquage normalement prévu par les normes de construction qui le concerne.

16 **DOCUMENTS DESCRIPTIFS**

Dossier de certification N° DA/007/05 rev 0 du 12 février 2007. Ce dossier comprend 9 rubriques (13 pages).

1 **SUPPLEMENTARY EC TYPE EXAMINATION CERTIFICATE**

2 **Equipment or protective system** intended for use in potentially explosive atmospheres (**Directive 94/9/EC**)

3 Supplementary certificate number :
LCIE 03 ATEX 0033 U / 01

4 Equipment or protective system :
Components
Type : EEXe ; Cap, Reducer or Amplifier models

5 Applicant : SIB ADR

15 **DESCRIPTION OF THE SUPPLEMENTARY CERTIFICATE**
Update standards

The examination and test results are recorded in confidential report N° 600551O6-555530 / 03

The marking shall be :

SIB ADR (or SIB logo)
II 2 G/ D
Ex e II
Ex tD A21
LCIE 03 ATEX 0033 U
Type and size of thread

The equipment shall also bear the usual marking required by the manufacturing standards applying to such equipment.

16 **DESCRIPTIVE DOCUMENTS**

Certification file N° DA/007/05 rev 0 dated February 12th, 2007. This file includes 9 items (13 pages).

Fontenay-aux-Roses, le 26 juin 2007

Le responsable de certification ATEX
ATEX certification manager

NOTIFIED BODY
0081
ORGANISME NOTIFIE

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Page 1 sur 2
02A-Annexe III_CE_sp_av - rev0.DOC

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Laboratoire Central BP 8 Fax : +33 1 40 95 86 56 au capital de 15 745 984 €
des Industries Electriques 92260 Fontenay-aux-Roses cedex contact@lcie.fr RCS Nanterre B 408 363 174
Une société de Bureau Veritas France www.lcie.fr

L C I E

(A1) **ANNEXE (suite)** (A1) **SCHEDULE (continued)**

(A2) **ATTESTATION D'EXAMEN CE DE TYPE** (A2) **EC TYPE EXAMINATION CERTIFICATE**

LCIE 03 ATEX 0033 U **LCIE 03 ATEX 0033 U**

(A6) EXIGENCES ESSENTIELLES EN CE QUI CONCERNE LA SECURITE ET LA SANTE (A6) ESSENTIAL HEALTH AND SAFETY REQUIREMENTS

Conformité aux normes européennes EN 50014 (1997) + amendements 1 et 2 (1999), EN 50019 (2000) et EN 50281-1-1 (1998) + amendement 1 (2002).

Le matériel est dispensé d'épreuve individuelle.

Conformity to the European standards EN 50014 (1997) + Amendments 1 and 2 (1999), EN 50019 (2000) and EN 50281-1-1 (1998) + Amendment 1 (2002).

The equipment is exempted of individual test.

Page 3/3

13 **ANNEXE**

14 **AVENANT D'ATTESTATION D'EXAMEN CE DE TYPE**

LCIE 03 ATEX 0033 U / 01

17 **CONDITIONS SPECIALES POUR UNE UTILISATION SURE**

Lors du montage des bouchons, des réducteurs ou des amplificateurs sur des enveloppes de sécurité augmentée « e » (pour les atmosphères Gaz) ou sur des enveloppes protégées « IP6X » (pour les atmosphères Poussières), l'implantation et les assemblages réalisés devront être conformes aux documents descriptifs du constructeur.

Gamme de température d'utilisation comprise entre :
– 20 °C et + 55 °C.

18 **EXIGENCES ESSENTIELLES DE SECURITE ET DE SANTE**

Le respect des exigences essentielles de sécurité et de santé est assuré par la conformité à :
- EN 60079-0 (2004)
- EN 60079-7 (2003)
- EN 61241-0 (2004)
- EN 61241-1 (2004)

19 **VERIFICATIONS ET ESSAIS INDIVIDUELS**

Néant

13 **SCHEDULE**

14 **SUPPLEMENTARY EC TYPE EXAMINATION CERTIFICATE**

LCIE 03 ATEX 0033 U / 01

17 **SPECIAL CONDITIONS FOR SAFE USE**

For the assembling of the caps, reducers or amplifiers on "e" increased safety enclosures (for Gas atmospheres) or on IP6X protected enclosures (for Dust atmospheres), the fitting up and the assembling realized shall must be in accordance with the descriptive documents on the manufacturer.

Using ambient temperature range between :
– 20 °C and + 55 °C.

18 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS**

Compliance with the Essential Health and Safety Requirements has been assured by compliance with :
- EN 60079-0 (2004)
- EN 60079-7 (2003)
- EN 61241-0 (2004)
- EN 61241-1 (2004)

19 **ROUTINE VERIFICATIONS AND TESTS**

None

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1 **AVENANT D'ATTESTATION D'EXAMEN CE DE TYPE**

2 **Composant** destiné à être utilisé en atmosphères explosibles **(Directive 94/9/CE)**

3 Numéro de l'avenant :
LCIE 03 ATEX 0033 U / 02

4 Composant :
Type : EEXe
Modèles : Bouchon, réducteur et amplificateur

5 Demandeur : S.I.B.-A.D.R.

15 **DESCRIPTION DE L'AVENANT**

Mise à jour selon les normes EN 60079-0 (2006), EN 60079-7 (2007), EN 61241-0 (2004), EN 61241-1 (2004)

Extension de la température ambiante d'utilisation. Voir détails au point 17.

Les résultats des vérifications et essais figurent dans le rapport confidentiel N° 91814-583624.

Paramètres spécifiques du ou des modes de protection concerné(s) :

Inchangés.

Le marquage doit être :

Inchangé.

16 **DOCUMENTS DESCRIPTIFS**
Dossier de certification N° DA/009/06 Rév. 1 du 23/06/2009.
Ce document comprend 9 rubriques (13 pages).

17 **CONDITIONS SPECIALES POUR UNE UTILISATION SÛRE**

Modifié comme suit :
Les accessoires ne doivent pas être soumis à un choc supérieur à 4 joules.

Référence de la matière plastique / *Reference of plastic material*	A9541016	A9380300	A9380301
Température ambiante d'utilisation / *Using ambient temperature*	-35°C à / *to* +95°C	-35°C à / *to* +90°C	-35°C à / *to* +90°C

18 **EXIGENCES ESSENTIELLES DE SECURITE ET DE SANTE**

Couvertes par les normes listées au point 15.

19 **VERIFICATIONS ET ESSAIS INDIVIDUELS**

Néant.

Fontenay-aux-Roses, le 24 juillet 2009

1 **SUPPLEMENTARY EC TYPE EXAMINATION CERTIFICATE**

2 **Component** Intended for use in Potentially explosive atmospheres **(Directive 94/9/EC)**

3 Supplementary certificate number :
LCIE 03 ATEX 0033 U / 02

4 Component :
Type : EEXe
Models : Cap, reducer and amplifier

5 Applicant : S.I.B.-A.D.R.

15 **DESCRIPTION OF THE SUPPLEMENTARY CERTIFICATE**

Updating according to the standards EN 60079-0 (2006), EN 60079-7 (2007), EN 61241-0 (2004), EN 61241-1 (2004)

Extension of the using ambient temperature. See details at 17.

The examination and test results are recorded in confidential report N° 91814-583624.

Specific parameters of the mode of protection concerned:

Unchanged.

The marking shall be :

Unchanged.

16 **DESCRIPTIVE DOCUMENTS**
Certification file N° DA/009/06 Rev. 1 dated 23/06/2009.
This file includes 9 items (13 pages).

17 **SPECIAL CONDITIONS FOR SAFE USE**

Modified as follows :
The accessories must not be submitted to a mechanical choc higher than 4 joules.

18 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS**

Covered by standards listed at 15.

19 **ROUTINE VERIFICATIONS AND TESTS**

None.

Le responsable de certification ATEX
ATEX certification manager

Michel EQUI

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RCS Nanterre B 408 363 174

1 **AVENANT D'ATTESTATION D'EXAMEN CE DE TYPE**

2 **Composant** destiné à être utilisé en atmosphères explosibles **(Directive 94/9/CE)**

3 Numéro de l'avenant :
LCIE 03 ATEX 0033 U / 03

4 Composant :

Type : EEx e
Modèles: Bouchon, réducteur et amplificateur

5 Demandeur : S.I.B (Schlemmer Industry & Building Parts)
25 Rue Théophile Somborn
57 220 BOULAY – MOSELLE France

15 **DESCRIPTION DE L'AVENANT**
Mise à jour normative suivant les normes :
EN 60079-0:2012 + A11:2013, EN 60079-7:2007,
EN 60079-31:2009
Mise à jour du marquage
Mise à jour de la raison sociale

Les résultats des vérifications et essais figurent dans le rapport confidentiel N° 133536-668141-03

Paramètres spécifiques du ou des modes de protection concerné(s) :
Néant
Le marquage doit être :
S.I.B
Adresse : ...
Type : EEx e
N° de fabrication : ...
Année de fabrication : ...
Ex II 2 GD
Ex eb IIC
Ex tb IIIC
IP6X
LCIE 03 ATEX 0033 U

Fontenay-aux-Roses, le 7 mai 2015

Le Responsable de Certification ATEX
ATEX Certification Officer
Julien Gauthier

1 **SUPPLEMENTARY EC TYPE EXAMINATION CERTIFICATE**

2 **Component** Intended for use in Potentially explosive atmospheres **(Directive 94/9/EC)**

3 Supplementary certificate number :
LCIE 03 ATEX 0033 U / 03

4 Component :

Type : EEx e
Models: Plastic cap , reducer and amplifier

5 Applicant : S.I.B (Schlemmer Industry & Building Parts)
25 Rue Théophile Somborn
57 220 BOULAY – MOSELLE France

15 **DESCRIPTION OF THE SUPPLEMENTARY CERTIFICATE**
Normative update according to the standards :
EN 60079-0:2012 + A11:2013, EN 60079-7:2007,
EN 60079-31:2009
Update of marking
Update of company name

The examination and test results are recorded in confidential report N° 133536-668141-03

Specific parameters of the concerned protection mode :

None
The marking shall be :
S.I.B
Address
Type : EEx e
N° de fabrication : ...
Année de fabrication : ...
Ex II 2 GD
Ex eb IIC
Ex tb IIIC
IP6X
LCIE 03 ATEX 0033 U

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13 **ANNEXE**

14 **AVENANT D'ATTESTATION D'EXAMEN CE DE TYPE**

LCIE 03 ATEX 0033 U / 03

16 **DOCUMENTS DESCRIPTIFS**
Dossier de certification N° DA/003/03 rév.3 du 04/02/2015.
Ce document comprend 2 rubriques (4 pages).

17 **CONDITIONS SPECIALES POUR UNE UTILISATION SURE**
Pour l'assemblage de bouchons, réducteurs ou amplificateur sur des enveloppes protégées par sécurité augmentée (pour les atmosphères Gaz) ou sur des enveloppes « Ex t » (pour les atmosphères poussière), l'aménagement et l'assemblage devra être en accord avec les documents descriptifs du fabriquant.

Température de service :
$-20°C \leq T_{service} \leq + 55°C$ pour toute la gamme
$-35°C \leq T_{service} \leq +95°C$:
Polycarbonate référencé A9541016
$-35°C \leq T_{service} \leq +90°C$:
Polyamide 6 référencé A9380300 et A9380301

18 **EXIGENCES ESSENTIELLES DE SECURITE ET DE SANTE**
Couverte par les normes listées au point 15

19 **VERIFICATIONS ET ESSAIS INDIVIDUELS**
Néant.

13 **SCHEDULE**

14 **SUPPLEMENTARY EC TYPE EXAMINATION CERTIFICATE**

LCIE 03 ATEX 0033 U / 03

16 **DESCRIPTIVE DOCUMENTS**
Certification file N° DA/003/03 rev.3 dated on 2015/02/04
This file includes 2 items (4 pages).

17 **SPECIAL CONDITIONS FOR SAFE USE**

For the assembling of the caps, reducers or amplifiers protected by increased safety enclosures (for Gas atmospheres) or on "Ex t" protected enclosures (for Dust atmospheres), the fitting up and the assembling realized shall be in accordance with the descriptive documents of the manufacturer.

Service temperature :
$-20°C \leq T_{service} \leq + 55°C$ for all the range
$-35°C \leq T_{service} \leq +95°C$:
Polycarbonate referenced A9541016
$-35°C \leq T_{service} \leq +90°C$:
Polyamide 6 referenced A9380300 and A9380301

18 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS**

Covered by standards listed at 15

19 **ROUTINE VERIFICATIONS AND TESTS**
None.

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ATEX certificate:

PTB 11 ATEX 1007 X

for

Stuffing gland

DE

Meggitt SA
Route de Moncor 4
PO Box 1616
CH - 1701 Fribourg
Switzerland

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CETTE PAGE EST LAISSÉE INTENTIONNELLEMENT VIDE
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Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

PTB

(1) # EG-Baumusterprüfbescheinigung

(2) Geräte und Schutzsysteme zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen - **Richtlinie 94/9/EG**

(3) EG-Baumusterprüfbescheinigungsnummer

PTB 11 ATEX 1007 X

(4)	Gerät:	Kabel- und Leitungseinführung Typ blueglobe HT Kabelverschraubung aus Messing vernickelt und Edelstahl
(5)	Hersteller:	Pflitsch GmbH & Co. KG
(6)	Anschrift:	Ernst-Pflitsch-Str. 1, 42499 Hückeswagen, Deutschland

(7) Die Bauart dieses Gerätes sowie die verschiedenen zulässigen Ausführungen sind in der Anlage und den darin aufgeführten Unterlagen zu dieser Baumusterprüfbescheinigung festgelegt.

(8) Die Physikalisch-Technische Bundesanstalt bescheinigt als benannte Stelle Nr. 0102 nach Artikel 9 der Richtlinie des Rates der Europäischen Gemeinschaften vom 23. März 1994 (94/9/EG) die Erfüllung der grundlegenden Sicherheits- und Gesundheitsanforderungen für die Konzeption und den Bau von Geräten und Schutzsystemen zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen gemäß Anhang II der Richtlinie.

Die Ergebnisse der Prüfung sind in dem vertraulichen Bewertungs- und Prüfbericht PTB Ex 11-11042 festgehalten.

(9) Die grundlegenden Sicherheits- und Gesundheitsanforderungen werden erfüllt durch Übereinstimmung mit
EN 60079-0:2009, EN 60079-7:2007, EN 60079-31:2009

(10) Falls das Zeichen „X" hinter der Bescheinigungsnummer steht, wird auf besondere Bedingungen für die sichere Anwendung des Gerätes in der Anlage zu dieser Bescheinigung hingewiesen.

(11) Diese EG-Baumusterprüfbescheinigung bezieht sich nur auf Konzeption und Prüfung des festgelegten Gerätes gemäß Richtlinie 94/9/EG. Weitere Anforderungen dieser Richtlinie gelten für die Herstellung und das Inverkehrbringen dieses Gerätes. Diese Anforderungen werden nicht durch diese Bescheinigung abgedeckt.

(12) Die Kennzeichnung des Gerätes muss die folgenden Angaben enthalten:

II 2 G Ex e IIC Gb
II 2 D Ex tb IIIC Db IP66, IP68

ZSEx10100d.dot

Zertifizierungssektor Explosionsschutz
Im Auftrag

Braunschweig, 8. Juni 2011

Dr.-Ing. U. Klausmeyer
Direktor und Professor

EG-Baumusterprüfbescheinigungen ohne Unterschrift und ohne Siegel haben keine Gültigkeit.
Diese EG-Baumusterprüfbescheinigung darf nur unverändert weiterverbreitet werden.
Auszüge oder Änderungen bedürfen der Genehmigung der Physikalisch-Technischen Bundesanstalt.

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Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

PTB

(13) # Anlage

(14) **EG-Baumusterprüfbescheinigung PTB 11 ATEX 1007 X**

(15) Beschreibung des Gerätes

Die Kabel- und Leitungseinführung Typ blueglobe HT, blueglobe HT AC und blueglobe HT TRI Kabelverschraubung aus Messing vernickelt, blank und Edelstahl dient zur Einführung von fest verlegten Kabeln und Leitungen in elektrische Betriebsmittel der Zündschutzart Erhöhte Sicherheit "e".

Die Kabel- und Leitungseinführung besteht aus Druckschraube, Doppelnippel mit metrischem Anschlussgewinde in unterschiedlichen Längen und einem Dichteinsatz aus Silikon.

Der Einbau erfolgt in Gehäuse mit Durchgangs- oder Gewindebohrungen. Bei Durchgangsbohrungen werden Gegenmuttern verwendet.

Zubehör ist die Baugruppe AC für stahlarmierte Kabel und Leitungen, die TRI-Feder für geschirmte Kabel und Leitungen sowie ein Kunststoffbolzen zum Verschließen von nicht benutzten Kabelverschraubungen.

Technische Daten

Nenngröße Anschlussgewinde ..... M 12 bis M 40

verwendbar für Kabel- und Leitungsdurchmesser ..... je nach Nenngröße von 4 mm bis 32 mm

geeignet für Geräte der Gerätegruppe II
mit dem Grad der mechanischen Gefahr ..... hoch

Mindestwandstärken
Einbau in Geräte mit Gewindebohrungen ..... 5,0 mm (Kunststoff)
..... 3,0 mm (Metall)
Einbau in Geräte mit Durchgangsbohrungen ..... 2,0 mm (Kunststoff)
..... 1,0 mm (Metall)

	Einsatztemperaturbereich
Dichteinsatz und Dichtring Silikon	-55 °C bis +160 °C
Bolzen	-55 °C bis +90 °C

Berührungs-, Fremdkörper- und Wasserschutz ..... IP 68 und IP66 nach EN 60529

Gewindegröße	maximale Anzugsdrehmomente	
Metrisch	Doppelnippel	Druckschraube
M 12	5 Nm	5 Nm
M 16	8 Nm	8 Nm
M 20	10 Nm	10 Nm
M 25	15 Nm	15 Nm
M 32	15 Nm	15 Nm
M 40	20 Nm	20 Nm

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Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

Anlage zur EG-Baumusterprüfbescheinigung PTB 11 ATEX 1007 X

(16) Bewertungs- und Prüfbericht PTB Ex 11-11042

(17) Besondere Bedingungen

Es dürfen nur festverlegte Kabel und Leitungen eingeführt werden. Der Betreiber muss eine entsprechende Zugentlastung gewährleisten.

(18) Grundlegende Sicherheits- und Gesundheitsanforderungen

Erfüllt durch Übereinstimmung mit den vorgenannten Normen.

Braunschweig, 8. Juni 2011

Zertifizierungssektor Explosionsschutz
Im Auftrag

Dr.-Ing. U. Klausmeyer
Direktor und Professor

Seite 3/3

EG-Baumusterprüfbescheinigungen ohne Unterschrift und ohne Siegel haben keine Gültigkeit.
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ATEX certificate:

EN

PTB 98 ATEX 3130

for

Cable stuffing glands

Meggitt SA
Route de Moncor 4
PO Box 1616
1701 Fribourg
Switzerland

energy@ch.meggitt.com
www.meggittsensing.com/energy

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

PTB

(1) **EC-TYPE-EXAMINATION CERTIFICATE**

(Translation)

(2) Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres - **Directive 94/9/EC**

(3) EC-type-examination Certificate Number:

PTB 98 ATEX 3130

(4) Equipment: Dummy plugs type GHG 960 663.P....

(5) Manufacturer: CEAG Sicherheitstechnik GmbH

(6) Address: Neuer Weg Nord 49, D-69412 Eberbach

(7) This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

(8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II to the Directive.

The examination and test results are recorded in the confidential report PTB Ex 98-30021.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 50014:1992 EN 50019:1994

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EC-type-examination Certificate relates only to the design and construction of the specified equipment in accordance with Directive 94/9/EC. Further requirements of this Directive apply to the manufacture and supply of this equipment.

(12) The marking of the equipment shall include the following:

Ex **II 2 G EEx e II**

Zertifizierungsstelle Explosionsschutz
By order:

Braunschweig, November 12, 1998

Dr.-Ing. U. Engel
Regierungsdirektor

sheet 1/2

EC-type-examination Certificates without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt.
In case of dispute, the German text shall prevail.

Physikalisch-Technische Bundesanstalt • Bundesallee 100 • D-38116 Braunschweig

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

PTB

(13) **SCHEDULE**

(14) **EC-TYPE-EXAMINATION CERTIFICATE PTB 98 ATEX 3130**

(15) Description of equipment

The type GHG 960 663.P... dummy plugs made of polyamide serve to close threaded holes for cable entries in enclosures of the type of protection increased safety "e". Installation in clearance holes is with lock nuts made of brass or polyamide.

Technical data

Nominal size	Installation in encloses of wall thickness
M 16 x 1,5	≥ 3,5 mm
M 20 x 1,5	≥ 3,5 mm
M 25 x 1,5	≥ 3,5 mm
M 32 x 1,5	≥ 3,5 mm
M 40 x 1,5	≥ 3,5 mm
M 50 x 1,5	≥ 3,5 mm
range of temperature of use:	-55 °C to +95 °C
range of temperature of ambient:	-55 °C to +55 °C
Suitability for equipment of group II with a degree of mechanical hazard:	high
Protection against contact, foreign matter and water:	at least IP 54 acc. to EN 60 529:1991

(16) Test report PTB Ex 98-30021 (comprising 3 pages, description and drawing)

(17) Special conditions for safe use

not applicable

(18) Essential health and safety requirements

The degree of protection - at least IP 54 according to EN 60529:1991 - is guaranteed only by appropriate selection of the dummy plugs and proper installation in the equipment.

Zertifizierungsstelle Explosionsschutz
By order:

Braunschweig, Novermber 12,1998

Dr.-Ing. U. Engel
Regierungsdirektor

sheet 2/2

EC-type-examination Certificates without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt.
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Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

1. SUPPLEMENT

according to Directive 94/9/EC Annex III.6

to EC-TYPE-EXAMINATION CERTIFICATE PTB 98 ATEX 3130

(Translation)

Equipment: Dummy plugs, type GHG 960 663. P.

Marking: Ⓔx **II 2 G EEx e II**

Manufacturer: CEAG Sicherheitstechnik GmbH

Address: Neuer Weg Nord 49
69412 Eberbach, Germany

Description of supplements and modifications

According to EN 50281-1-1:1998 the type GHG 960 663.P... dummy plugs may also be used in areas in which explosive atmospheres with dust/air mixtures have to be expected to occur occasionally.

The marking is therefore changed to read:

Ⓔx **II 2 G/D EEx e II IP66**

Test report: PTB Ex 03-13301

Zertifizierungsstelle Explosionsschutz
By order:
Dipl.-Phys. U. Völker

Braunschweig, September 18, 2003

Sheet 1/1

EC-type-examination Certificates without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt.
In case of dispute, the German text shall prevail.

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Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

Physikalisch-Technische Bundesanstalt • Postfach 33 45 • 38023 Braunschweig

Cooper-Crouse Hinds GmbH
z. Hd. Frau Frankhauser

Neuer Weg Nord 49
69412 Eberbach

Ihr Zeichen:
Ihre Nachricht vom: 29.11.2007
Unser Zeichen:
Unsere Nachricht vom:

Bearbeitet von: Dr. Monika Schumann
Telefondurchwahl: +49 (0) 531-592-3515
Telefaxdurchwahl: +49 (0) 531-592-3505
E-Mail: Monika.Schumann@ptb.de

Datum: 14. Januar 2008

Normengenerationsänderung nach EN 60079-0 ff, EN 6124-0 ff
Blindstopfen Typ / dummy plug type GHG 960 663. P....,
PTB 98 ATEX 3130

Sehr geehrte Frau Frankhauser,

es bestehen keine sicherheitstechnischen Bedenken,

den Blindstopfen Typ GHG 960 663. P.... mit folgenden Kennzeichnungen zu versehen:

Ⓔx II 2 G Ex e II

Ⓔx II 2 D Ex tD A21 IP66

Wir bitten Sie, diese Änderungen bei zukünftigen Ergänzungen mit aufzunehmen.

Translation

there are no safety-related objections from PTB to mark

the dummy plug type GHG 960 663.P... as follows

Ⓔx II 2 G Ex e II

Ⓔx II 2 D Ex tD A21 IP66

We would like to ask you to include this change into the next supplement.

Mit freundlichen Grüßen
Im Auftrag
Schumann
Dr. Schumann
Regierungsrätin

600 00 g

Hausadresse, Lieferanschrift:
Bundesallee 100
38116 Braunschweig
Deutschland

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E-Mail (Zentrale): poststelle@ptb.de
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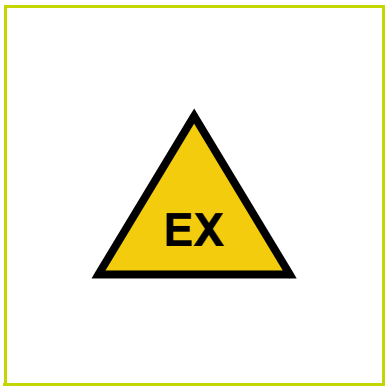
PTB Berlin-Charlottenburg
Abbestraße 2-12
10587 Berlin
Deutschland

EX CERTIFICATE – ATEX

vibro-meter®

SEV 15 ATEX 0151
for
cable fittings (stuffing glands)



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Document reference SEV 15 ATEX 0151
Edition 2 – October 2020

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eurofins | Electrosuisse Product Testing

Attestation d'Examen UE de Type

(1)

(2) Matériel et systèmes de protection destinés à être utilisés en atmosphères explosibles - **Directive 2014/34/UE**

(3) Numéro de l'attestation d'examen: **SEV 15 ATEX 0151**

(4) Produit: Presse-étoupe et accessoires
Type Progress *** ***** KB EX

(5) Fabricant: Agro AG

(6) Adresse: Korbackerweg 7, 150, 5502 Hunzenschwil, SWITZERLAND

(7) Le type de ce produit ainsi que toute autre variante acceptable de celui-ci sont spécifiés dans l'annexe de cette attestation d'examen.

(8) Eurofins, comme organisme notifié n° 1258, conformément à l'article 17 de la Directive 2014/34/UE du Parlement des Communautés européennes et du Conseil du 26 février 2014, certifie que les Exigences Essentielles de Santé et de Sécurité relatives à la conception et à la construction de produits destinés à être utilisés en atmosphères explosibles, telles qu'énoncées à l'Annexe II de la directive, sont remplies.

Les résultats de l'examen sont consignés dans le rapport d'essai confidentiel. 18-Ex-0130.01

(9) Les Exigences Essentielles de Santé et de Sécurité sont remplies par la conformité à:

EN 60079-0:12 + A11:13 **EN 60079-31:14** **EN 60079-7:15**

Les conditions spécifiées au point 18 constituent une exception.

(10) Lorsque le numéro de l'attestation est suivi du signe « X », celui-ci renvoie aux conditions spéciales de sécurité d'utilisation du produit, telles que spécifiées dans l'annexe de cette attestation.

(11) La présente attestation d'examen UE de type porte exclusivement sur la conception et la construction du produit spécifié. D'autres exigences de cette directive s'appliquent à la fabrication et à la mise sur le marché du produit, celles-ci ne font cependant pas l'objet de cette attestation.

(12) Le produit portera un marquage incluant les éléments suivants:

II 2 G Ex eb IIC Gb
II 2 D Ex tb IIIC Db

Eurofins Electrosuisse Product Testing AG
Notified Body ATEX

Martin Plüss
Product Certification

eurofins | Electrosuisse Product Testing

(13) # Annexe

(14) **Attestation d'Examen UE de Type no. SEV 15 ATEX 0151**

(15) **Description du produit**
Les presse-étoupe Progress *** KB Ex laiton ou acier servent à monter des câbles et conduites dans du matériel électrique présentant une enveloppe à sécurité augmentée «eb» et protection par enveloppe «tb». Le montage se fait dans le boîtier par des trous filetés ou des trous de passage. Les presse-étoupe se composent essentiellement de l'écrou de pression, du manchon et du joint d'étanchéité. La décharge de traction se fait par le joint d'étanchéité ou par un système supplémentaire de décharge.
Les accessoires comprennent des réductions, des extensions, des pièces de verrouillage et des contre-écrous.

Désignations des types
Progress MS **** KB EX (M16…M63; Pg9…Pg48; NPT3/8"…NPT2")
Progress S2 **** KB EX (M12…M63; Pg7…Pg48; NPT1/4"…NPT2")
Progress S4 **** KB EX (M12…M63; Pg7…Pg48; NPT1/4"…NPT2")
Adaptateurs filetés (réductions, extensions) MS EX (M16…M63; Pg9…Pg48)
Adaptateurs filetés (réductions, extensions) S2 EX (M12…M63; Pg7…Pg48)
Adaptateurs filetés (réductions, extensions) S4 EX (M12…M63; Pg7…Pg48)
Lamelles de blocage MS EX; S2 EX; S4 EX (M8…M63; Pg7…Pg48)
Contre-écrous MS EX; S2 EX; S4 EX (M8…M63; Pg7…Pg48)

Progress MS EMV easyCONNECT KB EX
(Laiton nickeleé avec mâchoires de serrage, M16…M63; Pg9…Pg48; NPT3/8"…NPT2")
Progress S2 EMV easyCONNECT KB Ex
(Laiton nickeleé avec mâchoires de serrage, M12…M63; Pg7…Pg48; NPT1/4"…NPT2")
Progress S4 EMV easyCONNECT KB Ex
(Laiton nickeleé avec mâchoires de serrage, M12…M63; Pg7…Pg48; NPT1/4"…NPT2")

Classification de l'installation et utilisation: fixe
Indice de protection: IP 66 / IP68
Plage de température ambiante nominale: -60 °C … +100 °C pour types de métal

(16) **Rapport d'essai** 18-Ex-0130.01

(17) **Conditions spéciales**
Aucune

(18) **Exigences Essentielles de Santé et de Sécurité**
Outre les Exigences Essentielles de Santé et de Sécurité remplies par les normes spécifiées au point 9, les conditions suivantes, prises en compte dans le rapport d'essai, sont également importantes:
Paragraphe **Thème**
Aucune

(19) **Dessins et documents**
Voir rapport d'essai « Documents du fabricant »

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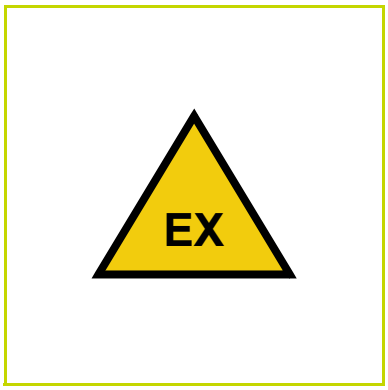
EX CERTIFICATE – ATEX

vibro-meter®

SEV 15 ATEX 0152 X
for
cable fittings (stuffing glands)



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Document reference SEV 15 ATEX 0152 X
Edition 3 – October 2020

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eurofins

(1) # Attestation d'Examen UE de Type

(2) Matériel et systèmes de protection destinés à être utilisés en atmosphères explosibles - **Directive 2014/34/UE**

(3) Numéro de l'attestation d'examen: **SEV 15 ATEX 0152 X**

(4) Produit: Presse-étoupe et accessoires Type Progress *** ***** EX

(5) Fabricant: Agro AG

(6) Adresse: Korbackerweg 7, 5502 Hunzenschwil, SWITZERLAND

(7) Le type de ce produit ainsi que toute autre variante acceptable de celui-ci sont spécifiés dans l'annexe de cette attestation d'examen.

(8) Eurofins, comme organisme notifié n° 1258, conformément à l'article 17 de la Directive 2014/34/UE du Parlement des Communautés européennes et du Conseil du 26 février 2014, certifie que les Exigences Essentielles de Santé et de Sécurité relatives à la conception et à la construction de produits destinés à être utilisés en atmosphères explosibles, telles qu'énoncées à l'Annexe II de la directive, sont remplies.

Les résultats de l'examen sont consignés dans le rapport d'essai confidentiel.
18-Ex-0130.02 + .02 E1 + .02 E2

(9) Les Exigences Essentielles de Santé et de Sécurité sont remplies par la conformité à:

EN 60079-0:2012+A11:13 **EN 60079-31:14** **EN 60079-7:15**

Les conditions spécifiées au point 18 constituent une exception.

(10) Lorsque le numéro de l'attestation est suivi du signe « X », celui-ci renvoie aux conditions spéciales de sécurité d'utilisation du produit, telles que spécifiées dans l'annexe de cette attestation.

(11) La présente attestation d'examen UE de type porte exclusivement sur la conception et la construction du produit spécifié. D'autres exigences de cette directive s'appliquent à la fabrication et à la mise sur le marché du produit, celles-ci ne font cependant pas l'objet de cette attestation.

(12) Le produit portera un marquage incluant les éléments suivants:

Ex **II 2 G Ex eb IIC Gb**
II 2 D Ex tb IIIC Db

Eurofins Electrosuisse Product Testing AG
Notified Body ATEX

Martin Plüss
Product Certification

eurofins

(13) # Annexe

(14) **Attestation d'Examen UE de Type no. SEV 15 ATEX 0152 X**

(15) **Description du produit**

Les presse-étoupe Progress *** KB Ex en plastique, laiton ou acier servent à monter des câbles et conduites dans du matériel électrique présentant une enveloppe à sécurité augmentée «eb» et protection par enveloppe «tb». Le montage se fait dans le boîtier par des trous filetés ou des trous de passage.
Les presse-étoupe se composent essentiellement de l'écrou de pression, du manchon et du joint d'étanchéité. La décharge de traction se fait par le joint d'étanchéité ou par un système supplémentaire de décharge. Les accessoires comprennent des réductions, des extensions, des pièces de verrouillage et des contre-écrous.

Désignations des types

Progress MS **** KB EX (M12; Pg7; NPT1/4")	[résistance aux chocs réduite]
Progress MS **** EX (M8…M12; Pg7; NPT1/8"…NPT1/4")	[résistance aux chocs réduite]
Progress S2 **** EX (M8…M10; NPT1/8")	[résistance aux chocs réduite]
Progress S4 **** EX (M8…M10; NPT1/8")	[résistance aux chocs réduite]
Progress MS **** EX (M16…M63; Pg9…Pg48; NPT3/8"…NPT2")	
Progress S2 **** EX (M12…M63; Pg7…Pg48; NPT1/4"…NPT2")	
Progress S4 **** EX (M12…M63; Pg7…Pg48; NPT1/4"…NPT2")	
Progress GFK*** EX (M16…M63; Pg9…Pg48)	[résistance aux chocs réduite]
Adaptateurs filetés (réductions, extensions) MS EX (M8…M12; Pg7)	[résistance aux chocs réduite]
Adaptateurs filetés (réductions, extensions) S2 EX (M8…M10)	[résistance aux chocs réduite]
Adaptateurs filetés (réductions, extensions) S4 EX (M8…M10)	[résistance aux chocs réduite]

En supplément, les variantes client suivantes sont incluses:
EX1000.12.91.900; EX1100.12.91.900; EX1700.12.86.901.91; EX1700.12.86.903.91;
EX1700.17.86.900.91; EX1710.12.86.901.91; EX1710.12.86.903.91; EX1710.17.86.900.91;
Progress MS FK EX, A2 FK EX, A4 FK EX, no d'article EX130*.75.*620.140
Progress MS EMV easyCONNECT KB EX
(Laiton nickeleé avec mâchoires de serrage, M12; Pg7; NPT1/4") [résistance aux chocs réduite]

Classification de l'installation et utilisation:	mobile / fixe / portatif
Indice de protection:	IP 66 / IP68
Plage de température ambiante nominale:	-60 °C … +100 °C pour types de métal -20 °C … +85 °C pour types GFK -50 °C … +60 °C pour MS FK EX, A2 FK EX, A4 FK EX

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(16) **Rapport d'essai** 18-Ex-0130.02 + .02 E1 + .02 E2

(17) **Conditions spéciales**

- Les types à faible force de traction sont destinés uniquement aux conduites et câbles fixes. L'utilisateur doit garantir une décharge de traction appropriée. (Non valable pour Progress MS ***** KB EX (M12; PG7; NPT1/4"))
- Les types à faible énergie de choc sont à monter dans le boîtier de sorte à assurer leur protection mécanique contre l'énergie de choc conformément au paragraphe 26.4.2 de la norme européenne EN 60079-0.

(18) **Exigences Essentielles de Santé et de Sécurité**
Outre les Exigences Essentielles de Santé et de Sécurité remplies par les normes spécifiées au point 9, les conditions suivantes, prises en compte dans le rapport d'essai, sont également importantes:
Paragraphe **Thème**
Aucune

(19) **Dessins et documents**
Voir rapport d'essai « Documents du fabricant »

附录 B：cCSAus 认证

表 B-1：相关 cCSAus 证书

涵盖的产品	证书编号
CA134	cCSAus 1636188
CA20x	cCSAus 70004630
CA28x、CE28x 和 CE31x	cCSAus 1514310
CA30x	cCSAus 1550831
GSI127	cCSAus 70001999
IPC707	cCSAus 70198728

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EN

cCSAus certificate:

1636188

for

CA 134

Meggitt SA
Route de Moncor 4
PO Box 1616
CH - 1701 Fribourg
Switzerland

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CSA Group

Certificate of Compliance

Certificate: 1636188 (LR 62075) **Master Contract:** 175074

Project: 70002267 **Date Issued:** February 28, 2014

Issued to: **Meggitt SA**

Rte de Moncor 4
Villars-sur-Glane, 1752
Switzerland
Attention: Mr. Carlo Pellegrinelli

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.

C US

T. Munteanu

Issued by: T. Munteanu, P.Eng.

PRODUCTS

CLASS 2258 84 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe, Entity - - For Hazardous Locations - Certified to US Standards

CLASS 2258 04 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe, Entity - For Hazardous Locations

CLASS I, Division 1, Groups A, B, C and D

Acceleration transducer Type 144-134-000-YYY

Intrinsically safe with entity parameters when connected per drawing PZ6920

Ratings:

Vmax≤ 28 Vdc, Imax≤100 mA. (for linear source) 25 mA (for non linear source), Pi≤0.7W

Ci=1.2 nF, capacitance of the integral cable is 0,250 nF/m.

Li=0 mH

Temperature code:

Ambient temperatures are as follows:

CSA Group

Certificate: 1636188 (LR 62075) **Master Contract:** 175074

Project: 70002267 **Date Issued:** February 28, 2014

* -200°C/ + 500°C for sensor and cable

*-200°C/ +500°C for sensor with high temperature VM connector

* -65°C/ + 200°C for connector Type M83723/89Y1020 or equivalent

* -65°C/ + 150°C for LEMO connector Type 0 or equivalent

The relation between maximum ambient temperature and temperature class is as follows for all devices, taking into account the above mentioned temperature ranges.

Maximum ambient temperature:

Ta<+430 °C for T1

Ta<+280 °C for T2

Ta<+180 °C for T3

Ta<+115 °C for T4

Ta<+80 °C for T5

Ta<+75 °C for T6

The maximum temperature, for ambient higher than 430 °C is the process temperature minus 10K.

APPLICABLE REQUIREMENTS

CAN/CSA-C22.2 No. 61010-1-04 - Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use, Part 1: General Requirements

CSA Std. C22.2 No 157-92 (R 2012) - Intrinsically Safe and Non-Incendive Equipment for Use in Hazardous Locations

UL 61010C-1 - Standard for Process Control Equipment

UL 913, Ed 6th - Standard for Intrinsically Safe Apparatus and Associated Apparatus for Use in Class I, II, III, Division 1, Hazardous (Classified) Locations

MARKINGS

1. Submittor's identification (company name);

2. Factory identifier; Made in Switzerland

3. Model designation; 144-134-000-YYY

4. Electrical rating;

CSA Group

Supplement to Certificate of Compliance

Certificate: 1636188 **Master Contract:** 175074

The products listed, including the latest revision described below, are eligible to be marked in accordance with the referenced Certificate.

Product Certification History

Project	Date	Description
70002267	Feb 28, 2014	cCSAus report update for modification of Accelerometer 144-134-000-XXX.
2421976	May 5, 2011	Update Report 1636188 to include the change of legal entity name

History

1636188	March 22, 2005	Original Certification.

DQD 507 Rev. 2012-05-22 Page: 1

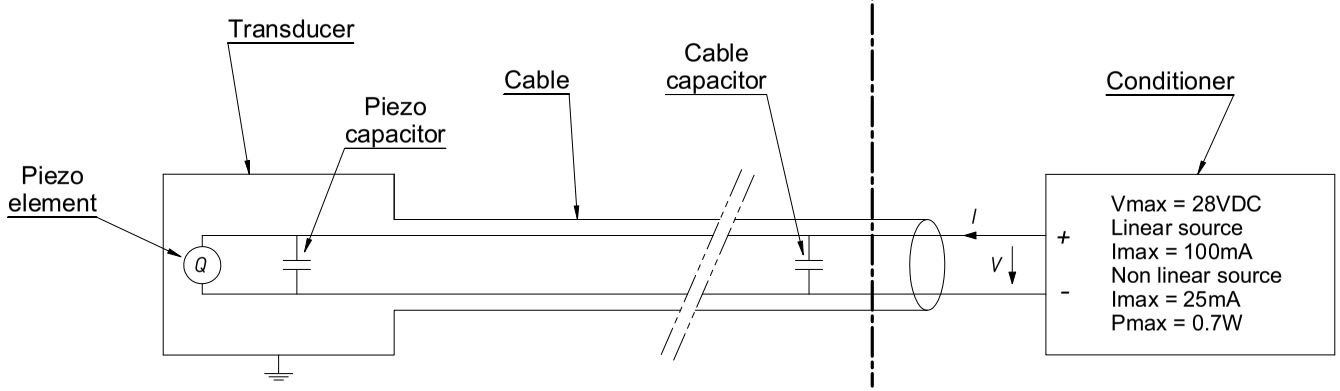
CSA Group

Certificate: 1636188 (LR 62075) **Master Contract:** 175074

Project: 70002267 **Date Issued:** February 28, 2014

5. Serial Number or Date of manufacture;
6. The cCSAus Monogram;
7. Hazardous area : Class I, Div 1, Groups A,B,C,D
8. Ex ia Tx/ AEx ia Tx
9. Entity Parameters: Vmax, Imax, Ci, Li, Pi
10. Intrinsically safe when connected per Control Drawing PZ6920

DQD 507 Rev. 2012-05-22 Page: 3



Transducer CA 134

Transducer Ci < 1nF
Transducer Li = 0
Transducer Ri = 0

Cable Ci = 250pF/m x cable length (pole to pole)
Cable Li = 0
Cable Ri = 0

WARNING:
- THIS PRODUCT MAY NEITHER BE MODIFIED OR REPAIRED

ATTENTION
- CE PRODUIT NE PEUT PAS ETRE MODIFIE OU REPARE

Environmental conditions

- Pollution degree : 2
- Installation category : CAT I
- Altitude : 2000 m Max
- Humidity : 80% Max relative humidity
- Electrical supply voltage fluctuation : No supply voltage (charge generator)
- Outdoor use statement : Outdoor use
- Temperature operational
  - sensor : -200°C to +500°C
  - cable : -200°C to +500°C
  - connectors : -200°C to +500°C
  - : -65°C to +200°C
  - : -65°C to +150°C

- Warning: This product may neither be modified or repaired.
- Coordinates to obtain Technical assistance provided.
  Meggitt SA, P.O. Box 1616, Route de Moncor 4, 1701 Fribourg, Switzerland, phone +41 26 407 11 11
- The product is intended to be used with certified signal conditioner and safety barrier.
- To ensure an installation conform with an explosive environment, it is crucial to respect the criteria mentioned into the corresponding Ex certificates.

Notes

1. Ex ia is defined as intrinsically safe.
2. Install associated apparatus in accordance with manufacturers instructions.

NO MODIFICATION ALLOWED
WITHOUT PRIOR AUTORISATION
OF NOTIFIED BODY

Rev.	Date	Change N°	Drawn	Appr.	Description

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Scale 1:1	Format A3	Meggitt SA Rte de Moncor 4, CH-1752 Villars-sur-Glâne, Switzerland

Material: | Repl.by: | Repl.for:

Linear Tolerances [mm]: › 0,5 … 3 | › 3 … 6 | › 6 … 30 | › 30 … 120 | › 120 … 400 | › 400 … 1000 | › 1000 … 2000 | › 2000 … 4000 — all -

Radius / Chamfers [mm]: › 0,5 … 3 | › 3 … 6 | › 6 — all -

Tol. on angle [°] (L [mm]): … 10 | › 10 … 50 | › 50 … 120 | › 120 … 400 — all -

Drawn	27.08.13	C.Pellegrinelli
Check.	27.08.13	H-P.Aeby
Appr.	27.08.13	J.Perriard

Accelerometer 144-134-000-XXX

Wiring diagram Ex

DWG.N° PZ 6920

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cCSAus certificate:

EN

70004630

for

CA 20x

Meggitt SA
Route de Moncor 4
PO Box 1616
CH - 1701 Fribourg
Switzerland

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CSA Group

Certificate of Compliance

Certificate: 70004630 **Master Contract:** 175074

Project: 70004630 **Date Issued:** August 26, 2014

Issued to: **MEGGITT SA**
Route de Moncor 4
1752 Villars sur Glâne
SWITZERLAND

Attention: Mr Carlo Pellegrinelli

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators "C" and "US".

C US

Issued by: E Giusti
E Giusti

PRODUCTS

CLASS 2258 02 - PROCESS CONTROL EQUIPMENT - For Hazardous Locations
CLASS 2258 82 - PROCESS CONTROL EQUIPMENT - For Hazardous Locations - Certified to US Standards

Class I Division 2 Group A, B, C, D
Ex nA IIC T6 to T2 Gc
Class I Zone 2 AEx nA IIC T6 to T2 Gc

Accelerometer Type 144-20X-000-YYY
X defines the design of the sensor head (0 to 9)
YYY depend of the connector type and cable length

Ratings: U≤28V, I≤100mA, P ≤0.7W
Operating ambient Temperature: -55°C to +260°C

Temperature codes are as follows:
* T6 at Tamb. +80°C
* T5 at Tamb. +95°C
* T4 at Tamb. +130°C

CSA Group

Certificate: 1636189 **Master Contract:** 175074

Project: 70004631 **Date Issued:** August 26, 2014, 2014

* T3 at Tamb. +195°C
* T2 at Tamb. +290°C

For details related to rating, size, configuration, etc. reference should be made to the CSA Certification Record or the descriptive report.

Note: The supply side of the cable is either provided with flying leads or connector, it is the end user responsibility to install this supply side as per National Codes (Canadian Electircal code or NFPA 70).

APPLICABLE REQUIREMENTS

CAN/CSA C22.2 No. 0-2010:	General Requirements - Canadian Electrical Code, Part II
CAN/CSA C22.2 No. 142- 2009:	Process control equipment
CAN/CSA C22.2 No. 213-2008:	Non-incendive electrical equipment for use in class I, Division 2 hazardous locations
CAN/CSA C22.2 No. 60079-0:11:	Electrical apparatus for explosive gas atmospheres – Part 0: General requirements
CAN/CSA C22.2 No. 60079-15:12:	Electrical apparatus for explosive gas atmospheres – Part 15: type of protection "n" electrical apparatus
ANSI/UL 916: 2013:	Energy management equipment
ANSI/ISA 60079-0 (12.00.01): 2009:	Electrical Apparatus for Use in Class I, Zone 0, 1 & 2 Hazardous (Classified) Locations: General requirements
ANSI/ISA 60079-15 (12.00.02): 2009	Electrical Apparatus for Use in Class I, Zone 2 Hazardous (Classified) Locations - Part 15: Equipment protection by type of protection "n"
AINSI/ISA-12.12.01: 2013:	Nonincendive Electrical Equipment for use in Class I and II, Division 2 and Class III, Divisions 1 and 2 Hazardous (classified) locations

MARKINGS

The following markings appear, engraved on the body of the product:

CSA Monogram with NRTL/C or C/US indicator
Submittor's identification and/or CSA master contract number "175074" adjacent to the CSA Monogram
Model designation
Serial number
A code traceable to the month and year of manufacture
Electrical rating
Hazardous Location designation: Class I, Division 2, Groups A, B, C and D
Ex nA IIC T6 to T2 Gc
Class I Zone 2 AEx nA IIC T6 to T2 Gc
Ambient temperature
Reference to installation drawing PZ6948

CSA Group

Supplement to Certificate of Compliance

Certificate: 70004630 **Master Contract:** 175074

The products listed, including the latest revision described below, are eligible to be marked in accordance with the referenced Certificate.

Product Certification History

Project	Date	Description
70004630	August 26, 2014	Original certification for Accelerometer type 144-20X-000-YYY

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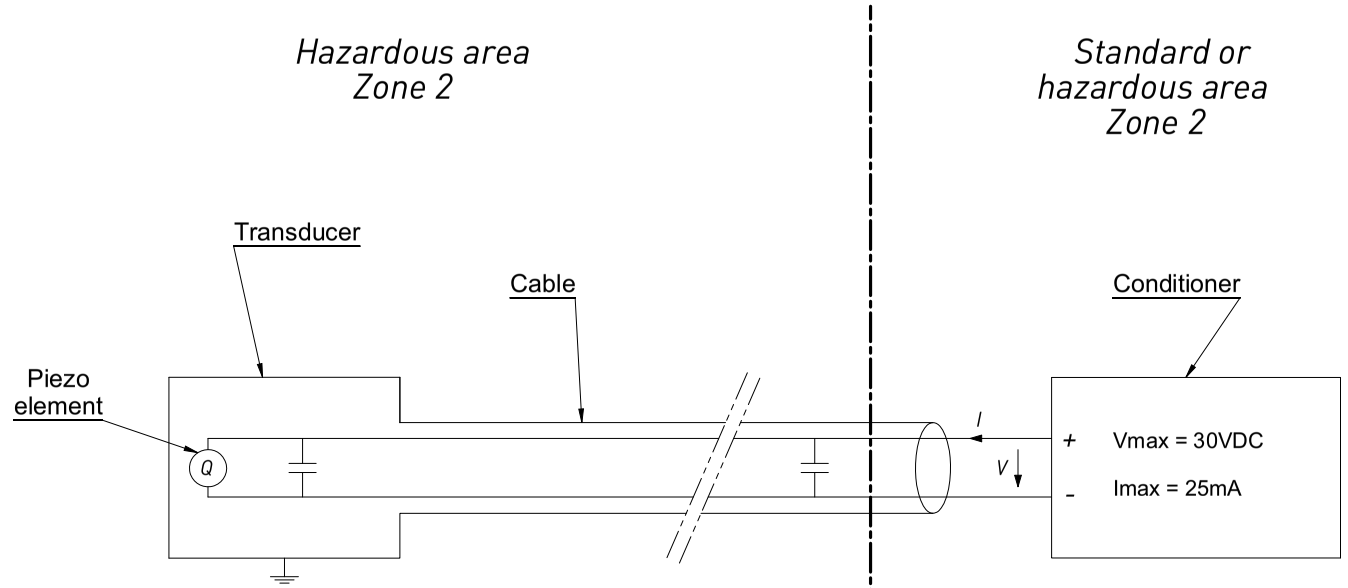
CSA Group

Certificate: 1636189 **Master Contract:** 175074

Project: 70004631 **Date Issued:** August 26, 2014

Jurisdictions in Canada may require these markings to be also in French. It is the responsibility of the Customer to provide bilingual marking, where applicable, in accordance with the requirements of the Provincial Regulatory Authorities. It is the responsibility of the Customer to determine this requirement and have bilingual wording added to the "Markings".

DQD 507 Rev. 2012-05-22 Page 3



WARNING:
- THIS PRODUCT MAY NEITHER BE MODIFIED OR REPAIRED

ATTENTION
- CE PRODUIT NE PEUT PAS ETRE MODIFIE OU REPARE

NO MODIFICATION ALLOWED
WITHOUT PRIOR AUTORISATION
OF NOTIFIED BODY

Environmental conditions

- Pollution degree	: 2
- Installation category	: CAT I
- Altitude	: 2000 m Max
- Humidity	: 80% Max relative humidity
- Electrical supply voltage fluctuation	: No supply voltage (charge generator)
- Outdoor use statement	: Outdoor use
- Temperature operational	: -55°C to +260°C

- Warning: This product may neither be modified or repaired.
- Coordinates to obtain Technical assistance provided.
  Meggitt SA, P.O. Box 1616, Route de Moncor 4, 1701 Fribourg, Switzerland, phone +41 26 407 11 11
- To ensure an installation conform with an explosive environment, it is crucial to respect
  the criteria mentioned into the corresponding Ex certificates.

Rev.	Date	Change N°	Drawn	Appr.	Description

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Rte de Moncor 4, CH-1752 Villars-sur-Glâne, Switzerland

Material:	Repl.by:	Repl.for:

Linear Tolerances [mm]										Radius / Chamfers [mm]			Tol. on angle [°]				
	› 0,5 … 3	› 3 … 6	› 6 … 30	› 30 … 120	› 120 … 400	›400 …1000	›1000 …2000	›2000 …4000		› 0,5 … 3	› 3 … 6	› 6	… 10	› 10 … 50	› 50 … 120	› 120 … 400	
'	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	

Drawn	31.01.14	C.Pellegrinelli
Check.	31.01.14	H-P.Aeby
Appr.	31.01.14	J.Perriard

Accelerometer 144-20X-000-YYY
Wiring diagram

DWG.N°
PZ 6948

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cCSAus certificate:

EN

1514310

for CA 28x, CE 28x and CE 31x

EX

Meggitt SA
Route de Moncor 4
PO Box 1616
CH - 1701 Fribourg
Switzerland

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Certificate of Compliance

Certificate: 1514310 **Master Contract:** 175074

Project: 70097496 **Date Issued:** 2016-12-12

Issued to: **Meggitt SA**
Rte de Moncor 4
Villars-sur-Glane, Fribourg 1752
SWITZERLAND
Attention: Carlo Pellegrinelli

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.

Issued by: Hossein Saleh
Hossein Saleh

PRODUCTS

CLASS – 2258 04 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe, Entity - For Hazardous Locations
CLASS – 2258 84 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe, Entity - For Hazardous Locations - Certified to US Standards

Class I, Division 1, Groups A, B, C and D

Accelerometers Type CE 28X (sensor with remote electronic) P/N 444-28X-000-YY1, and Type CE 31X (sensor with integrated electronic) P/N 444-28X-000-YY1

The sensor converts mechanical forces (e.g. vibrations) of the equipment to which it is mounted into an electrical signal sent to a conditioner (remote, or integrated, respectively) that sends out a modulated current output signal. Intrinsically safe with entity parameters when connected per drawing PZ6684, and PZ6692, respectively.

Ratings:

In type of protection intrinsic safety Ex ia, only for connection to a certified intrinsically safe circuit, with the following entity parameters:

Part Number	Power Source Type	Vmax	Imax	Li	Ci
444-28X-000-YY1	Linear	28 V	100 mA	0 mH	10.45 nF
444-31X-000-YY1	Linear	28 V	100 mA	0 mH	10.45 nF

Ambient Temperature Range:

Type Description	Part Number	Ambient Temperature	
		Conditioner	Sensor and cable
Sensor and remote electronic	444-28X-000-YY1	-55 °C to +100 °C	-55 °C to +260 °C
Sensor and integrated electronic	444-31X-000-YY1	-55 °C to +125 °C	

Temperature Code:

Part Number	T6	T5	T4
444-28X-000-YY1	+80°C	+95°C	+100°C
444-31X-000-YY1	+80°C	+95°C	+125°C

Class I, Division 1, Groups A, B, C and D
Ex ia IIC T6…T2 Ga
Class I, Zone 0, AEx ia IIC T6…T2 Ga

Accelerometer Type CA 28X (sensor only) P/N 144-28X-000-YYY

The sensor converts mechanical forces (e.g. vibrations) of the equipment to which it is mounted into an electrical signal that is processed externally. Intrinsically safe with entity parameters when connected per drawing PZ 8721.

Nomenclature:

X defines the design of the sensor head (X = 0…9)
YYY depends on the connector type and the cable length (Y = 0…9)

Ratings:

In type of protection intrinsic safety A/Ex ia IIC, only for connection to a certified intrinsically safe circuit, with following entity parameters:

Part Number	Vmax, Ui	Imax, Ii	Pi	Li	Ci sensor	Ci cable
144-28X-000-YYY	28 V	100 mA	0.7 W	0 mH	8 nF	250 pF/m

Ambient Temperature Range:

Type Description	Part Number	Ambient Temperature
Sensor only	144-28X-000-YYY	-55 °C to +260 °C

Certificate: 1514310 **Master Contract:** 175074
Project: 70097496 **Date Issued:** 2016-12-12

Temperature Code:

Part Number	T6	T5	T4	T3	T2
144-28X-000-YYY	+80°C	+95°C	+130°C	+195°C	+260°C

Accelerometers Type CE 28X (sensor with remote electronic) P/N 444-28X-000-YY2 to 444-28X-000-YY9

The sensor converts mechanical forces (e.g. vibrations) of the equipment to which it is mounted into an electrical signal through a permanently attached cable to a conditioner (electronic box) that sends out a modulated current output signal. Intrinsically safe with entity parameters when connected per drawing PZ 8726.

Nomenclature:

X defines the design of the sensor head (X = 0…9)
YY depends on the connector type and the cable length (Y = 0…9)

Ratings:

In type of protection intrinsic safety A/Ex ia IIC, only for connection to a certified intrinsically safe circuit, with following entity parameters:

Part Number	Vmax, Ui	Imax, Ii	Pi	Li	Ci sensor
444-28X-000-YY2 to 444-28X-000-YY9	28 V	100 mA	0.7 W	0 mH	0 nF

Ambient Temperature Range:

Type Description	Part Number	Ambient Temperature	
		Conditioner	Sensor and cable
Sensor and remote electronic	444-28X-000-YY2 to 444-28X-000-YY9	-55 °C to +125 °C	-55 °C to +260 °C

Temperature Code:

Type Part Number		T6	T5	T4	T3	T2
444-28X-000-YY2 to	Sensor and cable	+80°C	+95°C	+130°C	+195°C	+260°C
444-28X-000-YY9	Conditioner	+65°C	+80°C	+115°C	+125°C	+125°C

Class I, Division 1, Groups A, B, C and D
Ex ia IIC T6…T3 Ga
Class I, Zone 0, AEx ia IIC T6…T3 Ga

Accelerometers Type CE 31X (sensor with integrated electronic) P/N 444-31X-000-YY2 to 444-31X-000-YY9

The sensor is used for vibration monitoring and converts mechanical forces (e.g. vibrations) of the equipment to which it is mounted into an electrical signal that is processed within the integrated signal conditioner and sends

Certificate: 1514310 **Master Contract:** 175074
Project: 70097496 **Date Issued:** 2016-12-12

out a modulated current output signal. Intrinsically safe with entity parameters when connected per drawing PZ 8735.

Nomenclature:

X defines the design of the sensor head (X = 0…9)
YY depends on the connector type and the cable length (Y = 0…9)

Ratings:

In type of protection intrinsic safety A/Ex ia IIC, only for connection to a certified intrinsically safe circuit, with following entity parameters.

Part Number	Vmax, Ui	Imax, Ii	Pi	Li	Ci sensor	Ci cable
444-31X-000-YY2 to 444-31X-000-YY9	28 V	100 mA	0.7 W	0 mH	0 nF	250 pF/m

Ambient Temperature Range:

Type Description	Part Number	Ambient Temperature
Sensor with integrated conditioner	444-31X-000-YY2 to 444-31X-000-YY9	-55 °C to +125 °C

Temperature Code:

Part Number	T6	T5	T4	T3
444-31X-000-YY2 to 444-31X-000-YY9	+65°C	+80°C	+115°C	+125°C

CLASS - C225802 - PROCESS CONTROL EQUIPMENT- For Hazardous Locations -
CLASS - C225882 - PROCESS CONTROL EQUIPMENT- For Hazardous Locations - Certified to US Standards

Class I, Division 2, Groups A, B, C and D
Ex nA IIC T6…T2 Gc
Class I, Zone 2, AEx nA IIC T6…T2 Gc

Accelerometers Type CA 28X (sensor only) P/N 144-28X-000-YYY

The sensor converts mechanical forces (e.g. vibrations) of the equipment to which it is mounted into an electrical signal that is processed externally. Installation shall be in accordance with drawing PZ 8723.

Nomenclature:

X defines the design of the sensor head (X = 0…9)
YYY depends on the connector type and the cable length (Y = 0…9)

Certificate: 1514310 **Master Contract:** 175074
Project: 70097496 **Date Issued:** 2016-12-12

Ambient Temperature Range:

Type Description	Part Number	Ambient Temperature
Sensor and cable only	144-28X-000-YYY	-55 °C to +260 °C

Temperature Code:

Part Number	T6	T5	T4	T3	T2
144-28X-000-YYY	+80°C	+95°C	+130°C	+195°C	+260°C

Conditions of Acceptability

1. To be supplied by a Class 2 or Limited Energy Source in accordance with CSA/UL 61010-1.
2. Transient protection shall be provided that is set at a level not exceeding 140 % of the peak rated voltage value at the supply terminals to the equipment.
3. The final installation shall ensure that there is no risk of mechanical impact to the cable of the device.
4. The final installation of the device shall meet the requirements of CEC (for Canada) and NEC (for USA) for wiring method in Zone 2 and Division 2 and is subjected to acceptance of local authority having jurisdiction.

Accelerometers Type CE 28X (sensor with remote electronic) P/N 444-28X-000-YY2 to 444-28X-000-YY9

The sensor converts mechanical forces (e.g. vibrations) of the equipment to which it is mounted into an electrical signal sent through an integrated cable to a conditioner (electronic box) that sends out a modulated current output signal. Installation shall be in accordance with drawing PZ 8732.

Nomenclature:

X defines the design of the sensor head (X = 0…9)
YY depends on the connector type and the cable length (Y = 0…9)

Ratings:

In type of protection non-sparking Ex nA IIC with the following maximum values:

Part Number	Maximum Voltage	Maximum Current	Maximum Power
444-28X-000-YY2 to 444-28X-000-YY9	28 V	25 mA	224 mW

Ambient Temperature Range:

Type Description	Part Number	Ambient Temperature	
		Electronic	Sensor and cable
Sensor with remote electronic	444-28X-000-YY2 to 444-28X-000-YY9	-55 °C to +125 °C	-55 °C to +260 °C

Certificate: 1514310 **Master Contract:** 175074
Project: 70097496 **Date Issued:** 2016-12-12

Temperature Code:

Type Part Number		T6	T5	T4	T3	T2
444-28X-000-YY2 to 444-28X-000-YY9	Sensor and cable	+80°C	+95°C	+130°C	+195°C	+260°C
	Conditioner	+65°C	+80°C	+115°C	+125°C	+125°C

Conditions of Acceptability

1. To be supplied by a Class 2 or Limited Energy Source in accordance with CSA/UL 61010-1.
2. Transient protection shall be provided that is set at a level not exceeding 140 % of the peak rated voltage value at the supply terminals to the equipment.
3. The final installation shall ensure that there is no risk of mechanical impact to the cable of the device.
4. The final installation of the device shall meet the requirements of CEC (for Canada) and NEC (for USA) for wiring method in Zone 2 and Division 2 and is subjected to acceptance of local authority having jurisdiction.

Class I, Division 2, Groups A, B, C and D
Ex nA IIC T6…T3 Gc
Class I, Zone 2, AEx nA IIC T6…T3 Gc

Accelerometers Type CE 31X (sensor with integrated electronic) P/N 444-31X-000-YY2 to 444-31X-000-YY9

The sensor is used for vibration monitoring and converts mechanical forces (e.g. vibrations) of the equipment to which it is mounted into an electrical signal that is processed within the integrated signal conditioner and sends out a modulated current output signal. Installation shall be in accordance with drawing PZ 8739.

Nomenclature:

X defines the design of the sensor head (X = 0…9)
YY depends on the connector type and the cable length (Y = 0…9)

Ratings:

In type of protection non-sparking A/Ex nA IIC with the following maximum values:

Part Number	Maximum Voltage	Maximum Current	Maximum Power
444-31X-000-YY2 to 444-31X-000-YY9	28 V	25 mA	224 mW

Ambient Temperature Range:

Type Description	Part Number	Ambient Temperature
Sensor with integral conditioner	444-31X-000-YY2 to 444-31X-000-YY9	-55 °C to +125 °C

Certificate: 1514310 **Master Contract:** 175074
Project: 70097496 **Date Issued:** 2016-12-12

Temperature Code:

Part Number	T6	T5	T4	T3
444-31X-000-YY2 to 444-31X-000-YY9	+65°C	+80°C	+115°C	+125°C

Conditions of Acceptability

1. To be supplied by a Class 2 or Limited Energy Source in accordance with CSA/UL 61010-1.
2. Transient protection shall be provided that is set at a level not exceeding 140 % of the peak rated voltage value at the supply terminals to the equipment.
3. The final installation shall ensure that there is no risk of mechanical impact to the cable of the device.
4. The final installation of the device shall meet the requirements of CEC (for Canada) and NEC (for USA) for wiring method in Zone 2 and Division 2 and is subjected to acceptance of local authority having jurisdiction.

APPLICABLE REQUIREMENTS

CAN/CSA-C22.2 No. 0-10 (R2011)	General Requirements – Canadian Electrical Code, Part II
CSA Standard 1010.1	Safety Requirements for Electrical Equipment for Measurement, Control & Laboratory Use - Part 1: General Requirements
CSA Std. C22.2 No. 213-16	Non-Incendive Electrical Equipment for Use in Class I, Division 2 Hazardous Locations
CAN/CSA-C22.2 No. 60079-0:15	Explosive Atmospheres - Part 0: Equipment - General requirements
CAN/CSA-C22.2 No. 60079-11:14	Explosive Atmospheres – Part 11: Equipment protection by intrinsic safety "i"
CAN/CSA-C22.2 No. 60079-15:16	Explosive Atmospheres – Part 15: Construction, test and marking of type of protection "n" electrical apparatus
UL 61010C-1, 1st Ed	Standard for Process Control Equipment
ANSI/ISA-12.12.01-2015	Nonincendive Electrical Equipment for Use in Class I and II, Division 2 and Class III, Divisions 1 and 2 Hazardous (Classified) Locations
ANSI/UL 60079-0:13	Electrical Apparatus for Explosive Gas Atmospheres - Part 0: General Requirements
ANSI/UL 60079-11:13	Electrical apparatus for Explosive Gas Atmospheres - Part 11: Intrinsic Safety "i"
ANSI/UL 60079-15:13	Electrical apparatus for Explosive Gas Atmospheres - Part 15: Type of Protection "n"

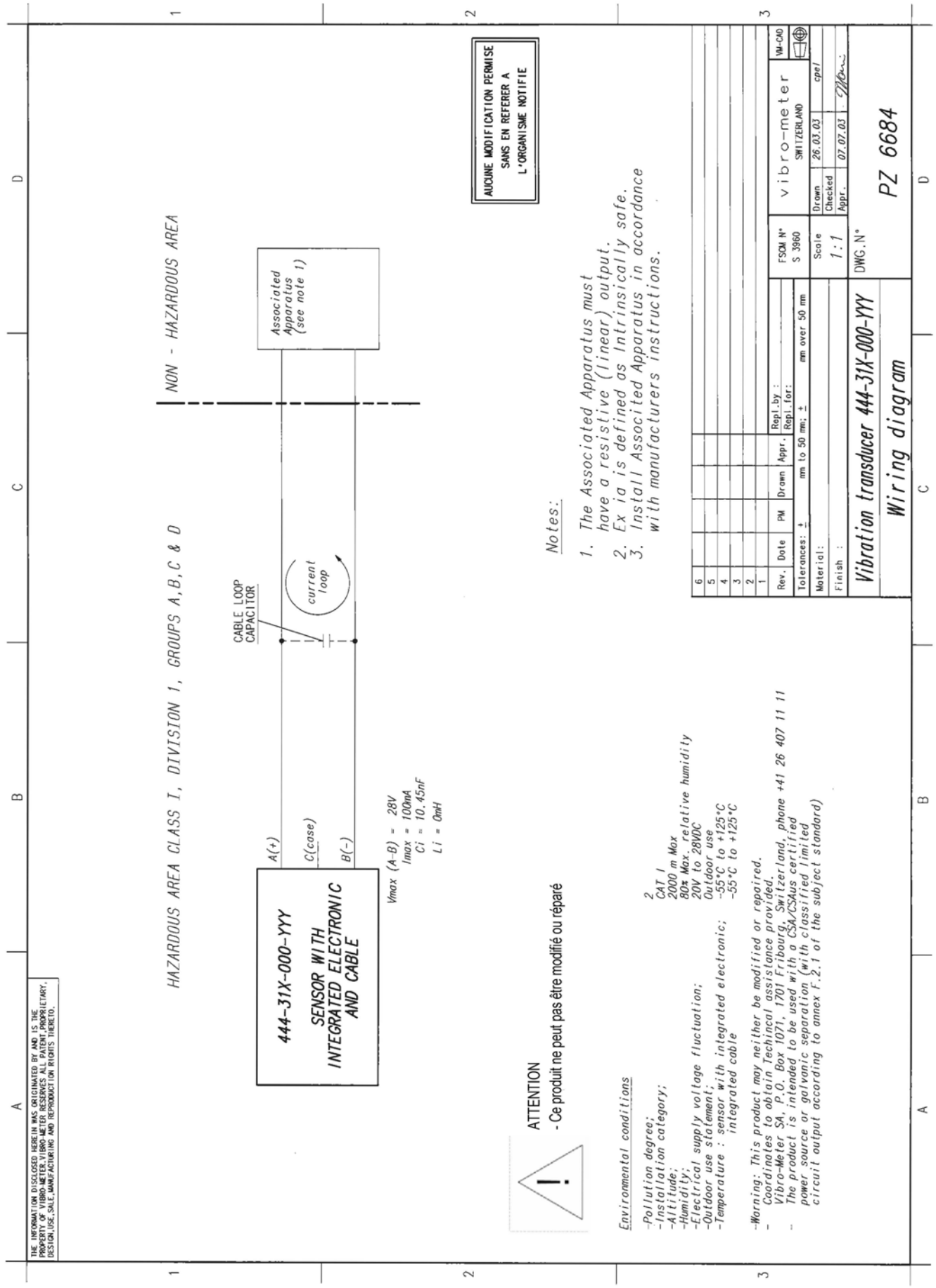
Supplement to Certificate of Compliance

Certificate: 1514310 **Master Contract:** 175074

The products listed, including the latest revision described below, are eligible to be marked in accordance with the referenced Certificate.

Product Certification History

Project	Date	Description
70097496	2016-12-12	Update to report 1514310 to include the following changes: New design of electronic conditioner; Introduction of new nomenclature for old and new models; Addition of alternative RT 426 casting compound; Evaluation of intrinsic safe version of product for Division 1 and Zone 0; Evaluation of non-sparking version of product for Division 2 and Zone 2; Update of several control drawings; Update to applicable standards.
2421979	2011-05-05	Update Report 1514310 to include the change of legal entity name
2188588	2009-07-22	Update to report 1514310 to change Ci value from 6nF to 8nF. Evaluation done against following standards: CSA Standard 1010.1, CSA C22.2No. 157-92, UL 61010C-1, and Ul 913.
1648970	2005-04-12	Update to report 1514310 to add a new compound reference Q-Sil 550.
1514310	2004-01-09	Original cCSAus certification for Accelerometer Type 444-31X-000-YYY, 444-28X-000-YYY, and 144-28X-000-YYY.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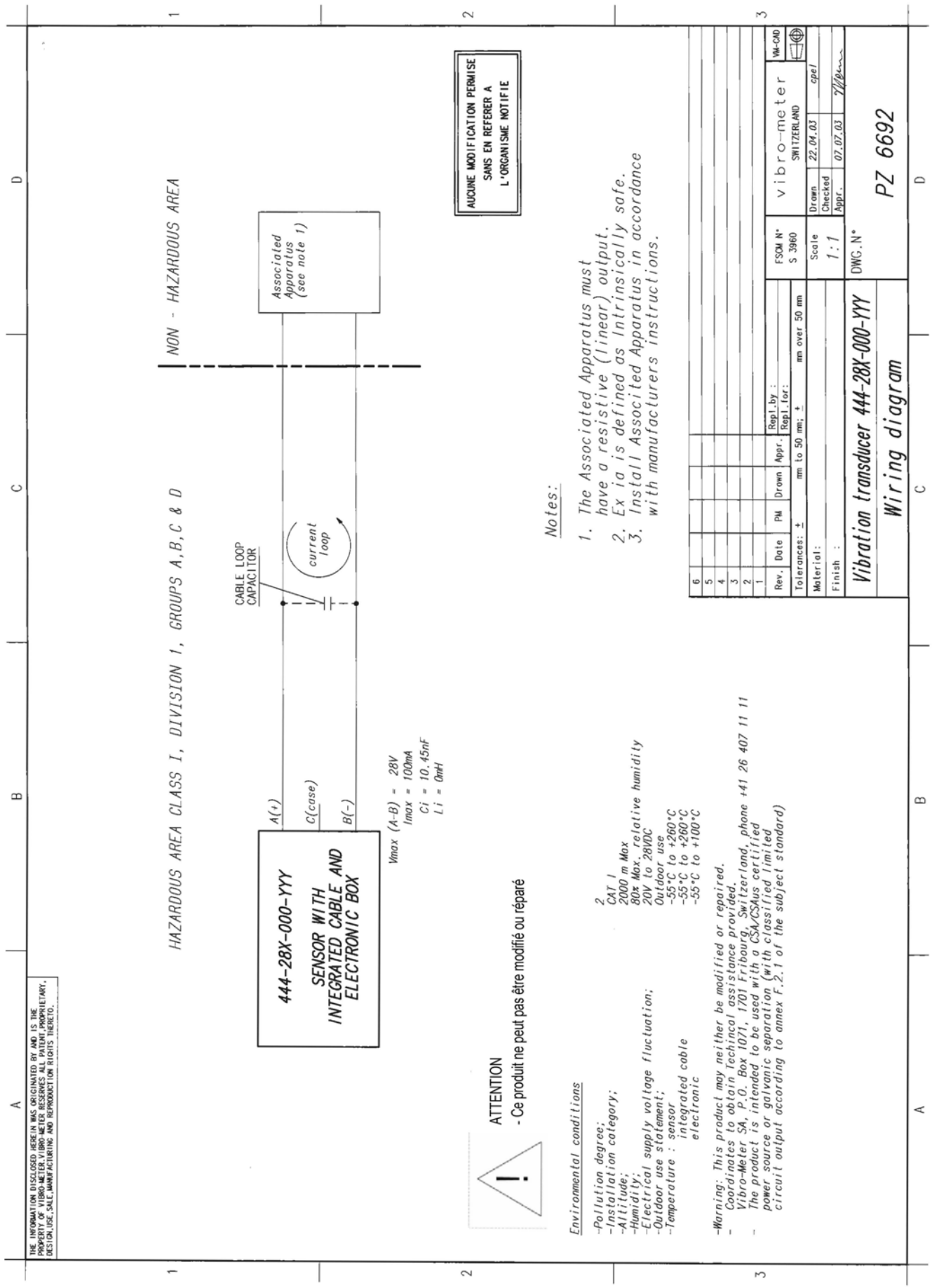
HAZARDOUS AREA CLASS I, DIVISION 1, GROUPS A,B,C & D
NON - HAZARDOUS AREA
444-31X-000-YYY
SENSOR WITH INTEGRATED ELECTRONIC AND CABLE
A(+)
C(case)
B(-)
CABLE LOOP CAPACITOR
current loop
Associated Apparatus (see note 1)
Vmax (A-B) = 28V
Imax = 100mA
Ci = 10.45nF
Li = 0mH
AUCUNE MODIFICATION PERMISE SANS EN REFERER A L'ORGANISME NOTIFIE
Notes:
1. The Associated Apparatus must have a resistive (linear) output.
2. Ex ia is defined as Intrinsically safe.
3. Install Associated Apparatus in accordance with manufacturers instructions.
ATTENTION
- Ce produit ne peut pas être modifié ou réparé
Environmental conditions
-Pollution degree; 2
-Installation category; CAT I
-Altitude; 2000 m Max
-Humidity; 80% Max. relative humidity
-Electrical supply voltage fluctuation; 20V to 28VDC
-Outdoor use statement; Outdoor use
-Temperature : sensor with integrated electronic; -55°C to +125°C
integrated cable -55°C to +125°C
-Warning: This product may neither be modified or repaired.
- Coordinates to obtain Technical assistance provided.
Vibro-Meter SA, P.O. Box 1071, 1701 Fribourg, Switzerland, phone +41 26 407 11 11
- The product is intended to be used with a CSA/CSAus certified power source or galvanic separation (with classified limited circuit output according to annex F.2.1 of the subject standard)
Rev. Date PM Drawn Appr. Repl.by : Repl.for:
Tolerances: ± mm to 50 mm; ± mm over 50 mm
Material:
Finish :
FSCM N° S 3960
Scale 1:1
DWG.N° PZ 6684
vibro-meter SWITZERLAND
Drawn 26.03.03 cpel
Checked
Appr. 07.07.03
Vibration transducer 444-31X-000-YYY
Wiring diagram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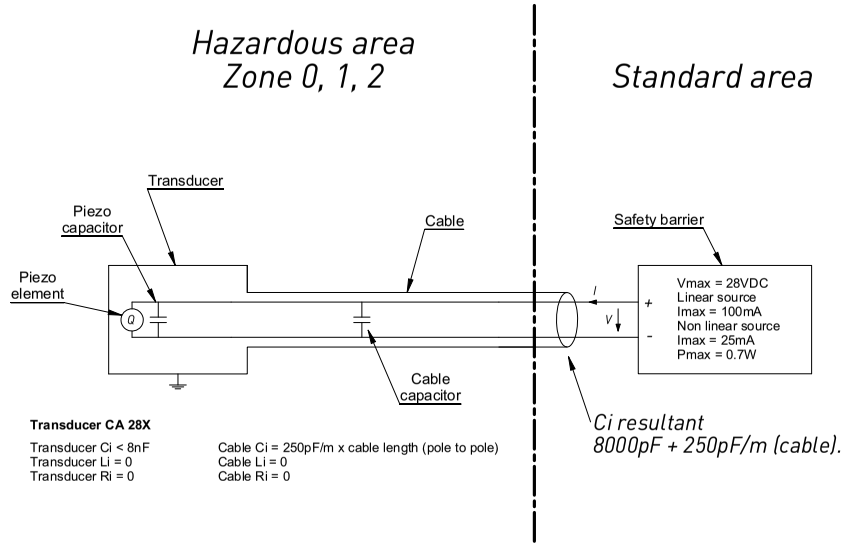
HAZARDOUS AREA CLASS I, DIVISION 1, GROUPS A,B,C & D
NON - HAZARDOUS AREA
444-28X-000-YYY
SENSOR WITH INTEGRATED CABLE AND ELECTRONIC BOX
A(+)
C(case)
B(-)
CABLE LOOP CAPACITOR
current loop
Associated Apparatus (see note 1)
Vmax (A-B) = 28V
Imax = 100mA
Ci = 10.45nF
Li = 0mH
AUCUNE MODIFICATION PERMISE SANS EN REFERER A L'ORGANISME NOTIFIE
ATTENTION
- Ce produit ne peut pas être modifié ou réparé
Notes:
1. The Associated Apparatus must have a resistive (linear) output.
2. Ex ia is defined as Intrinsically safe.
3. Install Associated Apparatus in accordance with manufacturers instructions.
Environmental conditions
-Pollution degree; 2
-Installation category; CAT I
-Altitude; 2000 m Max
-Humidity; 80% Max. relative humidity
-Electrical supply voltage fluctuation; 20V to 28VDC
-Outdoor use statement; Outdoor use
-Temperature : sensor -55°C to +260°C
integrated cable -55°C to +260°C
electronic -55°C to +100°C
-Warning: This product may neither be modified or repaired.
- Coordinates to obtain Techincal assistance provided.
Vibro-Meter SA, P.O. Box 1071, 1701 Fribourg, Switzerland, phone +41 26 407 11 11
- The product is intended to be used with a CSA/CSAus certified power source or galvanic separation (with classified limited circuit output according to annex F.2.1 of the subject standard)
Rev. Date PM Drown Appr. Repl.by : Repl.for:
Tolerances: ± mm to 50 mm; ± mm over 50 mm
Material:
Finish :
FSCM N° S 3960
Scale 1:1
DWG. N°
Vibration transducer 444-28X-000-YYY
Wiring diagram
PZ 6692
vibro-meter SWITZERLAND
Drown 22.04.03 cpel
Checked
Appr. 07.07.03
VM-CAD



WARNING:
- THIS PRODUCT MAY NEITHER BE MODIFIED OR REPAIRED

ATTENTION
- CE PRODUIT NE PEUT PAS ETRE MODIFIE OU REPARE

Notes

1. Ex ia is defined as intrinsically safe.
2. Install associated apparatus in accordance with manufacturers instructions.

Environmental conditions

- Pollution degree : 2
- Installation category : CAT I
- Altitude : 2000 m Max
- Humidity : 80% Max relative humidity
- Electrical supply voltage fluctuation : No supply voltage (charge generator)
- Outdoor use statement : Outdoor use
- Temperature operational
  - sensor : -55°C to +260°C
  - cable : -55°C to +260°C

- Warning: This product may neither be modified or repaired.
- Coordinates to obtain Technical assistance provided.
  Meggitt SA, P.O. Box 1616, Route de Moncor 4, 1701 Fribourg, Switzerland, phone +41 26 407 11 11
- The product is intended to be used with certified signal conditioner and safety barrier.
- To ensure an installation conform with an explosive environment, it is crucial to respect the criteria mentioned into the corresponding Ex certificates.

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OF NOTIFIED BODY

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Scale 1:1	Format A3	Meggitt SA, Rte de Moncor 4, CH-1752 Villars-sur-Glâne, Switzerland

Material:	Repl.by:	Repl.for:

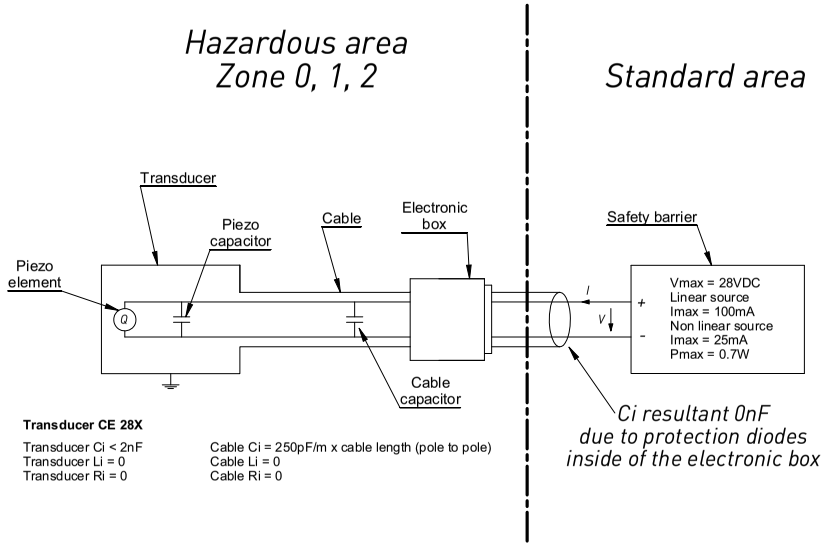
Linear Tolerances [mm]: › 0,5 … 3 | › 3 … 6 | › 6 … 30 | › 30 … 120 | › 120 … 400 | ›400 …1000 | ›1000 …2000 | ›2000 …4000 — all "-"

Radius / Chamfers [mm]: › 0,5 … 3 | › 3 … 6 | › 6 — all "-"

Tol. on angle [°] (L [mm]): … 10 | › 10 … 50 | › 50 … 120 | › 120 … 400 — all "-"

Drawn	30.06.16	C.Pellegrinelli
Check.	30.06.16	H-P.Aeby
Appr.	30.06.16	J.Perriard

Wiring diagram CA 28X (ia)	DWG.N°
144-28X-000-YYY	PZ 8721



WARNING:
- THIS PRODUCT MAY NEITHER BE MODIFIED OR REPAIRED

ATTENTION
- CE PRODUIT NE PEUT PAS ETRE MODIFIE OU REPARE

Notes

1. Ex ia is defined as intrinsically safe.
2. Install associated apparatus in accordance with manufacturers instructions.

Environmental conditions

- Pollution degree : 2
- Installation category : CAT I
- Altitude : 2000 m Max
- Humidity : 80% Max relative humidity
- Electrical supply voltage fluctuation : 15VDC to 28VDC
- Outdoor use statement : Outdoor use
- Temperature operational
  - sensor : -55°C to +260°C
  - cable : -55°C to +260°C
  - conditioner : -55°C to +125°C

- Warning: This product may neither be modified or repaired.
- Coordinates to obtain Technical assistance provided.
  Meggitt SA, P.O. Box 1616, Route de Moncor 4, 1701 Fribourg, Switzerland, phone +41 26 407 11 11
- The product is intended to be used with certified signal conditioner and safety barrier.
- To ensure an installation conform with an explosive environment, it is crucial to respect the criteria mentioned into the corresponding Ex certificates.

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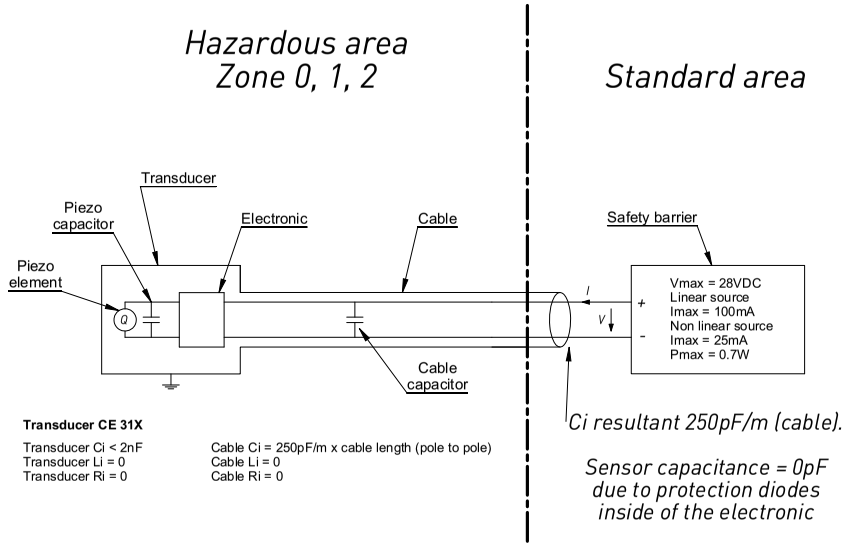
Material:	Repl.by:	Repl.for:

Linear Tolerances [mm]: › 0,5 … 3 | › 3 … 6 | › 6 … 30 | › 30 … 120 | › 120 … 400 | ›400 …1000 | ›1000 …2000 | ›2000 …4000
Radius / Chamfers [mm]: › 0,5 … 3 | › 3 … 6 | › 6
Tol. on angle [°] (L [mm]): … 10 | › 10 … 50 | › 50 … 120 | › 120 … 400

Drawn	30.06.16	C.Pellegrinelli
Check.	30.06.16	H-P.Aeby
Appr.	30.06.16	J.Perriard

Wiring diagram CE 28X (ia)	DWG.N°
444-28X-000-YY2 to -YY9	PZ 8726



WARNING:
- THIS PRODUCT MAY NEITHER BE MODIFIED OR REPAIRED

ATTENTION
- CE PRODUIT NE PEUT PAS ETRE MODIFIE OU REPARE

Notes

1. Ex ia is defined as intrinsically safe.
2. Install associated apparatus in accordance with manufacturers instructions.

Environmental conditions

- Pollution degree : 2
- Installation category : CAT I
- Altitude : 2000 m Max
- Humidity : 80% Max relative humidity
- Electrical supply voltage fluctuation : 15VDC to 28VDC
- Outdoor use statement : Outdoor use
- Temperature operational
  - sensor : -55°C to +125°C
  - cable : -55°C to +125°C

- Warning: This product may neither be modified or repaired.
- Coordinates to obtain Technical assistance provided.
  Meggitt SA, P.O. Box 1616, Route de Moncor 4, 1701 Fribourg, Switzerland, phone +41 26 407 11 11
- The product is intended to be used with certified signal conditioner and safety barrier.
- To ensure an installation conform with an explosive environment, it is crucial to respect the criteria mentioned into the corresponding Ex certificates.

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S3960	
Scale	Format
1:1	A3

Meggitt SA
Rte de Moncor 4, CH-1752 Villars-sur-Glâne, Switzerland

Material:	Repl.by:	Repl.for:

Linear Tolerances [mm]

› 0,5 … 3	› 3 … 6	› 6 … 30	› 30 … 120	› 120 … 400	›400 …1000	›1000 …2000	›2000 …4000
-	-	-	-	-	-	-	-

Radius / Chamfers [mm]

› 0,5 … 3	› 3 … 6	› 6
-	-	-

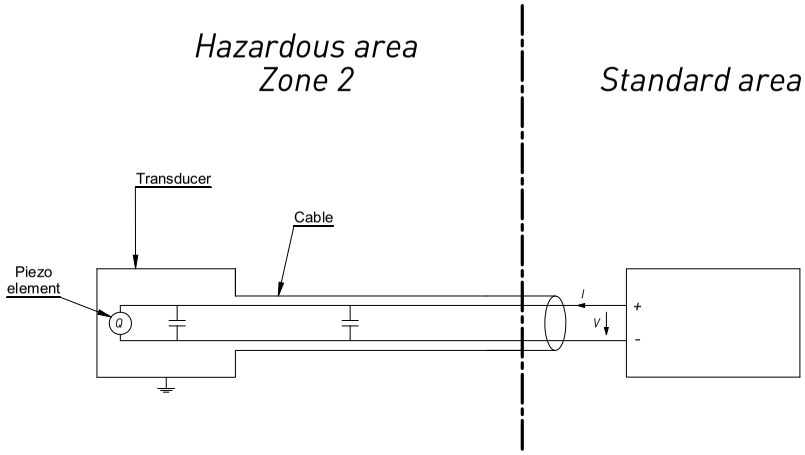
Tol. on angle [°] (L [mm])

… 10	› 10 … 50	› 50 … 120	› 120 … 400
-	-	-	-

Drawn	30.06.16	C.Pellegrinelli
Check.	30.06.16	H-P.Aeby
Appr.	30.06.16	J.Perriard

Wiring diagram CE 31X (ia)
444-31X-000-YY2 to YY9

DWG.N°
PZ 8735



WARNING:
- THIS PRODUCT MAY NEITHER BE MODIFIED OR REPAIRED

ATTENTION
- CE PRODUIT NE PEUT PAS ETRE MODIFIE OU REPARE

Notes

Install associated apparatus in accordance with manufacturers instructions.

Environmental conditions

- Pollution degree : 2
- Installation category : CAT I
- Altitude : 2000 m Max
- Humidity : 80% Max relative humidity
- Electrical supply voltage fluctuation : No supply voltage (charge generator)
- Outdoor use statement : Outdoor use
- Temperature operational
  - sensor : -55°C to +260°C
  - cable : -55°C to +260°C

- To be supplied by a Class 2 or Limited Energy Source in accordance with CSA/UL 61010-1.
- Transient protection shall be provided that is set at a level not exceeding 140 % of the peak rated voltage value at the supply terminals to the equipment.
- The final installation shall ensure that there is no risk of mechanical impact to the cable of the device.
- The final installation of the device shall meet the requirements of CEC (for Canada) and NEC (for USA) for wiring method in Zone 2 and Division 2 and is subjected to acceptance of local authority having jurisdiction.

- Warning: This product may neither be modified or repaired.
- Coordinates to obtain Technical assistance provided.
  Meggitt SA, P.O. Box 1616, Route de Moncor 4, 1701 Fribourg, Switzerland, phone +41 26 407 11 11
- The product is intended to be used with certified signal conditioner and safety barrier.
- To ensure an installation conform with an explosive environment, it is crucial to respect the criteria mentioned into the corresponding Ex certificates.

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MFR	MSS-CAD
S3960	
Scale	Format
1:1	A3

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Meggitt SA
Rte de Moncor 4, CH-1752 Villars-sur-Glâne, Switzerland

Material:	Repl.by:	Repl.for:

Linear Tolerances [mm]									Radius / Chamfers [mm]			Tol. on angle [°]				
	› 0,5 … 3	› 3 … 6	› 6 … 30	› 30 … 120	› 120 … 400	›400 …1000	›1000 …2000	›2000 …4000	› 0,5 … 3	› 3 … 6	› 6	… 10	› 10 … 50	› 50 … 120	› 120 … 400
'	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

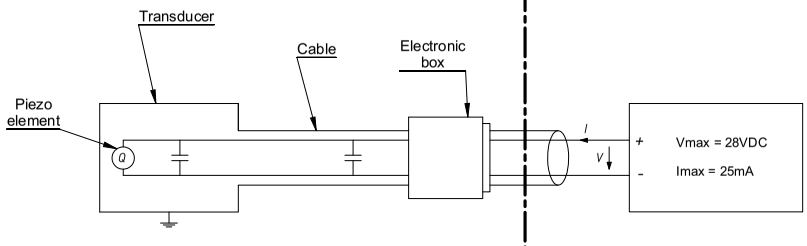
Drawn	30.06.16	C.Pellegrinelli
Check.	30.06.16	H-P.Aeby
Appr.	30.06.16	J.Perriard

Wiring diagram CA 28X (nA)

144-28X-000-YYY

DWG.N°
PZ 8723

MEGGiTT



WARNING:
- THIS PRODUCT MAY NEITHER BE MODIFIED OR REPAIRED

ATTENTION
- CE PRODUIT NE PEUT PAS ETRE MODIFIE OU REPARE

Notes

Install associated apparatus in accordance with manufacturers instructions.

Environmental conditions

- Pollution degree : 2
- Installation category : CAT I
- Altitude : 2000 m Max
- Humidity : 80% Max relative humidity
- Electrical supply voltage fluctuation : 15VDC to 28VDC
- Outdoor use statement : Outdoor use
- Temperature operational
  - sensor : -55°C to +260°C
  - cable : -55°C to +260°C
  - conditioner : -55°C to +125°C

- To be supplied by a Class 2 or Limited Energy Source in accordance with CSA/UL 61010-1.
- Transient protection shall be provided that is set at a level not exceeding 140 % of the peak rated voltage value at the supply terminals to the equipment.
- The final installation shall ensure that there is no risk of mechanical impact to the cable of the device.
- The final installation of the device shall meet the requirements of CEC (for Canada) and NEC (for USA) for wiring method in Zone 2 and Division 2 and is subjected to acceptance of local authority having jurisdiction.

- Warning: This product may neither be modified or repaired.
- Coordinates to obtain Technical assistance provided.
  Meggitt SA, P.O. Box 1616, Route de Moncor 4, 1701 Fribourg, Switzerland, phone +41 26 407 11 11
- The product is intended to be used with certified signal conditioner and safety barrier.
- To ensure an installation conform with an explosive environment, it is crucial to respect the criteria mentioned into the corresponding Ex certificates.

NO MODIFICATION ALLOWED
WITHOUT PRIOR AUTORISATION
OF NOTIFIED BODY

Rev.	Date	Change N°	Drawn	Appr.	Description

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MFR	MSS-CAD
S3960	
Scale	Format
1:1	A3

MEGGITT
Meggitt SA
Rte de Moncor 4, CH-1752 Villars-sur-Glâne, Switzerland

Material:	Repl.by:	Repl.for:

Linear Tolerances [mm]

› 0,5 … 3	› 3 … 6	› 6 … 30	› 30 … 120	› 120 … 400	›400 …1000	›1000 …2000	›2000 …4000
-	-	-	-	-	-	-	-

Radius / Chamfers [mm]

› 0,5 … 3	› 3 … 6	› 6
-	-	-

Tol. on angle [°] (L [mm])

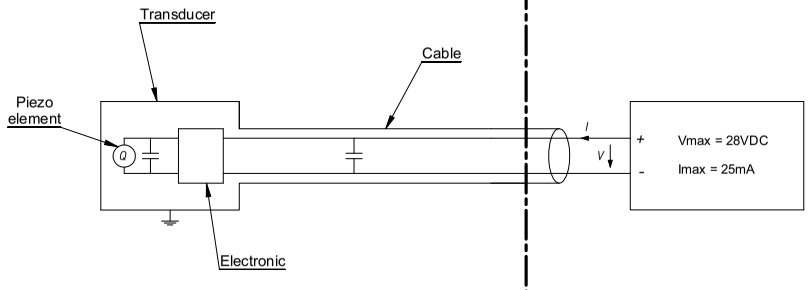
… 10	› 10 … 50	› 50 … 120	› 120 … 400
-	-	-	-

Drawn	30.06.16	C.Pellegrinelli
Check.	30.06.16	H-P.Aeby
Appr.	30.06.16	J.Perriard

Wiring diagram CE 28X (nA)

444-28X-000-YY2 to -YY9

DWG.N°
PZ 8732



WARNING:
- THIS PRODUCT MAY NEITHER BE MODIFIED OR REPAIRED

ATTENTION
- CE PRODUIT NE PEUT PAS ETRE MODIFIE OU REPARE

Notes

Install associated apparatus in accordance with manufacturers instructions.

Environmental conditions

- Pollution degree : 2
- Installation category : CAT I
- Altitude : 2000 m Max
- Humidity : 80% Max relative humidity
- Electrical supply voltage fluctuation : 15VDC to 28VDC
- Outdoor use statement : Outdoor use
- Temperature operational
  - sensor : -55°C to +125°C
  - cable : -55°C to +125°C

- To be supplied by a Class 2 or Limited Energy Source in accordance with CSA/UL 61010-1.
- Transient protection shall be provided that is set at a level not exceeding 140 % of the peak rated voltage value at the supply terminals to the equipment.
- The final installation shall ensure that there is no risk of mechanical impact to the cable of the device.
- The final installation of the device shall meet the requirements of CEC (for Canada) and NEC (for USA) for wiring method in Zone 2 and Division 2 and is subjected to acceptance of local authority having jurisdiction.

- Warning: This product may neither be modified or repaired.
- Coordinates to obtain Technical assistance provided.
  Meggitt SA, P.O. Box 1616, Route de Moncor 4, 1701 Fribourg, Switzerland, phone +41 26 407 11 11
- The product is intended to be used with certified signal conditioner and safety barrier.
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MFR	MSS-CAD
S3960	
Scale	Format
1:1	A3

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Meggitt SA
Rte de Moncor 4, CH-1752 Villars-sur-Glâne, Switzerland

Material:	Repl.by:	Repl.for:		
		Drawn	30.06.16	C.Pellegrinelli
Linear Tolerances [mm]	Radius / Chamfers [mm]	Tol. on angle [°]	Check.	30.06.16	H-P.Aeby
			Appr.	30.06.16	J.Perriard

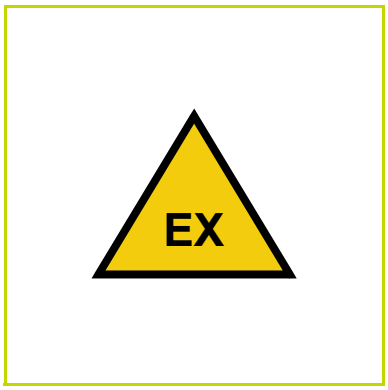
Wiring diagram CE 31X (nA)
444-31X-000-YY2 to -YY9

DWG.N°
PZ 8739

EX CERTIFICATE – cCSAus

vibro-meter®

cCSAus 1550831
for
CA30x piezoelectric accelerometers



Note: Although the Ex certificate may be included in more than one language, the liability of the notified body applies only on the text of the original copy of the certificate that it published.

Document reference cCSAus 1550831
Edition 5 – May 2021

Meggitt SA, Route de Moncor 4, Case postale, 1701 Fribourg, Switzerland

Tel: +41 26 407 1111
Fax: +41 26 407 1660
energy@ch.meggitt.com
www.meggittsensing.com/energy
www.meggitt.com

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Certificate of Compliance

Certificate: 1550831 **Master Contract:** 175074

Project: 80070101 **Date Issued:** 2021-04-06

Issued To: **Meggitt SA**
Rte de Moncor 4
Villars-sur-Glane, Fribourg, 1752
Switzerland

Attention: Pascal Kornatko

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.

Issued by: Sorin Tat
Sorin Tat

C US

PRODUCTS
CLASS - C225804 - PROCESS CONTROL EQUIPMENT Intrinsically Safe, Entity - For Hazardous Locations
CLASS - C225884 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe Entity - For Hazardous Locations - Certified to US Standards

CLASS I, Division 1, Groups A, B, C and D

Accelerometer Type 144-30X-000-YYY

Intrinsically safe with entity parameters when connected per drawing PZ 6720

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Entity Parameters for the sensor:
Vmax(Ui)=28 V, Imax(Ii)=100 mA, when used with linear source Voc ≤ 28 V, Isc ≤ 100 mA, Po ≤ 0,7W
Pmax(Pi)=0,7W, Imax(Ii)=25mA, when used with non linear source Voc ≤ 28V, Isc ≤ 25mA, Po ≤ 0,7W
Ci=2nF, Li=0 mH

Temperature code :

Ambient temperatures are as follows:

* -54°C/ / + 500°C for sensor and cable

*-54°C/…/+500°C for sensor with high temperature VM connector
connectors:
* -65°C/ / + 150°C for LEMO connector Type 0 or equivalent
* -65°C/ / + 200°C for connector Type M83723/89Y1020 or equivalent
* -54°C/ / + 260°C for standard temperature VM connector

The relation between maximum ambient temperature and temperature class is as follows for all devices, taking into account the above mentioned temperature ranges:

Maximum ambient temperature: Ta<+430 °C for T1
Ta<+280 °C for T2
Ta<+180 °C for T3
Ta<+115 °C for T4
Ta<+80 °C for T5
Ta<+75 °C for T6

The maximum temperature, for ambient higher than 430 °C is the process temperature minus 10K.

APPLICABLE REQUIREMENTS

CSA Standard 1010.1	Safety Requirements for Electrical Equipment for Measurement, Control & Laboratory Use - Part 1: General Requirements
CSA C22.2 No 157-92	Intrinsically Safe and Non-Incendive Equipment for use in Hazardous Locations
UL 61010C-1, 1st Ed	Standard for Process Control Equipment
UL 913, 6th Ed	Standard for Intrinsically Safe Apparatus and Associated Apparatus for Use in Class I, II, III, Division 1, Hazardous (Classified) Locations

MARKINGS

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Certificate: 1550831
Project: 80070101

Master Contract: 175074
Date Issued: 2021-04-06

The manufacturer is required to apply the following markings:

- Products shall be marked with the markings specified by the particular product standard.
- Products certified for Canada shall have all Caution and Warning markings in both English and French.

Additional bilingual markings not covered by the product standard(s) may be required by the Authorities Having Jurisdiction. It is the responsibility of the manufacturer to provide and apply these additional markings, where applicable, in accordance with the requirements of those authorities.

The products listed are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US (indicating that products have been manufactured to the requirements of both Canadian and U.S. Standards) or with adjacent indicator 'US' for US only or without either indicator for Canada only.

Markings shall be as follows:

VIBRO METER

CSA Monogram

Type: 144-30X-000-YYY

Serial Number

Class I, Div 1, Groups A, B, C, D

Ex ia Tx

Reference Drawing: drawing PZ6720.

Method of marking: engraved on the enclosure of the sensor

Note - Jurisdictions in Canada may require these markings to also be provided in French language. It is the responsibility of the manufacturer to provide bilingual marking, where applicable, in accordance with the requirements of the Provincial Regulatory Authorities. It is the responsibility of the manufacturer to determine this requirement and have bilingual wording added to the "Markings".

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Supplement to Certificate of Compliance

Certificate: 1550831 **Master Contract:** 175074

The products listed, including the latest revision described below, are eligible to be marked in accordance with the referenced Certificate.

Product Certification History

Project	Date	Description
80070101	2021-04-06	Update to cCSAus report 1550831 for intrinsically safe Accelerometer Type 144-30X-000-YYY for removal of entity parameters from marking label drawing. This update is based on FIR on September 15, 2020 at Factory ID 4551751 in Fribourg, Switzerland.
0002421981	2011-05-05	Update Report 1550831 to include the change of legal entity name
1550831	2004-09-23	Original certification of Accelerometer Type 144-30X-000-YYY for Class I Division 1 Gr.A,B,C,D.

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Original copy (English)
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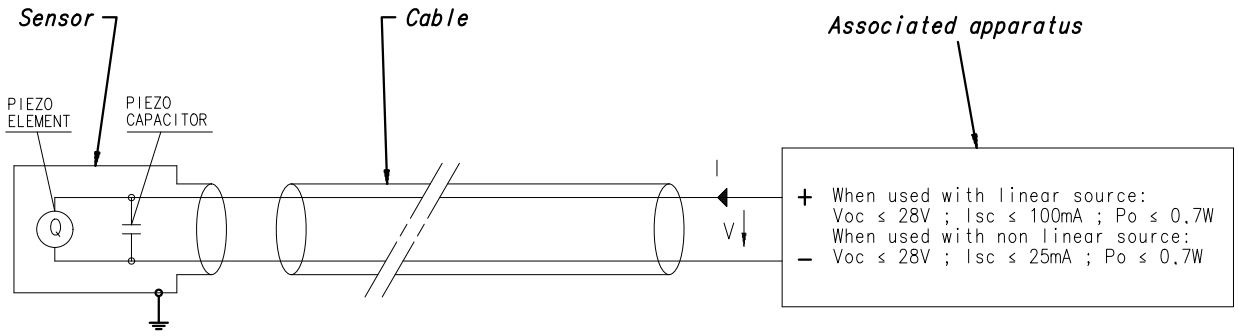

Sensor Ci = 2nF
Sensor Li = 0
Sensor Ri = 0

Cable Ci = 200pF/m x Cable lenght
Cable Li = 0
Cable Ri = 0

Ca ≥ Ci + Ccable
La ≥ Li + Lcable

AUCUNE MODIFICATION PERMISE
SANS EN REFERER A
L'ORGANISME NOTIFIE

WARNING
This product may neither be modified or repaired

ATTENTION
Ce produit ne peut pas être modifié ou réparé

Environmental conditions

- Pollution degree;	2
- Installation category;	CAT I
- Altitude;	2000 m Max
- Humidity;	80% Max. relative humidity
- Electrical supply voltage fluctuation;	No supply voltage (charge generator)
- Outdoor use statement;	Outdoor use
- Temperature: sensor and connector;	-54°C to +500°C
sensor and cable;	-54°C to +500°C
connectors;	-65°C to +150°C
	-65°C to +200°C
	-54°C to +260°C

- *Coordinates to obtain Techincal assistance provided.*
  Meggitt SA, Route de Moncor 4, 1752 Villars-sur-Glâne, Switzerland, phone +41 26 407 11 11
- *The product is intended to be used with certified safety barrier.*
- *To ensure an installation conform with an explosive environment, it is crucial to respect the criteria mentioned into the corresponding Ex certificates.*

Notes:

1. *Ex ia is defined as Intrinsically safe.*
2. *Install Associted Apparatus in accordance with manufacturers instructions.*

Rev.	Date	PM	Drawn	Appr.	Repl.by : / Repl.for:
6					
5					
4					
3					
2					
1	30.03.21	-----	cpel	P.Kornatko	Updated conditioner box

Tolerances: ± mm to 50 mm; ± mm over 50 mm

Material:

Finish :

FSCM N° S 3960

vibro-meter SWITZERLAND

VM-CAD

Drawn	06.01.04	cpel
Checked		
Appr.	06.01.04	jper

Scale 1:1

Vibration transducer 144-30X-000-YYY

Wiring diagram (cCSAus)

DWG.N° PZ 6720

MEGGITT
Original copy (English)

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cCSAus certificate:

EN

70001999

for

GSI 127

Meggitt SA
Route de Moncor 4
PO Box 1616
CH - 1701 Fribourg
Switzerland

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Certificate of Compliance

Certificate: 70001999 **Master Contract:** 175074

Project: 70112845 **Date Issued:** 2017-01-19

Issued to: **Meggitt SA**
Rte de Moncor 4
Villars-sur-Glane, Fribourg 1752
SWITZERLAND
Attention: Carlo Pellegrinelli

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.

Issued by: Hossein Saleh
Hossein Saleh

PRODUCTS

CLASS - 2258 03 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe and Non-Incendive Systems - For Hazardous Locations
CLASS - 2258 83 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe and Non-Incendive-Systems - For Hazardous Locations - Certified to U.S. Standards

Class I, Division 2, Groups A, B, C and D
Ex nA [ia Ga] IIC T4 Gc
Class I, Zone 2, AEx nA [ia Ga] IIC T4 Gc

Monitoring system consisting of galvanic separation unit Model 244-127-000-XXX (GSI 127) providing I.S. outputs for Division 1/Zone 0 when connected per Installation Drawing PZ 6924. Operating temperature: -40° to +70°C

Nomenclature:

244-127-000-XXX-A2-BYY

XXX defines the version of the product (X = 0 to 9)
YY defines the transfer mode (YY = 01 to 19 for actual specification; YY = 20 to 39 for alternate specification)

Rating:

Power supply: 30 V, 150 mA

Sensor or conditioner:

- For 244-127-000-XXX-A2-B01 to B19:
  Uo, Voc = 25.2 V; Io, Isc = 60 mA; Po = 0.7 W; Co, Ca = 95 nF; Lo, La = 5 mH
- For 244-127-000-XXX-A2-B20 to B39:
  Uo, Voc = 25.2 V; Io, Isc = 45 mA; Po = 0.5 W; Co, Ca = 95 nF; Lo, La = 10 mH

Conditions of Acceptability:

1. The power to the Monitoring Side of the equipment shall be supplied by an SELV or PELV system with a maximum voltage of 30 Vdc.
2. The Transducer Side of the equipment shall only be connected to intrinsically safe certified associated apparatus or simple apparatus.
3. This device is an OPEN type equipment that shall be installed within a fixed end-use enclosure that is rated for IP54 (according to CSA/UL 60079-0) or Type 4. The suitability of the enclosure is subject to investigation by the local authorities having jurisdiction at the time of installation.

APPLICABLE REQUIREMENTS

CAN/CSA C22.2 No. 0-10 (R2011)	General Requirements - Canadian Electrical Code, Part II
CAN/CSA C22.2 No. 142- 2009	Process control equipment
CSA Std. C22.2 No. 213-16	Non-incendive electrical equipment for use in class I, Division 2 hazardous locations
CAN/CSA-C22.2 No. 60079-0:15	Explosive Atmospheres - Part 0: Equipment - General requirements
CAN/CSA-C22.2 No. 60079-11:14	Explosive Atmospheres – Part 11: Equipment protection by intrinsic safety "i"
CAN/CSA-C22.2 No. 60079-15:16	Explosive Atmospheres – Part 15: Construction, test and marking of type of protection “n” electrical apparatus
ANSI/UL 916: October 2015 (Fifth Edition)	Energy management equipment
ANSI/UL 60079-0:13	Electrical Apparatus for Explosive Gas Atmospheres - Part 0: General Requirements
ANSI/UL 60079-11:13	Electrical apparatus for Explosive Gas Atmospheres - Part 11: Intrinsic Safety “i”
ANSI/UL 60079-15:13	Electrical apparatus for Explosive Gas Atmospheres - Part 15: Type of Protection “n”
ANSI/ISA-12.12.01-2015	Nonincendive Electrical Equipment for Use in Class I and II, Division 2 and Class III, Divisions 1 and 2 Hazardous (Classified) Locations

Supplement to Certificate of Compliance

Certificate: 70001999 **Master Contract:** 175074

The products listed, including the latest revision described below, are eligible to be marked in accordance with the referenced Certificate.

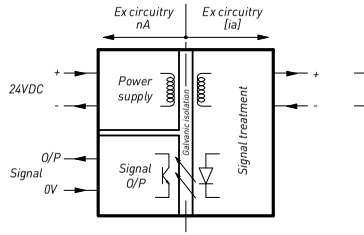
Product Certification History

Project	Date	Description
70112845	2017-01-19	Update to CSA C-US Certificate and Report 70001999 for GSI 127 Interface with IS Output, to add new models with Alternate specification, and an update to the Type designation of 2444-127-000-XXX-A2-BYY to differentiate between the two specifications. A new operating temperature of -40°C to + 70°C for all models is introduced.
70001999	2014-03-24	cCSAus certification for GSI127 for Class I, Division 2, with intrinsically safe outputs

Standard area (Cubicle for industrial application) or hazardous area Zone 2

Hazardous area Zones 0, 1, 2
Class I, division 1, groups A,B,C,D

2-wire transmission



GSI 127

244-127-000-XXX-A2-B01 to B19	244-127-000-XXX-A2-B20 to B39	CSA	IEC
95nF	95nF	Ca	Co
5mH	10mH	La	Lo
25.2V	25.2V	Voc	Uo
60mA	45mA	Isc	Io
0.7W	0.5W	Po	Po

Grounding bracket is recommended at cubical entrance

CABLE

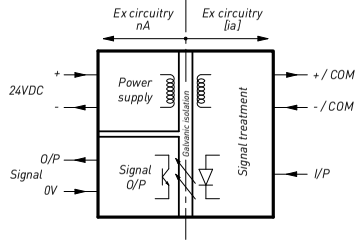
Ccable
Lcable

DEVICE

CSA	IEC
Ci	Ci
Li	Li
Vmax	Vi
Imax	Ii
Pi	Pi

Intrinsically safe device

3-wire transmission



Intrinsically safe device

"Conditions of Acceptability:

1. The power to the Monitoring Side of the device shall be supplied by an SELV or PELV system with a maximum voltage of 30 Vdc.
2. The Transducer Side of the device shall only be connected to intrinsically safe certified associated apparatus or simple apparatus.
3. This device is an OPEN type equipment that shall be installed within a fixed end-use enclosure that is rated for IP54 (according to CSA/UL 60079-0) or Type 4. The suitability of the enclosure is subject to investigation by the local authorities having jurisdiction at the time of installation."

CSA	IEC
Ca ≥ Ci + Ccable	Co ≥ Ci + Ccable
La ≥ Li + Lcable	Lo ≥ Li + Lcable
Va ≤ Vmax	Vo ≤ Vi
Isc ≤ Imax	Io ≤ Ii
Po ≤ Pi	Po ≤ Pi

Notes

1. Choose associated apparatus and intrinsically safe devices such that the above conditions are met.
2. Ex i is defined as intrinsically safe.
3. Install associated apparatus in accordance with manufacturers instructions.
4. Installation shall be carried out in compliance with NEC and CEC.

THESE NOTES ARE NOT APPLICABLE FOR n PROTECTION MODE

WARNING
- This product may neither be modified or repaired
- Separate only in non-hazardous area
- Do not connect or disconnect when energized

ATTENTION
- Ce produit ne peut pas être modifié ou réparé
- Séparer uniquement dans une zone non dangereuse
- Ne pas connecter ou déconnecter lorsqu'il est sous tension

Environmental conditions

- Pollution degree : 2
- Installation category : Cat I
- Altitude : 2000m max
- Humidity : 80% max relative humidity
- Power supply : 30V, 150mA
- Outdoor use statement : Indoor use only
- Temperature range
  - ambient temperature : -40°C to +70°C
  - storage temperature : -40°C to +85°C

- Coordinates to obtain technial assistance provided:
  Meggitt SA / rte de Moncor 4 / PO box / 1701 Fribourg / Switzerland

NO MODIFICATION ALLOWED
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OF NOTIFIED BODY

Rev.	Date	PM	Drawn	Appr.	Description
1	01.12.16	-----	cpel	jper	Lower operational temperature of -40°C was 0°C Lower storage temperature of -40°C was -20°C

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MFR S3960 | MSS-CAD | Scale | Format A3

MEGGITT
Meggitt SA
Rte de Moncor 4, CH-1752 Villars-sur-Glâne, Switzerland

Material: | Repl.by | Repl.for

Linear Tolerances [mm]: ›0,5 …3 | ›3 …6 | ›6 …30 | ›30 …120 | ›120 …400 | ›400 …1000 | ›1000 …2000 | ›2000 …4000
Radius / Chamfers [mm]: ›0,5 …3 | ›3 …6 | ›6
Tol. on angle [°]: … 10 | ›10 …50 | ›50 …120 | ›120 …400

Drawn	11.11.2013	C.Pellegrinelli
Checked	11.11.2013	H-P.Aeby
Appr.	11.11.2013	J.Perriard

Wiring diagram cCSAus
GSI 127

DWG.N°
PZ 6924

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MEGGITT

EN

cCSAus certificate:

70198728

for

IPC707

EX

Meggitt SA
Route de Moncor 4
PO Box 1616
1701 Fribourg
Switzerland

energy@ch.meggitt.com
www.meggittsensing.com/energy

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Certificate of Compliance

Certificate: 70198728 **Master Contract:** 175074

Project: 70198728 **Date Issued:** 2018-12-07

Issued to: **Meggitt SA**
Rte de Moncor 4
Villars-sur-Glane, Fribourg 1752
SWITZERLAND

Attention: **Carlo Pellegrinelli**

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.

Issued by: Hossein Saleh
Hossein Saleh

PRODUCTS

CLASS 2258 04 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe, Entity - For Hazardous Locations
CLASS 2258 84 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe, Entity - For Hazardous Locations - Certified to US Standards

Class I, Division 1, Groups A, B, C, and D T6…T4
Ex ia IIC T6…T4 Ga
Class I, Zone 0, AEx ia IIC T6…T4 Ga

IPC 707 Signal Conditioner is an analog electronic conditioner which converts the electrical charges coming from a piezoelectric sensor (sensor side) into an analog voltage or current signal (signal side). The electronic circuitry of the IPC 707 signal conditioner is fully potted and incorporated into an aluminum enclosure.

IPC 707signal Conditioner is equipped with terminals (sensor side and signal side) and with an optional clip for DIN rail mounting. Signal side output configurations could be one of the following:

- Voltage output: 3-wires transmission mode,
- Current output: 2-wires transmission mode.

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Entity Parameter Values:

Terminal	Intrinsic Safety Electrical Parameters	
J0 (SUP, COM)	U_i/V_{max}: 28 V, I_i/I_{max}: 100 mA, P_i/P_{max}: 700 mW	C_i: 2.2 nF, L_i: 1 uH
J0 (OUT, COM)		C_i: 9.6 nF, L_i: 565 uH
J1 (IN+, COM) (IN-, COM)	Uo/Vos: 6.6 V, Io/Isc: 66 mA, Po/Pmax: 107 mW, Co/Ca: 5.69 uF, L_o/L_a: 3.435 mH	

Temperature Table:

Temperature Class / Code	Ambient Temperature Range
T6	-40 °C ≤ T_{AMB} ≤ +70 °C
T5	-40 °C ≤ T_{AMB} ≤ +80 °C
T4	-40 °C ≤ T_{AMB} ≤ +85 °C

Notes:

1. The above model is fixed connection, Pollution Degree 2 (Micro Environment), Overvoltage Category I.
2. Mode of operation: Continuous.
3. Environmental Conditions: Extended, Indoor use, -40°C to +85°C, altitude up to 4000m, RH% of 0-95% (non-condensing).
4. The sensor that can be attached to the IPC707 Signal Conditioner has not been assessed under this certification. The suitability of the combination as a system is to be determined.

Conditions of Acceptability:

1. The intrinsic safety terminal blocks (IS boards) must be connected only to an Intrinsically Safe certified apparatus.
2. The equipment housing contains more than 10% of aluminum. It must be mounted in such a manner as to eliminate the risk of sparks caused by friction or impact.
3. The grounding of the Intrinsically Safe circuits must be in accordance with the requirements of CEC and NEC.
4. End-use shall ensure the device is properly connected to Earth upon installation.

CLASS 2258 02 - PROCESS CONTROL EQUIPMENT – For Hazardous Locations
CLASS 2258 82 - PROCESS CONTROL EQUIPMENT – For Hazardous Locations - Certified to US Standards

Class I, Division 2, Groups A, B, C, and D T6…T4
Ex ec IIC T6…T4 Gc
Class I, Zone 2, AEx ec IIC T6…T4 Gc

IPC 707 Signal Conditioner is an analog electronic conditioner which converts the electrical charges coming from a piezoelectric sensor (sensor side) into an analog voltage or current signal (signal side). The electronic circuitry of the IPC 707 signal conditioner is fully potted and incorporated into an aluminum enclosure.

IPC 707signal Conditioner is equipped with terminals (sensor side and signal side) and with an optional clip for DIN rail mounting. Signal side output configurations could be one of the following:

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Certificate: 70198728 **Master Contract:** 175074
Project: 70198728 **Date Issued:** 2018-12-07

- Voltage output: 3-wires transmission mode,
- Current output: 2-wires transmission mode.

Electrical Rating: U_{MAX}: 30 V, I_{MAX}: 20 mA

Temperature Table:

Temperature Class / Code	T6	T5	T4
Ambient Temperature Range	-40 °C ≤ T_{AMB} ≤ +70 °C	-40 °C ≤ T_{AMB} ≤ +80 °C	-40 °C ≤ T_{AMB} ≤ +85 °C

Notes:

1. The above model is fixed connection, Pollution Degree 2 (Macro Environment), Installation Category I.
2. Mode of operation: Continuous.
3. Environmental Conditions: Extended, Indoor use, -40°C to +85°C, altitude up to 4000m, RH% of 0-95% (non-condensing).
4. The sensor that can be attached to the IPC707 Signal Conditioner has not been assessed under this certification. The suitability of the combination as a system is to be determined.

Conditions of Acceptability:

1. To be supplied by a Class 2 or limited-energy source on the signal side according to CSA 61010-1-12/UL 61010-1 3rd Edition.
2. Transient protection shall be provided that is set at a level not exceeding 140 % of the peak rated voltage value at the supply terminals to the equipment.
3. The equipment shall be used in an area of not more than pollution degree 2 as defined in IEC 60664-1.
4. For Zone 2 application, this device shall be installed within a fixed end-use enclosure that provides a degree of protection not less than IP54 according to CSA/UL 60079-0 and CSA/UL 60079-7. The suitability of the enclosure is subject to acceptance by the local authorities having jurisdiction at the time of installation.
5. For Division 2 application, this device shall be installed within a fixed end-use enclosure that provides a degree of protection Type 4. The suitability of the enclosure is subject to acceptance by the local authorities having jurisdiction at the time of installation.
6. The final enclosure must bear the following warning marking both in French and English: “Do not connect or disconnect when an explosive atmosphere is present”.
7. The final installation of the device shall meet the requirements of CEC (for Canada) and NEC (for USA) for wiring method in Division 2 and Zone 2 and is subject to acceptance of local authority having jurisdiction.
8. End-use shall ensure the device is properly connected to Earth upon installation.

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Certificate: 70198728 **Master Contract:** 175074
Project: 70198728 **Date Issued:** 2018-12-07

APPLICABLE REQUIREMENTS

CAN/CSA C22.2 No. 61010-1-12	Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use - Part 1: General Requirements - Third Edition
CSA Std. C22.2 No. 213-17	Non-Incendive Electrical Equipment for Use in Class I, Division 2 Hazardous Locations
CAN/CSA-C22.2 No. 60079-0:15	Explosive Atmospheres - Part 0: Equipment - General requirements
CAN/CSA-C22.2 No. 60079-7:16	Explosive atmospheres - Part 7: Equipment protection by increased safety “e”
CAN/CSA-C22.2 No. 60079-11:14	Explosive Atmospheres - Part 11: Equipment protection by intrinsic safety "i"
ANSI/UL 61010-1 3rd Edition	Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use - Part 1: General Requirements - Third Edition
ANSI/UL 121201 Edition 9	Nonincendive Electrical Equipment for Use in Class I and II, Division 2 and Class III, Divisions 1 and 2 Hazardous (Classified) Locations
ANSI/UL 60079-0:13	Electrical Apparatus for Explosive Gas Atmospheres - Part 0: General Requirements
ANSI/UL 60079-7:17	Explosive Atmospheres - Part 7: Equipment Protection by Increased Safety “e”
ANSI/UL 60079-11:13	Electrical apparatus for Explosive Gas Atmospheres - Part 11: Intrinsic Safety “i”

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Supplement to Certificate of Compliance

Certificate: 70198728 **Master Contract:** 175074

The products listed, including the latest revision described below, are eligible to be marked in accordance with the referenced Certificate.

Product Certification History

Project	Date	Description
70198728	2018-12-07	Original North American certification of IPC707 Signal Conditioner with Model Number 244-707-000-XXX based on acceptance of existing IEC and IECEx reports for the following markings: Class I, Division 1, Groups A, B, C, D T6…T4; Ex ia IIC T6...T4 Ga; Class I, Zone 0, AEx ia IIC T6...T4 Ga; and Class I, Division 2, Groups A, B, C, and D T6…T4; Ex ec IIC T6...T4 Gc; Class I, Zone 2, AEx ec IIC T 6...T4 Gc.

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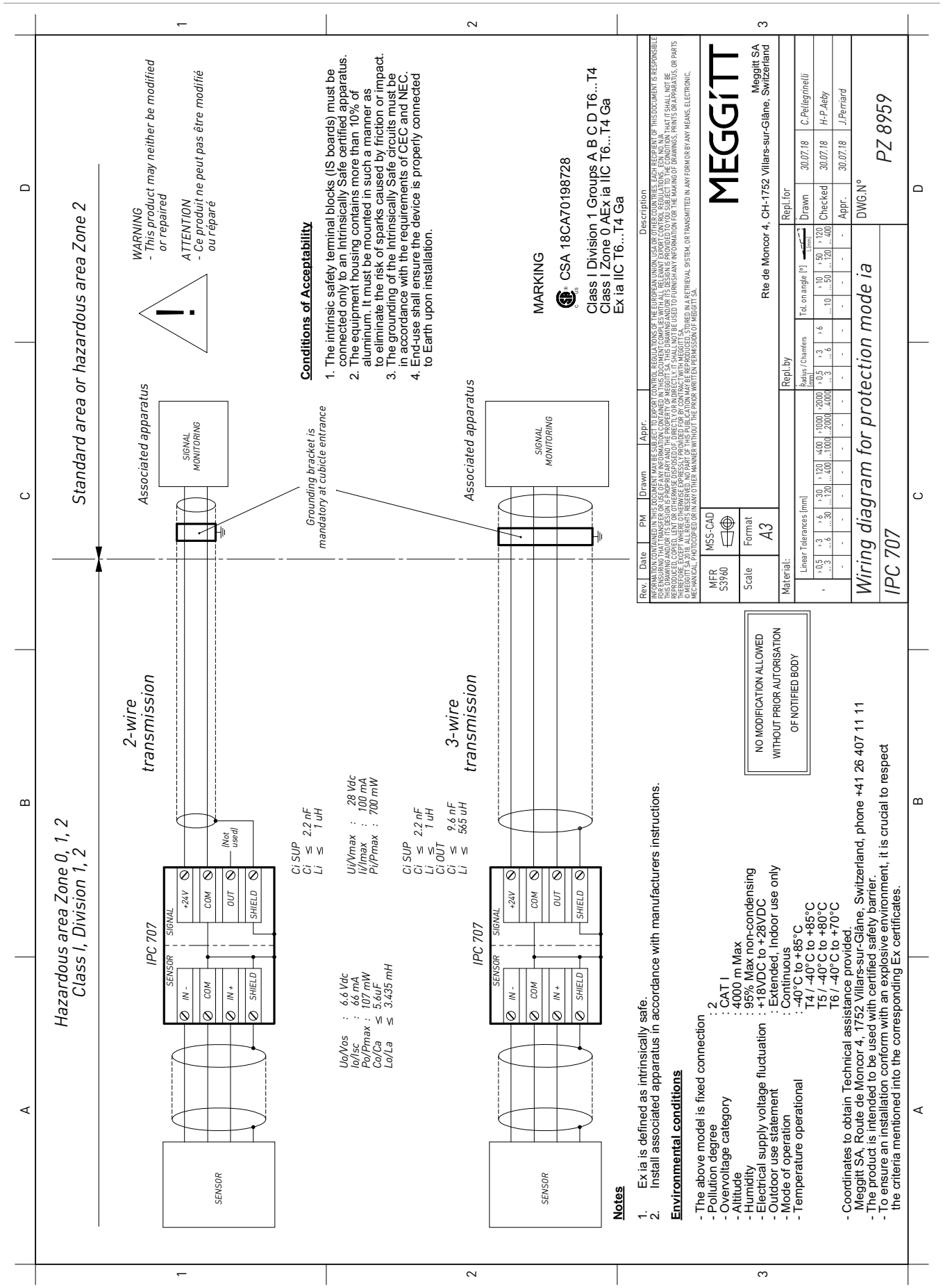
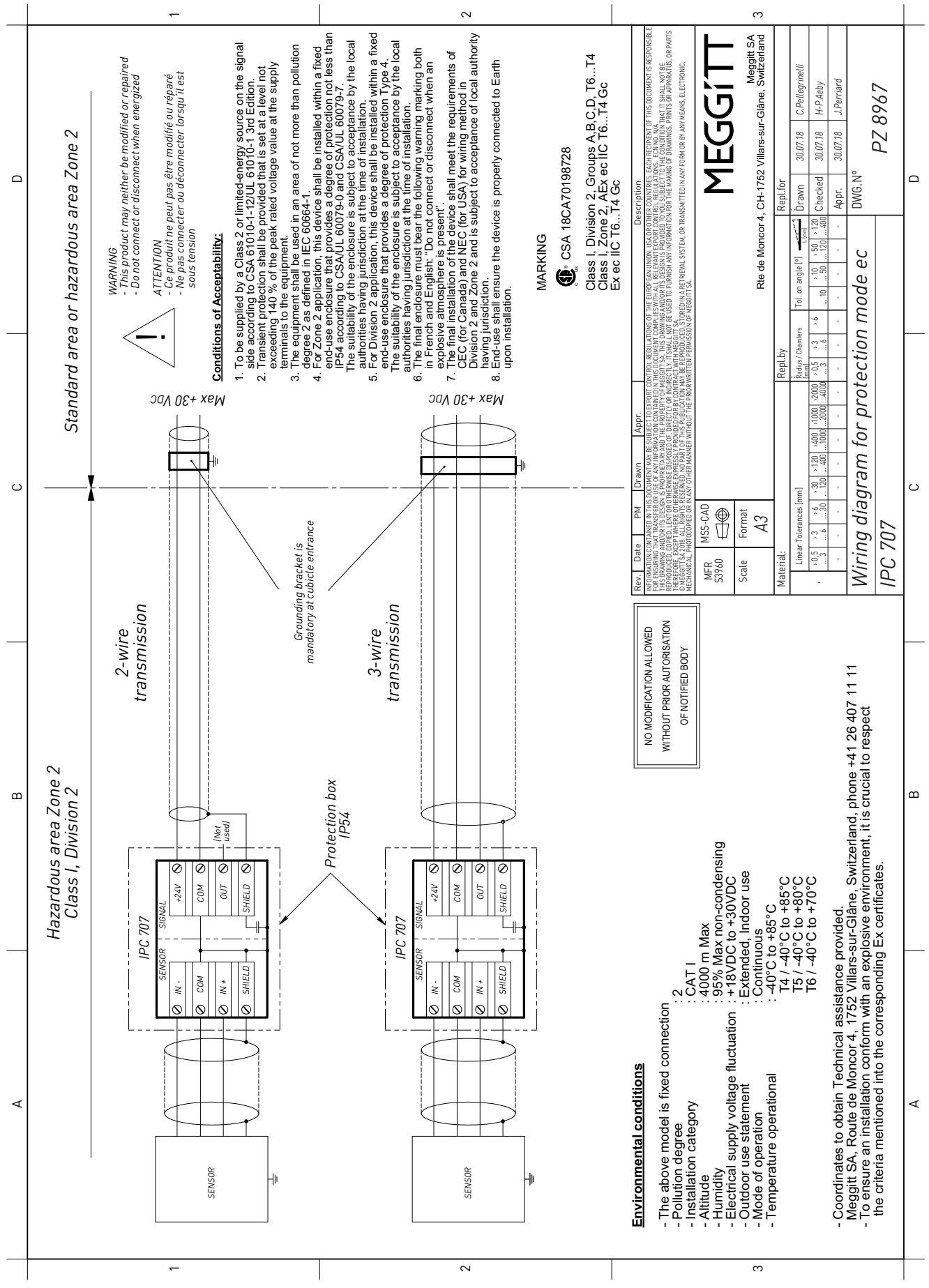

Standard area or hazardous area Zone 2
Hazardous area Zone 0, 1, 2
Class I, Division 1, 2
Associated apparatus
SIGNAL MONITORING
Grounding bracket is mandatory at cubicle entrance
2-wire transmission
3-wire transmission
IPC 707
SENSOR
IN -
COM
IN +
SHIELD
+24V
OUT
(Not used)
Ci SUP 2.2 nF
Ci ≤ 1 uH
Li ≤
Ui/Vmax : 28 Vdc
Ii/Imax : 100 mA
Pi/Pmax : 700 mW
Uo/Vos : 6.6 Vdc
Io/Isc : 66 mA
Po/Pmax : 107 mW
Co/Ca ≤ 5.6uF
Lo/La ≤ 3.435 mH
Ci SUP 2.2 nF
Ci ≤ 1 uH
Li ≤
Ci OUT 9.6 nF
Li ≤ 565 uH
WARNING
- This product may neither be modified or repaired
ATTENTION
- Ce produit ne peut pas être modifié ou réparé
Conditions of Acceptability
1. The intrinsic safety terminal blocks (IS boards) must be connected only to an Intrinsically Safe certified apparatus.
2. The equipment housing contains more than 10% of aluminum. It must be mounted in such a manner as to eliminate the risk of sparks caused by friction or impact.
3. The grounding of the Intrinsically Safe circuits must be in accordance with the requirements of CEC and NEC.
4. End-use shall ensure the device is properly connected to Earth upon installation.
MARKING
CSA 18CA70198728
Class I Division 1 Groups A B C D T6...T4
Class I Zone 0 AEx ia IIC T6...T4 Ga
Ex ia IIC T6...T4 Ga
Notes
1. Ex ia is defined as intrinsically safe.
2. Install associated apparatus in accordance with manufacturers instructions.
Environmental conditions
- The above model is fixed connection : 2
- Pollution degree : 2
- Overvoltage category : CAT I
- Altitude : 4000 m Max
- Humidity : 95% Max non-condensing
- Electrical supply voltage fluctuation : +18VDC to +28VDC
- Outdoor use statement : Extended, Indoor use only
- Mode of operation : Continuous
- Temperature operational : -40°C to +85°C
T4 / -40°C to +85°C
T5 / -40°C to +80°C
T6 / -40°C to +70°C
- Coordinates to obtain Technical assistance provided.
Meggitt SA, Route de Moncor 4, 1752 Villars-sur-Glâne, Switzerland, phone +41 26 407 11 11
- The product is intended to be used with certified safety barrier.
- To ensure an installation conform with an explosive environment, it is crucial to respect the criteria mentioned into the corresponding Ex certificates.
NO MODIFICATION ALLOWED
WITHOUT PRIOR AUTORISATION
OF NOTIFIED BODY
Rev. Date PM Drawn Appr. Description
MFR S3960
MS5-CAD
Scale
Format A3
Material:
Repl.by
Repl.for
Linear Tolerances [mm]
Tol. on angle [°]
Radius / Chamfers [mm]
Drawn 30.07.18 C.Pellegrinelli
Checked 30.07.18 H-P.Aeby
Appr. 30.07.18 J.Perriard
MEGGITT
Meggitt SA
Rte de Moncor 4, CH-1752 Villars-sur-Glâne, Switzerland
Wiring diagram for protection mode ia
IPC 707
DWG.N°
PZ 8959


Standard area or hazardous area Zone 2
Hazardous area Zone 2
Class I, Division 2
WARNING
- This product may neither be modified or repaired
- Do not connect or disconnect when energized
ATTENTION
- Ce produit ne peut pas être modifié ou réparé
- Ne pas connecter ou déconnecter lorsqu'il est sous tension
Conditions of Acceptability:
1. To be supplied by a Class 2 or limited-energy source on the signal side according to CSA 61010-1-12/UL 61010-1 3rd Edition.
2. Transient protection shall be provided that is set at a level not exceeding 140 % of the peak rated voltage value at the supply terminals to the equipment.
3. The equipment shall be used in an area of not more than pollution degree 2 as defined in IEC 60664-1.
4. For Zone 2 application, this device shall be installed within a fixed end-use enclosure that provides a degree of protection not less than IP54 according to CSA/UL 60079-0 and CSA/UL 60079-7. The suitability of the enclosure is subject to acceptance by the local authorities having jurisdiction at the time of installation.
5. For Division 2 application, this device shall be installed within a fixed end-use enclosure that provides a degree of protection Type 4. The suitability of the enclosure is subject to acceptance by the local authorities having jurisdiction at the time of installation.
6. The final enclosure must bear the following warning marking both in French and English: "Do not connect or disconnect when an explosive atmosphere is present".
7. The final installation of the device shall meet the requirements of CEC (for Canada) and NEC (for USA) for wiring method in Division 2 and Zone 2 and is subject to acceptance of local authority having jurisdiction.
8. End-use shall ensure the device is properly connected to Earth upon installation.
MARKING
CSA 18CA70198728
Class I, Division 2, Groups A,B,C,D, T6...T4
Class I, Zone 2, AEx ec IIC T6...T4 Gc
Ex ec IIC T6...T4 Gc
2-wire transmission
3-wire transmission
Max +30 VDC
Max +30 VDC
Grounding bracket is mandatory at cubicle entrance
Protection box IP54
IPC 707
SENSOR
SIGNAL
IN -
IN +
COM
+24V
OUT
SHIELD
(Not used)
SENSOR
NO MODIFICATION ALLOWED
WITHOUT PRIOR AUTORISATION
OF NOTIFIED BODY
Rev. Date PM Drawn Appr. Description
INFORMATION CONTAINED IN THIS DOCUMENT MAY BE SUBJECT TO EXPORT CONTROL REGULATIONS OF THE EUROPEAN UNION, USA OR OTHER COUNTRIES. EACH RECIPIENT OF THIS DOCUMENT IS RESPONSIBLE FOR ENSURING THAT TRANSFER OR USE OF ANY INFORMATION CONTAINED IN THIS DOCUMENT COMPLIES WITH ALL RELEVANT EXPORT CONTROL REGULATIONS. ECCN NO. N/A
THE INFORMATION CONTAINED IN THIS DOCUMENT IS THE PROPERTY OF MEGGITT SA, AND MAY BE USED ONLY AS AUTHORIZED IN THE AGREEMENT UNDER WHICH IT WAS SUPPLIED. NOTIFICATION OR OBTAINING OF AN AGREEMENT DOES NOT CONVEY ANY LICENSE TO REPRODUCE, DISCLOSE OR USE THE INFORMATION CONTAINED IN THIS DOCUMENT, IN WHOLE OR IN PART, EXCEPT AS EXPRESSLY PERMITTED BY THE AGREEMENT UNDER WHICH IT WAS SUPPLIED. THIS DOCUMENT SHALL NOT BE REPRODUCED, COPIED, LENT OR OTHERWISE DISPOSED OF, DIRECTLY OR INDIRECTLY, IT SHALL NOT BE USED TO FURNISH ANY INFORMATION FOR THE MAKING OF DRAWINGS, PRINTS OR APPARATUS, OR PARTS THEREOF, EXCEPT WHERE OTHERWISE EXPRESSLY PROVIDED BY CONTRACT WITH MEGGITT SA.
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MFR S3960
MSS-CAD
Scale A3
Format
Material:
Repl.by
Repl.for
Linear Tolerances [mm]
Radius / Chamfers [mm]
Tol. on angle [°]
Drawn 30.07.18 C.Pellegrinelli
Checked 30.07.18 H-P.Aeby
Appr. 30.07.18 J.Perriard
MEGGiTT
Meggitt SA
Rte de Moncor 4, CH-1752 Villars-sur-Glâne, Switzerland
Wiring diagram for protection mode ec
IPC 707
DWG.N° PZ 8967
Environmental conditions
- The above model is fixed connection
- Pollution degree : 2
- Installation category : CAT I
- Altitude : 4000 m Max
- Humidity : 95% Max non-condensing
- Electrical supply voltage fluctuation : +18VDC to +30VDC
- Outdoor use statement : Extended, Indoor use
- Mode of operation : Continuous
- Temperature operational : -40°C to +85°C
T4 / -40°C to +85°C
T5 / -40°C to +80°C
T6 / -40°C to +70°C
- Coordinates to obtain Technical assistance provided.
Meggitt SA, Route de Moncor 4, 1752 Villars-sur-Glâne, Switzerland, phone +41 26 407 11 11
- To ensure an installation conform with an explosive environment, it is crucial to respect the criteria mentioned into the corresponding Ex certificates.

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附录 C：IECEx 认证

表 C-1：相关 IECEx 证书

涵盖的产品	证书编号
ABA160、 JB116 和 JB118	IECEx PTB 08.0003U
ABA161	IECEx PTB 08.0005U
ABA17x	IECEx BVS 16.0026U
	IECEx PRE 14.0042U
CA134	IECEx LCI 06.0008X
	IECEx LCI 10.0017X
CA20x	IECEx LCI 10.0018X
CA28x、CE28x 和 CE31x	IECEx LCI 10.0021X
	IECEx DEK 15.0029
CA30x	IECEx LCI 10.0027X
CA901	IECEx LCI 08.0041X
	IECEx LCI 10.0020X
GSI127	IECEx LCIE 13.0026X
IPC707	IECEx LCIE 18.0023X
电缆接头 （填料函压盖）	IECEx ITS 16.0011X
	IECEx ITS 16.0012X
	IECEx LCI 10.0009U
	IECEx PTB 03.0000
	IECEx PTB 11.0019X
	IECEx SEV 15.0018
	IECEx SEV 15.0019X

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EX CERTIFICATE – IECEx

vibro-meter®

IECEx PTB 08.0003U
for
ABA15x, ABA160, JB116, JB118 and PA151 enclosures

Note: Although the Ex certificate may be included in more than one language, the liability of the notified body applies only on the text of the original copy of the certificate that it published.

Document reference IECEx PTB 08.0003U
Edition 2 – March 2022

Meggitt SA, Route de Moncor 4, Case postale, 1701 Fribourg, Switzerland

Tel: +41 26 407 1111
Fax: +41 26 407 1660
energy@ch.meggitt.com
www.meggittsensing.com/energy
www.meggitt.com

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IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres
for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	**IECEx PTB 08.0003U**	Page 1 of 4	Certificate history:
Status:	**Current**	Issue No: 4	Issue 3 (2012-03-12) Issue 2 (2009-08-17) Issue 1 (2008-11-24) Issue 0 (2008-03-12)
Date of Issue:	2016-09-12		
Applicant:	**ROSE Systemtechnik GmbH** Erbeweg 13 32457 Porta Westfalica **Germany**		
Equipment:	**Empty Enclosure Type 26.********		
Optional accessory:			
Type of Protection:	**Increased Safety "eb", Protection by enclosures "tb"**		
Marking:	Ex eb IIC Gb Ex tb III C Db		

Approved for issue on behalf of the IECEx Certification Body: **Dr.-Ing. Detlev Markus**

Position: **Head of Working Group "Flame Transmission Processes"**

Signature: (for printed version)

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.

Certificate issued by:

Physikalisch-Technische Bundesanstalt (PTB)
Bundesallee 100
38116 Braunschweig
Germany

Physikalisch-Technische Bundesanstalt
Braunschweig und Berlin

IECEx Certificate of Conformity

Certificate No.:	**IECEx PTB 08.0003U**	Page 2 of 4
Date of issue:	2016-09-12	Issue No: 4

Manufacturer: **ROSE Systemtechnik GmbH**
Erbeweg 13
32457 Porta Westfalica
Germany

Additional manufacturing locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements.This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :
The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2011 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-31:2013 Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
IEC 60079-7:2015 Edition:5.0	Explosive atmospheres – Part 7: Equipment protection by increased safety "e"

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:

DE/PTB/ExTR08.0007/04

Quality Assessment Report:

DE/TUR/QAR09.0009/06

MEGGITT
Original copy (English)

IECEx Certificate of Conformity

Certificate No.: **IECEx PTB 08.0003U** Page 3 of 4

Date of issue: 2016-09-12 Issue No: 4

EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

Description of equipment

Empty enclosure of type 26.******, made of polyester, which may be provided with flanges and a glass or plastic inspection window.
It can optionally be fitted with an earth bolt compl. with / or without off-shore plate and screwed or riveted typeplates made of stainless steel.

Technical Data, Nomenclature and Schedule of Limitations see Annex.

SPECIFIC CONDITIONS OF USE: NO

IECEx Certificate of Conformity

Certificate No.: **IECEx PTB 08.0003U** Page 4 of 4

Date of issue: 2016-09-12 Issue No: 4

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
1) New test according to the standards IEC 60079-7:2015 and IEC 60079-31:2013.
2) New marking.
3)The maximum ambient temperature is decreased to +127 °C.

Annex:

COCA-08.0003U-Issue 4.pdf

Original copy (English)
MEGGITT

Applicant: ROSE Systemtechnik GmbH
Erbeweg 13
32457 Porta Westfalica
Germany

Electrical Apparatus: Empty Enclosure Type 26.******

Description of equipment

Empty enclosure of type 26.******, made of polyester, which may be provided with flanges and a glass or plastic inspection window.
It can optionally be fitted with an earth bolt compl. with / or without off-shore plate and screwed or riveted type plates made of stainless steel.

Technical data

Sizes and Product lines				
Type 26.08 08 06 to 26.41 40 20 (Ex-standard-enclosure)		Width	Height	Depth
	min.	80 mm	75 mm	56 mm
	max.	400 mm	405 mm	201 mm
Type 26.88 01 00 to 26.88 04 00 (Ex-Okta Box-enclosure)		Width	Height	Depth
	min.	81 mm	81 mm	75 mm
	max.	200 mm	200 mm	125 mm
Type 26.14 01 00 to 26.14 03 00 (Ex-PF-enclosure)		Width	Height	Depth
	min.	270 mm	170 mm	136 mm
	max.	541 mm	270 mm	136 mm
Type 26.12 20 00 to 26.40 60 00 (Mini-Polyglas-Ex-enclosure and Polyglas-Ex-enclosure)		Width	Height	Depth
	min.	200 mm	120 mm	100 mm
	max.	405 mm	605 mm	252 mm
Type 26.01 22 15 to 26.01 44 15 (Ex-Combi Box-enclosure)		Width	Height	Depth
	min.	177 mm	177 mm	145 mm
	max.	360 mm	360 mm	145 mm

Attachment to Certificate
IECEx PTB 08.0003U, Issue No. 4

Ambient temperature
-55 °C to +127 °C with Silicon gasket
-40 °C to +100 °C with HF gasket
-40 °C to +100 °C with PU foam
-20 °C to + 85 °C with CR gasket
-20 °C to +100 °C with window out of glas
-50 °C to +100 °C with PC-window mono duro clear 8099,conductive
to +105 °C Ex-PF-enclosure, Mini-Polyglas-Ex-enclosure and Polyglas-Ex-enclosure
(minimum temperature depends on the gasket used)

Ingress protection ..... IP 66 acc. to IEC 60529

Thread stud of the earth bolt compl...... M6x60, M8x50, M10x60, M12x80

Nomenclature

26.	**	**	**
1	2	3	4

1: Type, material polyester
2: Height or product line (see above)
3: Width or number depending on product line
4: Depth or number depending on product line

Schedule of limitations

Installation of electrical components requires a further assessment by an ExCB.

Physikalisch-Technische Bundesanstalt (PTB)
Bundesallee 100, 38116 Braunschweig, Germany
Postfach 33 45, 38023 Braunschweig, Germany
Telephone +49 531 592-0, Telefax +49 531 592-3605

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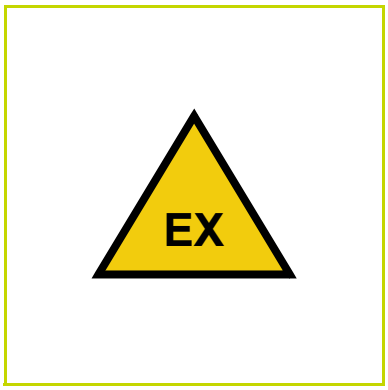
EX CERTIFICATE – IECEx

vibro-meter®

IECEx PTB 08.0005U
for
ABA161 and PA150 enclosures



Note: Although the Ex certificate may be included in more than one language, the liability of the notified body applies only on the text of the original copy of the certificate that it published.

Document reference IECEx PTB 08.0005U
Edition 2 – April 2022

Meggitt SA, Route de Moncor 4, Case postale, 1701 Fribourg, Switzerland

Tel: +41 26 407 1111
Fax: +41 26 407 1660
energy@ch.meggitt.com
www.meggittsensing.com/energy
www.meggitt.com

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IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx PTB 08.0005U	Issue No: 2	Certificate history:
Status:	**Current**	Page 1 of 4	Issue No. 2 (2016-09-08)
Date of Issue:	**2016-09-08**		Issue No. 1 (2012-02-29)
Applicant:	**ROSE Systemtechnik GmbH** Erbeweg 13 32457 Porta Westfalica **Germany**		Issue No. 0 (2008-03-07)
Equipment:	**Empty Enclosure Type 25.********		
Optional accessory:			
Type of Protection:	**Increased Safety "eb", Protection by enclosures "tb"**		
Marking:	Ex eb IIC Gb Ex tb IIIC Db		

Approved for issue on behalf of the IECEx Certification Body: Dr.-Ing. Detlev Markus

Position: Head of Working Group "Flame Transmission Processes"

Signature:
(for printed version)

Date: 07.09.16

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

Physikalisch-Technische Bundesanstalt (PTB)
Bundesallee 100
38116 Braunschweig
Germany

Physikalisch-Technische Bundesanstalt Braunschweig und Berlin

IECEx Certificate of Conformity

Certificate No:	IECEx PTB 08.0005U	Issue No: 2
Date of Issue:	**2016-09-08**	Page 2 of 4
Manufacturer:	**ROSE Systemtechnik GmbH** Erbeweg 13 32457 Porta Westfalica **Germany**	

Additional Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-31 : 2013 Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
IEC 60079-7 : 2015 Edition:5.0	Explosive atmospheres – Part 7: Equipment protection by increased safety "e"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

DE/PTB/ExTR08.0004/02

Quality Assessment Report:

DE/TUR/QAR09.0009/06

IECEx Certificate of Conformity

Certificate No: IECEx PTB 08.0005U Issue No: 2

Date of Issue: **2016-09-08** Page 3 of 4

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Description

Empty enclosure type 25.******, made of aluminium, which may be provided with flanges and a glass or plastic inspection window.

Technical Data, Nomenclature and Schedule of Limitations see attachment.

CONDITIONS OF CERTIFICATION: NO

IECEx Certificate of Conformity

Certificate No: IECEx PTB 08.0005U Issue No: 2

Date of Issue: **2016-09-08** Page 4 of 4

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

1) New test according to IEC 60079-0:2011, IEC 60079-7:2015, IEC 60079-31:2013
2) New marking.

Annex:

COCA08.0005U-02.pdf

Original copy (English)
MEGGITT

Attachment to Certificate
IECEx PTB 08.0005U, Issue No. 2

Applicant: ROSE Systemtechnik GmbH
Erbeweg 13
32457 Porta Westfalica
Germany

Electrical Apparatus: Empty Enclosure Type 25.******

Description of equipment

Empty enclosure type 25.******, made of aluminium, which may be provided with flanges and a glass or plastic inspection window.

Technical data

sizes	length	width	depth
min	58 mm	64 mm	34 mm
max	600 mm	600 mm	227 mm

Ambient temperature

-55 °C to +135 °C with Silicon gasket
-40 °C to +100 °C with HF gasket
-40 °C to +100 °C with PU-foam
-20 °C to + 85 °C with CR gasket
-20 °C to +100 °C with window out of glas
-50 °C to +100 °C with PC-window mono duro clear 8099, conductive

Protection against contact, foreign bodies and water

IP 66 acc. to IEC 60529

Nomenclature

25.	**	**	**
1	2	3	4

1: Material aluminium
2: Height
3: Width
4: Depth

Schedule of limitations

The empty enclosure with a coating must not be used in areas affected by charge-producing processes, mechanical friction and separation processes, electron emission (e.g. in the vicinity of electrostatic coating equipment), and pneumatically conveyed dust.

Installation of electrical components requires a further assessment by an ExCB.

Physikalisch-Technische Bundesanstalt (PTB)
Bundesallee 100, 38116 Braunschweig, Germany
Postfach 33 45, 38023 Braunschweig, Germany
Telephone +49 531 592-0, Telefax +49 531 592-3605

IECEx Technical Report: DE/PTB/ExTR08.0004/02 details

ExTR :	
ExTR Reference Number *: (automatic numbering)	DE/PTB/ExTR08.0004/02
Status*:	Issued
ExTR Free Reference Number*:	DE/PTB/ExTR08.0004/00
Date of Issue*: (yyyy-mm-dd)	2016-09-08
Details of change*:	New test according to IEC 60079-0:2011, IEC 60079-7:2015, IEC 60079-31:2013 and changing of the marking.
List of Standards Covered*:	IEC 60079-0 (Ed.6.0); IEC 60079-31 (Ed.2); IEC 60079-7 (Ed.5.0)
Issuing ExTL*:	PTB - Physikalisch-Technische Bundesanstalt (PTB)
Endorsing ExCB*:	PTB - Physikalisch-Technische Bundesanstalt (PTB)
Manufacturer*:	ROSE Systemtechnik GmbH + Co. KG Erbeweg 13 - 15 32457 Porta Westfalica
Country of Manufacture*:	Germany
Ex Protection*:	Increased Safety "eb" Protection by Enclosures "tb"
Ratings:	see certificate
Equipment*:	Empty Enclosure
Model Reference*:	Type 25.******
Related IECEx Certificates:	IECEx PTB 08.0005U issue: 2 [Current]
Comment:	
Attachment:	

Last modified: 06.09.2016 13:28:19

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Original copy (English)

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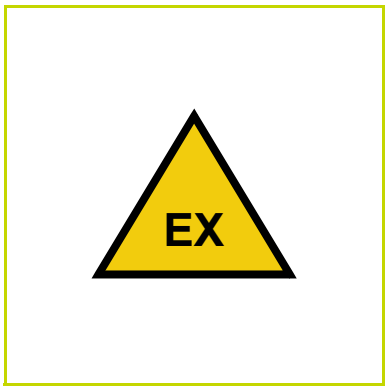
EX CERTIFICATE – IECEx

vibro-meter®

IECEx BVS 16.0026U
for
ABA17x industrial housings



Note: Although the Ex certificate may be included in more than one language, the liability of the notified body applies only on the text of the original copy of the certificate that it published.

Document reference IECEx BVS 16.0026U
Edition 2 – January 2022

Meggitt SA, Route de Moncor 4, Case postale, 1701 Fribourg, Switzerland

Tel: +41 26 407 1111
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energy@ch.meggitt.com
www.meggittsensing.com/energy
www.meggitt.com

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IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres
for rules and details of the IECEx Scheme visit www.iecex.com
Ex COMPONENT CERTIFICATE

Certificate No.: **IECEx BVS 16.0026U** Page 1 of 5 Certificate history:
Status: **Current** Issue No: 1 Issue 0 (2016-05-10)
Date of Issue: 2019-02-20

Applicant: **thuba Ltd.**
Blauensteinerstrasse 16
4002 Basel
Switzerland

Ex Component: Empty enclosure type eCAM ** ** **

This component is NOT intended to be used alone and requires additional consideration when incorporated into other equipment or systems for use in explosive atmospheres (refer to IEC 60079-0).

Type of Protection: **Equipment dust ignition protection by enclosure "t", Equipment protection by increased safety "e"**

Marking: Ex eb IIC Gb
Ex tb IIIC Db

Approved for issue on behalf of the IECEx Certification Body: **Jörg Koch**

Position: **Head of Certification Body**

Signature: (for printed version)

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.

Certificate issued by:

DEKRA Testing and Certification GmbH
Certification Body
Dinnendahlstrasse 9
44809 Bochum
Germany

DEKRA
On the safe side.

IECEx Certificate of Conformity

Certificate No.: **IECEx BVS 16.0026U** Page 2 of 5
Date of issue: 2019-02-20 Issue No: 1

Manufacturer: **thuba Ltd.**
Blauensteinerstrasse 16
4002 Basel
Switzerland

Additional manufacturing locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements.This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :
The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2011 Edition:6.0 — Explosive atmospheres - Part 0: General requirements

IEC 60079-31:2013 Edition:2 — Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"

IEC 60079-7:2015 Edition:5.0 — Explosive atmospheres – Part 7: Equipment protection by increased safety "e"

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:

DE/BVS/ExTR16.0029/01

Quality Assessment Report:

DE/BVS/QAR13.0010/05

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Original copy (English)

IECEx Certificate of Conformity

Certificate No.: **IECEx BVS 16.0026U** Page 3 of 5

Date of issue: 2019-02-20 Issue No: 1

Ex Component(s) covered by this certificate is described below:

Subject and Type

Empty enclosure type eCAM **1) **2) **3)

Steel or stainless steel	size		
Type	width[1)] [mm]	height[2)] [mm]	depth[3)] [mm]

Enclosure with screwed fixing covers (size range)

eCAM 12 12 08	120	120	80
up to			
eCAM 40 40 20	400	400	200

Enclosure with hinges and latches (size range)

eCAM 20 20 10	200	200	100
up to			
eCAM 100 120 50	1000	1200	500

Description

The empty enclosure type eCam ** ** ** is built in type of protection Increased Safety "e" for use in areas with EPL Gb or Protection by Enclosure "t" for use in areas with EPL Db.
The empty enclosure is used for the mounting of different switch and control apparatus. The enclosure consists of steel or stainless steel and can be constructed with a screwed fixing cover or a cover with hinges and latches.

SCHEDULE OF LIMITATIONS:

N/A

IECEx Certificate of Conformity

Certificate No.: **IECEx BVS 16.0026U** Page 4 of 5

Date of issue: 2019-02-20 Issue No: 1

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Update for the new Ex component certificate layout.

Original copy (English)
MEGGITT

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 16.0026U

Date of issue: 2019-02-20

Page 5 of 5

Issue No: 1

Additional information:
Parameters

Limits of service temperature: -55 °C up to +100 °C

IP protection degree: IP66

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MEGGITT

EN

IECEx certificate:

IECEx PRE 14.0042U

for

ABA 17x

Meggitt SA
Route de Moncor 4
PO Box 1616
CH - 1701 Fribourg
Switzerland

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IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx PRE 14.0042U	Issue No: 0	Certificate history: Issue No. 0 (2014-10-31)
Status:	**Current**	Page 1 of 3	
Date of Issue:	**2014-10-31**		
Applicant:	**Ensto Finland Oy** Ensio Miettisen katu 2 P.O.Box 77, 06101 Porvoo **Finland**		
Electrical Apparatus:	**Empty junction box, Cubo X**		
Optional accessory:			
Type of Protection:	**Ex e/ Ex t**		
Marking:	Ex e IIC Gb Ex t IIIC Db IP 64 or IP66 or IP66/67 Tamb: -55°C/-30°C to +45°C/+85°C/+100°C/+160°C		

Approved for issue on behalf of the IECEx Certification Body: Bjørn Spongsveen

Position: Certification Manager

Signature: (for printed version)

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

DNV Nemko Presafe AS
Gaustadalleen 30
P.O.Box 73 Blindern
0314 Oslo
Norway

Presafe
A DNV & NEMKO COMPANY

IECEx Certificate of Conformity

Manufacturer:
Ensto Finland Oy
Ensio Miettisen katu 2
06101 Porvoo
Finland

Additional Manufacturing location(s):
Ensto Finland Oy
Insinöörinkatu 1
FI-50100 Mikkeli
Finland

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-31 : 2013 Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
IEC 60079-7 : 2006-07 Edition:4	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

NO/PRE/ExTR14.0046/00

Quality Assessment Report:

FI/VTT/QAR11.0003/02

Gaustadalleen 30
P.O.Box 73 Blindern
0314 Oslo

Presafe
A DNV & NEMKO COMPANY

Annex to IECEx PRE 14.0042U Issue No.00

Product Nomenclature:

[X]	[Version]	[Material]	[Surface]	[Cut type]	[width] [height] [depth]	KOT8...	
							Customer specific feaatures (Total No. Holes/Mounting Lugs)
							Max width: 1000 mm Max height: 2000 mm No restriction on depth
							[F]: Standard flange plate [FC]: Custom sized flange plate(s) [P]: Plain walls or cut-outs
							[N]: Natural surface [B]: Brushed surface [E]: Powder coated
							[S]: Stainless steel AISI304 [A]:Stainless steel AISI316L [F]: Mild steel mild steel galvanized
							[1]: Lid with screws [2]: Lid with screws and hinges [3]: Lid with quick locks [4]: Lid with screws and loose hinges
							[X]: Cubo X

Examples:

X2ANP303015C –Combo

X3ANP303015C –Combo with standard lock

X3ANP303015S –Box with AISI lock

X3ANP303015 –Box with Standard lock

X3ANP10010015D – Two doors with standard locks

X3ANP10010015DS – Two doors with AISI locks

NB. If with two doors, then end of code there will be letter 'D', if supplied with AISI-locks, then after the code there will be letter 'S', if Combo option with EPDM gasket end letter will be 'C'.

IECEx Certificate of Conformity

Certificate No: IECEx PRE 14.0042U Issue No: 0

Date of Issue: 2014-10-31 Page 3 of 3

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

CuboX empty boxes are made of stainless steel or painted steel in various sizes. Enclosures can be fitted with optional plastic window or gland plates, mounting accessories like DIN-rails, mounting plates, brackets Metric & NPT thread coupler. Lid can be fixed by screws or combination of screws and loose hinges or quick locks. Several internal and external earthing options are provided. Sealing is ensured by high temperature silicone gasket (EPDM gasket can be used for gland plate or Combo assemblies). For information regarding tightening torques, refer to instructions for use. See attachment for more product details and rating.

This replaces IECEx DNV 11.0005U

Schedule of Limitations

- Potential risk of electrostatic discharge from plastic window, Refer to instructions for use.
- When the plastic switch handle is installed in the electrical apparatus, care must be taken that the temperatures at the mounting place are within the temperature range of use.

CONDITIONS OF CERTIFICATION: NO

Annex:

Annex to the certificate IECEx PRE 14.0042U.pdf

Gaustadalleen 30
P.O.Box 73 Blindern
0314 Oslo

Presafe
A DNV & NEMKO COMPANY

Service temperature:

Operating temperature limits for plain stainless steel enclosure (with or without gland plate): -55°C to +160°C

Operating temperature limits for stainless steel enclosure with Lexan plastic window, earthing option 3: -55°C to +100°C

Operating temperature limits for painted steel enclosure (with or without plastic window and gland plate): -55°C to +85°C

Operating temperature EPDM gasket/and or quick locks in enclosure: -55°C to +85°C

Operating temperature plastic switch handle in enclosure: -30°C to +45°C

Degrees of Protection (IP Code)

Enclosure material	Optional accessories	IP rating
Stainless steel and painted steel	Plastic window	IP66/67
Stainless steel and painted steel	Standard gland plate with silicon gasket	IP66
Stainless steel or painted steel enclosure	AISI quick locks	IP66/67
Stainless steel or painted steel enclosure	ZINK quick locks	IP66
Stainless steel or painted steel enclosure	Gland plate & Combo box with EPDM gasket	IP66/67
Stainless steel or painted steel enclosure	Plastic switch handle	IP64

Example KOT8...

Enclosure standard type: X3ABP304016S
Example description: Standard enclosure generated according to code key shown in certificate. Version 3 with stainless steel quick locks size 300x400x160mm, material AISI 316L brushed.

Enclosure custom type: X3ABP304016SKOT80001

Example description: Enclosure as X3ABP304016S with customer design features eg. d=16mm hole in bottom side. KOT8... Code by end of type refers to customer specific engineering drawing. Numbers (and letters) after KOT8 will specify general assembly drawing code. Number is sequential and cannot be used to specify other design. KOT8-design is always unique.

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IECEx certificate:

EN

IECEx LCI 06.0008X

for CA 134

Meggitt SA
Route de Moncor 4
PO Box 1616
CH - 1701 Fribourg
Switzerland

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IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: IECEx LCI 06.0008X Issue No.:3

Status: **Current**

Date of Issue: **2013-10-25** Page 1 of 4

Certificate history:
Issue No. 3 (2013-10-25)
Issue No. 2 (2011-12-23)
Issue No. 1 (2010-10-25)
Issue No. 0 (2006-7-3)

Applicant: **Meggitt SA**
Route de Moncor 4
1752 Villars-sur-Glâne
Switzerland

Electrical Apparatus: **Accelerometer**
Optional accessory:

Type of Protection: **ia**

Marking: Vibro-meter or MEGGITT or MFR S3960
Address : ...
PNR 144-134-000-XXX
Serial Number : ...
Year of construction : ...
Ex ia IIC T6 to T1 or 510°C Ga
IECEx LCI 06.0008X

Approved for issue on behalf of the IECEx Certification Body: Julien GAUTHIER

Position: Certification Officer

Signature: (for printed version)

Date: 2013-10-25

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:
Laboratoire Central des Industries Electriques (LCIE)
33 Avenue du General Leclerc
FR-92260 Fontenay-aux-Roses
France
Documents relative to LCIE certification activites (Certificates, QARs, ExTRs) can be registered under the references "LCI" or "LCIE".

IECEx Certificate of Conformity

Certificate No.: IECEx LCI 06.0008X

Date of Issue: **2013-10-25** Issue No.: **3**

Manufacturer: **Meggitt SA**
Route de Moncor 4
1752 Villars-sur-Glâne
Switzerland

Additional Manufacturing location (s):
Meggitt SA
Route de Moncor 4
1752 Villars-sur-Glâne
Switzerland

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:
The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Explosive atmospheres - Part 0: General requirements
Edition: 6.0
IEC 60079-11 : 2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition: 6.0

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:
FR/LCI/ExTR06.0012/00 FR/LCI/ExTR06.0012/01 FR/LCI/ExTR06.0012/02
FR/LCI/ExTR06.0012/03

Quality Assessment Report:

FR/LCI/QAR06.0006/00 FR/LCI/QAR06.0006/01 FR/LCI/QAR06.0006/02
FR/LCI/QAR06.0006/03 FR/LCI/QAR06.0006/04 FR/LCI/QAR06.0006/05
FR/LCI/QAR06.0006/06

IECEx Certificate of Conformity

Certificate No.: IECEx LCI 06.0008X

Date of Issue: **2013-10-25** Issue No.: **3**

Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

DESCRIPTION
Accelerometer:
This sensor is electro mechanic transducer delivering at its terminal blocks an electrical load proportional to the measured pressure.
It works with piezoelectric equipment mounted in compression.

SPECIFIC PARAMETERS OF THE MODE OF PROTECTION "ia" :
Sensor : Ci ≤ 1,2nF, Li ≈ 0
Cable : Ci ≤ 250pF/m, Li ≈ 0

CONDITIONS OF CERTIFICATION: YES as shown below:

Electrical parameters of any IS certified equipment connected to the sensor shall not exceed the following values:
Linear source : Ui ≤ 28V,Ii ≤ 100mA,Pi ≤ 0,7W
Non linear source : Ui ≤ 28V,Ii ≤ 25mA,Pi ≤ 0,7W
-200℃ < Ta < +500℃
Temperature classification : T6 : Tamb < 80℃, T5 : Tamb < 95℃, T4 : Tamb < 130℃, T3 : Tamb < 195℃, T2 : Tamb < 290℃, T1 : Tamb < 440℃, 510℃ : Tamb < 500℃.
The materiel shall only be connected to a certified [ia] or [ib] apparatus and this combination, taking account to the length of joining cable, shall be compatible as regards intrinsic safety.

IECEx Certificate of Conformity

Certificate No.: IECEx LCI 06.0008X

Date of Issue: **2013-10-25** Issue No.: **3**

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Issue 1 :
Normative update according to IEC 60079-11 Ed 5 standard
Change of legal entity name and adress of applicant (VIBRO-METER SA becomes Meggitt SA)
Modifications of registered trade mark
Issue 2 :
Normative update according to IEC 60079-0 Ed 5 standard
Issue 3 :
Normative update according to IEC 60079-0 Ed 6.0 and IEC 60079-11 Ed 6.0 standards
Modification of the sensing part material of the sensor

MEGGITT

IECEx certificate:

EN

IECEx LCI 10.0017X

for CA 134

Meggitt SA
Route de Moncor 4
PO Box 1616
CH - 1701 Fribourg
Switzerland

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IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx LCI 10.0017X	issue No.:2	Certificate history: Issue No. 2 (2011-12-23) Issue No. 1 (2010-10-25) Issue No. 0 (2010-7-20)
Status:	**Current**		
Date of Issue:	**2011-12-23**	Page 1 of 4	

Applicant: **Meggitt SA**
Route de Moncor 4
1752 Villars-sur-Glâne
Switzerland

Electrical Apparatus: **Accelerometer**
Optional accessory:

Type of Protection: **nA**

Marking: **Vibro-meter or MEGGITT or MFR S3960**
Address : ...
Type : PNR : 144-134-000-XXX
Serial number : ...
Year of construction : ...
Ex nA IIC T6 to T510°C Gc
IECEx LCI 10.0017X

Approved for issue on behalf of the IECEx Certification Body: Julien GAUTHIER

Position: Certification Officer

Signature: (for printed version)

Date: December 28, 2011

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

Laboratoire Central des Industries Electriques (LCIE)
33 Avenue du General Leclerc
FR-92260 Fontenay-aux-Roses
France

L C I E

IECEx Certificate of Conformity

Certificate No.: IECEx LCI 10.0017X

Date of Issue: **2011-12-23** Issue No.: **2**

Manufacturer: **Meggitt SA**
Route de Moncor 4
1752 Villars-sur-Glâne
Switzerland

Manufacturing location(s):
Meggitt SA
Route de Moncor 4
1752 Villars-sur-Glâne
Switzerland

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:
The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2007-10 Edition: 5	Explosive atmospheres - Part 0:Equipment - General requirements
IEC 60079-15 : 2010 Edition: 4	Explosive atmospheres - Part 15: Equipment protection by type of protection "n"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:
FR/LCI/ExTR10.0019/00 FR/LCI/ExTR10.0019/01 FR/LCI/ExTR10.0019/02

Quality Assessment Report:
FR/LCI/QAR06.0006/00 FR/LCI/QAR06.0006/01 FR/LCI/QAR06.0006/02
FR/LCI/QAR06.0006/03 FR/LCI/QAR06.0006/04

MEGGiTT

IECEx Certificate of Conformity

Certificate No.: IECEx LCI 10.0017X
Date of Issue: **2011-12-23** Issue No.: **2**
Page 3 of 4

Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

This equipment is composed of an electromechanical transducer which delivers to an electrical load, connected to its terminal, a signal related to the measurement performed.
Specific parameters:
U ≤ 28V, I ≤ 100mA, P ≤ 0,7W

CONDITIONS OF CERTIFICATION: YES as shown below:

Operating ambient temperature : -200°C to +500°C
Temperature classification in function of the operating temperature :
T6 at Tamb. + 80°C; T5 at Tamb. + 95°C
T4 at Tamb. + 130°C; T3 at Tamb. + 195°C
T2 at Tamb. + 290°C; T1 at Tamb. + 440°C
T510°C at Tamb. + 500°C

IECEx Certificate of Conformity

Certificate No.: IECEx LCI 10.0017X
Date of Issue: **2011-12-23** Issue No.: **2**
Page 4 of 4

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Normative update according to standards IEC 60079-0, Ed 5 and IEC 60079-15, Ed 4

EN

IECEx certificate:

IECEx LCI 10.0018X

for CA 20x

Meggitt SA
Route de Moncor 4
PO Box 1616
CH - 1701 Fribourg
Switzerland

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IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres
for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: IECEx LCI 10.0018X issue No.:2

Status: **Current**

Date of Issue: **2011-12-23** Page 1 of 4

Certificate history:
Issue No. 2 (2011-12-23)
Issue No. 1 (2010-10-25)
Issue No. 0 (2010-7-20)

Applicant: **Meggitt SA**
Route de Moncor 4
1752 Villars-sur-Glâne
Switzerland

Electrical Apparatus: **Accelerometer**
Optional accessory:

Type of Protection: **nA**

Marking: **Vibro-meter or MEGGITT or MFR S3960**
Address : ...
Type : PNR 144-20X-000-YYY
Serial number : ...
Year of construction : ...
Ex nA IIC T6 to T2 Gc
IECEx LCI 10.0018X

Approved for issue on behalf of the IECEx Certification Body: Julien GAUTHIER

Position: Certification Director – Michel BRÉNON

Signature: (for printed version)

Date: December 28, 2011

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

Laboratoire Central des Industries Electriques (LCIE)
33 Avenue du General Leclerc
FR-92260 Fontenay-aux-Roses
France

L C I E

IECEx Certificate of Conformity

Certificate No.: IECEx LCI 10.0018X

Date of Issue: **2011-12-23** Issue No.: **2**

Manufacturer: **Meggitt SA**
Route de Moncor 4
1752 Villars-sur-Glâne
Switzerland

Manufacturing location(s):
Meggitt SA
Route de Moncor 4
1752 Villars-sur-Glâne
Switzerland

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:
The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2007-10 Explosive atmospheres - Part 0:Equipment - General requirements
Edition: 5
IEC 60079-15 : 2010 Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
Edition: 4

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:
FR/LCI/ExTR10.0020/00 FR/LCI/ExTR10.0020/01 FR/LCI/ExTR10.0020/02

Quality Assessment Report:

FR/LCI/QAR06.0006/00 FR/LCI/QAR06.0006/01 FR/LCI/QAR06.0006/02
FR/LCI/QAR06.0006/03 FR/LCI/QAR06.0006/04

IECEx Certificate of Conformity

Certificate No.: IECEx LCI 10.0018X
Date of Issue: **2011-12-23** Issue No.: **2**
Page 3 of 4

Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

This equipment is composed of an electromechanical transducer which delivers to an electrical load, connected to its terminal, a signal related to the measurement performed.
Specific parameters:
U ≤ 28V, I ≤ 100mA, P ≤ 0,7W

CONDITIONS OF CERTIFICATION: YES as shown below:

Operating ambient temperature : -55°C to +260°C
Temperature classification in function of the operating temperature :
T6 at Tamb. + 80°C; T5 at Tamb. + 95°C
T4 at Tamb. + 130°C; T3 at Tamb. + 195°C
T2 at Tamb. + 260°C

IECEx Certificate of Conformity

Certificate No.: IECEx LCI 10.0018X
Date of Issue: **2011-12-23** Issue No.: **2**
Page 4 of 4

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Normative update according to standards IEC 60079-0, Ed 5 and IEC 60079-15, Ed 4

MEGGITT

EN

IECEx certificate:

IECEx LCI 10.0021X

for CA 28x, CE 28x and CE 31x

Meggitt SA
Route de Moncor 4
PO Box 1616
CH - 1701 Fribourg
Switzerland

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IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: IECEx LCI 10.0021X issue No.:3

Status: **Current**

Date of Issue: **2015-01-27** Page 1 of 4

Certificate history:
Issue No. 3 (2015-1-27)
Issue No. 2 (2011-12-23)
Issue No. 1 (2010-10-25)
Issue No. 0 (2010-7-20)

Applicant: **Meggitt SA**
Route de Moncor 4
1752 Villars-sur-Glâne
Switzerland

Electrical Apparatus: **Accelerometers - CE28X and CE31X**
Optional accessory:

Type of Protection: **nA**

Marking: Vibro-meter or MEGGITT or MFR S3960
Address : ...
Types : PNR : 444-28X-000-YYZ or PNR 444-31X-000-YYZ or PNR 144-28X-000-YYY
Serial number : …
Year of construction : …
Ex nA IIC T6...T2 Gc (see special conditions)
IECEx LCI 10.0021X

Approved for issue on behalf of the IECEx Certification Body: Julien GAUTHIER

Position: Certification Officer

Signature: (for printed version)

Date: 2015-01-27

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:
Laboratoire Central des Industries Electriques (LCIE)
33 Avenue du General Leclerc
FR-92260 Fontenay-aux-Roses
France
Documents relative to LCIE certification activites (Certificates, QARs, ExTRs) can be registered under the references "LCI" or "LCIE".

IECEx Certificate of Conformity

Certificate No.: IECEx LCI 10.0021X

Date of Issue: **2015-01-27** Issue No.: **3**

Manufacturer: **Meggitt SA**
Route de Moncor 4
1752 Villars-sur-Glâne
Switzerland

Additional Manufacturing location (s):
Meggitt SA
Route de Moncor 4
1752 Villars-sur-Glâne
Switzerland

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:
The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Explosive atmospheres - Part 0: General requirements
Edition: 6.0
IEC 60079-15 : 2010 Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
Edition: 4

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:
FR/LCI/ExTR10.0023/00 FR/LCI/ExTR10.0023/01 FR/LCI/ExTR10.0023/02
FR/LCI/ExTR10.0023/03

Quality Assessment Report:

FR/LCI/QAR06.0006/08

IECEx Certificate of Conformity

Certificate No.: IECEx LCI 10.0021X

Date of Issue: **2015-01-27** Issue No.: **3**

Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

CE28X and CE31X accelerometers are piezo-electrical transducers that supplies to its terminal an electrical charge proportional to the acceleration which is submitted. The charge generated by the piezo element is provided to the conditioner which delivers a modulated current.

CE28X accelerometer is constituted of sensor head, a cable or a connector and a conditioner for PNR 444….. types. Types are:
PNR 144-28X-000-YYY; X: depends on sensor head (X = 0 to 9); YYY depends on connector type and cable length, YYY = 000 to 999
PNR 444-28X-000-YYZ; X: depends on sensor head (X = 0 to 9); YY depends on connector type and cable length, YY = 00 to 99 and Z depends on conditioner electronic design:
PNR 444-28X-000-YY1 for initial electronic design, maximum power 700mW.
PNR 444-28X-000-YY2 to YY9 for new electronic design, maximum power 224mW.

CE31X accelerometer is constituted of sensor head, a cable or a connector and a conditioner.Type is PNR 444-31X-000-YYZ; X: depends on sensor head (X = 0 to 9); YY depends on connector type or cable length, YY = 00 to 99 and Z depends on conditioner electronic design:
PNR 444-31X-000-YY1 for initial electronic design, maximum power 700mW.
PNR 444-31X-000-YY2 to YY9 for new electronic design, maximum power 224mW.

CONDITIONS OF CERTIFICATION: YES as shown below:

- Temperature ranges:
  PNR 444-28X-000-YY0 to YY9, operating temperature ranges (Ta):
  Sensor and cable: -55℃ ≤ Ta ≤ +260℃
  Conditioner, PNR 444-28X-000-YY1: -55℃ ≤ Ta ≤ +100℃
  Conditioner, PNR 444-28X-000-YY2 to YY9: -55℃ ≤ Ta ≤ +125℃
  PNR 444-31X-000-YY1, operating temperature range: -55℃ ≤ Ta ≤ +100℃.
  PNR 444-31X-000-YY2 to YY9, operating temperature range: -55℃ ≤ Ta ≤ +125℃.

- Temperature classes depending on operating temperatures :

	T6	T5	T4	T3	T2
PNR 444-28X-000-YY1 to YY9Sensor and cable:	+ 80℃	+ 95℃	+ 130℃	+ 195℃	+ 260℃
PNR 444-28X-000-YY1Conditioner	+ 80℃	+ 95℃	+ 100℃	--	–
PNR 444-28X-000-YY2 to YY9Conditioner	+ 65℃	+ 80℃	+ 115℃	+125℃	–
PNR 444-31X-000-YY1	+ 80℃	+ 95℃	+ 125℃	--	–
PNR 444-31X-000-YY2 to YY9	+ 65℃	+ 80℃	+ 115℃	+125℃	–
PNR 144-28X-000-YYY	+ 80℃	+ 95℃	+ 130℃	+ 195℃	+ 260℃

- The electrical installation must provide a protection against voltage transients greater than 119V.

IECEx Certificate of Conformity

Certificate No.: IECEx LCI 10.0021X

Date of Issue: **2015-01-27** Issue No.: **3**

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Issue 1:
Legal entity of the applicant changes from Vibrometer to Meggitt SA, modification of trademarks.

Issue 2:
Normative update according to IEC 60079-0:2007-10 Ed.5 and IEC 6079-15:2010 Ed.4 standards.

Issue 3:
Normative update according to IEC 60079-0:2012 Ed.6.0 - Modification of types for initial electronic design, types become: PNR 444-28X-000-YY1 and PNR 444-31X-000-YY1 - New design of conditioner electronic, new types are: PNR 444-28X-000-YY2 to YY9 and PNR 444-31X-000-YY2 to YY9

EN

IECEx certificate:

IECEx DEK 15.0029

for CA 28x, CE 28x and CE 31x

Meggitt SA
Route de Moncor 4
PO Box 1616
CH - 1701 Fribourg
Switzerland

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IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx DEK 15.0029	Issue No: 0	Certificate history: Issue No. 0 (2016-06-24)
Status:	**Current**	Page 1 of 3	
Date of Issue:	**2016-06-24**		
Applicant:	**Meggitt SA** Rte de Moncor 4, 1752 Villars-sur-Glâne **Switzerland**		
Equipment:	**Piezoelectric Accelerometer Type 144-28.-000-..., Type 444-28.-000-... and Type 444-31.-000-...**		
Optional accessory:			
Type of Protection:	**Ex ia**		
Marking:	Ex ia IIC T6 ... T2 Ga		

Approved for issue on behalf of the IECEx Certification Body: R. Schuller

Position: Certification manager

Signature: (for printed version)

Date: 2016-06-24

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

DEKRA Certification B.V.
Meander 1051,
6825 MJ Arnhem
The Netherlands

DEKRA

IECEx Certificate of Conformity

Certificate No:	IECEx DEK 15.0029	Issue No: 0
Date of Issue:	**2016-06-24**	Page 2 of 3
Manufacturer:	**Meggitt SA** Rte de Moncor 4, 1752 Villars-sur-Glâne **Switzerland**	
Additional Manufacturing location(s):		

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-11 : 2011 Edition:6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

NL/DEK/ExTR15.0037/00

Quality Assessment Report:

FR/LCI/QAR06.0006/09

MEGGITT

IECEx DEK 15.0029 (EN)
(Original copy)
CA 28x, CE 28x and CE 31x

IECEx Certificate of Conformity

Certificate No:	IECEx DEK 15.0029	Issue No: 0
Date of Issue:	2016-06-24	Page 3 of 3

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Piezoelectric Accelerometers Type 144-28.-000-... (sensor only), Type 444-28.-000-... (sensor with remote conversion module) and Type 444-31.-000-... (sensor with integral conversion module) are used for vibration monitoring.

The sensor converts mechanical forces (e.g. vibrations) of the equipment to which it is mounted into an electrical signal, that is processed externally. When a conversion module is integrated, the sensor signal is converted into a modulated current output signal.

Refer to Annex 1 for details

CONDITIONS OF CERTIFICATION: NO

Annex:

Annex1 to IECEx DEK15.0029 Iss0 & IECExTR15.0037_00.pdf

DEKRA

Annex 1 to Certificate of Conformity IECEx DEK 15.0029, issue 0
Annex 1 to NL/DEK/ExTR15.0037/00

Description

Piezoelectric Accelerometers sensor only Type 144-28.-000-..., sensor with remote Conditioner (Electronic box) Type 444-28.-000-... and sensor with integral Conditioner Type 444-31.-000-... are used for vibration monitoring.
The sensor converts mechanical forces (e.g. vibrations) of the equipment to which it is mounted into an electrical signal, that is processed externally. When a conversion module is integrated, the sensor signal is converted into a modulated current output signal.

Ambient temperature range, depending on type and application:

Type 144-28.-000-...
Sensor only: -60 °C to +260 °C

Type 444-28.-000-.2 to 444-28.-000-..9
Conditioner: -55 °C to +125 °C
Sensor and Cable: -55 °C to +260 °C

Type 444-31.-000-.2 to 444-31.-000-..9
Sensor and Integral
Conditioner: -55 °C to +125 °C

The relation between maximum ambient temperature and temperature class is as follows for all devices, taking into account the above mentioned temperature ranges:

Type	T6	T5	T4	T3	T2
444-28.-000-.2 to 444-28.-000-..9 Conditioner	+65 °C	+80 °C	+115 °C	+125 °C	-
444-31.-000-.2 to 444-31.-000-..9	+65 °C	+80 °C	+115 °C	+125 °C	-
144-28.-000-...	+80 °C	+95 °C	+130 °C	+195 °C	+260 °C

Form 124
Version 2 (2013-07)

DEKRA Certification B.V. Meander 1051, 6825 MJ Arnhem P.O. Box 5185, 6802 ED Arnhem The Netherlands
T +31 88 9683000 F +31 88 9683100 www.dekra-certification.com Registered Arnhem 09085396

MEGGITT

Annex 1 to Certificate of Conformity IECEx DEK 15.0029, issue 0
Annex 1 to NL/DEK/ExTR15.0037/00

Electrical data

Supply and output signal:
in type of protection intrinsic safety Ex ia IIC, only for connection to a certified intrinsically safe circuit, with following maximum values:

Type	U_i	I_i	P_i	L_i	C_i sensor	C_i cable
444-28.-000-.2 to 444-28.-000-.9	28 V	100 mA	0.7 W	0 mH	0 nF	-
444-31.-000-.2 to 444-31.-000-.9	28 V	100 mA	0.7 W	0 mH	0 nF	0.25 nF/m
144-28.-000-...	28 V	100 mA	0.7 W	0 mH	8 nF	0.25 nF/m

Installation instructions

The instructions provided with the product shall be followed in detail to assure safe operation.

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IECEx certificate:

EN

IECEx LCI 10.0027X

for CA 30x

Meggitt SA
Route de Moncor 4
PO Box 1616
CH - 1701 Fribourg
Switzerland

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IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx LCI 10.0027X	issue No.:2	Certificate history: Issue No. 2 (2011-12-23) Issue No. 1 (2010-10-25) Issue No. 0 (2010-7-20)
Status:	Current		
Date of Issue:	2011-12-23	Page 1 of 4	

Applicant: **Meggitt SA**
Route de Moncor 4
1752 Villars-sur-Glâne
Switzerland

Electrical Apparatus: **Accelerometer**
Optional accessory:

Type of Protection: **nA**

Marking: **Vibro-meter or MEGGITT or MFR S3960**
Address : ...
Type : PNR 144-30X-000-YYY
Serial number : ...
Year of construction : ...
Ex nA IIC T6 to T510°C Gc
IECEx LCI 10.0027X

Approved for issue on behalf of the IECEx Certification Body: Julien GAUTHIER

Position: Certification Officer

Signature: (for printed version) Michel BRÉNON

Date: December 28, 2011

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

Laboratoire Central des Industries Electriques (LCIE)
33 Avenue du General Leclerc
FR-92260 Fontenay-aux-Roses
France

L C I E

IECEx Certificate of Conformity

Certificate No.:	IECEx LCI 10.0027X	
Date of Issue:	**2011-12-23**	Issue No.: **2**
		Page 2 of 4

Manufacturer: **Meggitt SA**
Route de Moncor 4
1752 Villars-sur-Glâne
Switzerland

Manufacturing location(s):
Meggitt SA
Route de Moncor 4
1752 Villars-sur-Glâne
Switzerland

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:
The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2007-10 Explosive atmospheres - Part 0:Equipment - General requirements
Edition: 5
IEC 60079-15 : 2010 Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
Edition: 4

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:
FR/LCI/ExTR10.0024/00 FR/LCI/ExTR10.0024/01 FR/LCI/ExTR10.0024/02

Quality Assessment Report:
FR/LCI/QAR06.0006/00 FR/LCI/QAR06.0006/01 FR/LCI/QAR06.0006/02
FR/LCI/QAR06.0006/03 FR/LCI/QAR06.0006/04

MEGGiTT

IECEx Certificate of Conformity

Certificate No.: IECEx LCI 10.0027X
Date of Issue: **2011-12-23** Issue No.: **2**
Page 3 of 4

Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

This equipment is composed of an electromechanical transducer which delivers to an electrical load, connected to its terminal, a signal related to the measurement performed.
Specific parameters: U ≤ 30V, I ≤ 130mA, P ≤ 0,8W

CONDITIONS OF CERTIFICATION: YES as shown below:

Operating ambient temperature:
Sensor and cable : -54°C to +500°C;
Connector Lemo type 0 or equivalent: -65°C to +150°C;
Connector M83723/89Y1020 or equivalent: -65°C to +200°C;
Connector VM standard temperature: -54°C to +260°C.
Connector VM high temperature: -54°C to +500°C.
Temperature classification as a function of ambient temperature range:
T6 at Tamb. + 75°C; T5 at Tamb. + 90°C; T4 at Tamb. + 125°C; T3 at Tamb. + 190°C; T2 at Tamb. + 290°C;
T1 at Tamb. + 440°C;
T510°C at Tamb. +500°C.

IECEx Certificate of Conformity

Certificate No.: IECEx LCI 10.0027X
Date of Issue: **2011-12-23** Issue No.: **2**
Page 4 of 4

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Normative update according to standards IEC 60079-0, Ed 5 and IEC 60079-15, Ed 4

MEGGITT

EN

IECEx certificate:

IECEx LCI 08.0041X

for CA 901

Meggitt SA
Route de Moncor 4
PO Box 1616
CH - 1701 Fribourg
Switzerland

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IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: IECEx LCI 08.0041X issue No.:3

Status: Current

Date of Issue: 2014-07-18 Page 1 of 4

Certificate history:
Issue No. 3 (2014-7-18)
Issue No. 2 (2011-12-23)
Issue No. 1 (2010-12-3)
Issue No. 0 (2008-10-2)

Applicant:
Meggitt SA
Route de Moncor 4
1752 Villars-sur-Glâne
Switzerland

Electrical Apparatus: **Acceleration transducer type PNR 144-901-000-XXX**
Optional accessory:

Type of Protection: **Ia**

Marking:
Vibro-meter or MEGGITT or MFR S3960
PNR 144-901-000-XXX
DMF mmyyyy
Ex ia IIC T6 to 710°C Ga
IECEx LCI 08.0041 X
Ui = ..., Ii = ..., Pi = ..., Ci = ..., Li = ... (completed with the electrical parameters)

Approved for issue on behalf of the IECEx Certification Body: Julien GAUTHIER

Position: Certification Officer

Signature: (for printed version)

Date: 2014-07-18

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:
Laboratoire Central des Industries Electriques (LCIE)
33 Avenue du General Leclerc
FR-92260 Fontenay-aux-Roses
France
Documents relative to LCIE certification activites (Certificates, QARs, ExTRs) can be registered under the references "LCI" or "LCIE".

L C I E

IECEx Certificate of Conformity

Certificate No.: IECEx LCI 08.0041X

Date of Issue: **2014-07-18** Issue No.: **3**

Manufacturer:
Meggitt SA
Route de Moncor 4
1752 Villars-sur-Glâne
Switzerland

Additional Manufacturing location (s):
Meggitt SA
Route de Moncor 4
1752 Villars-sur-Glâne
Switzerland

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:
The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Explosive atmospheres - Part 0: General requirements
Edition: 6.0
IEC 60079-11 : 2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition: 6.0

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:
FR/LCI/ExTR08.0048/03

Quality Assessment Report:

FR/LCI/QAR06.0006/07

IECEx Certificate of Conformity

Certificate No.: IECEx LCI 08.0041X
Date of Issue: 2014-07-18
Issue No.: 3
Page 3 of 4

Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

DESCRIPTION OF THE EQUIPEMENT:
The sensor is an electro-mechanical transducer that supplies to its terminal an electrical charge proportional to the acceleration which is submitted. This acceleration is transmitted to the sensible element by the intermediate of a seismic mass. It operates with a piezo-electrical built in compression.
Type designation : 144-901-000-XXX : XXX depend of the connector type and cable length (X = 0 to 9).
TEMPERATURE CLASSIFICATION:
T6 up to Ta =+80°C
T5 up to Ta =+95°C
T4 up to Ta =+130°C
T3 up to Ta =+195°C
T2 up to Ta =+290°C
T1 up to Ta =+440°C
Above Ta = +440°C and up to +700°C: T°C (°=Ta+10°C)

CONDITIONS OF CERTIFICATION: YES as shown below:

Specific parameters of the mode of protection 'ia':
Sensor head : Ci = 200pF, Li = 0
Integral cable : Ci = 200pF/m, Li = 0
Linear power supply : Ui ≤ 28V, Ii ≤ 100mA, Pi ≤ 0,7W
Non linear power supply : Ui ≤ 28V, Ii ≤ 25mA, Pi ≤ 0,7W

Special condition for safe use:
- The sensor shall be only connected to an intrinsically safe certified equipment. This combination shall be compatible as regard the intrinsic safety rules (Specific parameters of the mode of protection 'ia').
- Operating ambient temperature:
sensor and cable: -196°C to +700°C
connector: -65°C to +150°C: connector LEMO type O or equivalent
-65°C to +200°C: connector M832 3/89Y1020 or equivalent
-54°C to +260°C: standard tempe rature VM connector
-196°C to +700°C: high temperat ure VM connector

IECEx Certificate of Conformity

Certificate No.: IECEx LCI 08.0041X
Date of Issue: 2014-07-18
Issue No.: 3
Page 4 of 4

DETAILS OF CERTIFICATE CHANGES (for Issues 1 and above):

Issue 1 :
Update of the manufacturer documents, change legal entity name and adress of applicant, modifications of registered trade mark
Issue 2 :
Normative update according to standard IEC 60079-0 Ed 5
Issue 3 :
Normative update according to standards IEC 60079-0:2011 Ed 6.0 and IEC 60079-11:2011 Ed 6.0
Modification of the sensor (the maximum sensor capacitance is 200pF instead of 80pF)
Modification of the following electrical parameter : Sensor head : Ci = 200pF
Update of the technical file

IECEx certificate:

EN

IECEx LCI 10.0020X

for CA 901

Meggitt SA
Route de Moncor 4
PO Box 1616
CH - 1701 Fribourg
Switzerland

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IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx LCI 10.0020X	issue No.:2	Certificate history: Issue No. 2 (2011-12-23) Issue No. 1 (2010-10-25) Issue No. 0 (2010-7-20)
Status:	Current		
Date of Issue:	2011-12-23	Page 1 of 4	

Applicant: **Meggitt SA**
Route de Moncor 4
1752 Villars-sur-Glâne
Switzerland

Electrical Apparatus: **Accelerometer**
Optional accessory:

Type of Protection: **nA**

Marking: **Vibro-meter or MEGGITT or MFR S3960**
Address : ...
Type : PNR 144-901-000-XXX
Serial number : ...
Year of construction : ...
Ex nA IIC T6 to T710°C Gc
IECEx LCI 10.0020X

Approved for issue on behalf of the IECEx Certification Body: Julien GAUTHIER

Position: Certification Officer

Signature: (for printed version) Michel BRÉNON

Date: December 28, 2011

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

Laboratoire Central des Industries Electriques (LCIE)
33 Avenue du General Leclerc
FR-92260 Fontenay-aux-Roses
France

IECEx Certificate of Conformity

Certificate No.: IECEx LCI 10.0020X

Date of Issue: **2011-12-23** Issue No.: **2**

Manufacturer: **Meggitt SA**
Route de Moncor 4
1752 Villars-sur-Glâne
Switzerland

Manufacturing location(s):
Meggitt SA
Route de Moncor 4
1752 Villars-sur-Glâne
Switzerland

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:
The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2007-10 Explosive atmospheres - Part 0:Equipment - General requirements
Edition: 5
IEC 60079-15 : 2010 Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
Edition: 4

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:
FR/LCI/ExTR10.0022/00 FR/LCI/ExTR10.0022/01 FR/LCI/ExTR10.0022/02

Quality Assessment Report:
FR/LCI/QAR06.0006/00 FR/LCI/QAR06.0006/01 FR/LCI/QAR06.0006/02
FR/LCI/QAR06.0006/03 FR/LCI/QAR06.0006/04

IECEx Certificate of Conformity

Certificate No.: IECEx LCI 10.0020X
Date of Issue: **2011-12-23** Issue No.: **2**
Page 3 of 4

Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

This equipment is composed of an electromechanical transducer which delivers to an electrical load, connected to its terminal, a signal related to the measurement performed.Specific parameters:
U ≤ 30V, I ≤ 130mA, P ≤ 0,8W

CONDITIONS OF CERTIFICATION: YES as shown below:

Operating ambient temperature :
- Sensor and cable: -196°C to +700°C
- Connector Lemo type 0 or equivalent: -65°C to +150°C; Connector M83723/89Y1020 or equivalent: -65°C to +200°C; Connector VM standard t: -54°C to +260°C; Connector VM high température : -196°C to +700°

Temperature classification in function of the operating temperature :
T6 at Tamb. + 80°C; T5 at Tamb. + 95°C; T4 at Tamb. + 130°C;
T3 at Tamb. + 195°C; T2 at Tamb. + 290°C; T1 at Tamb. + 440°C;
T710°C at Tamb. +700°C

IECEx Certificate of Conformity

Certificate No.: IECEx LCI 10.0020X
Date of Issue: **2011-12-23** Issue No.: **2**
Page 4 of 4

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Normative update according to standards IEC 60079-0, Ed 5 and IEC 60079-15, Ed 4

MEGGITT

EN

IECEx certificate:

IECEx LCIE 13.0026X

for

GSI 127

Meggitt SA
Route de Moncor 4
PO Box 1616
CH - 1701 Fribourg
Switzerland

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IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx LCIE 13.0026X	Issue No: 1	Certificate history: Issue No. 1 (2016-11-30)
Status:	**Current**	Page 1 of 4	Issue No. 0 (2013-05-31)
Date of Issue:	**2016-11-30**		
Applicant:	**MEGGITT SA** Route de Moncor 4 1752 VILLARS SUR GLANE **Switzerland**		
Equipment:	**GSI 127 Interface - Type: 244-127-000-XXX-A2-BYY**		
Optional accessory:			
Type of Protection:	**Ex nA [ia]**		
Marking:	Ex nA [ia Ga] IIC T4 Gc (refer to attachment for full marking)		

Approved for issue on behalf of the IECEx Certification Body: Julien Gauthier

Position: Certification Officer

Signature: (for printed version)

Date: 2016-11-30

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

Laboratoire Central des Industries Electriques (LCIE)
33 Avenue du General Leclerc
FR-92260 Fontenay-aux-Roses
France

L C I E

IECEx Certificate of Conformity

Certificate No:	IECEx LCIE 13.0026X	Issue No: 1
Date of Issue:	**2016-11-30**	Page 2 of 4
Manufacturer:	**MEGGITT SA** Route de Moncor 4 1752 VILLARS SUR GLANE **Switzerland**	

Additional Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-11 : 2011 Edition:6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-15 : 2010 Edition:4	Explosive atmospheres - Part 15: Equipment protection by type of protection "n"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

FR/LCIE/ExTR13.0024/00 FR/LCIE/ExTR16.0048/00

Quality Assessment Report:

FR/LCI/QAR06.0006/09

IECEx Certificate of Conformity

Certificate No: IECEx LCIE 13.0026X Issue No: 1

Date of Issue: **2016-11-30** Page 3 of 4

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The GSI 127 interface provides galvanic insolation between power supply circuit or signal treatment circuit (Ex nA) and a sensor or a conditioner (Ex ia).

The equipment consists of electronic board and screwed terminals blocks mounted inside a plastic enclosure. Conformal coating is applied on both sides of the electronic board.

CONDITIONS OF CERTIFICATION: YES as shown below:

a) The equipment shall only be connected to associated intrinsically safe certified equipment or simple apparatus. This combination must be compatible as regard the intrinsic safety rules.

b) The apparatus shall be installed in an enclosure conform to the requirements of standard IEC 60079-0 and with ingress protection of at least IP54.

c) Operating ambient temperature: -40°C to +70°C.

IECEx Certificate of Conformity

Certificate No: IECEx LCIE 13.0026X Issue No: 1

Date of Issue: **2016-11-30** Page 4 of 4

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Issue No. 0:
Conformity assessment according to IEC 60079-0:2011 Ed. 6, IEC 60079-11:2011 Ed. 6 and IEC 60079-15:2010 Ed. 4 standards.

Issue No. 1:

- New operating ambient temperature range: -40°C to +70°C.
- Update of type designation to differentiate two specifications.

Annex:

IECEx LCIE 13.0026X Issue 01 - Annex 01 - GSI127.pdf

Annex 01 to Certificate
IECEx LCIE 13.0026X issue 01

ADDITIONAL EQUIPMENT DESCRIPTION

Type designation:

244-127-000-XXX-A2-BYY

XXX defines the version of the product (X = 0 to 9).
YY defines the transfer mode (YY = 01 to 19 for actual specification; YY = 20 to 39 for alternate specification).

In order to differentiate the two specifications, the type of product is modified as follows:

- Actual specification: 244-127-000-XXX-A2-B01 to B19
- Alternate specification: 244-127-000-XXX-A2-B20 to B39

The difference between these specifications is only on electronic component values without modification of critical components part list and printed circuit board.

User manual (extract), ref. PZ 8763 rev. 00 dated 2016-09-06.

MARKING

MEGGITT SA or VIBRO-METER or MFR S3960
Address: ...
Type: 244-127-000-XXX-A2-BYY
Serial number: ...
Year of construction: …
Ex nA [ia Ga] IIC T4 Gc
IECEx LCIE 13.0026X
Power supply : U ≤ 30 V, I ≤ 150 mA
Sensor or conditioner :
For 244-127-000-XXX-A2-B01 to B19: U_o: 25.2 V; I_o: 60 mA; P_o: 0.7 W; C_o: 95 nF; L_o: 5 mH
For 244-127-000-XXX-A2-B20 to B39: U_o: 25.2 V; I_o: 45 mA; P_o: 0.5 W; C_o: 95 nF; L_o: 10 mH

RATINGS

Power supply: U ≤ 30 V, I ≤ 150 mA
Sensor or conditioner:
- For 244-127-000-XXX-A2-B01 to B19: U_o: 25.2 V; I_o: 60 mA; P_o: 0.7 W; C_o: 95 nF; L_o: 5 mH
- For 244-127-000-XXX-A2-B20 to B39: U_o: 25.2 V; I_o: 45 mA; P_o: 0.5 W; C_o: 95 nF; L_o: 10 mH

ROUTINE TEST

Each transformer T1 shall be submitted to dielectric strength test under test voltage of 1500 V; 50/60 Hz applied between the primary winding and the secondary windings during at least 60 s in accordance with clause 11.2 of IEC 60079-11:2011 Ed. 6 standard.

This Annex is valid only in combination with certificate mentioned above and may only be reproduced in its entirety and without any change.
CERT-ATEX-FORM 14 Rev. 01

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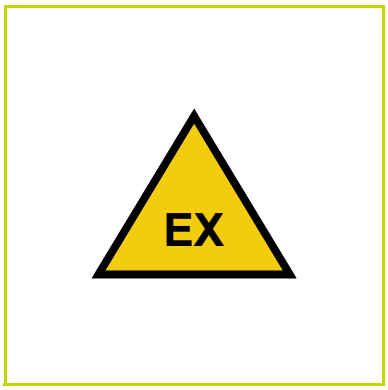
EX CERTIFICATE – IECEx

vibro-meter®

IECEx LCIE 18.0023X
for
IPC707 signal conditioner



Note: Although the Ex certificate may be included in more than one language, the liability of the notified body applies only on the text of the original copy of the certificate that it published.

Document reference IECEx LCIE 18.0023X
Edition 2 – April 2022

Meggitt SA, Route de Moncor 4, Case postale, 1701 Fribourg, Switzerland

Tel: +41 26 407 1111
Fax: +41 26 407 1660
energy@ch.meggitt.com
www.meggittsensing.com/energy
www.meggitt.com

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IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres
for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	**IECEx LCIE 18.0023X**	Page 1 of 4	Certificate history:
Status:	**Current**	Issue No: 1	Issue 0 (2018-08-30)
Date of Issue:	2022-04-01		
Applicant:	**MEGGITT SA** Route de Moncor 4 1752 Villars-sur-Glâne **Switzerland**		
Equipment:	**Signal Conditioner IPC 707 - Type : 244-707-000-xxx-A_**		
Optional accessory:			
Type of Protection:	**Ex ia, Ex ec**		
Marking:	Ex ia IIC T6...T4 Ga Ex ec IIC T6...T4 Gc Refer to the attachment for full marking		

Approved for issue on behalf of the IECEx Certification Body: **Julien GAUTHIER**

Position: **Certification Officer**

Signature: (for printed version)

LABORATOIRE CENTRAL DES INDUSTRIES ELECTRIQUES
S.A.S au capital de 15.745.984 €
RCS Nanterre B 408 363 174
33 avenue du Général Leclerc
F - 92266 FONTENAY AUX ROSES

Date: (for printed version) 2022-04-01

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.

Certificate issued by:

Laboratoire Central des Industries Electriques (LCIE)
33 Avenue du General Leclerc
FR-92260 Fontenay-aux-Roses
France

IECEx Certificate of Conformity

Certificate No.:	**IECEx LCIE 18.0023X**	Page 2 of 4
Date of issue:	2022-04-01	Issue No: 1

Manufacturer: **MEGGITT SA**
Route de Moncor 4
1752 Villars-sur-Glâne
Switzerland

Manufacturing locations: **MEGGITT SA**
Route de Moncor 4
1752 Villars-sur-Glâne
Switzerland

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements.This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :
The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Edition:7.0 — Explosive atmospheres - Part 0: Equipment - General requirements

IEC 60079-11:2011 Edition:6.0 — Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"

IEC 60079-7:2017 Edition:5.1 — Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

FR/LCIE/ExTR22.0026/00 FR/LCIE/ExTR22.0027/00

Quality Assessment Report:

FR/LCI/QAR06.0006/16

IECEx Certificate of Conformity

Certificate No.: **IECEx LCIE 18.0023X** Page 3 of 4

Date of issue: 2022-04-01 Issue No: 1

EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

IPC 707 Signal conditioner is an analogue electronic conditioner which converts the electrical charges coming from a piezoelectric sensor (sensor side) into an analogue voltage or current signal (signal side).

The electronic circuitry of the IPC 707 signal conditioner is totally potted and incorporated into an aluminium enclosure. IPC 707 Signal Conditioner is equipped with terminals (sensor side and signal side) and with an optional clip for DIN rail.

Signal side ouput configurations could be as following:

- Voltage output: 3-wires transmission mode,
- Current output: 2-wires transmission mode.

Refer to the attachment for full description.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- Ambient temperature range: -40°C to +85°C.
- The apparatus must be connected according to instruction manual.

a. Ex ia protection mode:

- The intrinsic safety terminal blocks (IS boards) must be connected only to an intrinsically safe certified apparatus. These combinations shall comply with the requirements of the standard IEC 60079-25.
- The equipment contains more than 15% of of aluminum. It must be mounted in such a manner as to eliminate the risk of sparks caused by friction or impact.
- The grounding of the intrinsically safe circuits must be in accordance with requirements of clause 16.2.3 of IEC 60079-14 standard.

b. Ex ec protection mode:

- For final installation, final end user shall take any precautions to install the apparatus into an IP54 enclosure and keep it connected in compliance with IEC 60079-14 requirements, providing and maintaining degree of protection at last IP54.
- The equipment shall only be used in an area of at least pollution degree 2, as defined in IEC 60664-1 standard.
- Transient protection shall be provided that is set at a level not exceeding 140% of the peak rated voltage value at the supply terminals to equipment.

IECEx Certificate of Conformity

Certificate No.: **IECEx LCIE 18.0023X** Page 4 of 4

Date of issue: 2022-04-01 Issue No: 1

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Ex ia protection mode :

- Normative update according to IEC 60079-0:Ed:7 standard.
- Extension of the range, Reference 244-707-000-012-A2 becomes 244-707-000-xxx-A2.

Ex ec protection mode :

- Normative update according to IEC 60079-0:Ed:7 and IEC 60079-7:Ed:5.1standards.
- Extension of the range, Reference 244-707-000-012-A3 becomes 244-707-000-xxx-A3.

Annex:

Annex 01 to Certificate IECEx LCIE 18.0023X issue 01_1.pdf

Original copy (English)
MEGGITT

Annex 01 to Certificate IECEx LCIE 18.0023 X issue 01

FULL EQUIPMENT DESCRIPTION

Functional description:

IPC 707 Signal Conditioner is an analogue electronic conditioner which converts the electrical charges coming from a piezoelectric sensor (sensor side) into an analogue voltage or current signal (signal side).

Signal side output configurations could be as following:

- voltage output: 3-wires transmission mode,
- current output: 2-wires transmission mode.

Mechanical description:

Electronic circuitry of the IPC 707 signal conditioner is totally potted and incorporated into an aluminium enclosure. IPC 707 Signal Conditioner is equipped with terminals (sensor side and signal side) and with an optional clip for DIN rail.

MARKING

Ex ia type of protection

Complete marking:
Vibro-Meter or MEGGITT SA or MFR S3960
Address: …
Type: 244-707-000-xxx-A2
Serial number: …
Year of construction : …
Ex ia IIC T6 …T4 Ga (*)
IECEx LCIE 18.0023X
-40°C ≤ T_{amb} ≤ +85°C
U_i : …V, I_i : …mA, P_i : … mW, C_i : …nF, L_i : … µH. (**)
U_o : …V, I_o : ….mA, P_o : …mW, C_o : … µF, L_o : … mH.

(**) : Intrinsic safety electrical parameters are identified as following :

Reduced marking:
Vibro-Meter or MEGGITT SA or MFR S3960
Address: …
Type: 244-707-000-xxx-A2
Serial number: …
Year of construction: …
Ex ia IIC T6…T4 Ga (*)
IECEx LCIE 18.0023X
(*) Temperature classification shall be as following:

Ex ec type of protection

Complete marking:
Vibro-Meter or MEGGITT SA or MFR S3960
Address: …
Type: 244-707-000-xxx-A3(*)
Serial number: …
Year of construction: …
Ex ec IIC T6 … T4 Gc (**)
IECEx LCIE 18.0023X
-40°C ≤ T_{amb} ≤ +85°C
U_{max} : 30 V, I_{max} : 20 mA.
WARNING – DO NOT SEPARATE WHEN ENERGIZED.
WARNING – SEPARATE ONLY IN A NON-HAZARDOUS AREA.
(*): completed with type designation.
(**): see temperatures table.

Reduced marking:
Vibro-Meter or MEGGITT SA or MFR S3960
Address: …
Type: 244-707-000-xxx-A3 (*)
Serial number: …
Year of construction: …
Ex ec IIC T6 … T4 Gc (**)
IECEx LCIE 18.0023X
(*): completed with type designation.
(**) Temperature classification shall be as following:

Temperature classification	*Ambient operating temperature range*
T6	-40°C ≤ T_{amb} ≤ +70°C
T5	-40°C ≤ T_{amb} ≤ +80°C
T4	-40°C ≤ T_{amb} ≤ +85°C

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CERT-ATEX-FORM 14 Rev. 03

Annex 01 to Certificate IECEx LCIE 18.0023 X issue 01

RANGE DETAILS

Ex i model:

244 – 707 - 000 ** * A2
- Minor modification number = 0 *to* 9 *Each modification increase the number by 1*
- *Customized version (transfer, filter, installation)* = 00 *to* 99
- *Product Type*

Ex e model:

244 – 707 - 000 ** * A3
- Minor modification number = 0 *to* 9 *Each modification increase the number by 1*
- *Customized version (transfer, filter, installation)* = 00 *to* 99
- *Product Type*

RATINGS

Ex ia type of protection:

Terminal	Intrinsic safety electrical parameters	
J0 (SUP, COM)	U_i : 28V, I_i : 100 mA, P_i : 700 mW	C_i : 2,2 nF, L_i : 1 µH.
J0 (OUT, COM)		C_i : 9,6 nF, L_i : 565 µH.
J1 (IN+, COM) (IN-, COM)	U_o : 6,6V, I_o : 66 mA, P_o : 107 mW, C_o : 5,69 µF, L_o : 3,435 mH.	

Ex ec type of protection:

U_{max} : 30 V, I_{max} : 20 mA.

FULL CONDITIONS OF CERTIFICATION

Ex ia type of protection:

a) Ambient temperature range: -40°C to +85°C.
b) The intrinsic safety terminal blocks (IS boards) must be connected only to an intrinsically safe certified apparatus. These combinations shall comply with the requirements of the standard IEC 60079-25.
c) The apparatus must be connected according to instruction manual.
d) The equipment contains more than 15% of aluminium. It must be mounted in such a manner as to eliminate the risk of sparks caused by friction or impact.

This Annex is valid only in combination with certificate mentioned above and may only be reproduced in its entirety and without any change.
CERT-ATEX-FORM 14 Rev. 03

MEGGITT
Original copy (English)

e) The grounding of the intrinsically safe circuits must be in accordance with requirements of clause 16.2.3 of IEC 60079-14 standard.

Ex ec type of protection:

a) Ambient temperature range: -40°C to +85°C.
b) For final installation, final end user shall take any precautions to install the apparatus into an IP54 enclosure and keep it connected in compliance with IEC 60079-14 requirements, providing and maintaining degree of protection at last IP54.

c) The apparatus must be connected according to instruction manual.
d) The equipment shall only be used in an area of at least pollution degree 2, as defined in IEC 60664-1 standard.
e) Transient protection shall be provided that is set at a level not exceeding 140% of the peak rated voltage value at the supply terminals to the equipment.

This Annex is valid only in combination with certificate mentioned above and may only be reproduced in its entirety and without any change.
CERT-ATEX-FORM 14 Rev. 03

Original copy (English)
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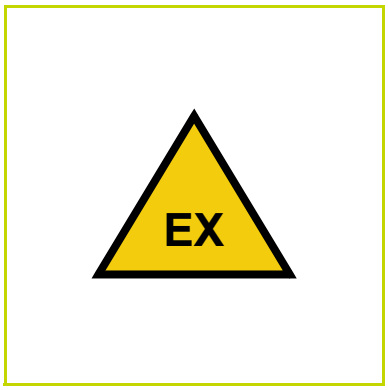
EX CERTIFICATE – IECEx

vibro-meter®

IECEx ITS 16.0011X
for
cable fittings (stuffing glands)



Note: Although the Ex certificate may be included in more than one language, the liability of the notified body applies only on the text of the original copy of the certificate that it published.

Document reference IECEx ITS 16.0011X
Edition 2 – January 2022

Meggitt SA, Route de Moncor 4, Case postale, 1701 Fribourg, Switzerland

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www.meggitt.com

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IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres
for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	**IECEx ITS 16.0011X**	Page 1 of 6	Certificate history:
Status:	**Current**	Issue No: 2	Issue 1 (2019-02-25) Issue 0 (2017-03-17)
Date of Issue:	2019-08-06		

Applicant: **Eaton Electrical Systems Ltd Trading as Raxton or Redapt**
Kingsway South
Westgate
Aldridge
West Midlands
WS9 8FS
United Kingdom

Equipment: **Gland Adaptors, Reducers and Earthlead Adaptors**

Optional accessory:

Type of Protection: **Ex db Ex eb and Ex tb**

Marking: IECEx ITS 16.0011X

Types AR and BJ Male/Male and type AU and AX Female/Female Union Adaptors, Types AB and AJ Gland Adaptors, Types BB and BJ Gland Reducers and DG and DN Earthlead Adaptors and Reducers

Ex db I/IIC Mb/Gb
Ex eb I/IIC Mb/Gb

Ex tb III C Db IP 6X

Ta = see schedule

Type AB & AJ Adapters, Type BB & BJ Reducers
Ex eb IIC Gb, Ex tb IIIC Db IP 66

Ta = see schedule

Approved for issue on behalf of the IECEx Certification Body: **V K Varma**

Position: **Certification Officer**

Signature: (for printed version)

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.

Certificate issued by:

Intertek Testing & Certification Limited
ITS House, Cleeve Road
Leatherhead
Surrey, KT22 7SA
United Kingdom

IECEx Certificate of Conformity

Certificate No.: **IECEx ITS 16.0011X** Page 2 of 6

Date of issue: 2019-08-06 Issue No: 2

MEGGITT
Original copy (English)

IECEx Certificate of Conformity

Certificate No.: **IECEx ITS 16.0011X** Page 3 of 6

Date of issue: 2019-08-06 Issue No: 2

Manufacturer: **Eaton Electrical Systems Ltd Trading as Raxton or Redapt**
Kingsway South
Westgate
Aldridge
West Midlands
WS9 8FS
United Kingdom

Additional manufacturing locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements.This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :
The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2011 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-1:2014-06 Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-31:2013 Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
IEC 60079-7:2015 Edition:5.0	Explosive atmospheres – Part 7: Equipment protection by increased safety "e"

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

GB/ITS/ExTR16.0013/00 GB/ITS/ExTR16.0013/01 GB/ITS/ExTR16.0013/02

Quality Assessment Reports:

GB/SIR/QAR06.0014/08 GB/SIR/QAR07.0016/06

IECEx Certificate of Conformity

Certificate No.: **IECEx ITS 16.0011X** Page 4 of 6

Date of issue: 2019-08-06 Issue No: 2

EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

The Types AR, BR, AB, AU, AX, AJ Adaptors, Types BB & BJ Reducers and Types DG and DN Earthlead Adaptors are designed to convert an existing cable entry aperture, in the associated apparatus, to a different thread form and/or size. Each device comprises a hollow body with a male thread at one end and a female thread at the other. Entry threads are between M12 and M120. (M16 to M75 for Glass Filled Nylon and M20 to M32 for DG/DN)

The Type AR and BJ Male/Male Adaptor and Types AU and AX Female/Female Adaptors have thread forms of between M12 and M120. Thread combinations are such that a maximum of two 'standard' size differences is maintained for Increase in thread and no restriction on reduction. Type designations determine thread combinations and body profiles.

Material Options

Brass to BS 2874

Brass BS 2872

Stainless Steel

Mild Steel

Aluminium

Bronze

30 % Glass Filled Nylon

40% Glass Filled Nylon

Surface Coating: Nickel, Zinc, Electroless Nickel

Thread Options

Metric to BS 3643

ET Conduit to BS 31

PG to DIN 40430

BSPP to BS 2779

BSPT to BS 21

NPT to ANSI/ASME B1.20.1

In addition, any other thread form that also complies with the requirements of IEC 60079-1 tables 3 or 4 and clause C2.2 (as applicable) are also permitted

Conditions of manufacture

The Manufacturer shall comply with the following:

1. The female threads of adaptors shall be restricted to one size larger than the male thread size.

2. When these entry devices are manufactured in 40% Glass Filled Nylon material, they shall be to be marked with '40% Glass Filled Nylon'.

3. These products shall be marked in accordance with the information as specified in this certificate and related reports.

4. An increase of up to two step thread sizes is permitted on the AB & AJ Series, in addition, equal sizes are also allowed.

5. These products shall be marked in accordance with the information as specified in this certificate and related reports.

6. Products constructed from Aluminum shall not to be marked for Group I applications.

SPECIFIC CONDITIONS OF USE: YES as shown below:
1. When used for Increased Safety ('Ex e') or Protection by enclosure (Ex tb) applications, a suitable method of sealing to the associated enclosure shall be provided.

IECEx Certificate of Conformity

Certificate No.: **IECEx ITS 16.0011X** Page 5 of 6

Date of issue: 2019-08-06 Issue No: 2

2. Products constructed from Aluminium are to be positioned where they are subject to low risk of mechanical impact only and shall not be marked as suitable for Group I

.

Type AB & AJ Adapters, Type BB & BJ Reducers

1 All entry devices shall only be installed where there is a low risk from mechanical impact.

2 Only one adaptor or reducer is to be used with any single cable entry on the associated equipment.

3 The interfaces between these devices and the associated enclosure cannot be defined; therefore, it is the user's responsibility to ensure that the appropriate ingress protection level is maintained at these interfaces.

4 When manufactured in 30% Glass Filled Nylon material, the entry devices are suitable for a service temperature range of -30°C to +90°C.

5 When manufactured in 40% Glass Filled Nylon material, the entry devices are suitable for a service temperature range of -20°C to +45°C

6 When the entry devices are manufactured in 40% Glass Filled Nylon material, they shall be protected from exposure to light; items made from this material are marked with '40% Glass Filled Nylon'.

7 Service temperature ranges have been applied as follows:

O-ring Service temperature

None fitted -60°C to 200°C *

EPDM -50°C to +100°C

Nitrile -20°C to +80°C

Neoprene -40°C to +80°C

Viton -20°C to +180°C *

Silicone -60°C to +180°C *

Fluorosilicone -60°C to +130°C

Note:. The limiting temperatures specified above are de-rated by 20K according to Clause 7.2.2 'Material Selection' of IEC 60079-0

Note: The maximum temperature is limited to 150°C in Group I application (Coal dust, Mining) O-ring materials affect marked with '*' above

Note: Unless fitted with an interface sealing O-ring with lower properties, temperatures shall then be limited as per the manufacturer's instructions

IECEx Certificate of Conformity

Certificate No.: **IECEx ITS 16.0011X** Page 6 of 6

Date of issue: 2019-08-06 Issue No: 2

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Issue 1: Update of QAR to reflect the certificate holder's new entity and address. Model Designation AR-U re-introduced which is recognised as a universal type certified to Ex db, Ex eb and Ex tb

Issue 2: Nylon material references revised Drawing AB-AJ-BB-BJ revised to Issue 2.

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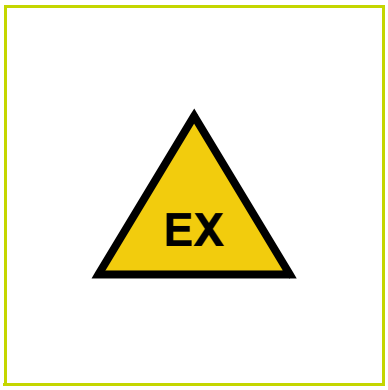
EX CERTIFICATE – IECEx

vibro-meter®

IECEx ITS 16.0012X
for
cable fittings (stuffing glands)



Note: Although the Ex certificate may be included in more than one language, the liability of the notified body applies only on the text of the original copy of the certificate that it published.

Document reference IECEx ITS 16.0012X
Edition 2 – January 2022

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IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres
for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	**IECEx ITS 16.0012X**	Page 1 of 5	Certificate history:
Status:	**Current**	Issue No: 3	Issue 2 (2019-02-22) Issue 1 (2018-04-27) Issue 0 (2016-12-20)
Date of Issue:	2019-10-23		

Applicant: **Eaton Electrical Systems trading as Raxton, Redapt or Capri**
Kingsway South
Westgate
Aldridge
West Midlands
WS9 8FS
United Kingdom

Equipment: **Types CB, CF, CK, CQ, CY, PD-U, PH-E, PA-D, PA-U, PB-U/PB-D and PD-E4 Stopping plugs**

Optional accessory:

Type of Protection: **Ex db , eb, tb**

Marking: IECEx ITS 16.0012X

Ex db I/IIC Mb/Gb

Ex eb I/IIC Mb/Gb

Ex tb IIIC Db

(Group I marking does not apply to CY or PD-E4 Stopping Plugs) (Ex d marking does not apply to PD-E4 or PH-E) Ta from -60°C to 200°C (Dependant on construction material and O-ring fitted). See specific conditons of use for particluar model.

Approved for issue on behalf of the IECEx Certification Body: **V K Varma**

Position: **Certificatin Officer**

Signature: (for printed version)

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.

Certificate issued by:

Intertek Testing & Certification Limited
ITS House, Cleeve Road
Leatherhead
Surrey, KT22 7SA
United Kingdom

IECEx Certificate of Conformity

Certificate No.:	**IECEx ITS 16.0012X**	Page 2 of 5
Date of issue:	2019-10-23	Issue No: 3

Manufacturer: **Eaton Electrical Systems trading as Raxton, Redapt or Capri**
Kingsway South
Westgate
Aldridge
West Midlands
WS9 8FS
United Kingdom

Additional manufacturing locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements.This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :
The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2011 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-1:2014-06 Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-31:2013 Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
IEC 60079-7:2015 Edition:5.0	Explosive atmospheres – Part 7: Equipment protection by increased safety "e"

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

GB/ITS/ExTR16.0014/00 GB/ITS/ExTR16.0014/01 GB/ITS/ExTR16.0014/02
GB/ITS/ExTR16.0014/03

Quality Assessment Report:

GB/SIR/QAR06.0014/08

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Original copy (English)

IECEx Certificate of Conformity

Certificate No.: **IECEx ITS 16.0012X** Page 3 of 5

Date of issue: 2019-10-23 Issue No: 3

EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

The stopping plugs are threaded and are used to fill unused entries in associated apparatus. They have thread forms between M12 and M120 and are briefly described as follows:
Type CF: Round/hexagon socket/internal mounting, Type CB: Round/hexagon socket/external mounting, Type CK: Hexagon head, Type CQ: 'Mushroom' head, Type CY: Similar to Type CK with a hollow threaded section
The PD-U series stopping plugs comprise of metallic round bodies with a dome head having a hexagonal key-way recess for tightening. They may optionally be machined with a groove to fit an 'o' ring seal. Coded: Exdb I/IIC Mb/Gb, Ex eb I/IIC Mb/Gb, Ex tb IIIC Db IP6X
The PA-D / PA-U, PB-D / PB-U Series stopping plugs comprise of metallic round bodies with a thread run out to shoulder having a hexagonal key-way recess for internal or external tightening. Coded: Ex db I/IIC Mb/Gb, Ex eb I/IIC Mb/ Gb Ex tb IIIC Db IP6X
The PH-E Series are ranges of 'Ex e' threaded stopping plugs each comprising a threaded body with either a hexagonal head or socket for tightening.
PD-E4 Stopping Plugs: these are a range of threaded stopping plugs that are used to fill unused entries in the associated apparatus. The PD-E4 has a 'mushroom' head, there is also a version made from 30% Glass Filled Nylon which are intended for Ex eb and tb only.
Material options:
• Brass BS 2872 (CZI 21) • Mild Steel to BS970 (EN1A) • Stainless Steel to BS970 (316) • Aluminium BS1474, 6082T6 • 30% Glass Filled Nylon • 40% Glass Filled Nylon

Surface Coating: Nickel, Zinc, Electroless Nickel

Entry threads options:
• Metric to BS 3643: • ET Conduit to BS 31: • PG to DIN 40430: • BSP to BS 2779 • BSPT to BS 21 • NPT to ANSI/ASME B1.20.1
Or any thread complying with IEC 60079-1. At their point of mounting, these devices are suitable for use at the following temperatures dependent on the type of 'o'-ring: O-ring Service temperature:

None fitted -60°C to 200°C * EPDM -50°C to +100°C Nitrile -30°C to +80°C Neoprene -40°C to +80°C Viton -20°C to +180°C * Silicone -60°C to +180°C * Fluorosilicone -60°C to +130°C
Note:. The limiting temperatures specified above are de-rated by 20K according to Clause 7.2.2 'Material Selection' of IEC 60079-0
Note: The maximum temperature is limited to 150°C in Group I application (Coal dust, Mining) O-ring materials affect marked with '*' above

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. If a stopping plug is machined with an undercut and is used for an Ex db application, then the wall of the enclosure into which it is fitted shall be such as to maintain five full threads of engagement.
2. When used for increased safety or Ex eb or protection by enclosure Ex tb applications, a suitable method of sealing to the associated enclosure shall be fitted
3. The stopping plugs shall not be used with any form of adaptors or reducers.
4. The interfaces between these devices and the associated enclosure cannot be defined; therefore, it is the user's responsibility to ensure that the appropriate ingress protection level is maintained at these interfaces
5. The stopping plugs, when manufactured from non-metallic material, are only suitable for installation in areas considered to be a low risk from mechanical impact
6. The stopping plugs, when manufactured from non-metallic material 40% Glass Filled Nylon, shall be adequately protected from direct exposure to sunlight
7. The stopping plugs, when construction from non-metallic material, shall only be cleaned with a damp cloth.

PD-E-4 Nylon Stopping Plugs

8. When manufactured in 30% Glass Filled Nylon material, the entry devices are suitable for a service temperature range of -30°C to +90°C.
9. When manufactured in 40% Glass Filled Nylon material, the entry devices are suitable for a service temperature range of -20°C to +45°C; items made from this material are marked with '40% Glass Filled Nylon'.
10. At their point of mounting, these devices are suitable for use at either -30°C to +90°C or -5°C to +45°C when using Viton seals. The clearance holes for metric male threaded products, suitable for clearance hole applications of increased safety enclosures are to have a dimeter of 0.3 to 0.5mm larger than the major diameter of the make thread.
11. When installed in Group I applications, adaptors manufactured in brass shall be installed where the risk of impact is low
12. At their point of mounting, metallic stopping plugs are suitable for use at -60°C to +200°C for Group II applications and -50°C to +150°C for Group I applications
13. 'Ex db' Stopping plugs are not to be used with any form of adaptors or reducers

IECEx Certificate of Conformity

Certificate No.: **IECEx ITS 16.0012X** Page 4 of 5

Date of issue: 2019-10-23 Issue No: 3

Equipment (continued):

At their point of mounting, these devices are suitable for use at the following temperatures dependent on the type of 'o'-ring:

O-ring Service temperature

None fitted -60°C to 200°C *

EPDM -50°C to +100°C

Nitrile -30°C to +80°C

Neoprene -40°C to +80°C

Viton -20°C to +180°C *

Silicone -60°C to +180°C *

Fluorosilicone -60°C to +130°C

Note:. The limiting temperatures specified above are de-rated by 20K according to Clause 7.2.2 'Material Selection' of IEC 60079-0

Note: The maximum temperature is limited to 150°C in Group I application (Coal dust, Mining) O-ring materials affect marked with '*' above

Conditions of manufacture

The Manufacturer shall comply with the following for the stopping plugs:

1. The PD-E4 stopping plugs manufactured from Nylon shall not be marked with any information that indicates that they are suitable for Group I use.

2. The manufacturer shall take all reasonable steps to ensure that the user can comply with the special conditions for safe use and shall advise the user in respect of the materials that are used in the construction of the devices.

3. These products shall be marked in accordance with the information as specified in this certificate and related reports.

4. When these entry devices are manufactured in 40% Glass Filled Nylon material, they shall be marked with 40% Glass Filled Nylon.

5. These products shall be marked in accordance with the information as specified in this certificate and related reports.

6. Aluminium variants, where applicable, are not permitted for Group I applications. The manufacturer shall ensure that the equipment is marked appropriately

7. In accordance with IEC 60079-1, the coating on joint surfaces of metallic devices that are electroplated shall be no more than 0.008mm thick.

IECEx Certificate of Conformity

Certificate No.: **IECEx ITS 16.0012X** Page 5 of 5

Date of issue: 2019-10-23 Issue No: 3

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Issue 1: PA-U, PB-U as stated to be changed to PA-D, PB-D stopping plugs and addition of M12 & equivalent threadforms Intertek Project G103326724

Issue 2: Update of QAR to reflect Certificate holder's new entity and address. PA-U and PB-U re introduced as a universal option that is both Ex d and Ex e certified

Issue 3: (This certificate) Nylon material reference revised. Drawings CQ-M and PD-E revised to Issue 2. Intertek Project No G104039337

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IECEx certificate:

EN

LCI 10.0009U

for

Cable stuffing glands

Meggitt SA
Route de Moncor 4
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www.meggittsensing.com/energy

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IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: IECEx LCI 10.0009U issue No.:1

Certificate history:
Issue No. 1 (2015-5-7)
Issue No. 0 (2010-5-11)

Status: Current

Date of Issue: 2015-05-07 Page 1 of 4

Applicant: **S.I.B (Schlemmer Industry & Building Parts)**
25 Rue Théophile Somborn
57220 BOULAY - MOSELLE
France

Electrical Apparatus: **Cap, reducer and amplifier. Type EEx e**
Optional accessory:

Type of Protection: **Ex e, Ex tb**

Marking: Ex eb IIC
Ex tb IIIC
IP6X
IECEx LCI 10.0009U
(Full marking is available in annex)

Approved for issue on behalf of the IECEx Certification Body: Julien Gauthier

Position: Certification Officer

Signature: (for printed version)

Date: 2015-05-07

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:
Laboratoire Central des Industries Electriques (LCIE)
33 Avenue du General Leclerc
FR-92260 Fontenay-aux-Roses
France

Documents relative to LCIE certification activites (Certificates, QARs, ExTRs) can be registered under the references "LCI" or "LCIE".

IECEx Certificate of Conformity

Certificate No.: IECEx LCI 10.0009U

Date of Issue: **2015-05-07** Issue No.: 1

Manufacturer: **S.I.B (Schlemmer Industry & Building Parts)**
25 Rue Théophile Somborn
57220 BOULAY - MOSELLE
France

Additional Manufacturing location (s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:
The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Edition: 6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-31 : 2008 Edition: 1	Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure 't'
IEC 60079-7 : 2006-07 Edition: 4	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:
FR/LCI/ExTR10.0012/00 FR/LCI/ExTR10.0012/01

Quality Assessment Report:

FR/LCI/QAR10.0003/06

IECEx Certificate of Conformity

Certificate No.: IECEx LCI 10.0009U

Date of Issue: **2015-05-07** Issue No.: **1**

Page 3 of 4

Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

Description of the components :

Three different components :
- Caps type Ex "e" in plastic used to be fitted on entry (clearance hole or threaded hole) on wall of enclosure.
- Reducers and amplifiers type Ex "e" in plastic used in order to adapt a cable entry with a lower or higher diameter (clearance hole or threaded hole) than the cable entry hole.

All these components are in plastic material. The plastics materials used in the construction are : Polycarbonate (Ref A9541016) or Polyamide 6 (Ref A9380300 and A99380301) and neoprene. For each size and component, there is the possibility of an ISO metric thread pitch 1,5 mm (ISO 965 (1998)) or PG thread (UTE 68 311 (2000) ; UTE 68312 (2000)).

Schedule of limitation :

For the assembling of the caps, reducers or amplifiers on increased safety enclosures (for Gas atmospheres) or on "Ex t" protected enclosures (for Dust atmospheres), the fitting up and the assembling realized shall be in accordance with the descriptive documents of the manufacturer.

Operating service temperature :

-20℃ ≤ Tservice ≤ + 55℃ (For all the range)
-35℃ ≤ Tservice ≤ +95℃ (Polycarbonate referenced A9541016)
-35℃ ≤ Tservice ≤ +90℃ (Polyamide 6 referenced A9380300 and A9380301)

CONDITIONS OF CERTIFICATION: NO

IECEx Certificate of Conformity

Certificate No.: IECEx LCI 10.0009U

Date of Issue: **2015-05-07** Issue No.: 1

Page 4 of 4

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Issue 00 (2010-05-11)
Initial assessment according to IEC 60079-0: Ed4 ; IEC 60079-7 Ed4 ; IEC 61241-0 Ed1 ; IEC 61241-1 Ed 1 standards

Issue 01
Normative updating according to the standards IEC 60079-0 Ed 6 ; IEC 60079-31 Ed 1 ; IEC 60079-7 Ed 4
Update of marking
Update of company name

Annex: LCI 10.0009 U - Issue 01-Annex 01 - SIB.pdf

IECEx LCI 10.0009U issue 01
Annex n°01

Marking :

SIB
Address
Type : EEx e
Serial number
Year of construction

Ex eb IIC
Ex tb IIIC
IP6X
IECEx LCI 10.0009U

This Annex is valid only in combination with certificate IECEx LCI 10.0009UX issue 01 and may only be reproduced in its entirety and without any change.

Page 1 sur 1
75 - IECEx CoC Attachment – rev0.DOC

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MEGGITT

EN

IECEx certificate:

PTB 03.0000

for

Cable stuffing glands

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Route de Moncor 4
PO Box 1616
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Switzerland

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www.meggittsensing.com/energy

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IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx PTB 03.0000	Issue No: 2	Certificate history:
Status:	Current		Issue No. 2 (2011-09-12)
Date of Issue:	2011-09-12	Page 1 of 4	Issue No. 1 (2011-02-04)
			Issue No. 0 (2003-09-15)

Applicant: **Cooper Crouse Hinds GmbH**
Neuer Weg Nord 49
D-69412 Eberbach
Germany

Equipment: **Blanking Element Type GHG 960 **** * ****
Optional accessory:

Type of Protection: **Increased Safety**

Marking: Ex e IIC Gb
Ex tb III C Db IP66/IP65
alternativ
Ex eb IIC
Ex tb III C IP66/IP65

Approved for issue on behalf of the IECEx Certification Body: Dr.-Ing. Ulrich Johannsmeyer

Position: Head of Department "Intrinsic Safety and Safety of Systems"

Signature:
(for printed version)

Date:

1. This certificate and schedule may only be reproduced in full.
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3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

Physikalisch-Technische Bundesanstalt (PTB)
Bundesallee 100
38116 Braunschweig
Germany

Physikalisch-Technische Bundesanstalt
Braunschweig und Berlin

IECEx Certificate of Conformity

Certificate No:	IECEx PTB 03.0000	Issue No: 2
Date of Issue:	2011-09-12	Page 2 of 4

Manufacturer: **Cooper Crouse-Hinds GmbH**
Neuer Weg Nord 47
D-69412 Eberbach
Germany

Additional Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2007-10 Edition:5	Explosive atmospheres - Part 0:Equipment - General requirements
IEC 60079-31 : 2008 Edition:1	Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure 't'
IEC 60079-7 : 2006-07 Edition:4	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

DE/PTB/ExTR11.0013/00

Quality Assessment Report:

DE/BVS/QAR11.0009/00

MEGGiTT

IECEx Certificate of Conformity

Certificate No: IECEx PTB 03.0000 Issue No: 2

Date of Issue: 2011-09-12 Page 3 of 4

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Description
The blanking element type GHG 960 **** * **** made of polyamide serves to close threaded holes for cable entries in enclosures.
Dependend on the size they can be used for enclosures in the type of protection Increased safety "e" and Protection by enclosure "tb".
Installation in clearance holes is with lock nuts made of brass or polyamide.

Size M16 x 1,5 to M50 x 1,5: type of protection Increased safety "e" and Protection by enclosure "tb"

Size M63 x 1,5: type of protection Increased safety "e"

Technical data and Nomenclature: see attachment.

SPECIFIC CONDITIONS OF USE: NO

IECEx Certificate of Conformity

Certificate No: IECEx PTB 03.0000 Issue No: 2

Date of Issue: 2011-09-12 Page 4 of 4

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

New QAR

Annex:
Attachment-IECEx PTB 03_0000_Rev1.pdf

Applicant: Cooper Crouse-Hinds GmbH
Neuer Weg Nord 49
69412 Eberbach
Germany

Electrical Apparatus: Blanking element type GHG 960 **** * ****

Description

The type GHG 960 **** * **** blanking element made of polyamide serves to close threaded holes for cable entries in enclosures. Dependend on the size they can be used for enclosures in the type of protection Increased safety "e" and Protection by enclosure "tb". Installation in clearance holes is with lock nuts made of brass or polyamide.

Size M16 x 1,5 to M50 x 1,5: type of protection Increased safety "e" and Protection by enclosure "tb"

Size M63 x 1,5: type of protection Increased safety "e"

Technical data

Designation M16x1,5 – M50x1,5	Unique specimen	Package	
		without O-Ring	witht O-Ring
Blanking element M16 x 1,5	GHG 960 6633 P	GHG 960 1952 R	GHG 960 1953 R ....
Blanking element M20 x 1,5	GHG 960 6634 P	GHG 960 1952 R	GHG 960 1953 R ....
Blanking element M25 x 1,5	GHG 960 6635 P	GHG 960 1952 R	GHG 960 1953 R....
Blanking element M32 x 1,5	GHG 960 6636 P	GHG 960 1952 R	GHG 960 1953 R....
Blanking element M40 x 1,5	GHG 960 6637 P	GHG 960 1952 R	GHG 960 1953 R ....
Blanking element M50 x 1,5	GHG 960 6638 P	GHG 960 1952 R	GHG 960 1953 R ....

Designation M63 x 1,5	Unique specimen	Package
Blanking element M63 x 1,5	GHG 960 1924 R0068	GHG 960 1952R ....

Service temperature range M16 x 1,5 to M50 x 1,5 M63 x 1,5	 -55 °C to +95 °C -20 °C to +80 °C
Degree of mechanical hazard	high
Wallthickness	≥ 3,5 mm
Ingress protection	
M16x1,5 –M50x1,5	IP66
M63 x 1,5	IP65

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Bundesallee 100, 38116 Braunschweig, Germany
Postfach 33 45, 38023 Braunschweig, Germany
Telephone +49 531 592-0, Telefax +49 531 592-3605

Attachment to Certificate
IECEx PTB 03.0000, Revision 1

Nomenclature

GHG 960	****	*	****
1	2	3	4

1: Type designation of the blanking element
2: Designation of size and equipment (see list above)
3: P = Unique specimen
R = Package
4: Without influence on the type of protection

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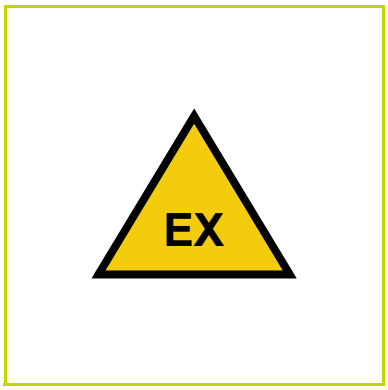
EX CERTIFICATE – IECEx

vibro-meter®

IECEx PTB 11.0019X
for
cable fittings (stuffing glands)



Note: Although the Ex certificate may be included in more than one language, the liability of the notified body applies only on the text of the original copy of the certificate that it published.

Document reference IECEx PTB 11.0019X
Edition 3 – October 2020

Meggitt SA, Route de Moncor 4, Case postale, 1701 Fribourg, Switzerland

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www.meggitt.com

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IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	**IECEx PTB 11.0019X**	Page 1 of 4	Certificate history:
Status:	**Current**	Issue No: 2	Issue 1 (2015-09-24) Issue 0 (2011-05-23)
Date of Issue:	2020-04-22		
Applicant:	**Pflitsch GmbH & Co. KG** Ernst-Pflitsch-Straße 1 42499 Hückeswagen **Germany**		
Equipment:	**Cable gland type blueglobe HT xx x xx xxxx xx, blueglobe HT AC xxx xx x xx xxxx xxxx xx and blueglobe HT TRI xx x xx xxxx xx**		
Optional accessory:			
Type of Protection:	**Increased Safety "eb", Protection by Enclosure "tb"**		
Marking:	Ex eb IIC Gb Ex tb IIIC Db		

Approved for issue on behalf of the IECEx Certification Body: **Dr. Ing. Detlev Markus**

Position: **Head of Department "Explosion Protection in Energy Technology"**

Signature: (for printed version) _____

Date: _____

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.

Certificate issued by:

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Germany

Physikalisch-Technische Bundesanstalt
Braunschweig und Berlin

IECEx Certificate of Conformity

Certificate No.:	**IECEx PTB 11.0019X**	Page 2 of 4
Date of issue:	2020-04-22	Issue No: 2
Manufacturer:	**Pflitsch GmbH & Co. KG** Ernst-Pflitsch-Straße 1 42499 Hückeswagen **Germany**	
Additional manufacturing locations:		

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements.This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :
The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Edition:7.0	Explosive atmospheres - Part 0: Equipment - General requirements
IEC 60079-31:2013 Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
IEC 60079-7:2017 Edition:5.1	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:

DE/PTB/ExTR11.0032/02

Quality Assessment Report:

DE/PTB/QAR10.0003/04

MEGGITT
Original copy (English)

IECEx Certificate of Conformity

Certificate No.: **IECEx PTB 11.0019X** Page 3 of 4

Date of issue: 2020-04-22 Issue No: 2

EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

The cable gland type blueglobe HT xx x xx xxxx xx, blueglobe HT AC xxx xx x xx xxxx xx and blueglobe HT TRI xx x xx xxxx xx made of brass blank or nickel-plated and stainless steel, serves to introduce fixed cables into electrical apparatus of the type of protection increased safety "eb" and protection by enclosure "tb". The cable gland consists of:
- pressure screw without clamping device
- sealing component with moulded inlet or two-part sealing component
- double nipple with metric connection thread in different length and an O-ring.

For mounting enclosures with through bore-holes or threaded holes are used. Lock nuts are used with through bore-holes.
Accessory is an AC group for steel armoured cables, a TRI-spring for shielded cables as well as a plastic bolt for sealing of cable glands which are not used.

Technical data and Nomenclature see Annex.

SPECIFIC CONDITIONS OF USE: YES as shown below:
Only permanently wired cables may be entered. The user shall provide the required strain relief.

When the tested sealing components are selected, the maximum thermal load of the cables introduced must be taken into account.

IECEx Certificate of Conformity

Certificate No.: **IECEx PTB 11.0019X** Page 4 of 4

Date of issue: 2020-04-22 Issue No: 2

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
1) The pressure screw can be optionally equipped with a silicone coating.
2) Two different sealing components can be used: sealing component with moulded inlet and two-part sealing component.
3) New test according to IEC 60079-0:2017 (Ed. 7), IEC 60079-7:2015+A1:2017 (Ed. 5.1) and IEC 60079-31:2013 (Ed. 2).

Annex:

COCA-11.0019X Issue 2.pdf

Applicant: Pflitsch GmbH & Co. KG
Ernst-Pflitsch-Straße 1
42499 Hückeswagen
Germany

Electrical Apparatus: Cable gland type blueglobe HT xx x xx xxxx xx,
blueglobe HT AC xxx xx x xx xxxx xx and
blueglobe HT TRI xx x xx xxxx xx

Description

The cable gland type blueglobe HT xx x xx xxxx xx, blueglobe HT AC xxx xx x xx xxxx xx and blueglobe HT TRI xx x xx xxxx xx made of brass blank or nickel-plated and stainless steel, serves to introduce fixed cables into electrical apparatus of the type of protection increased safety "eb" and protection by enclosure "tb". The cable gland consists of:
- pressure screw without clamping device
- sealing component with moulded inlet or two-part sealing component
- double nipple with metric connection thread in different length and an O-ring

For mounting enclosures with through bore-holes or threaded holes are used. Lock nuts are used with through bore-holes.
Accessory is an AC group for steel armoured cables, a TRI-spring for shielded cables as well as a plastic bolt for sealing of cable glands which are not used.

Technical data

Size of thread	M12 to M40
Suited for devices of equipment group II with mechanical risk level	High
Mounted in enclosures with clearance holes Plastic, wall thickness Metal, wall thickness	 ≥ 2 mm ≥ 1 mm
Mounted in enclosures with threaded holes Plastic, wall thickness Metal, wall thickness	 ≥ 5 mm ≥ 3 mm
Torque	Depending on the nominal size, see list below metric: 5 Nm to 20 Nm
Ambient temperatures Insert and connecting O-ring Silicon Bolt	 -55 °C to +160 °C -55 °C to +90 °C
Protection against solid foreign objects, water and contact	IP66 and IP 68 in accordance with IEC 60529

Attachment to Certificate
IECEx PTB 11.0019X, Issue No. 2

max. Torque blueglobe and blueglobe TRI

blueglobe HTand blueglobe TRI HT					
Thread	Molded inlet	Torque Pressure screw / double nipple	Cable diameter with inlet	Cable diameter without inlet	Mechanical strength
M12	X	5 Nm	---	8,0 – 5,0	7 J
M16	X	8 Nm	7,0 – 4,0	11,0 – 7,0	7 J
M20	X	10 Nm	9,0 – 5,0	14,0 – 9,0	7 J
M25	X	15 Nm	16,0 – 11,0	20,0 – 16,0	7 J
M32		15 Nm	20,0 – 15,0	25,0 – 20,0	7 J
M40		20 Nm	26,0 – 20,0	32,0 – 26,0	7 J
Connection thread: metric, acc. to IEC 60 423					
Note: The torque depends on the cable used and the insert seal but should not exceed the value given in the table.					

max. Torque blueglobe AC

blueglobe HT AC for armoured cable						
Thread	Molded inlet	Torque Pressure screw / double nipple	Cable diameter with inlet	Cable diameter without inlet	Clamping range of AC group	Mecha-nical strength
M20	X	15 Nm	14,0 – 9,0	---	13,0 – 9,0	7 J
M20	X	15 Nm	20,0 – 16,0	16,0 - 11,0	15,0 – 10,0	7 J
M25	X	15 Nm	20,0 – 16,0	---	17,0 – 14,0	7 J
M32		15 Nm	25,0 – 20,0	---	23,0 – 19,0	7 J
M32		15 Nm	32,0 – 26,0	26,0 - 20,0	27,0 – 23,0	7 J
M40		20 Nm	32,0 – 26,0	----	31,0 – 28,0	7 J
Connection thread: metric, acc. to IEC 60 423						
Note: The torque depends on the cable used and the insert seal but should not exceed the value given in the table.						

Nomenclature

blueglobe HT	xx	x	xx	xxxx	xx
1	2	3	4	5	6

1: Type
2: bg
3: Type of thread, 2 = series metric, 8 = series metric long
4: Connecting thread
5: Material
6: Ex

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Original copy (English)

blueglobe HT AC	xxx	xx	x	xx	xxxx	xxxx	xx
1	2	3	4	5	6	7	8

1: Type
2: Metric adapter
3: bg
4: Type of thread, 2 = serie metric
5: Connecting thread
6: Material
7: AC for amoured cable, clamping range
8: Ex

blueglobe HT TRI	xx	x	xx	xxxx	xx
1	2	3	4	5	6

1: Type
2: bg
3: Type of thread, 2 = serie metric
4: Connecting thread
5: Material
6: Ex

Conditions of Certification

Only permanently wired cables may be entered. The user shall provide the required strain relief.

The maximum thermal load of the cables and conduits entered is to be taken into account.

Physikalisch-Technische Bundesanstalt (PTB)
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Postfach 33 45, 38023 Braunschweig, Germany
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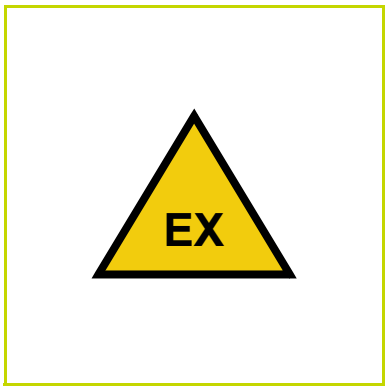
Original copy (English)
MEGGITT

EX CERTIFICATE – IECEx

vibro-meter®

IECEx SEV 15.0018
for
cable fittings (stuffing glands)



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Document reference IECEx SEV 15.0018
Edition 2 – October 2020

Meggitt SA, Route de Moncor 4, Case postale, 1701 Fribourg, Switzerland

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www.meggitt.com

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IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx SEV 15.0018	Issue No: 1	Certificate history: Issue No. 1 (2018-11-15) Issue No. 0 (2016-01-13)
Status:	Current	Page 1 of 4	
Date of Issue:	2018-11-15		
Applicant:	AGRO AG Korbackerweg 7 5502 Hunzenschwil Switzerland		
Equipment:	Cable glands and accessories Type Progress *** ***** KB EX		
Optional accessory:	*Thread adapters; Blanking elements; Counter nuts*		
Type of Protection:	Encreased safety "eb" and protection by enclosure "tb"		
Marking:	Ex eb IIC Gb Ex tb III C Db		

Approved for issue on behalf of the IECEx Certification Body: Martin Plüss

Position: Manager Product Certification

Signature: (for printed version)

Date:

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3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

Eurofins Electrosuisse Product Testing AG
Luppmenstrasse 3
CH-8320 FEHRALTORF
Switzerland

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IECEx Certificate of Conformity

Certificate No:	IECEx SEV 15.0018	Issue No: 1
Date of Issue:	2018-11-15	Page 2 of 4
Manufacturer:	AGRO AG Korbackerweg 7 5502 Hunzenschwil Switzerland	

Additional Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:

The apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-31 : 2013 Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
IEC 60079-7 : 2015 Edition:5.0	Explosive atmospheres – Part 7: Equipment protection by increased safety "e"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

CH/SEV/ExTR15.0020/01

Quality Assessment Report:

CH/SEV/QAR12.0001/05

IECEx Certificate of Conformity

Certificate No: IECEx SEV 15.0018 Issue No: 1

Date of Issue: 2018-11-15 Page 3 of 4

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The cable gland type Progress ***KB EX made of brass or steel for installation of cables in equipment with type of protection increased safety "eb" and protection by enclosure "tb". Installation takes place into the enclosure with threaded holes and through holes. The cable gland consists essentially of the compression nut, intermediate support and seal insert. The strain relief takes place by the use of seal insert or by an additional strain relief device.
Accessories are reductions, extensions, blanking elements and counter nuts.

Type References:
Progress MS **** KB EX (M16...M63; Pg9...Pg48; NPT3/8"...NPT2")
Progress S2 **** KB EX (M12...M63; Pg7...Pg48; NPT1/4"...NPT2")
Progress S4 **** KB EX (M12...M63; Pg7...Pg48; NPT1/4"...NPT2")
Thread adapters (Reductions, Extensions) MS EX (M16...M63; Pg9...Pg48)
Thread adapters (Reductions, Extensions) S2 EX (M12...M63; Pg7...Pg48)
Thread adapters (Reductions, Extensions) S4 EX (M12...M63; Pg7...Pg48)
Blanking elements MS EX; S2 EX; S4 EX (M8...M63; Pg7...Pg48)
Counter nuts MS EX; S2 EX; S4 EX (M8...M63; Pg7...Pg48)

Progress MS EMV easyCONNECT KB EX
(brass Ni with clamping jaws, M16...M63; Pg9....Pg48; NPT3/8"...NPT2")
Progress S2 EMV easyCONNECT KB Ex
(stainless steel A2 with clamping jaws, M12...M63; Pg7....Pg48; NPT1/4"...NPT2")
Progress S4 EMV easyCONNECT KB Ex
(stainless steel A4 with clamping jaws, M12...M63; Pg7....Pg48; NPT1/4"...NPT2")

SPECIFIC CONDITIONS OF USE: NO

IECEx Certificate of Conformity

Certificate No: IECEx SEV 15.0018 Issue No: 1

Date of Issue: 2018-11-15 Page 4 of 4

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

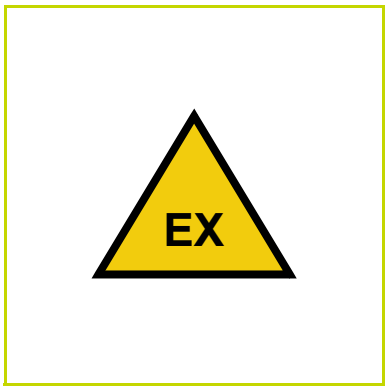
The product group was supplemented. The supplemented products are cable glands.

This certificate replaces the former certificate IECEx SEV 15.0018 Issue 0

EX CERTIFICATE – IECEx

vibro-meter®

IECEx SEV 15.0019X
for
cable fittings (stuffing glands)



Note: Although the Ex certificate may be included in more than one language, the liability of the notified body applies only on the text of the original copy of the certificate that it published.

Document reference IECEx SEV 15.0019X
Edition 4 – January 2022

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IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres
for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	**IECEx SEV 15.0019X**	Page 1 of 4	Certificate history:
Status:	**Current**	Issue No: 4	Issue 3 (2018-12-18) Issue 2 (2018-10-01) Issue 1 (2018-07-16) Issue 0 (2016-01-13)
Date of Issue:	2020-12-03		
Applicant:	**AGRO AG** Korbackerweg 7 5502 Hunzenschwil **Switzerland**		
Equipment:	**Cable glands and accessories, Type: Progress *** ***** EX**		
Optional accessory:	Thread adapters; Counter nuts; Blanking bolts		
Type of Protection:	**eb, tb**		
Marking:	Ex eb IIC Gb Ex tb III C Db		

Approved for issue on behalf of the IECEx Certification Body: **Martin Plüss**

Position: **Manager Product Certification**

Signature: (for printed version)

Date:

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3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.

Certificate issued by:

Eurofins Electric & Electronic Product Testing AG
Luppmenstrasse 3
CH-8320 FEHRALTORF
Switzerland

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IECEx Certificate of Conformity

Certificate No.:	**IECEx SEV 15.0019X**	Page 2 of 4
Date of issue:	2020-12-03	Issue No: 4

Manufacturer: **AGRO AG**
Korbackerweg 7
5502 Hunzenschwil
Switzerland

Additional manufacturing locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements.This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :
The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2011 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-31:2013 Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
IEC 60079-7:2015 Edition:5.0	Explosive atmospheres – Part 7: Equipment protection by increased safety "e"

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:

CH/SEV/ExTR15.0021/04

Quality Assessment Report:

CH/SEV/QAR12.0001/06

MEGGITT
Original copy (English)

IECEx Certificate of Conformity

Certificate No.: **IECEx SEV 15.0019X** Page 3 of 4

Date of issue: 2020-12-03 Issue No: 4

EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

The cable gland type Progress *** EX made of brass steel or reinforced plastics for installation of cables in equipment with type of protection increased safety "eb" and protection by enclosure "tb". Installation takes place into the enclosure with threaded holes and through holes. The cable gland consists essentially of the compression nut, intermediate support and seal insert. The strain relief takes place by the use of seal insert or by an additional strain relief device.
Accessories are reductions, extensions, blanking elements and counter nut and blanking bolts.

Type

Progress MS **** KB EX (M12; Pg7; NPT1/4")

Progress MS **** EX (M8…M12; Pg7; NPT1/8"…NPT1/4")

Progress S2 **** EX (M8…M10; NPT1/8")

Progress S4 **** EX (M8…M10; NPT1/8")

Progress MS **** EX (M16…M63; Pg9…Pg48; NPT3/8"…NPT2")

Progress S2 **** EX (M12…M63; Pg7…Pg48; NPT1/4"…NPT2")

Progress S4 **** EX (M12…M63; Pg7…Pg48; NPT1/4"…NPT2")

Progress GFK*** EX (M16…M63; Pg9…Pg48)

Thread adapters (Reductions, Extensions) MS EX (M8…M12; Pg7)

Thread adapters (Reductions, Extensions) S2 EX (M8…M10)

Thread adapters (Reductions, Extensions) S4 EX (M8…M10)

Additional the following customer variants are included:
EX1000.12.91.900; EX1100.12.91.900;
EX1700.12.86.901.91; EX1700.12.86.903.91;
EX1700.17.86.900.91; EX1710.12.86.901.91;
EX1710.12.86.903.91; EX1710.17.86.900.91

Progress MS FK EX, A2 FK EX, A4 FK EX, article number. EX130*.75.*620.140

Progress MS EMV easyCONNECT KB EX
(brass Ni with clamping jaws, M12; Pg7; NPT1/4")

SPECIFIC CONDITIONS OF USE: YES as shown below:

- Only permanently installed cable may be inserted into an enclosure. The user must provide a suitable strain relief. (not valid for Progress MS ***** KB EX (M12; PG7; NPT1/4"))
- The types with a low impact energy must be installed on the enclosure in such way, that they are protected mechanically from impact energy according to EN 60079-0 clause 26.4.2.

IECEx Certificate of Conformity

Certificate No.: **IECEx SEV 15.0019X** Page 4 of 4

Date of issue: 2020-12-03 Issue No: 4

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
New types of cable glands Progress made in stainless steel were added

Original copy (English)
MEGGITT

附录 D：KGS 认证

表 D-1：相关 KGS 证书

涵盖的产品	证书编号
CA134	KGS 14-GA4BO-0130X
CA20x	KGS 17-GA4BO-0551X
	KGS 21-GA4BO-0276X
CA28x	KGS 17-GA4BO-0323X
CA901	KGS 17-GA4BO-0550X
GSI127	KGS 17-GA4BO-0325X
IPC707	KGS 18-GA4BO-0548X
	KGS 18-GA4BO-0549X

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MEGGITT

KGS certificate:

14-GA4BO-0130X

for CA 134

KO

EX

Meggitt SA
Route de Moncor 4
PO Box 1616
CH - 1701 Fribourg
Switzerland

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제14-0130호

안 전 인 증 서

MEGGITT SA

Route de Moncor 4 1752 Villars-Sur-Glane Switzerland

위 사업장에서 제조하는 아래의 품목이 「산업안전보건법」 제34조 및 같은 법 시행규칙 제58조의4제4항에 따른 안전인증 심사 결과 안전·보건기준에 적합하므로 안전인증표시의 사용을 인증합니다.

품 목

Accelerometer

형식 · 모델 / 용량 · 등급 / 인증번호

형식·모델	용량 · 등급	인증번호
PNR144-134-000-XXX	뒷면 참조	14-GA4BO-0130X
	Ex ia IIC T6 to T1 or T510℃	

인 증 기 준

방호장치 의무안전인증 고시(고용노동부고시 제2013-54호)

인 증 조 건

Tamb : -200℃ ~ 500℃ (4.안전한 사용을 위한 조건 참조)

2014 년 03 월 31 일

한국가스안전공사 사장

인 증 조 건

1. 제조공장:
Route de Moncor 4 1752 Villars-Sur-Glane Switzerland에 위치한 MEGGITT SA 공장에서 생산한 제품 중 아래 인증범위의 제품에 한함.

2. 제품개요
Accelerometer: This sensor is an electro-mechanical transducer delivering at its terminal blocks an electrical load proportional to the measured pressure. It works with piezoelectric equipment mounted in compression.

정격: Linear Source
Ui≦28V; Ii≦100mA; Pi≦0.7W
Non-linear Source
Ui≦28V; Ii≦25mA; Pi≦0.7W
Sensor: Ci≦1.2nF, Li≈0
Cable: Ci≦250pF/m, Li≈0

3. 인증범위: 본 인증서는 아래의 형식번호에 한하여 유효함
품목 명 Accelerometer, 모델 명 PNR144-134-000-XXX에 한하여 인증함.

4. 안전한 사용을 위한 조건
1)센서에 연결되는 어떤 인증받은 본질안전기기의 전기적 파라미터는 정격(Linear Source, Non-linear Source) 값을 초과하지 말 것.
2)Tamb에 적합한 온도등급은 다음을 따를 것.

온도등급	Tamb(℃)
T6	80
T5	95
T4	130
T3	195
T2	290
T1	440
T510℃	500

3)인증받은 본질안전 관련기기([ia] 또는 [ib])와 연결하여 사용하며 설치시 본질안전을 유지할 수 있도록 케이블 길이를 고려할 것.

5. 인증(변경)사항

6. 그 밖의 사항
안전인증품의 품질관리, 확인심사 수검, 변경사항 신고 등 인증 받은 자의 의무 준수

MEGGITT

14-GA4BO-0130X
(Original copy)
CA 134

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EX CERTIFICATE – KGS

vibro-meter®

KGS 17-GA4BO-0551X
for
CA20x piezoelectric accelerometers
(PNR 144-202-000-xx5 only)

Note: Although the Ex certificate may be included in more than one language, the liability of the notified body applies only on the text of the original copy of the certificate that it published.

Document reference KGS 17-GA4BO-0551X
Edition 2 – June 2021

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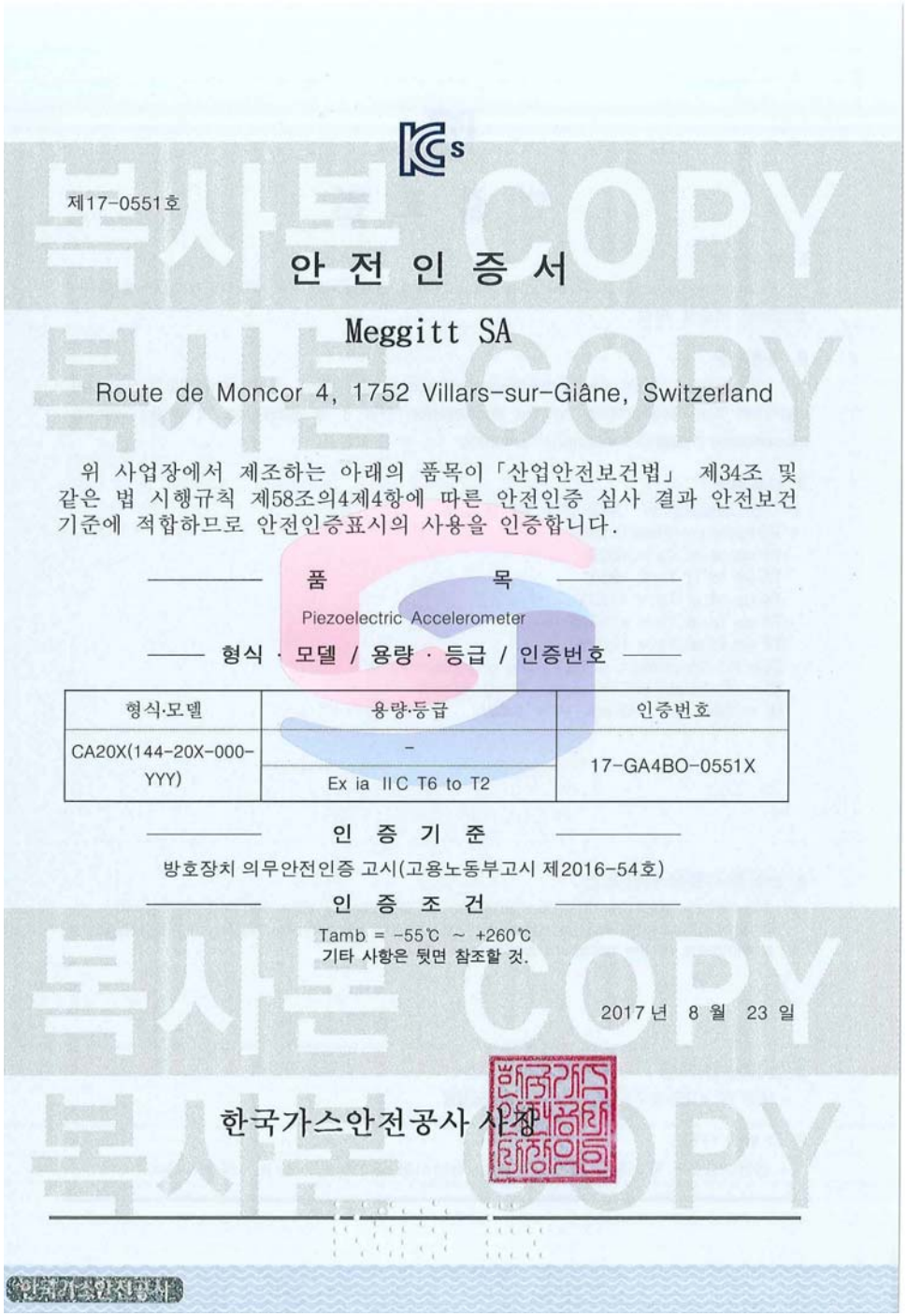


제17-0551호

안 전 인 증 서

Meggitt SA

Route de Moncor 4, 1752 Villars-sur-Giâne, Switzerland

위 사업장에서 제조하는 아래의 품목이 「산업안전보건법」 제34조 및 같은 법 시행규칙 제58조의4제4항에 따른 안전인증 심사 결과 안전보건 기준에 적합하므로 안전인증표시의 사용을 인증합니다.

품 목

Piezoelectric Accelerometer

형식 · 모델 / 용량 · 등급 / 인증번호

형식·모델	용량·등급	인증번호
CA20X(144-20X-000-YYY)	-	17-GA4BO-0551X
	Ex ia IIC T6 to T2	

인 증 기 준

방호장치 의무안전인증 고시(고용노동부고시 제2016-54호)

인 증 조 건

Tamb = -55℃ ~ +260℃
기타 사항은 뒷면 참조할 것.

2017 년 8 월 23 일

한국가스안전공사 사장

복사본 COPY

인 증 조 건

1. 제조공장 :
 - "Route de Moncor 4, 1752 Villars-sur-Giâne, Switzerland"에 위치한 Meggitt SA에서 생산하는 제품에 한함.

2. 제품개요 :
 - The sensor is an electromechanic transducer delivering at its terminal blocks an electrical load proportional to the acceleration that it is subjected. It works with a piezoelectric material mounted in shearing.

3. 인증범위 :
 - Type designation : 동일 형식 일람표 참조
 - Temperature classification :
  T6 up to at Ta = +80℃
  T5 up to at Ta = +95℃
  T4 up to at Ta = +130℃
  T3 up to at Ta = +195℃
  T2 up to at Ta = +260℃
 - Specific Parameters of the mode of protection 'ia' :
  Ci ≤ 5 nF(with 5m of cable), Ri =0, Li = 0
  Ui ≤ 28V, Ii ≤ 130 mA, Pi ≤ 0.8W

4. 안전한 사용을 위한 조건 :
 - The sensor shall be only connected to an intrinsically safe certified equipment. This combination shall be compatible as regard the intrinsic safety rules(Specific parameters of the mode of protection 'Ia').

5. 인증(변경)사항 :
 - LCIE 02 ATEX 6179 X를 바탕으로 작성되었음.

6. 그 밖의 사항 :
 - 안전인증품의 품질관리. 확인심사 수검, 변경사항 신고 등 인증 받은 자의 의무 준수

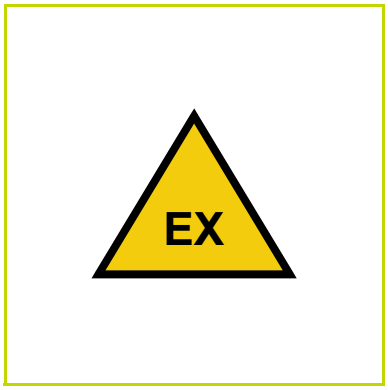
동 일 형 식 일 람 표

사업장명	Meggitt SA	개정일자 및 번호			인증번호	17-GA4BO-0551X
형식 및 모델		동일형식 인정범위 및 내역				비 고
형식번호	모델번호	동일형식 항목1	동일형식 항목2	동일형식 항목3	동일형식 항목4	
CA20X	144-202-000-105	케이블길이 3m				
	144-202-000-115	케이블길이 6m				
	144-202-000-125	케이블길이 11m				
	144-202-000-135	케이블길이 20m				
	144-202-000-305	케이블길이 8m				
	144-202-000-315	케이블길이 3m				
	144-202-000-325	케이블길이 11m				
	144-202-000-505	케이블길이 6m				
	144-202-000-515	케이블길이 10m				

EX CERTIFICATE – KGS

vibro-meter®

KGS 21-GA4BO-0276X
for
CA20x piezoelectric accelerometers
(PNR 144-202-000-xx6 only)



Note: Although the Ex certificate may be included in more than one language, the liability of the notified body applies only on the text of the original copy of the certificate that it published.

Document reference KGS 21-GA4BO-0276X
Edition 1 – June 2021

Meggitt SA, Route de Moncor 4, Case postale, 1701 Fribourg, Switzerland

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www.meggitt.com

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제21-0276호

안 전 인 증 서

MEGGITT SA

Route de Moncor 4 1752 Villars-sur-Glane SWITZERLAND

위 사업장에서 제조하는 아래의 품목이 「산업안전보건법」 제84조 및 같은 법 시행규칙 제110조제1항에 따른 안전인증 심사 결과 안전·보건기준에 적합하므로 안전인증표시의 사용을 인증합니다.

품 목

Acceleration transducer

형식 · 모델 / 용량 · 등급 / 인증번호

형식 · 모델	용량 · 등급	인증번호
CA20X(144-20x-000-yyy,동일형식 일람표 참고)	[뒷면 제품개요 참조] Ex ia IIC T6...T2 Ga	21-GA4BO-0276X

인 증 기 준

방호장치 안전인증 고시(고용노동부고시 제2021-22호)

인 증 조 건

Tamb : -55 ℃ ~ +260 ℃, 뒷면참조

2021 년 06 월 07 일

한국가스안전공사 사장

한국가스안전공사 사장의인

한국가스안전공사

인 증 조 건

1. 제조공장:

Route de Moncor 4, 1752 Villars-sur-Glâne, Switzerland에 위치한 Meggitt S.A에서 생산한 제품 중 아래 인증범위의 제품에 한함.

2. 제품개요

Acceleration transducer is composed of a stainless steel enclosure, which house a piezoelectric device as sensing element.
This acceleration sensor is an electro-mechanical transducer that supplies to its terminal an electrical charge proportional to the vibration which is submitted.
This vibration is transmitted to the sensible element by the intermediate of seismic mass. It operates with a piezo-electrical material built in shear.

* Parameters

Parameter	Connector	integral cable
Ui	≤ 28 V	≤ 28 V
Ii	≤ 100 mA	≤ 100 mA
Pi	≤ 0.7W	≤ 0.7 W
Ci	≤ 20nF	≤ 20nF +0.2nF/m
Li	≤ 0	≤ 1uH/m

3. 인증범위: 본 인증서는 아래의 형식에 한하여 유효함.

품목 명 : Acceleration transducer, 모델 명 : 144-20x-000-yyy(동일형식 일람표 참고)
Temperature Classification :
T6 up to at Ta = +80℃, T5 up to at Ta = +95℃, T4 up to at Ta = +130℃, T3 up to at Ta = +195℃
T2 up to at Ta = +260℃

4. 안전한 사용을 위한 조건

가. 이 기기는 관련된 본질 안전 기기에만 연결되어야 함.
이 결합은 EN 60079-25 표준의 요구사항에 따라 본질안전관련 규칙과 관련하여 호환되어야 함.
나. Operating ambient temperature : -55 ℃ to 260 ℃
다. 기기를 설비에 설치하는 작업은 가속변환기의 금속몸체와 케이블 차폐가 시스템 접지에 안정적으로 연결되도록 해야 함
라. 이 기기는 도면 n° PZ 9134 rev. 00 dated 2020/02/10에 따라 설치되어야 함.
마. 사용되는 케이블은 이 기기가 설치되는 환경과 호환되는 사용 온도를 가지고 있어야 한다.

5. 인증(변경)사항

LCIE 02 ATEX 6179 X Issue No. 5에 의해 작성되었음

6. 그 밖의 사항

가. 안전인증품의 품질관리, 확인심사 수검, 변경사항 신고 등 인증 받은 자의 의무 준수
나. 본 안전인증서는 반드시 관련 ATEX 인증서(LCIE 02 ATEX 6179 X Issue No. 5)와 함께 사용할 것

동 일 형 식 일 람 표

사업장명	Meggitt SA	개정일자 및 번호	0	인증번호	21-GA4BO-0276X

형식 및 모델번호		동일형식 항목 및 내역				비고
형식번호	모델번호	Cable Length	동일형식 항목2	동일형식 항목3	동일형식 항목4	
CA20X	144-202-000-106	3m				
	144-202-000-116	6m				
	144-202-000-126	11m				
	144-202-000-136	20m				
	144-202-000-306	8m				
	144-202-000-316	3m				
	144-202-000-326	11m				
	144-202-000-506	6m				
	144-202-000-516	10m				

Original copy (Korean)
MEGGITT

MEGGITT

KO

KGS certificate:

17-GA4BO-0323X

for

CA28x

EX

Meggitt SA
Route de Moncor 4
PO Box 1616
CH - 1701 Fribourg
Switzerland

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제17-0323호

안 전 인 증 서

MEGGITT SA

Route de Moncor 4, 1752 Villars-sur-Glane, Switzerland

위 사업장에서 제조하는 아래의 품목이 「산업안전보건법」 제34조 및 같은 법 시행규칙 제58조의4제4항에 따른 안전인증 심사 결과 안전·보건기준에 적합하므로 안전인증표시의 사용을 인증합니다.

품 목

Piezoelectric Accelerometer

형식 · 모델 / 용량 · 등급 / 인증번호

형식·모델	용량 · 등급	인증번호
144-28*-000-***	Ui=28V, Ii=100mA, Pi=0.7W, Li=0mH, Ci=0nF Ex ia IIC T6...T2	17-GA4BO-0323X

인 증 기 준

방호장치 안전인증 고시(고용노동부고시 제2016-54호)

인 증 조 건

뒷면 참조

2017 년 04 월 28 일

한국가스안전공사 사장

인 증 조 건

1. 제조공장

Route de Moncor 4, 1752 Villars-sur-Glane, Switzerland에서 제조하는 제품에 한함

2. 제품개요

Piezoelectric Accelerometers are used for vibration monitoring.
The sensor converts mechanical forces (e.g. vibrations) of the equipment to which it is mounted into an electrical signal, that is processed externally. When a conversion module is integrated, the sensor signal is converted into a modulated current output signal.

3. 인증범위

-첨부 인증조건 참조

4. 안전한 사용을 위한 조건

- The instructions provided with the product shall be followed in detail to assure safe operation.

5. 인증(변경)사항

IECEx DEK 15.0029 Issue No.0 에 의해 작성되었음

6. 그 밖의 사항

안전인증품의 품질관리, 확인심사 수검, 변경사항 신고 등 인증 받은 자의 의무 준수

KGS

인 증 조 건(17-0323)

1. Ambient temperature

Ambient temperature range, depending on type and application:

Type 144-28-000-...
Sensor only: -60 °C to +260 °C

Type 444-28-000-..2 to 444-28-000-..9
Conditioner: -55 °C to +125 °C
Sensor and Cable: -55 °C to +260 °C

Type 444-31-000-..2 to 444-31-000-..9
Sensor and Integral
Conditioner: -55 °C to +125 °C

The relation between maximum ambient temperature and temperature class is as follows for all devices, taking into account the above mentioned temperature ranges:

Type	T6	T5	T4	T3	T2
444-28-000-..2 to 444-28-000-..9 Conditioner	+65 °C	+80 °C	+115 °C	+125 °C	-
444-31-000-..2 to 444-31-000-..9	+65 °C	+80 °C	+115 °C	+125 °C	-
144-28-000-...	+80 °C	+95 °C	+130 °C	+195 °C	+260 °C

2. Electrical data

Supply and output signal:
In type of protection intrinsic safety Ex ia IIC, only for connection to a certified intrinsically safe circuit, with following maximum values:

Type	U_i	I_i	P_i	L_i	C_i sensor	C_i cable
444-28-000-..2 to 444-28-000-..9	28 V	100 mA	0.7 W	0 mH	0 nF	-
444-31-000-..2 to 444-31-000-..9	28 V	100 mA	0.7 W	0 mH	0 nF	0.25 nF/m
144-28-000-...	28 V	100 mA	0.7 W	0 mH	8 nF	0.25 nF/m

(1/1)

MEGGITT

KGS certificate:

17-GA4BO-0550X

for

CA901

KO

EX

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1701 Fribourg
Switzerland

energy@ch.meggitt.com
www.meggittsensing.com/energy

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제17-0550호

안 전 인 증 서

Meggitt SA

Route de Moncor 4, 1752 Villars-sur-Glâne, Switzerland

위 사업장에서 제조하는 아래의 품목이 「산업안전보건법」 제34조 및 같은 법 시행규칙 제58조의4제4항에 따른 안전인증 심사 결과 안전보건 기준에 적합하므로 안전인증표시의 사용을 인증합니다.

품 목

Piezoelectric Accelerometer

형식 · 모델 / 용량 · 등급 / 인증번호

형식·모델	용량·등급	인증번호
CA901(144-901-000-YYY)	-	17-GA4BO-0550X
	Ex ia IIC T6 to T710℃	

인 증 기 준

방호장치 의무안전인증 고시(고용노동부고시 제2016-54호)

인 증 조 건

Tamb = -196℃ ~ +700℃
기타 사항은 뒷면 참조할 것.

2017 년 8 월 23 일

한국가스안전공사 사장

한국가스안전공사

인 증 조 건

1. 제조공장 :
   - "Route de Moncor 4, 1752 Villars-sur-Glâne, Switzerland"에 위치한 Meggitt SA에서 생산하는 제품에 한함.

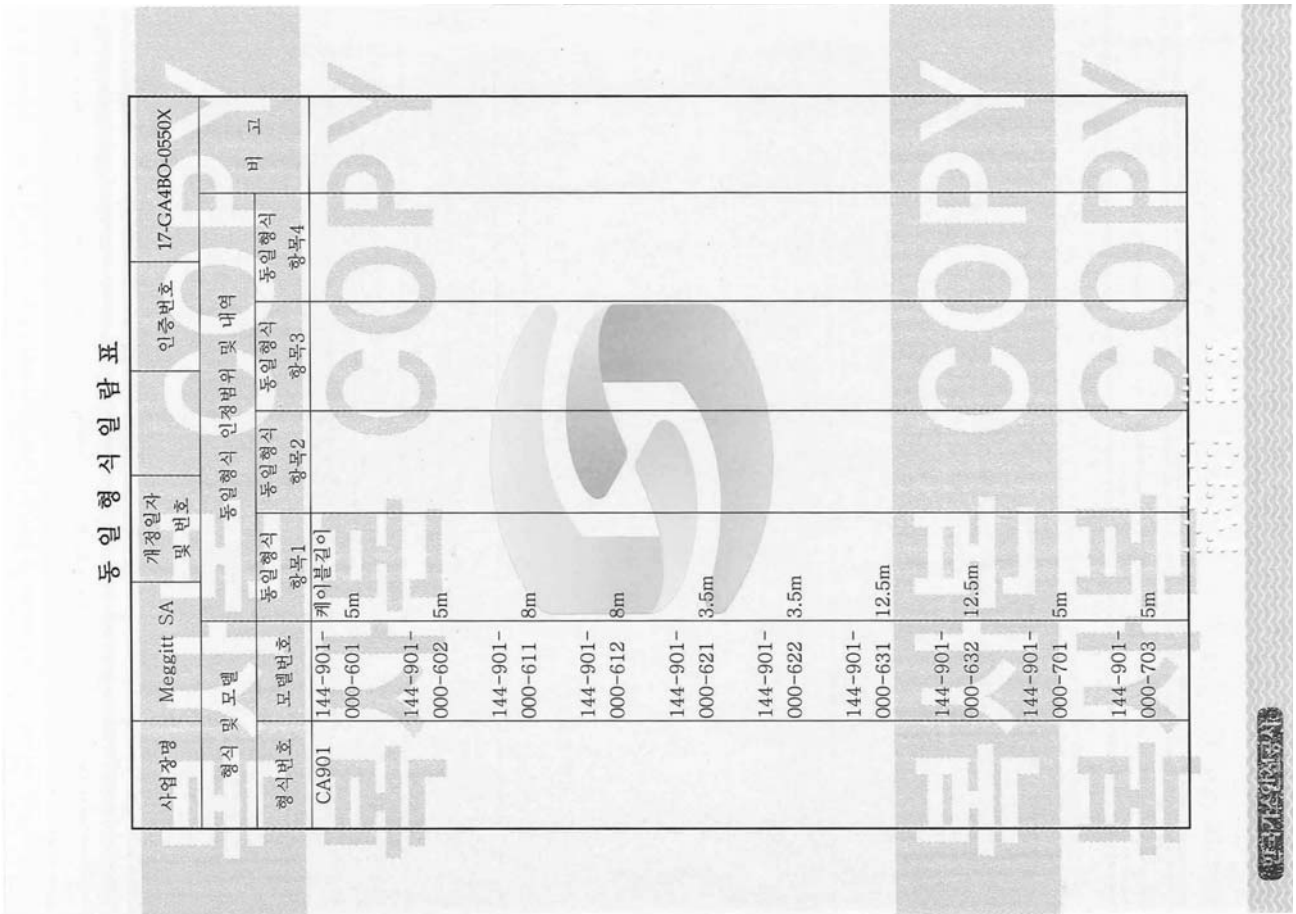
2. 제품개요 :
   - The sensor is an electro-mechanical transducer that supplies to its terminal an electrical charge proportional to the acceleration which is submitted. This acceleration is transmitted to the sensible element by the intermediate of a seismic mass. It operates with a piezo-electrical built in compression.

3. 인증범위 :
   - Type designation : 동일형식 일람표 참조
   - Temperature classification :
     T6 at Ta = +80℃
     T5 at Ta = +95℃
     T4 at Ta = +130℃
     T3 at Ta = +195℃
     T2 at Ta = +290℃
     T1 at Ta = +440℃
     Above Ta = +440℃ and up to +700℃:T*℃(*=Ta+10℃)
   - Specific Parameters of the mode of protection 'ia' :
     Sensor head : Ci = 200 pF, Li ≈ 0
     Integral cable : Ci = 200 pF/m, Li ≈ 0
     Linear power supply : Ui ≤ 28V, Ii ≤ 100mA, Pi ≤ 0.7W
     Non linear power supply : Ui ≤ 28V, Ii ≤ 25mA, Pi ≤ 0.7W

4. 안전한 사용을 위한 조건 :
   - The sensor shall be only connected to an intrinsically safe certified equipment. This combination shall be compatible as regard the intrinsic safety rules(Specific parameters of the mode of protection 'Ia').
   - Operating ambient temperature
     sensor and cable : -196℃ to +700℃
     connector : - 65℃ to +150℃ : connector LEMO type O or equivalent
     - 65℃ to +200℃ : connector M832 3/89Y1020 or equivalent
     - 54℃ to +260℃ : standard temperature VM connector
     - 196℃ to +700℃ : high temperature VM connector

5. 인증(변경)사항 :
   - IECEx LCI 08.0041X를 바탕으로 작성되었음.

6. 그 밖의 사항 :
   - 안전인증품의 품질관리, 확인심사 수검, 변경사항 신고 등 인증 받은 자의 의무 준수



동 일 형 식 일 람 표

사업장명	Meggitt SA	개정일자 및 번호		인증번호	17-GA4BO-0550X	
형식 및 모델		동일형식 인정범위 및 내역				
형식번호	모델번호	동일형식 항목1	동일형식 항목2	동일형식 항목3	동일형식 항목4	비 고
CA901	144-901-000-601	케이블길이 5m				
	144-901-000-602	5m				
	144-901-000-611	8m				
	144-901-000-612	8m				
	144-901-000-621	3.5m				
	144-901-000-622	3.5m				
	144-901-000-631	12.5m				
	144-901-000-632	12.5m				
	144-901-000-701	5m				
	144-901-000-703	5m				

MEGGITT

KO

KGS certificate:

17-GA4BO-0325X

for

GSI127

EX

Meggitt SA
Route de Moncor 4
PO Box 1616
CH - 1701 Fribourg
Switzerland

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제17-0325호

안 전 인 증 서

MEGGITT SA

Route de Moncor 4, 1752 Villars-sur-Glane, Switzerland

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품 목

GSI 127 Interface

형식 · 모델 / 용량 · 등급 / 인증번호

형식·모델	용량 · 등급	인증번호
244-127-000-***-A2-B* *	Uo=25.2V, Io=60mA, Po=0.7W, Co=95nF, Lo=5mH Ex nA[ia] IIC T4	17-GA4BO-0325X

인 증 기 준

방호장치 안전인증 고시(고용노동부고시 제2016-54호)

인 증 조 건

뒷면 참조

2017 년 04 월 28 일

한국가스안전공사 사장

인 증 조 건

1. 제조공장

Route de Moncor 4, 1752 Villars-sur-Glane, Switzerland에서 제조하는 제품에 한함

2. 제품개요

The GSI 127 interface provides galvanic insolation between power supply circuit or signal treatment circuit (Ex nA) and a sensor or a conditioner (Ex ia).
The equipment consists of electronic board and screwed terminals blocks mounted inside a plastic enclosure. Conformal coating is applied on both sides of the electronic board.

3. 인증범위

-첨부 인증조건 참조

4. 안전한 사용을 위한 조건

- The equipment shall only be connected to associated intrinsically safe certified equipment or simple apparatus. This combination must be compatible as regard the intrinsic safety rules.
- The apparatus shall be installed in an enclosure conform to the requirements of standard IEC 60079-0 and with ingress protection of at least IP54.
- Operation ambient temperature: -40℃ to +70℃.

5. 인증(변경)사항

IECEx LCIE 13.0026X Issue No.1 에 의해 작성되었음

6. 그 밖의 사항

- 안전인증품의 품질관리, 확인심사 수검, 변경사항 신고 등 인증 받은 자의 의무 준수
- 첨부 인증조건에 따라 확인시험을 실시할 것

KGS

인 증 조 건(17-0325)

Type designation:
244-127-000-XXX-A2-BYY
XXX defines the version of the product (X = 0 to 9).
YY defines the transfer mode (YY = 01 to 19 for actual specification; YY = 20 to 39 for alternate specification).

In order to differentiate the two specifications, the type of product is modified as follows:

- Actual specification: 244-127-000-XXX-A2-B01 to B19
- Alternate specification: 244-127-000-XXX-A2-B20 to B39

The difference between these specifications is only on electronic component values without modification of critical components part list and printed circuit board.

User manual (extract), ref. PZ 8763 rev. 00 dated 2016-09-06.

MARKING

MEGGITT SA or VIBRO-METER or MFR S3960
Address: ...
Type: 244-127-000-XXX-A2-BYY
Serial number: ...
Year of construction: ...
Ex nA [ia Ga] IIC T4 Gc
IECEx LCIE 13.0026X
Power supply : U ≤ 30 V, I ≤ 150 mA
Sensor or conditioner :
For 244-127-000-XXX-A2-B01 to B19: U_o: 25.2 V; I_o: 60 mA; P_o: 0.7 W; C_o: 95 nF; L_o: 5 mH
For 244-127-000-XXX-A2-B20 to B39: U_o: 25.2 V; I_o: 45 mA; P_o: 0.5 W; C_o: 95 nF; L_o: 10 mH

RATINGS

Power supply: U ≤ 30 V, I ≤ 150 mA
Sensor or conditioner:
- For 244-127-000-XXX-A2-B01 to B19: U_o: 25.2 V; I_o: 60 mA; P_o: 0.7 W; C_o: 95 nF; L_o: 5 mH
- For 244-127-000-XXX-A2-B20 to B39: U_o: 25.2 V; I_o: 45 mA; P_o: 0.5 W; C_o: 85 nF; L_o: 10 mH

ROUTINE TEST

Each transformer T1 shall be submitted to dielectric strength test under test voltage of 1500 V; 50/60 Hz applied between the primary winding and the secondary windings during at least 60 s in accordance with clause 11.2 of IEC 60079-11:2011 Ed. 6 standard.

(1/1)

MEGGITT

KO

KGS certificate:

18-GA4BO-0548X

for

IPC707

EX

Meggitt SA
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1701 Fribourg
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www.meggittsensing.com/energy

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제18-0548호

안 전 인 증 서

Meggitt SA

Route de Moncor 4, 1752 Villars-sur-Glâne, Switzerland

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품 목

Signal Conditioner

형식 · 모델 / 용량 · 등급 / 인증번호

형식.모델	용량.등급	인증번호
IPC707 (244-707-000-012-A3)	Umax : 30 V, Imax : 20 ㎃	18-GA4BO-0548X
	Ex nA IIC T6 to T4	

인 증 기 준

방호장치 의무안전인증 고시(고용노동부고시 제2016-54호)

인 증 조 건

-40℃ ≤ Ta ≤ +85℃

2018 년 10 월 25 일

한국가스안전공사 사장

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인 증 조 건

1. 제조공장 :
   - "Route de Moncor 4, 1752 Villars-sur-Glâne, Switzerland"에 위치한 Meggitt SA에서 생산하는 제품에 한함.

2. 제품개요 :
   - IPC 707 Signal conditioner is an analogue electronic conditioner which converts the electrical charges coming from a piezoelectric sensor(sensor side) into an analogue voltage or current signal(signal side)

3. 인증범위 :
   - Temperature classification :
     T6 at -40℃ ≤ Ta ≤ +70℃
     T5 at -40℃ ≤ Ta ≤ +80℃
     T4 at -40℃ ≤ Ta ≤ +85℃

4. 안전한 사용을 위한 조건 :
   - Transient protection shall be provided that is set at a level not exceeding 140% of the peak voltage value at the supply terminals to equipment.
   - 설치시 IP54 이상의 보호등급을 유지할 것.
   - 기타 사항은 사용설명서를 필히 참조할 것.

5. 인증(변경)사항 :
   - IECEx LCIE 18.0023X를 참조하여 작성(Ex nA IIC instead of Ex ec IIC)

6. 그 밖의 사항 :
   - 안전인증품의 품질관리, 확인심사 수검, 변경사항 신고 등 인증 받은 자의 의무 준수

MEGGITT

18-GA4BO-0548X
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IPC707

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MEGGITT

KO

KGS certificate:

18-GA4BO-0549X

for

IPC707

EX

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제18-0549호

안 전 인 증 서

Meggitt SA

Route de Moncor 4, 1752 Villars-sur-Glâne, Switzerland

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품 목

Signal Conditioner

형식 · 모델 / 용량 · 등급 / 인증번호

형식·모델	용량·등급	인증번호
IPC707 (244-707-000-012-A2)	뒷면 참조	18-GA4BO-0549X
	Ex ia IIC T6 to T4	

인 증 기 준

방호장치 의무안전인증 고시(고용노동부고시 제2016-54호)

인 증 조 건

-40℃ ≤ Ta ≤ +85℃

2018년 10월 25일

한국가스안전공사 사장

인 증 조 건

1. 제조공장 :

- "Route de Moncor 4, 1752 Villars-sur-Glâne, Switzerland"에 위치한 Meggitt SA에서 생산하는 제품에 한함.

2. 제품개요 :

- IPC 707 Signal conditioner is an analogue electronic conditioner which converts the electrical charges coming from a piezoelectric sensor(sensor side) into an analogue voltage or current signal(signal side)

3. 인증범위 :

- Temperature classification :
  T6 at -40℃ ≤ Ta ≤ +70℃
  T5 at -40℃ ≤ Ta ≤ +80℃
  T4 at -40℃ ≤ Ta ≤ +85℃

- Ratings:

Terminals	Intrinsic safety electrical parameters	
J0(SUP, COM)	U_i: 28 V, I_i: 100 mA, P_i: 700 mW	C_i : 2.2 nF, L_i: 1 µH
J0(OUT, COM)		C_i : 9.6 nF, L_i: 565 µH
J1(IN+, COM)(IN-, COM)	U_o: 6.6 V, I_o: 66 mA, P_o: 107 mW, C_o : 5.69 µF, L_o: 3,435 mH	

4. 안전한 사용을 위한 조건 :

- The intrinsic safety terminal blocks (IS boards) must be connected to an intrinsically safe certified apparatus. These combinations shall comply with the requirements of the standard IEC 60079-25.
- The equipment contains more than 15% of aluminium. It must be mounted in such a manner as to eliminate the risk of sparks caused by friction or impact
- The grounding of the intrinsically safe circuits must be in accordance with requirements of clause 16.2.3 of IEC 60079-14 standard.
- 기타 사항은 사용설명서를 필히 참조할 것.

5. 인증(변경)사항 :

- IECEx LCIE 18.0023X를 참조하여 작성

6. 그 밖의 사항 :

- 안전인증품의 품질관리. 확인심사 수검, 변경사항 신고 등 인증 받은 자의 의무 준수

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附录 E：TIIS 认证

表 E-1：相关 TIIS 证书

涵盖的产品	证书编号
CA134 （仅限 PNR 144-134-000-611）	TIIS TC 20432
CA134 （仅限 PNR 144-134-000-612）	TIIS TC 20544

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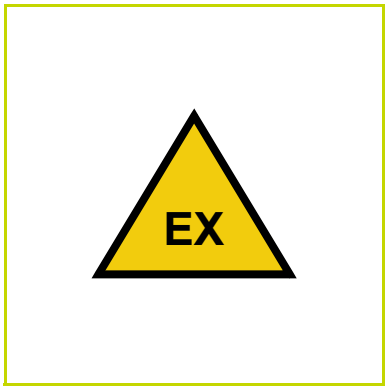
EX CERTIFICATE – TIIS

vibro-meter®

TIIS TC 20432
for
CA134 piezoelectric accelerometer
(PNR 144-134-000-611)



Note: Although the Ex certificate may be included in more than one language, the liability of the notified body applies only on the text of the original copy of the certificate that it published.

Document reference TIIS TC 20432
Edition 4 – August 2022

Meggitt SA, Route de Moncor 4, Case postale, 1701 Fribourg, Switzerland

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防爆構造電気機械器具型式検定合格証

公益社団法人 産業安全技術協会
TIIS Technology Institution of Industrial Safety

申請者	東京都中央区日本橋横山町９番１４号 三協インタナショナル株式会社
製造者	Route de Moncor 4,1752 Villars-sur-Glane Switzerland Meggitt SA
品名	加速度計
型式の名称	ＣＡ１３４－１４４－１３４－０００－６１１
防爆構造の種類	本質安全防爆構造（ｉｂ）
対象ガス又は蒸気の爆発等級及び発火度	ⅡＣＴ１
防爆記号	Ｅｘ　ｉｂⅡＣＴ１
適用基準	工場電気設備防爆指針（国際規格に整合した技術指針 2008） JNIOSH-TR-NO.43
定格	本安回路許容電圧　２８Ｖ 本安回路許容電流　１００ｍＡ 本安回路許容電力　０．７Ｗ 内部インダクタンス　５μＨ 内部キャパシタンス　０．７１ｎＦ 周囲温度　＋５℃～＋６０℃ 被測定物温度　＋５℃～＋４３５℃
使用条件	
型式検定合格番号	第　ＴＣ２０４３２　号

有効期間	型式検定者の所属及び氏名
２０１９年　７月１７日から　２０２２年　７月１６日まで	試験認証部　後藤　隆
２０２２年　７月１７日から　２０２５年　７月１６日まで	試験認証部　後藤　隆
年　月　日から　年　月　日まで	
年　月　日から　年　月　日まで	

機械等検定規則による型式検定に合格したことを証明する。

２０１３年　７月１７日

型式検定実施者　公益社団法人　産業安全技術協会長

TC20432_0_1/1

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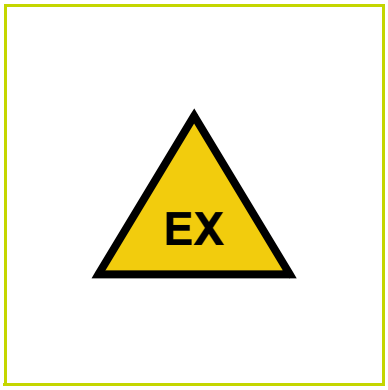
EX CERTIFICATE – TIIS

vibro-meter®

TIIS TC 20544
for
CA134 piezoelectric accelerometer
(PNR 144-134-000-612)



Note: Although the Ex certificate may be included in more than one language, the liability of the notified body applies only on the text of the original copy of the certificate that it published.

Document reference TIIS TC 20544
Edition 4 – October 2022

Meggitt SA, Route de Moncor 4, Case postale, 1701 Fribourg, Switzerland

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防爆構造電気機械器具型式検定合格証

公益社団法人 産業安全技術協会 TIIS Technology Institution of Industrial Safety

申請者	東京都中央区日本橋横山町９番１４号 三協インタナショナル株式会社
製造者	Route de Moncor 4, 1752 Villars-sur-Glane Switzerland Meggitt SA
品名	加速度センサー
型式の名称	ＣＡ１３４－１４４－１３４－０００－６１２
防爆構造の種類	本質安全防爆構造（ｉｂ）
対象ガス又は蒸気の爆発等級及び発火度	ⅡＣＴ１
防爆記号	Ｅｘ　ｉｂⅡＣＴ１
適用基準	工場電気設備防爆指針（国際規格に整合した技術指針 2008） JNIOSH-TR-NO. 43
定格	本安回路許容電圧　２８Ｖ 本安回路許容電流　１００ｍＡ 本安回路許容電力　０．７Ｗ 内部インダクタンス　５μＨ 内部キャパシタンス　１．７１３ｎＦ 周囲温度　＋５℃～＋６０℃ 被測定物温度　＋５℃～＋４３５℃
使用条件	
型式検定合格番号	第　ＴＣ２０５４４　号

有効期間	型式検定者の所属及び氏名
２０２０年　１月　８日から ２０２３年　１月　７日まで	試験認証部　後藤　隆
２０２３年　１月　８日から ２０２６年　１月　７日まで	試験認証部　後藤　隆
年　月　日から　年　月　日まで	
年　月　日から　年　月　日まで	

機械等検定規則による型式検定に合格したことを証明する。

２０１４年　１月　８日

型式検定実施者　公益社団法人　産業安全技術協会長

TC20544_0_1/1

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附录 F：UK 认证

表 F-1：相关 UK 证书

涵盖的产品	证书编号
GSI127	CML 21 UKEX 4542 X
IPC707	CML 21 UKEX 2543 X
	CML 21 UKEX 4544 X

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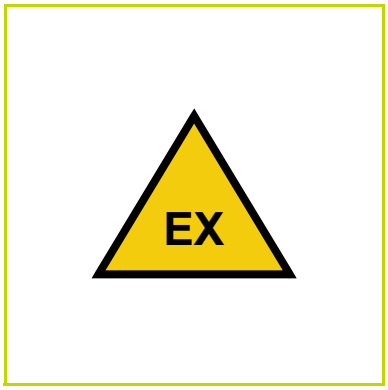
EX CERTIFICATE – UK

vibro-meter®

CML 21 UKEX 4542 X
for
GSI127 galvanic separation unit



Note: Although the Ex certificate may be included in more than one language, the liability of the notified body applies only on the text of the original copy of the certificate that it published.

Document reference CML 21 UKEX 4542 X
Edition 1 – September 2021

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energy@ch.meggitt.com
www.meggittsensing.com/energy
www.meggitt.com

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Type Examination Certificate CML 21UKEX4542X Issue 0

United Kingdom Conformity Assessment

1 Product or Protective System Intended for use in Potentially Explosive Atmospheres UKSI 2016:1107 (as amended)

2 Equipment **GSI 127 interface**

3 Manufacturer **Meggitt SA**

4 Address **Route de Moncor 4,**
1752 Villars-sur-Glane,
Switzerland

5 The equipment is specified in the description of this certificate and the documents to which it refers.

6 Eurofins E&E CML Limited, Newport Business Park, New Port Road, Ellesmere Port, CH65 4LZ, United Kingdom, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations.

The examination and test results are recorded in the confidential reports listed in Section 12.

7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to specific conditions of use (affecting correct installation or safe use). These are specified in Section 14.

8 This Type Examination certificate relates only to the design and construction of the specified equipment. Further requirements of the Regulations apply to the manufacturing process and supply of the product. These are not covered by this certificate.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018 EN 60079-11:2012 EN 60079-15:2010

10 The equipment shall be marked with the following:

Refer to attached certificate LCIE 13 ATEX 3037 X, Issue 01 for specific marking of explosion protection symbols.

Refer to attached certificate LCIE 13 ATEX 3037 X, Issue 01 for marked code and ambient temperature range.

L. A. Brisk
Certification Officer

11 Description

For product description refer to attached certificate LCIE 13 ATEX 3037 X, Issue 01.

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	06 Aug 2021	R14182C/00	Issue of the prime certificate. LCIE 13 ATEX 3037 X, Issue 01 is attached and shall be referred to in conjunction with this certificate.

Note: Drawings that describe the equipment are listed in the Annex.

13 Conditions of Manufacture

For conditions of manufacture, refer to attached certificate LCIE 13 ATEX 3037 X, Issue 01.

Any routine tests/verifications required by the ATEX certification shall be conducted

14 Specific Conditions of Use

For specific conditions of use, refer to attached certificate LCIE 13 ATEX 3037 X, Issue 01.

ATTESTATION D'EXAMEN UE DE TYPE
EU TYPE EXAMINATION CERTIFICATE

1 **Version : 01** — **LCIE 13 ATEX 3037 X** — **Issue : 01**

	Directive 2014/34/UE	**Directive 2014/34/EU**
2	Appareil ou Système de Protection destiné à être utilisé en Atmosphères Explosibles	Equipment or Protective System Intended for use in Potentially Explosive Atmospheres
3	Produit : **Interface GSI 127**	Product : **GSI 127 interface**

Type: 244-127-000-XXX-A2-BYY

4	Fabricant :	Manufacturer :
	MEGGITT SA	
5	Adresse :	Address :
	Route de Moncor 4 1752 Villars-sur-Glâne SUISSE	

6 Ce produit et ses variantes éventuelles acceptées sont décrits dans l'annexe de la présente attestation et dans les documents descriptifs cités en référence.

This product any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

7 Le LCIE, Organisme Notifié sous la référence 0081 conformément à l'article 17 de la directive 2014/34/UE du Parlement européen et du Conseil du 26 février 2014, certifie que ce produit est conforme aux Exigences Essentielles de Sécurité et de Santé pour la conception et la construction de produits destinés à être utilisés en atmosphères explosibles, données dans l'annexe II de la Directive.
Les résultats des vérifications et essais figurent dans le(s) rapport(s) confidentiel(s) N° :

LCIE, Notified Body number 0081 in accordance with article 17 of the Directive 2014/34/EU of the European Parliament and the Council of 26 February 2014 certifies that product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres, given in Annex II to the Directive.
The examination and test results are recorded in confidential report(s) N°:

108046-614947; 141529-685013

8 Le respect des Exigences Essentielles de Sécurité et de Santé est assuré par la conformité à :

Compliance with the Essential Health and Safety Requirements has been assured by compliance with :

EN 60079-0:2012 + A11:2013
EN 60079-11:2012
EN 60079-15:2010

9 Le signe « X » lorsqu'il est placé à la suite du numéro de l'attestation, indique que cet appareil est soumis aux conditions particulières d'utilisation, mentionnées dans l'annexe de cette attestation.

If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.

10 Cette Attestation d'Examen UE de Type concerne uniquement la conception et la construction du produit spécifié.
Des exigences supplémentaires de la directive sont applicables pour la fabrication et la fourniture du produit. Ces dernières ne sont pas couvertes par la présente attestation.

This EU Type Examination Certificate relates only to the design and construction of the specified product.
Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

11 Le marquage du produit est mentionné dans l'annexe de cette attestation.

The marking of the product is specified in the schedule to this certificate.

Fontenay-aux-Roses, le 30 novembre 2016

Responsable de Certification
Certification Officer
Julien Gauthier

LABORATOIRE CENTRAL DES INDUSTRIES ELECTRIQUES
S.A.S au capital de 15.745.980 €
RCS Nanterre B 408 363 174
33 avenue du Général Leclerc
F - 92260 FONTENAY AUX ROSES

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ATTESTATION D'EXAMEN UE DE TYPE - ANNEXE
EU TYPE EXAMINATION CERTIFICATE - SCHEDULE

1 **Version : 01** — **LCIE 13 ATEX 3037 X** — **Issue : 01**

12 **DESCRIPTION DU PRODUIT**

L'interface GSI 127 fournit une isolation galvanique entre le circuit d'alimentation ou le circuit de traitement de signal (Ex nA) et un capteur ou un conditionneur (Ex ia).
L'appareil se compose d'une carte électronique et des bornes à vis montées dans un boîtier plastique. Un revêtement conforme est appliqué sur deux faces de la carte.

DETAIL DE LA GAMME

244-127-000-XXX-A2-BYY

XXX définit la version du produit (X = 0 à 9).
YY définit le mode de transfert (YY = 01 à 19 pour la spécification actuelle; YY = 20 à 39 pour la spécification alternative).

MARQUAGE

Le marquage du produit doit comprendre :

MEGGITT SA ou VIBRO-METER ou MFR S3960
Adresse : .....
Type : 244-127-000-XXX-A2-BYY
N° de fabrication : …
Année de fabrication : …
Ⓔ II 3 (1) G
Ex nA [ia Ga] IIC T4 Gc
LCIE 13 ATEX 3037 X
Alimentation : U ≤ 30 V, I ≤ 150 mA
Capteur ou conditionneur :
Pour 244-127-000-XXX-A2-B01 à B19:
U_o: 25,2 V; I_o: 60 mA; P_o: 0,7 W; C_o: 95 nF; L_o: 5 mH
Pour 244-127-000-XXX-A2-B20 à B39:
U_o: 25,2 V; I_o: 45 mA; P_o: 0,5 W; C_o: 95 nF; L_o: 10 mH

L'appareil doit également comporter le marquage normalement prévu par les normes de construction qui le concernent sous la responsabilité du fabricant.

13 **CONDITIONS PARTICULIERES D'UTILISATION**

a. L'appareil ne doit être raccordé qu'à des matériels de sécurité intrinsèque certifiés ou à un appareil simple. Cette association doit être compatible vis-à-vis de la sécurité intrinsèque.

b. L'appareil doit être installé dans une enveloppe conforme aux exigences de la norme EN 60079-0 et ayant un degré de protection minimal IP54.

c Température ambiante d'utilisation : -40°C à +70°C.

14 **EXIGENCES ESSENTIELLES DE SANTE ET DE SECURITE**

Couvertes par les normes listées au point 8.

DESCRIPTION OF PRODUCT

The GSI 127 interface provides galvanic insolation between power supply circuit or signal treatment circuit (Ex nA) and a sensor or a conditioner (Ex ia).
The equipment consists of electronic board and screwed terminals blocks mounted inside a plastic enclosure. Conformal coating is applied on both sides of the electronic board.

RANGE DETAILS

244-127-000-XXX-A2-BYY

XXX defines the version of the product (X = 0 to 9).
YY defines the transfer mode (YY = 01 to 19 for actual specification; YY = 20 to 39 for alternate specification).

MARKING

The marking of the product shall include the following :

MEGGITT SA or VIBRO-METER or MFR S3960
Address: ...
Type: 244-127-000-XXX-A2-BYY
Serial number: ...
Year of construction: …
Ⓔ II 3 (1) G
Ex nA [ia Ga] IIC T4 Gc
LCIE 13 ATEX 3037 X
Power supply : U ≤ 30 V, I ≤ 150 mA
Sensor or conditioner :
For 244-127-000-XXX-A2-B01 to B19:
U_o: 25.2 V; I_o: 60 mA; P_o: 0.7 W; C_o: 95 nF; L_o: 5 mH
For 244-127-000-XXX-A2-B20 to B39:
U_o: 25.2 V; I_o: 45 mA; P_o: 0.5 W; C_o: 95 nF; L_o: 10 mH

The equipment shall also bear the usual marking required by the product standards applying to such equipment under the manufacturer responsibility.

SPECIFIC CONDITIONS OF USE

The equipment shall only be connected to associated intrinsically safe certified equipment or simple apparatus. This combination must be compatible as regard the intrinsic safety rules.
The apparatus shall be installed in an enclosure conform to the requirements of standard EN 60079-0 and with ingress protection at least IP54.
Operating ambient temperature: -40°C to +70°C.

ESSENTIAL HEALTH AND SAFETY REQUIREMENTS

Covered by standards listed at 8.

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Laboratoire Central des Industries Electriques
Une société de Bureau Veritas
33 Avenue du Général Leclerc
92260 Fontenay-aux-Roses
FRANCE
WWW.LCIE.FR

ATTESTATION D'EXAMEN UE DE TYPE - ANNEXE
EU TYPE EXAMINATION CERTIFICATE - SCHEDULE

1 **Version : 01** **LCIE 13 ATEX 3037 X** **Issue : 01**

15 **DOCUMENTS DESCRIPTIFS** / **DESCRIPTIVE DOCUMENTS**

N°	Description	Reference	Rev.	Date	Page(s)
1.	Technical file	DT 1052	01	2016-10-24	36
2.	User manual (extract)	PZ 8763	00	2016-09-06	1

16 **INFORMATIONS COMPLEMENTAIRES** / **ADDITIONAL INFORMATIONS**

Essais individuels

Chaque transformateur T1 devra être soumis à un essai diélectrique sous tension d'essai de 1500 V ; 50/60 Hz appliquée entre l'enroulement primaire et les enroulements secondaires pendant au moins 60 s conformément au paragraphe 11.2 de la norme EN 60079-11:2012.

Conditions de certification

Les détenteurs d'attestations d'examen UE de type doivent également satisfaire les exigences de contrôle de production telles que définies à l'article 13 de la Directive 2014/34/UE.

En accord avec l'Article 41 de la Directive 2014/34/UE, les attestations d'examen CE de type mentionnant la Directive 94/9/CE émises avant la date d'application de la Directive 2014/34/UE (20 avril 2016) peuvent être considérées comme émises en accord avec la Directive 2014/34/UE. Les nouvelles versions de ces attestations peuvent conserver le numéro de l'attestation d'origine émise avant le 20 avril 2016.

Routine tests

Each transformer T1 shall be submitted to dielectric strength test under test voltage of 1500 V; 50/60 Hz applied between the primary winding and the secondary windings during at least 60 s in accordance with clause 11.2 of EN 60079-11:2012 standard.

Conditions of certification

Holders of EU type examination certificates are also required to comply with the production control requirements defined in article 13 of Directive 2014/34/EU.

In accordance with Article 41 of Directive 2014/34/EU, EC-Type Examination Certificates referring to Directive 94/9/EC that were in existence prior to the date of application of Directive 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. New issues of such certificates may continue to bear the original certificate number issued prior to 20 April 2016.

17 **DETAILS DES MODIFICATIONS** / **DETAILS OF CHANGES**

Version 00 : (31/05/2013) Evaluation de la conformité selon les normes EN 60079-0:2012, EN 60079-11:2012 et EN 60079-15:2010.

Version 01 :
- Mise à jour normative selon la norme EN 60079-0:2012 + A11:2013.
- Nouvelle plage de température ambiante d'utilisation : -40°C à +70°C
- Mise à jour de la désignation du type pour différencier deux spécifications.

Issue 00 : (2013/05/31) Conformity assessment according to EN 60079-0:2012, EN 60079-11:2012 and EN 60079-15:2010 standards.

Issue 01 :
- Normative update according to EN 60079-0:2012 + A11:2013 standard.
- New operating ambient temperature range: -40°C to +70°C.
- Update of type designation to differentiate two specifications.

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MEGGITT
Original copy (English)

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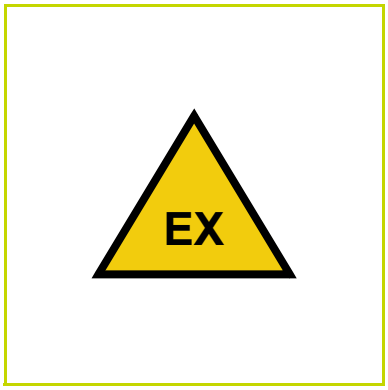
EX CERTIFICATE – UK

vibro-meter®

CML 21 UKEX 2543 X
for
IPC707 signal conditioner



Note: Although the Ex certificate may be included in more than one language, the liability of the notified body applies only on the text of the original copy of the certificate that it published.

Document reference CML 21 UKEX 2543 X
Edition 1 – September 2021

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www.meggitt.com

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UK Type Examination Certificate CML 21UKEX2543X Issue 0

United Kingdom Conformity Assessment

1 Product or Protective System Intended for use in Potentially Explosive Atmospheres UKSI 2016:1107 (as amended) – Schedule 3A, Part 1

2 Equipment **Signal Conditioner, IPC 707**

3 Manufacturer **Meggitt SA**

4 Address **Route de Moncor 4,**
1752 Villars-sur-Glâne,
Switzerland

5 The equipment is specified in the description of this certificate and the documents to which it refers.

6 Eurofins E&E CML Limited, Newport Business Park, New Port Road, Ellesmere Port, CH65 4LZ, United Kingdom, Approved Body Number 2503, in accordance with Regulation 43 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended), certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations.

The examination and test results are recorded in the confidential reports listed in Section 12.

7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to specific conditions of use (affecting correct installation or safe use). These are specified in Section 14.

8 This UK Type Examination certificate relates only to the design and construction of the specified equipment. Further requirements of the Regulations apply to the manufacturing process and supply of the product. These are not covered by this certificate.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018 EN 60079-11:2012

10 The equipment shall be marked with the following:

Refer to attached certificate LCIE 18 ATEX 3026 X, Issue 01 for specific marking of explosion protection symbols.

Refer to attached certificate LCIE 18 ATEX 3026 X, Issue 01 for marked code and ambient temperature range.

L. A. Brisk
Certification Officer

11 Description

For product description refer to attached certificate LCIE 18 ATEX 3026 X, Issue 01.

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	05 Aug 2021	R14182D/00	Issue of the prime certificate. LCIE 18 ATEX 3026 X, Issue 01 is attached and shall be referred to in conjunction with this certificate.

Note: Drawings that describe the equipment are listed in the Annex.

13 Conditions of Manufacture

For conditions of manufacture, refer to attached certificate LCIE 18 ATEX 3026 X, Issue 01.

Any routine tests/verifications required by the ATEX certification shall be conducted.

14 Specific Conditions of Use

For specific conditions of use, refer to attached certificate LCIE 18 ATEX 3026 X, Issue 01.

ATTESTATION D'EXAMEN UE DE TYPE
EU TYPE EXAMINATION CERTIFICATE

1 **Version : 01** — **LCIE 18 ATEX 3026 X** — **Issue : 01**

	Directive 2014/34/UE	**Directive 2014/34/EU**
2	Appareil ou Système de Protection destiné à être utilisé en Atmosphères Explosibles	Equipment or Protective System Intended for use in Potentially Explosive Atmospheres
3	Produit : Conditionneur de signal, IPC 707	Product : Signal Conditioner, IPC 707

Type: 244-707-000-xxx-A_

4	Fabricant :	Manufacturer :
	MEGGITT SA	
5	Adresse :	Address :
	Route de Moncor 4 1752 Villars-sur-Glâne SUISSE	
6	Ce produit et ses variantes éventuelles acceptées sont décrits dans l'annexe de la présente attestation et dans les documents descriptifs cités en référence.	This product and any acceptable variations thereto are specified in the schedule to this certificate and the documents therein referred to.
7	Le LCIE, Organisme Notifié sous la référence 0081 conformément à l'article 17 de la directive 2014/34/UE du Parlement européen et du Conseil du 26 février 2014, certifie que ce produit est conforme aux Exigences Essentielles de Sécurité et de Santé pour la conception et la construction de produits destinés à être utilisés en atmosphères explosibles, données dans l'annexe II de la Directive.	LCIE, Notified Body number 0081 in accordance with article 17 of the Directive 2014/34/EU of the European Parliament and the Council of 26 February 2014 certifies that product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres, given in Annex II to the Directive.
	Accréditation Cofrac Certification de Produits et Services, n°5-0014. Portée disponible sur www.cofrac.fr.	Cofrac Accreditation Product and Services Certification n°5-0014. Scope available on www.cofrac.fr.
	Les résultats des vérifications et essais figurent dans le(s) rapport(s) confidentiel(s) N° :	The examination and test results are recorded in confidential report(s) N°:
	140555-682748	
8	Le respect des Exigences Essentielles de Sécurité et de Santé est assuré par la conformité à :	Compliance with the Essential Health and Safety Requirements has been assured by compliance with :
	EN 60079-0:2012+A11:2013, EN 60079-11:2012.	
9	Le signe « X » lorsqu'il est placé à la suite du numéro de l'attestation, indique que cet appareil est soumis aux conditions particulières d'utilisation, mentionnées dans l'annexe de cette attestation.	If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.
10	Cette Attestation d'Examen UE de Type concerne uniquement la conception et la construction du produit spécifié. Des exigences supplémentaires de la directive sont applicables pour la fabrication et la fourniture du produit. Ces dernières ne sont pas couvertes par la présente attestation.	This EU Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.
11	Le marquage du produit est mentionné dans l'annexe de cette attestation.	The marking of the product is specified in the schedule to this certificate.

Fontenay-aux-Roses, le 30 août 2018

Responsable de Certification
Certification Officer
Jérôme Reysson

LABORATOIRE CENTRAL DES INDUSTRIES ELECTRIQUES
S.A.S au capital de 15.45.904 €
RCS Nanterre B 408 305 174
33 avenue du Général Leclerc
F - 92260 FONTENAY AUX ROSES

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ATTESTATION D'EXAMEN UE DE TYPE - ANNEXE
EU TYPE EXAMINATION CERTIFICATE - SCHEDULE

1 **Version : 01** — **LCIE 18 ATEX 3026 X** — **Issue : 01**

12 **DESCRIPTION DU PRODUIT**

Le Conditionneur de Signal IPC 707 est un conditionneur électronique analogique qui convertit les charges électriques provenant d'un capteur piézoélectrique (côté capteur) en un signal de tension ou de courant analogique (côté signal).

Le circuit électronique du conditionneur de signal IPC 707 est entièrement enrobé et incorporé dans une enveloppe en aluminium.

Le conditionneur de signal IPC 707 est équipé de bornes (côté capteur et côté signal) et d'un clip optionnel pour rail DIN.

Les configurations de sortie, côté signal, sont les suivantes:
- sortie de tension: mode de transmission à 3 fils,
- sortie de courant: mode de transmission à 2 fils.

DESCRIPTION OF PRODUCT

IPC 707 Signal Conditioner is an analogue electronic conditioner which converts the electrical charges coming from a piezoelectric sensor (sensor side) into an analogue voltage or current signal (signal side).

The electronic circuitry of the IPC 707 signal conditioner is totally potted and incorporated into an aluminium enclosure.

IPC 707 Signal Conditioner is equipped with terminals (sensor side and signal side) and with an optional clip for DIN rail.

Signal side output configurations could be as following :
- voltage output : 3-wires transmission mode,
- current output : 2-wires transmission mode.

DETAIL DE LA GAMME

Seul ce modèle est inclus : 244-707-000-012-A2

RANGE DETAILS

Only this model is included: 244-707-000-012-A2

CARACTERISTIQUES

Borne Signal (SUP, COM) :
U_i : 28V, I_i : 100 mA, P_i : 700 mW, C_i : 2,2 nF, L_i : 1 µH.

RATINGS

Signal side terminals (SUP, COM) :
U_i : 28V, I_i : 100 mA, P_i : 700 mW, C_i : 2,2 nF, L_i : 1 µH.

MARQUAGE

Le marquage du produit doit comprendre :

Marquage complet :

Vibro-Meter ou MEGGITT SA ou MFR S3960
Adresse : …
Type : 244-707-000-012-A2
N° de fabrication : …
Année de fabrication : …
Ex II 1 G
Ex ia IIC T6 … T4 Ga (*)
LCIE 18 ATEX 3026 X
-40°C ≤ Tamb ≤ +85°C
U_i : …, I_i : … , P_i : …, C_i : …, L_i : … (**)
U_o : …, I_o : …, P_o : …, C_o : …, L_o : …

Marquage réduit :

Vibro-Meter ou MEGGITT SA ou MFR S3960
Adresse : …
Type : 244-707-000-012-A2
N° de fabrication : …
Année de fabrication : …
Ex II 1 G
Ex ia IIC T6 … T4 Ga (*)
LCIE 18 ATEX 3026 X

MARKING

The marking of the product shall include the following :

Complete marking :

Vibro-Meter or MEGGITT SA or MFR S3960
Address: …
Type: 244-707-000-012-A2
Serial number: …
Year of construction: …
Ex II 1 G
Ex ia IIC T6 … T4 Ga (*)
LCIE 18 ATEX 3026 X
-40°C ≤ Tamb ≤ +85°C
U_i : …, I_i : … , P_i : …, C_i : …, L_i : … (**)
U_o : …, I_o : …, P_o : …, C_o : …, L_o : …

Reduced marking :

Vibro-Meter or MEGGITT SA or MFR S3960
Address: …
Type: 244-707-000-012-A2
Serial number: …
Year of construction: …
Ex II 1 G
Ex ia IIC T6 … T4 Ga (*)
LCIE 18 ATEX 3026 X

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FRANCE
WWW.LCIE.FR

ATTESTATION D'EXAMEN UE DE TYPE - ANNEXE
EU TYPE EXAMINATION CERTIFICATE - SCHEDULE

1 **Version : 01** — **LCIE 18 ATEX 3026 X** — **Issue : 01**

MARQUAGE (suite)

(**) Les paramètres de sécurité intrinsèque sont identifiés comme suit :

Borne / *Terminal*	Paramètres électriques de sécurité intrinsèque / *Intrinsic safety electrical parameters*	
J0 (SUP, COM)	U_i : 28V, I_i : 100 mA, P_i : 700 mW	C_i : 2,2 nF, L_i : 1 µH.
J0 (OUT, COM)		C_i : 9,6 nF, L_i : 565 µH.
J1 (IN+, COM) (IN-, COM)	U_o : 6,6V, I_o : 66 mA, P_o : 107 mW, C_o : 5,69 µF, L_o : 3,435 mH.	

(*) La classification en température est réalisée comme suit :

Classification en température / *Temperature classification*	Température ambiante d'utilisation / *Ambient operating temperature range*
T6	-40°C ≤ Tamb ≤ +70°C
T5	-40°C ≤ Tamb ≤ +80°C
T4	-40°C ≤ Tamb ≤ +85°C

L'appareil doit également comporter le marquage normalement prévu par les normes de construction qui le concernent sous la responsabilité du fabricant.

MARKING (continued)

(**) Intrinsic safety electrical parameters are identified as following:

(*) Temperature classification shall be as following:

The equipment shall also bear the usual marking required by the product standards applying to such equipment under the manufacturer responsibility.

13 CONDITIONS PARTICULIERES D'UTILISATION

a) Température ambiante d'utilisation : de -40°C à +85°C

b) L'appareil ne peut être raccordé qu'à des équipements certifiés de sécurité intrinsèque.
Ces associations doivent répondre aux exigences de la norme EN 60079-25.

c) L'appareil devra être raccordé conformément au manuel d'instruction.

d) L'équipement contient plus de 15% d'aluminium. Il doit être monté de manière à éviter le risque d'étincelle par frottement ou impact.

e) La mise à la terre des circuits de sécurité intrinsèque (borne SHD) doit être conforme aux exigences du chapitre 16.2.3 de la norme EN 60079-14.

SPECIFIC CONDITIONS OF USE

Ambient temperature range: -40°C to +85°C.

The intrinsic safety terminal blocks (IS boards) must be connected only to an intrinsically safe certified apparatus. These combinations shall comply with the requirements of the standard EN 60079-25.

The apparatus must be connected according to instruction manual.

The equipment contains more than 15% of aluminum. It must be mounted in such a manner as to eliminate the risk of sparks caused by friction or impact.

The grounding of the intrinsically safe circuits must be in accordance with requirements of clause 16.2.3 of EN 60079-14 standard.

14 EXIGENCES ESSENTIELLES DE SANTE ET DE SECURITE

Couvertes par les normes listées au point 8.

ESSENTIAL HEALTH AND SAFETY REQUIREMENTS

Covered by standards listed at 8.

15 DOCUMENTS DESCRIPTIFS

DESCRIPTIVE DOCUMENTS

N°	Description	Reference	Rev.	Date	Page(s)
1.	Extrait notice d'utilisation / *Instruction notice extract*	PZ 8954	-	-	1
2.	Dossier technique / *Technical file*	DT-1070	00	2018/01/10	125

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ATTESTATION D'EXAMEN UE DE TYPE - ANNEXE
EU TYPE EXAMINATION CERTIFICATE - SCHEDULE

1 **Version : 01** — **LCIE 18 ATEX 3026 X** — **Issue : 01**

16 INFORMATIONS COMPLEMENTAIRES

Essais individuels

Néant.

Conditions de certification

Les détenteurs d'attestations d'examen UE de type doivent également satisfaire les exigences de contrôle de production telles que définies à l'article 13 de la Directive 2014/34/UE.

ADDITIONAL INFORMATIONS

Routine tests

None.

Conditions of certification

Holders of EU type examination certificates are also required to comply with the production control requirements defined in article 13 of Directive 2014/34/EU.

17 DETAILS DES MODIFICATIONS DE L'ATTESTATION

Version 00 : 27/07/2018 — Evaluation initiale selon les exigences des normes EN 60079-0:2012+A11:2013 et EN 60079-11:2012.

Version 01 : Actuelle — Clarification du modèle de l'appareil.
La référence 244-707-000-xxx devient 244-707-000-012-A2.

DETAILS OF CERTIFICATE CHANGES

Issue 00 : 2018/07/27 — Initial assessment according to standards EN 60079-0:2012+A11:2013 and EN 60079-11:2012 requirements.

Issue 01 : Current — Clarification of apparatus type.
Reference 244-707-000-xxx becomes 244-707-000-012-A2.

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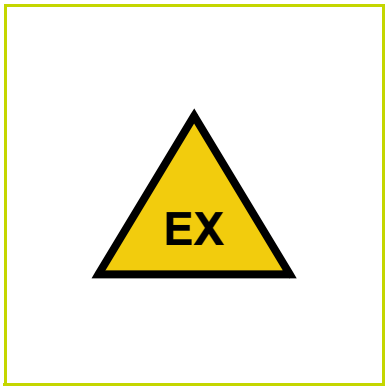
EX CERTIFICATE – UK

vibro-meter®

CML 21 UKEX 4544 X
for
IPC707 signal conditioner



Note: Although the Ex certificate may be included in more than one language, the liability of the notified body applies only on the text of the original copy of the certificate that it published.

Document reference CML 21 UKEX 4544 X
Edition 1 – September 2021

Meggitt SA, Route de Moncor 4, Case postale, 1701 Fribourg, Switzerland

Tel: +41 26 407 1111
Fax: +41 26 407 1660
energy@ch.meggitt.com
www.meggittsensing.com/energy
www.meggitt.com

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Type Examination Certificate CML 21UKEX4544X Issue 0

United Kingdom Conformity Assessment

1 Product or Protective System Intended for use in Potentially Explosive Atmospheres UKSI 2016:1107 (as amended)

2 Equipment **Signal Conditioner, IPC 707**

3 Manufacturer **Meggitt SA**

4 Address **Route de Moncor 4,**
1752 Villars-sur-Glane,
Switzerland

5 The equipment is specified in the description of this certificate and the documents to which it refers.

6 Eurofins E&E CML Limited, Newport Business Park, New Port Road, Ellesmere Port, CH65 4LZ, United Kingdom, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations.

The examination and test results are recorded in the confidential reports listed in Section 12.

7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to specific conditions of use (affecting correct installation or safe use). These are specified in Section 14.

8 This Type Examination certificate relates only to the design and construction of the specified equipment. Further requirements of the Regulations apply to the manufacturing process and supply of the product. These are not covered by this certificate.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018 EN 60079-7:2015

10 The equipment shall be marked with the following:

Refer to attached certificate LCIE 18 ATEX 1012 X, Issue 00 for specific marking of explosion protection symbols.

Refer to attached certificate LCIE 18 ATEX 1012 X, Issue 00 for marked code and ambient temperature range.

This certificate shall only be copied in its entirety and without change
www.CMLEx.com

L. A. Brisk
Certification Officer

11 Description

For product description refer to attached certificate LCIE 18 ATEX 1012 X, Issue 00.

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	05 Aug 2021	R14182E/00	Issue of the prime certificate. LCIE 18 ATEX 1012 X, Issue 00, is attached and shall be referred to in conjunction with this certificate.

Note: Drawings that describe the equipment are listed in the Annex.

13 Conditions of Manufacture

For conditions of manufacture, refer to attached certificate LCIE 18 ATEX 1012 X, Issue 00.

Any routine tests/verifications required by the ATEX certification shall be conducted.

14 Specific Conditions of Use

For specific conditions of use, refer to attached certificate LCIE 18 ATEX 1012 X, Issue 00.

This certificate shall only be copied in its entirety and without change
www.CMLEx.com

MEGGITT
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ATTESTATION D'EXAMEN DE TYPE
TYPE EXAMINATION CERTIFICATE

1 **Version : 00** — **LCIE 18 ATEX 1012 X** — **Issue : 00**

	Directive 2014/34/UE	**Directive 2014/34/EU**
2	Appareil ou Système de Protection destiné à être utilisé en Atmosphères Explosibles	Equipment or Protective System Intended for use in Potentially Explosive Atmospheres
3	Produit : Conditionneur de signal, IPC 707	Product : Signal conditioner, IPC 707
	Type: 244-707-000-xxx-A_	
4	Fabricant :	Manufacturer : **MEGGITT SA**
5	Adresse :	Address : Route de Moncor 4 1752 Villars-sur-Glâne SUISSE
6	Ce produit et ses variantes éventuelles acceptées sont décrits dans l'annexe de la présente attestation et dans les documents descriptifs cités en référence.	This product and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.
7	Le LCIE certifie que ce produit est conforme aux Exigences Essentielles de Sécurité et de Santé pour la conception et la construction de produits destinés à être utilisés en atmosphères explosibles, données dans l'annexe II de la Directive. Les résultats des vérifications et essais figurent dans le(s) rapport(s) confidentiel(s) N° : 140555-682752	LCIE certifies that product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres, given in Annex II to the Directive. The examination and test results are recorded in confidential report(s) N°:
8	Le respect des Exigences Essentielles de Sécurité et de Santé est assuré par la conformité à : EN 60079-0:2012 + A11:2013, EN 60079-7:2015	Compliance with the Essential Health and Safety Requirements has been assured by compliance with :
9	Le signe « X » lorsqu'il est placé à la suite du numéro de l'attestation, indique que cet appareil est soumis aux conditions particulières d'utilisation, mentionnées dans l'annexe de cette attestation.	If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.
10	Cette Attestation d'Examen de Type concerne uniquement la conception et la construction du produit spécifié. Des exigences supplémentaires de la directive sont applicables pour la fabrication et la fourniture du produit. Ces dernières ne sont pas couvertes par la présente attestation.	This Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.
11	Le marquage du produit est mentionné dans l'annexe de cette attestation.	The marking of the product is specified in the schedule to this certificate.

Fontenay-aux-Roses, le 30 août 2018

Responsable de Certification
Certification Officer
Jérôme Reysson

LABORATOIRE CENTRAL DES INDUSTRIES ELECTRIQUES
33 Avenue du Général Leclerc
F - 92260 FONTENAY AUX ROSES

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ATTESTATION D'EXAMEN DE TYPE - ANNEXE
TYPE EXAMINATION CERTIFICATE - SCHEDULE

1 **Version : 00** — **LCIE 18 ATEX 1012 X** — **Issue : 00**

12 **DESCRIPTION DU PRODUIT**

Le conditionneur de signal IPC 707 est un conditionneur électronique analogique qui convertit les charges électriques provenant d'un capteur piézoélectrique (côté capteur) en un signal de tension ou de courant analogique (côté signal).

Le circuit électronique du conditionneur de signal IPC 707 est incorporé dans une enveloppe en aluminium.

Le conditionneur de signal IPC 707 est équipé de bornes (côté capteur et côté signal) et d'un clip optionnel pour rail DIN.

Les configurations de sortie, côté signal, sont les suivantes:
- sortie de tension: mode de transmission à 3 fils,
- sortie de courant: mode de transmission à 2 fils.

DESCRIPTION OF PRODUCT

IPC 707 signal conditioner is an analogue electronic conditioner which converts the electrical charges coming from a piezoelectric sensor (sensor side) into an analogue voltage or current signal (signal side).

The electronic circuitry of the IPC 707 signal conditioner is incorporated into an aluminium enclosure.

IPC 707 signal conditioner is equipped with terminals (sensor side and signal side) and with an optional clip for DIN rail.

Signal side output configurations could be as following :
- voltage output : 3-wires transmission mode,
- current output : 2-wires transmission mode.

DETAIL DE LA GAMME

Seul ce modèle est inclus : 244-707-000-012-A3

RANGE DETAILS

Only this model is included: 244-707-000-012-A3

CARACTERISTIQUES

Bornier signal (SUP, COM, OUT) : U_{max} : 30 V, I_{max} : 20 mA.

RATINGS

Signal terminal (SUP, COM, OUT): U_{max} : 30 V, I_{max} : 20 mA.

MARQUAGE

Le marquage du produit doit comprendre :

Marquage complet :

Vibro-Meter ou MEGGITT SA ou MFR S3960
Adresse : …
Type : 244-707-000-012-A3
N° de fabrication : …
Année de fabrication : …
Ex II 3 G
Ex ec IIC T6…T4 Gc (*)
LCIE 18 ATEX 1012 X
-40°C ≤ Tamb ≤ +85°C
U_{max} : 30 V, I_{max} : 20 mA.
AVERTISSEMENT - NE PAS SEPARER SOUS TENSION.
AVERTISSEMENT – SEPARER UNIQUEMENT DANS UN EMPLACEMENT NON DANGEREUX.

Marquage réduit :

Vibro-Meter ou MEGGITT SA ou MFR S3960
Adresse : …
Type : 244-707-000-012-A3
N° de fabrication : …
Année de fabrication : …
Ex II 3 G
Ex ec IIC T6…T4 Gc (*)
LCIE 18 ATEX 1012 X

MARKING

The marking of the product shall include the following :

Complete marking :

Vibro-Meter or MEGGITT SA or MFR S3960
Address: …
Type: 244-707-000-012-A3
Serial number: …
Year of construction: …
Ex II 3 G
Ex ec IIC T6…T4 Gc (*)
LCIE 18 ATEX 1012 X
-40°C ≤ Tamb ≤ +85°C
U_{max} : 30 V, I_{max} : 20 mA.
WARNING – DO NOT SEPARATE WHEN ENERGIZED.
WARNING – SEPARATE ONLY IN A NON-HAZARDOUS AREA.

Reduced marking :

Vibro-Meter or MEGGITT SA or MFR S3960
Address: …
Type: 244-707-000-012-A3
Serial number: …
Year of construction: …
Ex II 3 G
Ex ec IIC T6…T4 Gc (*)
LCIE 18 ATEX 1012 X

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ATTESTATION D'EXAMEN DE TYPE - ANNEXE
TYPE EXAMINATION CERTIFICATE - SCHEDULE

1 **Version : 00** **LCIE 18 ATEX 1012 X** **Issue : 00**

MARQUAGE (suite)

(*) La classification en température est réalisée comme suit :

Classification en température *Temperature classification*	Température ambiante d'utilisation *Ambient operating temperature range*
T6	-40°C ≤ Tamb ≤ +65°C
T5	-40°C ≤ Tamb ≤ +80°C
T4	-40°C ≤ Tamb ≤ +85°C

L'appareil doit également comporter le marquage normalement prévu par les normes de construction qui le concernent sous la responsabilité du fabricant.

MARKING (continued)

(*) Temperature classification shall be as following:

The equipment shall also bear the usual marking required by the product standards applying to such equipment under the manufacturer responsibility.

13 **CONDITIONS PARTICULIERES D'UTILISATION**

a. Température ambiante d'utilisation : -40°C à +85°C

b. L'utilisateur final devra prendre toutes les précautions nécessaires pour installer l'appareil dans une enveloppe IP54 et maintenir le degré de protection minimum IP54 de la connexion du capteur lors de son raccordement selon les préconisations de la norme EN 60079-14.

c. L'appareil devra être raccordé conformément au manuel d'instruction.

d. Le matériel doit être utilisé dans une zone assurant au moins un degré de pollution 2, tel que défini dans la norme EN 60664-1.

e. La protection contre les transitoires doit être fournie à un niveau défini ne dépassant pas 140% de la valeur de crête de la tension assignée aux bornes d'alimentation vers le matériel.

SPECIFIC CONDITIONS OF USE

Ambient temperature range: -40°C to +85°C.

For final installation, final end user shall take any precautions to install the apparatus into an IP54 enclosure and keep it connected in compliance with EN 60079-14 requirements, providing and maintaining degree of protection at least IP54.

The apparatus must be connected according to instruction manual.

The equipment shall only be used in an area of at least pollution degree 2, as defined in EN 60664-1 standard.

Transient protection shall be provided that is set at a level not exceeding 140% of the peak rated voltage value at the supply terminals to the equipment.

14 **EXIGENCES ESSENTIELLES DE SANTE ET DE SECURITE**

Couvertes par les normes listées au point 8.

ESSENTIAL HEALTH AND SAFETY REQUIREMENTS

Covered by standards listed at 8.

15 **DOCUMENTS DESCRIPTIFS**

DESCRIPTIVE DOCUMENTS

N°	Description	Reference	Rev.	Date	Page(s)
1.	Extrait de la notice d'utilisation / *Instruction notice extract*	PZ 8782	-	-	1
2.	Dossier technique / *Technical file*	DT-1071	00	2018/01/10	46

16 **INFORMATIONS COMPLEMENTAIRES**

Essais individuels

Néant.

ADDITIONAL INFORMATIONS

Routine tests

None.

17 **DETAILS DES MODIFICATIONS DE L'ATTESTATION**

Version 00 : Evaluation initiale.

DETAILS OF CERTIFICATE CHANGES

Issue 00: Initial assessment.

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附录 G：EAЭC RU 认证

表 **G-1**：相关 EAЭC RU 证书

涵盖的产品	证书编号
ABA17x	EAЭC RU C-CH.АД07.B.02998/21
CA134、CA20x、CA28x、CA30x 和 CA901	EAЭC RU C-CH.АД07.B.03042/21
GSI127	EAЭC RU C-CH.АД07.B.03008/21
IPC707	EAЭC RU C-CH.АД07.B.04681/22

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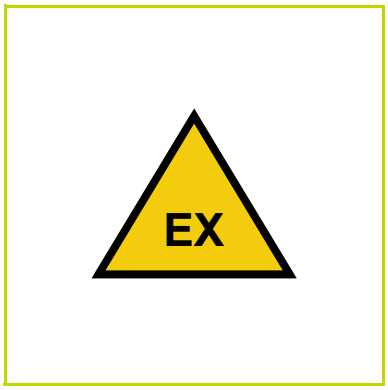
EX CERTIFICATE – RU

ЕАЭС RU C-CH.АД07.В.02998/21
for
ABA17x industrial housings



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Document reference ЕАЭС RU C-CH.АД07.В.02998/21
Edition 1 – March 2021

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ЕВРАЗИЙСКИЙ ЭКОНОМИЧЕСКИЙ СОЮЗ

СЕРТИФИКАТ СООТВЕТСТВИЯ

EAC

№ ЕАЭС RU C-CH.АД07.В.02998/21

Серия RU № 0225696

ОРГАН ПО СЕРТИФИКАЦИИ Орган по сертификации Общество с ограниченной ответственностью «Центр Сертификации «ВЕЛЕС». Место нахождения (адрес юридического лица): 195009, РОССИЯ, город Санкт-Петербург, улица Академика Лебедева, дом 12, корпус 2, литера А, этаж 2, комната 26, Адрес места осуществления деятельности: 190068, РОССИЯ, город Санкт-Петербург, переулок Никольский, дом 4 литер А, помещение 8Н. Уникальный номер записи об аккредитации в реестре аккредитованных лиц № RA.RU.10АД07 Дата решения об аккредитации: 24.03.2016. Телефон: +74952211810 Адрес электронной почты: info@velessert.ru

ЗАЯВИТЕЛЬ ОБЩЕСТВО С ОГРАНИЧЕННОЙ ОТВЕТСТВЕННОСТЬЮ "СОРТУМ"
Место нахождения (адрес юридического лица) и адрес места осуществления деятельности: 101000, Россия, город Москва, переулок Милютинский, дом 10, строение 1, этаж 3, помещение VIII, комната 4, офис 4
Основной государственный регистрационный номер 1187746680538.
Телефон: 74991101637 Адрес электронной почты: info@sortum.ru

ИЗГОТОВИТЕЛЬ "MEGGITT S.A."
Место нахождения (адрес юридического лица) и адрес места осуществления деятельности по изготовлению продукции: Швейцария, Route de Moncor 4, 1752 Villars-sur-Glane

ПРОДУКЦИЯ Аппаратура распределительная: соединительные коробки, типа: ABA17x
Маркировка взрывозащиты согласно приложению (бланки №№ 0765056, 0765057).
Продукция изготовлена в соответствии с Директивой 2014/34/EU и технической документацией изготовителя для работы во взрывоопасных средах.
Серийный выпуск

КОД ТН ВЭД ЕАЭС 8538100000

СООТВЕТСТВУЕТ ТРЕБОВАНИЯМ
Технического регламента Таможенного союза "О безопасности оборудования для работы во взрывоопасных средах" (ТР ТС 012/2011)

СЕРТИФИКАТ СООТВЕТСТВИЯ ВЫДАН НА ОСНОВАНИИ Протокола испытаний № 2688ИЛПМВ от 11.02.2021 года, выданного Испытательным центром Общества с ограниченной ответственностью "ПРОММАШ ТЕСТ" (уникальный номер записи об аккредитации в реестре аккредитованных лиц RA.RU.21ВС05)
акта анализа состояния производства от 01.12.2020 года, выданного Органом по сертификации Общество с ограниченной ответственностью «Центр Сертификации «ВЕЛЕС»
Руководства по эксплуатации, конструкторской документации.
Схема сертификации: 1с

ДОПОЛНИТЕЛЬНАЯ ИНФОРМАЦИЯ Срок службы 30 лет. Срок хранения 10 лет. Стандарты, обеспечивающие соблюдение требований Технического регламента Таможенного союза ТР ТС 012/2011 "О безопасности оборудования для работы во взрывоопасных средах" согласно приложениям - бланки №№ 0765056, 0765057.

СРОК ДЕЙСТВИЯ С 16.02.2021 **ПО** 15.02.2026 **ВКЛЮЧИТЕЛЬНО**

Руководитель (уполномоченное лицо) органа по сертификации (подпись) Ролзивон Галина Александровна (Ф.И.О.)

М.П.

Эксперт (эксперт-аудитор) (эксперты (эксперты-аудиторы)) (подпись) Шатило Андрей Алексеевич (Ф.И.О.)

АО «Опцион», Москва, 2019 г., «Б». Лицензия № 05-05-09/003 ФНС РФ. ТЗ № 369. Тел.: (495) 726-47-42, www.opcion.ru

ЕВРАЗИЙСКИЙ ЭКОНОМИЧЕСКИЙ СОЮЗ

ПРИЛОЖЕНИЕ

К СЕРТИФИКАТУ СООТВЕТСТВИЯ № ЕАЭС RU C-CH.АД07.В.02998/21

Серия RU № 0765056

1. Назначение и область применения

Сертификат соответствия распространяется на соединительные коробки, типа ABA17x модели eCAM (далее по тексту – соединительные коробки), предназначенные для обеспечения защиты закрытого оборудования от проникновения твердых предметов и жидкостей, а также от повреждений в результате ударов.

Область применения – соединительные коробки являются Ex-компонентами и предназначены для применения в сборе с электрооборудованием предназначенным для установки во взрывоопасных зонах классов 1 и 2 по ГОСТ IEC 60079-10-1-2011 категорий взрывоопасных смесей IIA, IIB, IIC по ГОСТ Р МЭК 60079-20-1-2011, взрывоопасных зонах классов 21 и 22 по ГОСТ IEC 60079-10-2-2011, содержащих взрывоопасную пыль подгрупп IIIA, IIIB и IIIC, согласно маркировкам взрывозащиты электрооборудования, ГОСТ IEC 60079-14-2011 и другим нормативным документам, регламентирующим применение электрооборудования в потенциально взрывоопасных средах.

2. Описание оборудования и средств обеспечения взрывозащиты

Конструктивно корпус соединительной коробки выполнен в виде короба из прочной листовой стали с защитным покрытием. Корпус имеет защитную канавку вокруг дверного проема, навесную дверцу с замком и уплотнительную прокладку, которая помогает обеспечить необходимую степень защиты от внешних климатических воздействий. Крепление соединительной коробки производится с помощью четырех монтажных кронштейнов. В задней части каждого корпуса соединительной коробки имеется монтажная пластина из оцинкованной стали с горизонтальными DIN-рейками для установки преобразователей сигналов или других устройств. При необходимости монтажная пластина снимается с корпуса для облегчения установки и монтажа проводки оборудования. Дверца соединительной коробки имеет соединение с корпусом кабелем заземления. В нижней части каждого корпуса соединительной коробки имеются отверстия кабельного ввода для прокладки кабелей к оборудованию, установленного в корпусе.

Подробное описание конструкции соединительной коробки приведено в руководстве по эксплуатации.

Основные технические данные:

Маркировка взрывозащиты	Ex e IIC Gb U Ex tb IIIC Db U
Диапазон температур окружающей среды, °С	от минус 55 до +100
Степень защиты от внешних воздействий по ГОСТ 14254-2015	IP66

Взрывозащищенность соединительных коробок обеспечивается выполнением их конструкции в соответствии с общими требованиями по ГОСТ 31610.0-2014 (IEC 60079-0:2011), видом взрывозащиты «повышенная защита вида «e» по ГОСТ Р МЭК 60079-7-2012 и видом взрывозащиты от воспламенения пыли «t» по ГОСТ Р МЭК 60079-31-2010.

Внесение изготовителем в конструкцию и техническую документацию изменений, влияющих на взрывобезопасность и соответствие соединительных коробок требованиям ТР ТС 012/2011, возможно только по согласованию с органом по сертификации ООО «Центр Сертификации «ВЕЛЕС».

Данный сертификат соответствия подтверждает соответствие требованиям взрывобезопасности ТР ТС 012/2011 и не рассматривает любые другие виды безопасности соединительных коробок.

3. Оборудование соответствует требованиям:

ТР ТС 012/2011	Технический регламент Таможенного союза «О безопасности оборудования для работы во взрывоопасных средах»;
ГОСТ 31610.0-2014 (IEC 60079-0:2011)	Взрывоопасные среды. Часть 0. Оборудование. Общие требования;
ГОСТ Р МЭК 60079-7-2012	Взрывоопасные среды. Часть 7. Оборудование. Повышенная защита вида "e";
ГОСТ Р МЭК 60079-31-2010	Взрывоопасные среды. Часть 31. Оборудование с видом взрывозащиты от воспламенения пыли "t".

«Центр Сертификации «ВЕЛЕС» М.П.

Руководитель (уполномоченное лицо) органа по сертификации (подпись) Ролзивон Галина Александровна (Ф.И.О.)

Эксперт (эксперт-аудитор) (эксперты (эксперты-аудиторы)) (подпись) Шатило Андрей Алексеевич (Ф.И.О.)

АО «Опцион», Москва, 2016 г., «Б». Лицензия № 05-05-09/003 ФНС РФ. ТЗ № 938. Тел.: (495) 726-47-42, www.opcion.ru

ЕВРАЗИЙСКИЙ ЭКОНОМИЧЕСКИЙ СОЮЗ

ПРИЛОЖЕНИЕ

К СЕРТИФИКАТУ СООТВЕТСТВИЯ № ЕАЭС RU C-CH.АД07.В.02998/21

Серия RU № 0765057

4. Маркировка

Маркировка, наносимая на электрооборудование, должна включать следующие данные:

4.1 наименование предприятия-изготовителя или его зарегистрированный товарный знак;

4.2 обозначение типа оборудования;

4.3 порядковый номер по системе нумерации предприятия-изготовителя;

4.4 маркировку взрывозащиты см. п. 2 «Основные технические данные»;

4.5 наименование или знак органа по сертификации и номер сертификата соответствия;

4.6 предупредительные надписи;

4.7 единый знак ЕАС обращения продукции на рынке государств - членов Таможенного союза;

4.8 специальный знак взрывобезопасности Ex в соответствии с ТР ТС 012/2011;

4.9 другие данные, которые должен отразить изготовитель, если это требуется технической документацией (диапазон температур окружающей среды, степень защиты оболочки и т.д.).

5. Шкала ограничений

Нет.

Руководитель (уполномоченное лицо) органа по сертификации _____ (подпись) Родзивон Галина Александровна (Ф.И.О.)

М.П.

Эксперт (эксперт-аудитор) (эксперты (эксперты-аудиторы)) _____ (подпись) Шатило Андрей Алексеевич (Ф.И.О.)

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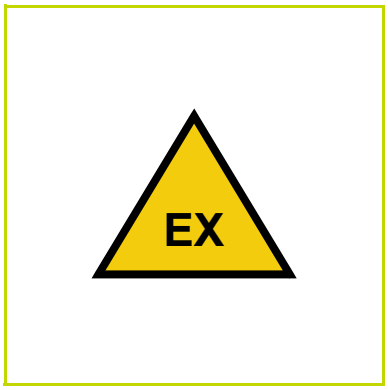
EX CERTIFICATE – RU

ЕАЭС RU C-CH.АД07.В.03042/21
for
CA134, CA20x, CA28x, CA30x, CA901, CE134, CE281 and CE620 vibration sensors



Note: Although the Ex certificate may be included in more than one language, the liability of the notified body applies only on the text of the original copy of the certificate that it published.

Document reference ЕАЭС RU C-CH.АД07.В.03042/21
Edition 1 – March 2021

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ЕВРАЗИЙСКИЙ ЭКОНОМИЧЕСКИЙ СОЮЗ

СЕРТИФИКАТ СООТВЕТСТВИЯ

EAC

№ ЕАЭС RU C-CH.АД07.В.03042/21

Серия RU № 0225745

ОРГАН ПО СЕРТИФИКАЦИИ Орган по сертификации Общество с ограниченной ответственностью «Центр Сертификации «ВЕЛЕС». Место нахождения (адрес юридического лица): 195009, РОССИЯ, город Санкт-Петербург, улица Академика Лебедева, дом 12, корпус 2, литера А, этаж 2, комната 26. Адрес места осуществления деятельности: 190068, РОССИЯ, город Санкт-Петербург, переулок Никольский, дом 4 литер А, помещение 8Н.
Уникальный номер записи об аккредитации в реестре аккредитованных лиц № RA.RU.10АД07.
Дата решения об аккредитации: 24.03.2016.
Телефон: +74952211810 Адрес электронной почты: info@velessert.ru

ЗАЯВИТЕЛЬ ОБЩЕСТВО С ОГРАНИЧЕННОЙ ОТВЕТСТВЕННОСТЬЮ "СОРТУМ"
Место нахождения (адрес юридического лица) и адрес места осуществления деятельности: 101000, Россия, город Москва, переулок Милютинский, дом 10, строение 1, этаж 3, помещение VIII, комната 4, офис 4
Основной государственный регистрационный номер 1187746680538.
Телефон: 74991101637 Адрес электронной почты: info@sortum.ru

ИЗГОТОВИТЕЛЬ "MEGGITT S.A."
Место нахождения (адрес юридического лица): Швейцария, Route de Moncor 4, 1752 Villars-sur-Glane
Филиал изготовителя: VIBRASENS, Место нахождения (адрес юридического лица) и адрес места осуществления деятельности по изготовлению продукции: Франция, Avenue des Montboucons 2E, 25000 BESANCON

ПРОДУКЦИЯ Оборудование измерительное: акселерометры, типов: CA134, CA20X, CA28X, CA30X, CA901, CE134, CE620, CE281.
Маркировка взрывозащиты согласно приложениям (бланки №№ 0765150, 0765151, 0765152).
Продукция изготовлена в соответствии с Директивой 2014/34/EU и технической документацией изготовителя для работы во взрывоопасных средах.
Серийный выпуск

КОД ТН ВЭД ЕАЭС 9031803800

СООТВЕТСТВУЕТ ТРЕБОВАНИЯМ
Технического регламента Таможенного союза "О безопасности оборудования для работы во взрывоопасных средах" (ТР ТС 012/2011)

СЕРТИФИКАТ СООТВЕТСТВИЯ ВЫДАН НА ОСНОВАНИИ Протокола испытаний № 2690ИЛПМВ от 11.02.2021 года, выданного Испытательным центром Общества с ограниченной ответственностью «ПРОММАШ ТЕСТ» (уникальный номер записи об аккредитации в реестре аккредитованных лиц RA.RU.21ВС05)
акта анализа состояния производства от 01.12.2020 года, выданного Органом по сертификации Общество с ограниченной ответственностью «Центр Сертификации «ВЕЛЕС»
Руководства по эксплуатации, конструкторской документации.
Схема сертификации: 1с

ДОПОЛНИТЕЛЬНАЯ ИНФОРМАЦИЯ Срок службы 30 лет. Срок хранения 10 лет. Стандарты, обеспечивающие соблюдение требований Технического регламента Таможенного союза ТР ТС 012/2011 "О безопасности оборудования для работы во взрывоопасных средах" согласно приложениям - бланки №№ 0765150, 0765151, 0765152.

СРОК ДЕЙСТВИЯ С 21.02.2021 **ПО** 20.02.2026 **ВКЛЮЧИТЕЛЬНО**

Руководитель (уполномоченное лицо) органа по сертификации _____ (подпись) Родионов Галина Александровна (Ф.И.О.)

М.П.

Эксперт (эксперт-аудитор) (эксперты (эксперты-аудиторы)) _____ (подпись) Шатило Андрей Алексеевич (Ф.И.О.)

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ЕВРАЗИЙСКИЙ ЭКОНОМИЧЕСКИЙ СОЮЗ

ПРИЛОЖЕНИЕ

К СЕРТИФИКАТУ СООТВЕТСТВИЯ № ЕАЭС RU C-CH.АД07.В.03042/21

Серия RU № 0765150

1. Назначение и область применения

Сертификат соответствия распространяется на оборудование измерительное: акселерометры, типов: CA134, CA20X, CA28X, CA30X, CA901, CE134, CE620, CE281 (далее по тексту - акселерометры) которые предназначены для мониторинга и измерения вибрации в случаях, когда необходима высокая чувствительность прибора.

Область применения – взрывоопасные зоны классов 0, 1 и 2 по ГОСТ IEC 60079-10-1-2011 категорий взрывоопасных смесей IIA, IIB, IIC по ГОСТ Р МЭК 60079-20-1-2011, взрывоопасные зоны классов 20, 21 и 22 по ГОСТ IEC 60079-10-2-2011, содержащие взрывоопасную пыль подгрупп IIIA, IIIB и IIIC, а также подземные выработки угольных шахт и рудников, в том числе опасные по газу (метану) и (или) угольной пыли, и их наземные сооружения, согласно маркировкам взрывозащиты электрооборудования, ГОСТ IEC 60079-14-2011 и другим нормативным документам, регламентирующим применение электрооборудования в потенциально взрывоопасных средах.

2. Описание оборудования и средств обеспечения взрывозащиты

Конструктивно акселерометры, типов: CA134, CA20X, CA28X, CA30X, CA901, CE134, CE620, CE281 имеют сварной, стальной герметичный корпус. Внутри корпуса расположен датчик акселерометра, выполненный из искусственного пьезоэлектрического материала, что обеспечивает исключительную стабильность и надежность показаний прибора.

Отверстия в подложке корпуса акселерометров обеспечивает их надежное крепление. Для подключения акселерометров используется соответствующий штатный кабель, обеспечивающий минимальные затухания сигнала с выхода датчика. Сигнал с датчика акселерометра по кабелю поступает на усилитель сигнала и далее на исполнительное устройство.

Подробное описание конструкции акселерометров приведено в руководстве по эксплуатации на изделие.

Основные технические данные:

Маркировка взрывозащиты:

- акселерометр CA134 (тип 144-134-000-XXX)	0Ex ia IIC T6...510°C Ga X
- акселерометр CA134 (тип PNR: 144-134-000-XXX)	2Ex nA II T6…510°C Gc
- акселерометр CA20X (тип PNR:144-20X-000-YYY)	0Ex ia IIC T6...T2 Ga X
- акселерометр CA20X (тип PNR: 144-20X-000-YYY)	2Ex nA IIC T6…T2 Gc
- акселерометр CA28X (тип 144-28.-000-...)	0Ex ia IIC T6...T2 Ga X
- акселерометр CA28X (тип PNR: 144-28X-000-YYY)	2Ex nA IIC T6…T2 Gc
- акселерометр CA30X (тип 144-30.-000-...)	0Ex ia IIC T6...510°C Ga X
- акселерометр CA30X (тип PNR: 144-30X-000-YYY)	2Ex nA IIC T6…510°C Gc
- акселерометр CA901 (тип PNR: 144-901-000-XXX)	0Ex ia IIC T6...710°C Ga X
- акселерометр CA901 (тип PNR: 144-901-000-XXX)	2Ex nA IIC T6…710°C Gc
- акселерометр CE134 (тип PNR: 444-134-000-XX1…XX4)	1Ex ib IIC T6...T1 Gb X
- акселерометр CE134 (тип PNR: 444-134-000-XX5…XX9)	0Ex ia IIC T6...T1 Ga X
- акселерометр CE134 (тип PNR: 444-134-000- XX1…XX9)	2Ex nA IIC T6… T1 Gc
- акселерометр CE620 (тип 444-620-000- XXX)	PO Ex ia I Ma X
	0Ex ia IIC T4 Ga X
	Ex ia IIIC T135°C Da X
- акселерометр CE28X (тип 444-28.-000-...)	0Ex ia IIC T6...T2 Ga X
- акселерометр CE28X (тип PNR: 444-28X-000-YYY)	2Ex nA IIC T6…T2 Gc

Руководитель (уполномоченное лицо) органа по сертификации (подпись) Шаповалова Галина Александровна (Ф.И.О.)

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Эксперт (эксперт-аудитор) (эксперты (эксперты-аудиторы)) (подпись) Патило Андрей Алексеевич (Ф.И.О.)

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ЕВРАЗИЙСКИЙ ЭКОНОМИЧЕСКИЙ СОЮЗ

ПРИЛОЖЕНИЕ

К СЕРТИФИКАТУ СООТВЕТСТВИЯ № ЕАЭС RU C-CH.АД07.В.03042/21

Серия RU № 0765151

Диапазон температур окружающей среды, °С:
- акселерометр CA134 (тип 144-134-000-XXX) ..... от минус 200 до +500
- акселерометр CA134 (тип PNR: 144-134-000-XXX) ..... от минус 200 до +500
- акселерометр CA20X (тип PNR: 144-20X-000-YYY) ..... от минус 55 до +260
- датчик акселерометра CA28X (тип 144-28.-000-...) ..... от минус 60 до +260
- датчик и кабель акселерометра CA28X (тип 144-28.-000-...) ..... от минус 55 до +260
- акселерометр CA30X (тип 144-30.-000-...) ..... от минус 30 до +80
- акселерометр CA30X (тип PNR: 144-30X-000-YYY) ..... от минус 54 до +500
- акселерометр CA901 (тип PNR: 144-901-000-XXX) ..... от минус 196 до +700
- датчик акселерометра CE134 (тип PNR: 444-134-000-...) ..... от минус 70 до +350
- кабель акселерометра CE134 (тип PNR: 444-134-000-...) ..... от минус 70 до +350
- акселерометр CE620 (тип 444-620-000- XXX) ..... от минус 54 до +121
- датчик акселерометра CE28X (тип 444-28.-000-...) ..... от минус 60 до +260
- датчик и кабель акселерометра CE28X (тип 444-28.-000-...) ..... от минус 55 до +260

Степень защиты от внешних воздействий по ГОСТ 14254-2015 ..... IP67

Параметры искробезопасных цепей приведены в таблице 2.1

Таблица 2.1

Наименование акселерометров	Значение параметров искробезопасных цепей акселерометров				
	U_i, В	I_i, мА (линейное/ нелинейное питание)	P_i, Вт	C_i, нФ	L_i, мкГн
Акселерометр CA134	28	100/25	0,7	1,2+0,25 нФ/м (кабель)	0
Акселерометр CA20X	28	100	0,7	20+0,2 нФ/м (кабель)	1 мкГн (кабель)
Акселерометр CA28X (тип 144-28.-000-...)	28	100	0,7	8+0,25 нФ/м (кабель)	0
Акселерометр CA30X (тип 144-30.-000-...)	28	100/25	0,7	2+0,2 нФ/м (кабель)	0
Акселерометр CA901 (тип PNR: 144-901-000-XXX)	28	100	0,7	0,2+0,2 нФ/м (кабель)	0
акселерометр CE134 (тип PNR: 444-134-000-YY1…YY4)	28	100	2	15	500
акселерометр CE134 (тип PNR: 444-134-000-YY5…YY9)	28	-	0,7	0	0
акселерометр CE620 (тип 444-620-000- XXX)	28	93	0,65	41 (исполнение с разъемом) 56 (исполнение с кабелем. Кабель до 99 метров)	0 (исполнение с разъемом) 51 (исполнение с кабелем. Кабель до 99 метров)
Акселерометр CE28X (тип 444-28.- 000-..1)	28	100	0,7	10,5	0
Акселерометр CE28X (тип 444-28.-000-..2…9))	28	100	0,7	0	0

Взрывозащищенность акселерометров обеспечивается выполнением их конструкций в соответствии с общими требованиями по ГОСТ 31610.0-2014 (IEC 60079-0:2011), видом взрывозащиты «искробезопасная электрическая цепь «i» по ГОСТ 31610.11-2014 (IEC 60079-11:2011) и видом взрывозащиты «n» по ГОСТ 31610.15-2014/IEC 60079-15:2010.

Внесение изготовителем в конструкцию и техническую документацию изменений, влияющих на взрывобезопасность и соответствие акселерометров требованиям ТР ТС 012/2011, возможно только по согласованию с органом по сертификации ООО «Центр Сертификации «ВЕЛЕС».

Руководитель (уполномоченное лицо) органа по сертификации (подпись) Романюк Галина Александровна (Ф.И.О.)

«Центр Сертификации «ВЕЛЕС» М.П.

Эксперт (эксперт-аудитор) (эксперты (эксперты-аудиторы)) (подпись) Шатило Андрей Алексеевич (Ф.И.О.)

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ЕВРАЗИЙСКИЙ ЭКОНОМИЧЕСКИЙ СОЮЗ

ПРИЛОЖЕНИЕ

К СЕРТИФИКАТУ СООТВЕТСТВИЯ № ЕАЭС RU C-CH.АД07.В.03042/21

Серия RU № 0765152

Данный сертификат соответствия подтверждает соответствие требованиям взрывобезопасности ТР ТС 012/2011 и не рассматривает любые другие виды безопасности акселерометров.

3. Оборудование соответствует требованиям:

ТР ТС 012/2011	Технический регламент Таможенного союза «О безопасности оборудования для работы во взрывоопасных средах»;
ГОСТ 31610.0-2014 (IEC 60079-0:2011)	Взрывоопасные среды. Часть 0. Оборудование. Общие требования;
ГОСТ 31610.11-2014 (IEC 60079-11:2011)	Взрывоопасные среды. Часть 11. Оборудование с видом взрывозащиты "искробезопасная электрическая цепь "i".
ГОСТ 31610.15-2014/IEC 60079-15:2010	Взрывоопасные среды. Часть 15. Оборудование с видом взрывозащиты "n".

4. Маркировка

Маркировка, наносимая на электрооборудование, должна включать следующие данные:

4.1 наименование предприятия-изготовителя или его зарегистрированный товарный знак;
4.2 обозначение типа оборудования;
4.3 порядковый номер по системе нумерации предприятия-изготовителя;
4.4 маркировку взрывозащиты см. п. 2 «Основные технические данные»;
4.5 наименование или знак органа по сертификации и номер сертификата соответствия;
4.6 предупредительные надписи;
4.7 единый знак ЕАС обращения продукции на рынке государств - членов Таможенного союза;
4.8 специальный знак взрывобезопасности Ex в соответствии с ТР ТС 012/2011;
4.9 другие данные, которые должен отразить изготовитель, если это требуется технической документацией (диапазон температур окружающей среды, степень защиты оболочки и т.д.).

5. Специальные условия применения

Знак X, стоящий после Ex-маркировки, означает, что при эксплуатации необходимо соблюдать следующие специальные условия:
- к акселерометрам с видом взрывозащиты искробезопасная электрическая цепь должны подключаться устройства, имеющие соответствующую маркировку взрывозащиты и сертификат соответствия требованиям ТР ТС 012/2011. Выходные напряжение, ток и мощность таких устройств не должны превышать соответствующих максимальных входных значений акселерометров. Внешние допустимые индуктивность и электрическая емкость искробезопасных цепей таких устройств должны быть не менее максимальных значений внутренних индуктивности и электрической емкости искробезопасных цепей акселерометров с учетом параметров линии связи;
- акселерометры необходимо подключать в соответствии с инструкцией по эксплуатации;
- для акселерометров в версии с разъемом используемый кабель должен иметь рабочую температуру, совместимую с окружающей средой, в которой используется устройство.

«Центр Сертификации «ВЕЛЕС» Общество с ограниченной ответственностью

Руководитель (уполномоченное лицо) органа по сертификации _____ (подпись) Родионов Галина Александровна (Ф.И.О.)

М.П.

Эксперт (эксперт-аудитор) (эксперты (эксперты-аудиторы)) _____ (подпись) Мигало Андрей Алексеевич (Ф.И.О.)

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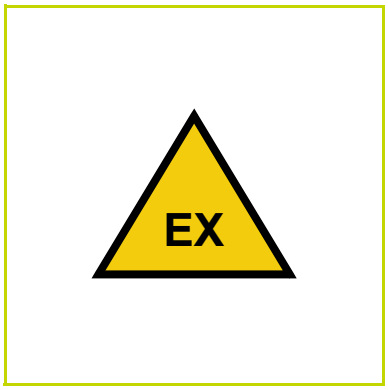
EX CERTIFICATE – RU

ЕАЭС RU C-CH.АД07.В.03008/21
for
GSI127 galvanic separation unit



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ЕВРАЗИЙСКИЙ ЭКОНОМИЧЕСКИЙ СОЮЗ

СЕРТИФИКАТ СООТВЕТСТВИЯ

EAC

№ ЕАЭС RU C-CH.АД07.В.03008/21

Серия RU № 0225707

ОРГАН ПО СЕРТИФИКАЦИИ Орган по сертификации Общество с ограниченной ответственностью «Центр Сертификации «ВЕЛЕС». Место нахождения (адрес юридического лица): 195009, РОССИЯ, город Санкт-Петербург, улица Академика Лебедева, дом 12, корпус 2, литера А, этаж 2, комната 26, Адрес места осуществления деятельности: 190068, РОССИЯ, город Санкт-Петербург, переулок Никольский, дом 4 литер А, помещение 8Н. Уникальный номер записи об аккредитации в реестре аккредитованных лиц № RA.RU.10АД07 Дата решения об аккредитации: 24.03.2016. Телефон: +74952211810 Адрес электронной почты: info@velessert.ru

ЗАЯВИТЕЛЬ ОБЩЕСТВО С ОГРАНИЧЕННОЙ ОТВЕТСТВЕННОСТЬЮ "СОРТУМ"
Место нахождения (адрес юридического лица) и адрес места осуществления деятельности: 101000, Россия, город Москва, переулок Милютинский, дом 10, строение 1, этаж 3, помещение VIII, комната 4, офис 4
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Телефон: 74991101637 Адрес электронной почты: info@sortum.ru

ИЗГОТОВИТЕЛЬ "MEGGITT S.A."
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Филиал изготовителя: TT ELECTRONICS IMS; Место нахождения (адрес юридического лица) и адрес места осуществления деятельности по изготовлению продукции: Китай, Feng Qiao Industrial Park 158 – 29 Hua Shan Road 215129 SUZHOU CITY

ПРОДУКЦИЯ Блоки гальванической развязки, типа: GSI127
Маркировка взрывозащиты согласно приложению (бланки №№ 0765078, 0765079).
Продукция изготовлена в соответствии с Директивой 2014/34/EU и технической документацией изготовителя для работы во взрывоопасных средах.
Серийный выпуск

КОД ТН ВЭД ЕАЭС 9031803800

СООТВЕТСТВУЕТ ТРЕБОВАНИЯМ
Технического регламента Таможенного союза "О безопасности оборудования для работы во взрывоопасных средах" (ТР ТС 012/2011)

СЕРТИФИКАТ СООТВЕТСТВИЯ ВЫДАН НА ОСНОВАНИИ Протокола испытаний № 2691ИЛПМВ от 11.02.2021 года, выданного Испытательным центром Общества с ограниченной ответственностью «ПРОММАШ ТЕСТ» (уникальный номер записи об аккредитации в реестре аккредитованных лиц RA.RU.21ВС05)
акта анализа состояния производства от 01.12.2020 года, выданного Органом по сертификации Общество с ограниченной ответственностью «Центр Сертификации «ВЕЛЕС»
Руководства по эксплуатации, конструкторской документации.
Схема сертификации: 1с

ДОПОЛНИТЕЛЬНАЯ ИНФОРМАЦИЯ Срок службы 30 лет. Срок хранения 10 лет. Выдан взамен № ЕАЭС RU C-CH.АД07.В.02996/21 дата выдачи 16.02.2021 год. Стандарты, обеспечивающие соблюдение требований Технического регламента Таможенного союза ТР ТС 012/2011 "О безопасности оборудования для работы во взрывоопасных средах" согласно приложениям - бланки №№ 0765078, 0765079.

СРОК ДЕЙСТВИЯ С 18.02.2021 **ПО** 15.02.2026 **ВКЛЮЧИТЕЛЬНО**

Руководитель (уполномоченное лицо) органа по сертификации (подпись) Ротзивон Галина Александровна (Ф.И.О.)

М.П.

Эксперт (эксперт-аудитор) (эксперты (эксперты-аудиторы)) (подпись) Шатило Андрей Алексеевич (Ф.И.О.)

ЕВРАЗИЙСКИЙ ЭКОНОМИЧЕСКИЙ СОЮЗ

ПРИЛОЖЕНИЕ

К СЕРТИФИКАТУ СООТВЕТСТВИЯ № ЕАЭС RU C-CH.АД07.В.03008/21

Серия RU № 0765078

1. Назначение и область применения

Сертификат соответствия распространяется на блоки гальванической развязки, типа: GSI127 (далее по тексту – блоки гальванической развязки), предназначенные для эксплуатации совместно с электрометрическими усилителями, преобразователями сигнала и электроникой (подключаемой или встроенной), используемой различными измерительными цепями виброметров.

Область применения – взрывоопасные зоны класса 2 по ГОСТ IEC 60079-10-1-2011 категорий взрывоопасных смесей IIA, IIB и IIC по ГОСТ Р МЭК 60079-20-1-2011, согласно маркировке взрывозащиты электрооборудования, ГОСТ IEC 60079-14-2011 и другим нормативным документам, регламентирующим применение электрооборудования в потенциально взрывоопасных средах.

2. Описание оборудования и средств обеспечения взрывозащиты

Блоки гальванической развязки, типа GSI127 выполнены в пластиковом корпусе, со степенью защиты от внешних воздействий IP20. Конструкция корпуса обеспечивает выполнение его монтажа на DIN-рейку. Внутри корпуса блоков гальванической развязки расположена электронная плата. Корпус блока оснащен съемными винтовыми клеммными разъемами, которые могут быть отключены от основного корпуса для упрощения установки и монтажа. Блок гальванической развязки является универсальным устройством, которое может использоваться для передачи высокочастотных сигналов переменного тока на большие расстояния в измерительных цепях, использующих передачу токового сигнала, или в качестве безопасного барьера в измерительных цепях, использующих передачу сигнала напряжения. В более общем случае он может использоваться для питания любой электронной системы (сторона датчика), имеющей потребление тока до 22 мА. Блоки гальванической развязки не имеют какой-либо индикации по работе блока и не требуют дополнительных настроек.

Подробное описание конструкции блоков гальванической развязки приведено в руководстве по эксплуатации на изделие.

Основные технические данные:

Маркировка взрывозащиты ..... Ex 2Ex nA [ia Ga] IIC T4 Gc X
Диапазон температур окружающей среды, °С ..... от минус 40 до +70
Степень защиты от внешних воздействий по ГОСТ 14254-2015 ..... IP20
Напряжение питания, В (постоянного тока) ..... 18 – 30
Максимальное напряжение U_m, В 30
Параметры искробезопасных цепей блоков гальванической развязки приведены в таблице 2.1.

Таблица 2.1

Наименование параметра	Значение	
	Блок GSI127 исполнения B01 – B19	Блок GSI127 исполнения B20 – B39
Максимальное выходное напряжение U_o, В	25,2	25,2
Максимальный выходной ток I_o, мА	60	45
Максимальная выходная мощность P_o, Вт	0,7	0,5
Максимальная внешняя емкость C_o, нФ	95	95
Максимальная внешняя индуктивность L_o, мГн	5	10

Взрывозащищенность блоков гальванической развязки обеспечивается выполнением их конструкции в соответствии с общими требованиями по ГОСТ 31610.0-2014 (IEC 60079-0:2011), видом взрывозащиты «искробезопасная электрическая цепь «i» по ГОСТ 31610.11-2014 (IEC 60079-11:2011) и видом взрывозащиты «n» по ГОСТ 31610.15-2014/IEC 60079-15:2010.

«Центр Сертификации «ВЕЛС» М.П.

Руководитель (уполномоченное лицо) органа по сертификации (подпись) Родзивон Галина Александровна (Ф.И.О.)

Эксперт (эксперт-аудитор) (эксперты (эксперты-аудиторы)) (подпись) Шатило Андрей Алексеевич (Ф.И.О.)

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ЕВРАЗИЙСКИЙ ЭКОНОМИЧЕСКИЙ СОЮЗ

ПРИЛОЖЕНИЕ

К СЕРТИФИКАТУ СООТВЕТСТВИЯ № ЕАЭС RU C-CH.АД07.В.03008/21

Серия RU № 0765079

Внесение изготовителем в конструкцию и техническую документацию изменений, влияющих на взрывобезопасность и соответствие блоков гальванической развязки требованиям ТР ТС 012/2011, возможно только по согласованию с органом по сертификации ООО «Центр Сертификации «ВЕЛЕС».

Данный сертификат соответствия подтверждает соответствие требованиям взрывобезопасности ТР ТС 012/2011 и не рассматривает любые другие виды безопасности блоков гальванической развязки.

3. Оборудование соответствует требованиям:

ТР ТС 012/2011	Технический регламент Таможенного союза «О безопасности оборудования для работы во взрывоопасных средах»;
ГОСТ 31610.0-2014 (IEC 60079-0:2011)	Взрывоопасные среды. Часть 0. Оборудование. Общие требования;
ГОСТ 31610.11-2014 (IEC 60079-11:2011)	Взрывоопасные среды. Часть 11. Оборудование с видом взрывозащиты "искробезопасная электрическая цепь "i".
ГОСТ 31610.15-2014/IEC 60079-15:2010	Взрывоопасные среды. Часть 15. Оборудование с видом взрывозащиты "n".

4. Маркировка

Маркировка, наносимая на электрооборудование, должна включать следующие данные:

4.1 наименование предприятия-изготовителя или его зарегистрированный товарный знак;
4.2 обозначение типа оборудования;
4.3 порядковый номер по системе нумерации предприятия-изготовителя;
4.4 маркировку взрывозащиты см. п. 2 «Основные технические данные»;
4.5 наименование или знак органа по сертификации и номер сертификата соответствия;
4.6 предупредительные надписи;
4.7 единый знак ЕАС обращения продукции на рынке государств - членов Таможенного союза;
4.8 специальный знак взрывобезопасности Ex в соответствии с ТР ТС 012/2011;
4.9 другие данные, которые должен отразить изготовитель, если это требуется технической документацией (диапазон температур окружающей среды, степень защиты оболочки и т.д.).

5. Специальные условия применения

Знак X, стоящий после Ex-маркировки, означает, что при эксплуатации необходимо соблюдать следующие специальные условия:
- температура окружающей среды при эксплуатации от минус 40 °C до плюс 70 °C;
- блоки гальванической развязки должны устанавливаться в корпусе со степенью защиты от внешних воздействий не ниже IP54.

«Центр Сертификации «ВЕЛЕС»

М.П.

Руководитель (уполномоченное лицо) органа по сертификации _____ (подпись) Родзивон Галина Александровна (Ф.И.О.)

Эксперт (эксперт-аудитор) (эксперты (эксперты-аудиторы)) _____ (подпись) Шатило Андрей Алексеевич (Ф.И.О.)

АО «Опцион», Москва, 2019 г., «Б». Лицензия № 05-05-09/003 ФНС РФ. ТЗ № 926. Тел.: (495) 726-47-42, www.opcion.ru

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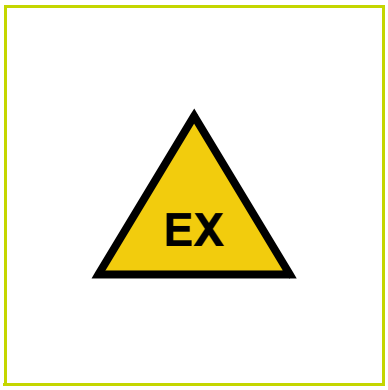
EX CERTIFICATE – RU

vibro-meter®

ЕАЭС RU C-CH.АД07.В.04681/22
for
IPC707 signal conditioner



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Edition 1 – June 2022

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ЕВРАЗИЙСКИЙ ЭКОНОМИЧЕСКИЙ СОЮЗ

СЕРТИФИКАТ СООТВЕТСТВИЯ

№ ЕАЭС RU C-CH.АД07.В.04681/22

Серия RU № 0278213

ОРГАН ПО СЕРТИФИКАЦИИ Орган по сертификации Общество с ограниченной ответственностью «Центр Сертификации «ВЕЛЕС». Место нахождения (адрес юридического лица): 195009, РОССИЯ, город Санкт-Петербург, улица Академика Лебедева, дом 12, корпус 2, литера А, этаж 2, комната 26. Адрес места осуществления деятельности: 195009, РОССИЯ, город Санкт-Петербург, улица Академика Лебедева, дом 12 корпус 2 литер А, помещения № 6-9. Уникальный номер записи об аккредитации в реестре аккредитованных лиц № RA.RU.10АД07. Дата решения об аккредитации: 24.03.2016. Телефон: +74952211810. Адрес электронной почты: info@velessert.ru

ЗАЯВИТЕЛЬ ОБЩЕСТВО С ОГРАНИЧЕННОЙ ОТВЕТСТВЕННОСТЬЮ "МИР ТЕХНОЛОГИЙ"
Место нахождения (адрес юридического лица) и адрес места осуществления деятельности: 117041, Россия, город Москва, улица Адмирала Руднева, дом 4, этаж 6, помещение IV, офис 613
Основной государственный регистрационный номер 1187746469096.
Телефон: 74954814150 Адрес электронной почты: MirTekhnologiy@gmail.com

ИЗГОТОВИТЕЛЬ «MEGGITT SA»
Место нахождения (адрес юридического лица) и адрес места осуществления деятельности по изготовлению продукции: Швейцария, Route de Moncor 4, 1752 Villars-sur-Glane

ПРОДУКЦИЯ Усилитель сигнала IPC707
Маркировка взрывозащиты согласно приложению (бланки №№ 0869689, 0869690, 0869691). Продукция изготовлена в соответствии с Директивой 2014/34/EU.
Серийный выпуск

КОД ТН ВЭД ЕАЭС 8543708000

СООТВЕТСТВУЕТ ТРЕБОВАНИЯМ
Технического регламента Таможенного союза "О безопасности оборудования для работы во взрывоопасных средах" (ТР ТС 012/2011)

СЕРТИФИКАТ СООТВЕТСТВИЯ ВЫДАН НА ОСНОВАНИИ Протокола испытаний № 6098ИЛПМВ от 05.05.2022 года, выданного Испытательным центром Общества с ограниченной ответственностью «ПРОММАШ ТЕСТ» (уникальный номер записи об аккредитации в реестре аккредитованных лиц RA.RU.21ВС05)
акта анализа состояния производства от 03.02.2022 года, выданного Органом по сертификации Общество с ограниченной ответственностью «Центр Сертификации «ВЕЛЕС»
Руководство по эксплуатации, технический паспорт и конструкторская документация
Схема сертификации: 1с

ДОПОЛНИТЕЛЬНАЯ ИНФОРМАЦИЯ Срок службы – 30 лет, срок хранения – 10 лет, условия хранения: при температуре -40 до +85°С, максимальная влажность 95% без конденсации. Стандарты, обеспечивающие соблюдение требований Технического регламента Таможенного союза ТР ТС 012/2011 "О безопасности оборудования для работы во взрывоопасных средах": согласно приложениям - бланки №№ 0869689, 0869690, 0869691.

СРОК ДЕЙСТВИЯ С 18.05.2022 **ПО** 17.05.2027 **ВКЛЮЧИТЕЛЬНО**

Руководитель (уполномоченное лицо) органа по сертификации (подпись) Ролзивон Галина Александровна (Ф.И.О.)

М.П.

Эксперт (эксперт-аудитор) (эксперты (эксперты-аудиторы)) (подпись) Шатило Андрей Алексеевич (Ф.И.О.)

АО «Опцион», Москва, 2019 г., «Б». Лицензия № 05-05-09/003 ФНС РФ. ТЗ № 968. Тел.: (495) 726-47-42, www.opcion.ru

ЕВРАЗИЙСКИЙ ЭКОНОМИЧЕСКИЙ СОЮЗ

ПРИЛОЖЕНИЕ

К СЕРТИФИКАТУ СООТВЕТСТВИЯ № ЕАЭС RU C-CH.АД07.В.04681/22

Серия RU № 0869689

1. Назначение и область применения

Сертификат соответствия распространяется на усилитель сигнала IPC707 (далее по тексту – усилитель сигнала) который предназначен для работы вместе с датчиками, имеющими пьезоэлектрический чувствительный элемент, который производит зарядовый выходной сигнал и требует внешнего формирователя сигнала (усилителя заряда).

Область применения – во взрывоопасных зонах классов 0, 1 и 2 по ГОСТ IEC 60079-10-1-2011 категорий взрывоопасных смесей IIA, IIB и IIC по ГОСТ Р МЭК 60079-20-1-2011, согласно маркировкам взрывозащиты электрооборудования, ГОСТ IEC 60079-14-2011 и другим нормативным документам, регламентирующим применение электрооборудования в потенциально взрывоопасных средах.

2. Описание оборудования и средств обеспечения взрывозащиты

Конструктивно усилитель сигнала IPC707 выполнен в литом алюминиевом корпусе. Монтаж усилителя сигнала производится на плоскую поверхность путем крепления винтами через монтажные отверстия в корпусе или на din-рейку посредством специального адаптера. Внутри корпуса расположена печатная плата с электронными компонентами. Корпус усилителя сигнала имеет съемные клеммные колодки которые можно отсоединить от главной части корпуса для упрощения установки и монтажа. Клеммные колодки имеют винтовые зажимы для подключения проводов. Усилитель сигнала IPC707 включает в себя фильтры радиопомех для защиты входного и выходного сигнала от радиочастот и других электромагнитных помех, взрывозащиту, дифференциальный усилитель заряда, конфигурируемые фильтры высоких и низких частот, интегратор для передачи выходного сигнала скорости, конфигурируемый усилитель и конфигурируемый выходной каскад для создания токового выходного сигнала или сигнала по напряжению согласно требованиям. Также усилитель сигнала IPC707 опционально может включать диагностическую схему, которая используется для обнаружения неисправностей измерительной цепи, состоящей из датчика, кабелей и усилителя.

Подробное описание конструкции усилителя сигнала IPC707 приведено в руководстве по эксплуатации.

Основные технические данные:

Основные технические данные усилителя сигнала IPC707 приведены в таблице 2.1

Таблица 2.1

Наименование параметра	Значение параметра	
Маркировка взрывозащиты	0Ex ia IIC T6…T4 Ga	2Ex ec IIC T6…T4 Gc
Диапазон температур окружающей среды, °C: - для температурного класса T4 - для температурного класса T5 - для температурного класса T6	 от минус 40 до +85 от минус 40 до +80 от минус 40 до +70	 от минус 40 до +85 от минус 40 до +80 от минус 40 до +65
Степень защиты от внешних воздействий по ГОСТ 14254-2015	IP20	IP20
Максимальное напряжение на сигнальных клеммах (SUP, COM, OUT), Umax, В	-	30
Максимальный ток на сигнальных клеммах (SUP, COM, OUT), Imax, мА	-	20

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М.П.

Эксперт (эксперт-аудитор) (эксперты (эксперты-аудиторы)) (подпись) Ивашко Андрей Алексеевич (Ф.И.О.)

ЕВРАЗИЙСКИЙ ЭКОНОМИЧЕСКИЙ СОЮЗ

ПРИЛОЖЕНИЕ

К СЕРТИФИКАТУ СООТВЕТСТВИЯ № ЕАЭС RU C-CH.АД07.В.04681/22

Серия RU № 0869690

Параметры искробезопасных цепей усилителя сигнала IPC707 приведены в таблице 2.2.

Таблица 2.2

Наименование параметра	Значение
Разъем J0 (SUP, COM):	
Максимальное входное напряжение U_i, В	28
Максимальный входной ток I_i, мА	100
Максимальная входная мощность P_i, мВт	700
Максимальная внутренняя емкость C_i, нФ	2,2
Максимальная внутренняя индуктивность L_i, мкГн	1
Разъем J0 (OUT, COM):	
Максимальное входное напряжение Ui, В	28
Максимальный входной ток Ii, мА	100
Максимальная входная мощность Pi, мВт	700
Максимальная внутренняя емкость Ci, нФ	9,6
Максимальная внутренняя индуктивность Li, мкГн	565
Разъем J1 (IN+, COM) (IN-, COM):	
Максимальное выходное напряжение Uo, В	6,6
Максимальный выходной ток Io, мА	66
Максимальная выходная мощность Po, мВт	107
Максимальная внешняя емкость Co, мкФ	5,69
Максимальная внешняя индуктивность Lo, мГн	3,435

Взрывозащищенность усилителя сигнала IPC707 обеспечивается выполнением его конструкции в соответствии с общими требованиями по ГОСТ 31610.0-2014 (IEC 60079-0:2011), видом взрывозащиты «искробезопасная электрическая цепь «i» по ГОСТ 31610.11-2014 (IEC 60079-11:2011) и видом взрывозащиты «повышенная защита вида «e» по ГОСТ Р МЭК 60079-7-2012.

Внесение изготовителем в конструкцию и техническую документацию изменений, влияющих на взрывобезопасность и соответствие усилителя сигнала IPC707 требованиям ТР ТС 012/2011, возможно только по согласованию с органом по сертификации ООО «Центр Сертификации «ВЕЛЕС».

Данный сертификат соответствия подтверждает соответствие требованиям взрывобезопасности ТР ТС 012/2011 и не рассматривает любые другие виды безопасности усилителя сигнала IPC707.

3. Оборудование соответствует требованиям:

ТР ТС 012/2011	Технический регламент Таможенного союза «О безопасности оборудования для работы во взрывоопасных средах»;
ГОСТ 31610.0-2014 (IEC 60079-0:2011)	Взрывоопасные среды. Часть 0. Оборудование. Общие требования;
ГОСТ 31610.11-2014 (IEC 60079-11:2011)	Взрывоопасные среды. Часть 11. Оборудование с видом взрывозащиты "искробезопасная электрическая цепь "i".
ГОСТ Р МЭК 60079-7-2012	Взрывозащищенные среды. Часть 7. Оборудование. Повышенная защита вида «e».

4. Маркировка

Маркировка, наносимая на электрооборудование, должна включать следующие данные:

4.1 наименование предприятия-изготовителя или его зарегистрированный товарный знак;

4.2 обозначение типа оборудования;

«Центр Сертификации «ВЕЛЕС» М.П.

Руководитель (уполномоченное лицо) органа по сертификации (подпись) Родзивон Галина Александровна (Ф.И.О.)

Эксперт (эксперт-аудитор) (эксперты (эксперты-аудиторы)) (подпись) Шапило Андрей Алексеевич (Ф.И.О.)

АО «Опцион», Москва, 2020 г., «Б», ТЗ № 334.

ЕВРАЗИЙСКИЙ ЭКОНОМИЧЕСКИЙ СОЮЗ

ПРИЛОЖЕНИЕ

К СЕРТИФИКАТУ СООТВЕТСТВИЯ № ЕАЭС RU C-CH.АД07.В.04681/22

Серия RU № 0869691

4.3 порядковый номер по системе нумерации предприятия-изготовителя;
4.4 маркировку взрывозащиты см. п. 2 «Основные технические данные»;
4.5 наименование или знак органа по сертификации и номер сертификата соответствия;
4.6 предупредительные надписи;
4.7 единый знак ЕАС обращения продукции на рынке государств - членов Таможенного союза;
4.8 специальный знак взрывобезопасности Ex в соответствии с ТР ТС 012/2011;
4.9 другие данные, которые должен отразить изготовитель, если это требуется технической документацией (диапазон температур окружающей среды, степень защиты оболочки и т.д.).

5. Специальные условия применения

Знак X, стоящий в маркировке взрывозащиты, означает, что при эксплуатации необходимо соблюдать следующие особые условия:
- усилитель сигнала IPC707 имеющий вид защиты Ex «e» должен быть установлен в шкаф имеющий степень защиты от внешних воздействий не ниже IP54.
- для усилителя сигнала IPC707 имеющий вид защиты Ex «e» должен быть установлена зашита по входу на непривышение 140% пикового значения по напряжению.
- искробезопасные клеммные колодки (платы IS) усилителя сигнала IPC707 имеющий вид защиты Ex «ia» должны быть подключается только к искробезопасному сертифицированному оборудованию.
- необходимо избегать трения и ударов о корпус

Руководитель (уполномоченное лицо) органа по сертификации _____ (подпись) Родзивон Галина Александровна (Ф.И.О.)

М.П.

Эксперт (эксперт-аудитор) (эксперты (эксперты-аудиторы)) _____ (подпись) Шапило Андрей Алексеевич (Ф.И.О.)

АО «Опцион», Москва, 2020 г., «Б», ТЗ № 334

附录 H：INMETRO 认证

表 H-1：相关 INMETRO 证书

涵盖的产品	证书编号
CA134	INMETRO BVC20.3862-X
	INMETRO BVC20.3863-X
IPC707	INMETRO BVC20.3861-X

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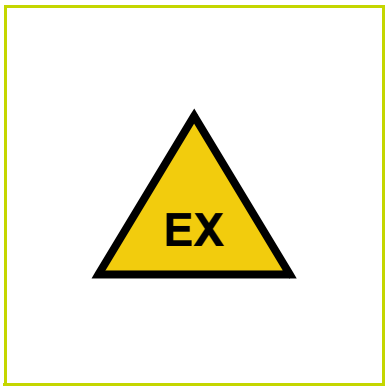
EX CERTIFICATE – INMETRO

vibro-meter®

INMETRO BVC20.3862-X
for
CA134 piezoelectric accelerometer



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Document reference INMETRO BVC20.3862-X
Edition 1 – January 2021

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BUREAU VERITAS Certification

Certificate of Conformity

AWARDED TO APPLICANT

MEGGITT SA
ROUTE DE MONCOR 4
1752 VILLARS-SUR-GLÂNE – **SWITZERLAND**

MANUFACTURER: MEGGITT SA
ROUTE DE MONCOR 4
1752 VILLARS-SUR-GLÂNE – **SWITZERLAND**

Bureau Veritas Certification certifies that the Product in the scope of supply specified below has been evaluated and found to comply with the requirements of the reference documents.

Documents of Reference

ORDINANCE N° 179 FROM INMETRO, ISSUED IN MAY 18TH 2010,
ABNT NBR IEC 60079-0:2013 and ABNT NBR IEC 60079-11:2013.
CERTIFICATE ISSUED BASED ON THE MANUFACTURER EVALUATION OF QUALITY MANAGEMENT SYSTEM AND PRODUCT TESTS MODEL

Scope of Supply

ACCELEROMETER
TYPE: PNR 144-134-000-XXX
MARKING: Ex ia IIC T* or 510 °C Ga (*According to table 1)

Initial date of this Certificate: **JANUARY 20TH 2021.**
Certificate valid until: **JANUARY 19TH 2024.**

This Certificate of Conformity was issued according to the certification model 5 and is valid only accompanied by pages 1 to 5. The validity of this Certificate is linked to carrying out assessments maintenance and treatment of possible non-conformity in accordance with the Bureau Veritas Certification guidelines and in the specific Inmetro Ordinances (RAC).
To check the updated condition of regularity of this Certificate must be obtained from the product database and Certificate Services on Inmetro site.

Product Certification Contract: **20200003**

Certificate since: **JANUARY 20TH 2021.**

INMETRO Certificate Number: **BVC20.3862-X**

Vagner Valentino
Coordenador Técnico de Certificação de Produto

BUREAU VERITAS 2101201217001

Bureau Veritas Certification
Av. Alfredo Egídio de Souza Aranha, 100, Torre C, 3º andar, Centro Administrativo Santo Amaro
Cep: 04726-170, Chácara Santo Antônio, São Paulo, SP, Brasil
Tel.: + 55 11 2655 9000 - www.bureauveritascertification.com.br

BUREAU VERITAS Certification

Certificate of Conformity

BVC20.3862-X

SPECIFICATION:
This sensor is electro mechanic transducer delivering at its terminal blocks an electrical load proportional to the measured pressure.
It works with piezoelectric equipment mounted in compression.

ELECTRICAL CHARACTERISTICS:
Sensor: Ci ≤ 1,2nF, Li ≈ 0
Cable: Ci ≤ 250pF/m, Li ≈ 0

1 – Table - Temperature Class x Ambient Temperature

Temperature Classification	Ambient Operating Temperature Range
T6	-200 °C ≤ *Ta* ≤ +80 °C
T5	-200 °C ≤ *Ta* ≤ +95 °C
T4	-200 °C ≤ *Ta* ≤ +130 °C
T3	-200 °C ≤ *Ta* ≤ +195 °C
T2	-200 °C ≤ *Ta* ≤ +290 °C
T1	-200 °C ≤ *Ta* ≤ +440 °C
510 °C	-200 °C ≤ *Ta* ≤ +500 °C

TECHNICAL DOCUMENTATION:

- Certificate of Conformity n° IECEX LCIE 06.0008X of 2013/10/25;
- Test Report LCIE n° 60044315-544914 of 2006/07/03;
- Test Report LCIE n° FR/LCI/ExTR06.0012/01 of 2010/10/25;
- Test Report LCIE n° FR/LCI/ExTR06.0012/02 of 2011/12/13;
- Test Report LCIE n° FR/LCI/ExTR06.0012/03 of 2013/10/16;
- Analysis Report (RA) n° 002/2020 of 2020/10/09;
- Factory Inspection performed in: 2020/11/18;
- Manual in Portuguese.

BUREAU VERITAS 2101201217002

Bureau Veritas Certification
Av. Alfredo Egídio de Souza Aranha, 100, Torre C, 3º andar, Centro Administrativo Santo Amaro
Cep: 04726-170, Chácara Santo Antônio, São Paulo, SP, Brasil
Tel.: + 55 11 2655 9000 - www.bureauveritascertification.com.br

BUREAU VERITAS Certification

Certificate of Conformity

BVC20.3862-X

Drawing	Description	Revision	Date
PZ7653	Capteur D'Acceleration	0	01/10/2004
144-134-000 D 203	Accelerometer Type CA 134	3	21/09/2016
144-134-000 D 612	Accelerometer Type CA 134	4	01/07/2020

OBSERVATIONS:

1. The letter "X" after the Certificate number means the following special conditions for safe use:
   Electrical parameters of any IS certified equipment connected to the sensor shall not exceed the following values:
   Linear source: Ui ≤ 28V, Ii ≤ 100mA, Pi ≤ 0,7W
   Non linear source: Ui ≤ 28V, Ii ≤ 25mA, Pi ≤ 0,7W
   -200 °C < *Ta* < +500 °C
   Temperature classification:
   T6: Tamb <80 °C, T5: Tamb <95 °C, T4: Tamb <130 °C, T3: Tamb <195 °C, T2: Tamb <290 °C, T1: Tamb <440 °C, 510 °C: Tamb <500 °C.
   The materiel shall only be connected to a certified [ia] or [ib] apparatus and this combination, taking account to the length of joining cable, shall be compatible as regards intrinsic safety.

2. This Certificate is valid only for products with the same model and type as the tested prototype. Any modification in the project, as well as the use of components apart from those defined by the technical documentation, without previous authorization from Bureau Veritas Certification, will invalid this Certificate.

3. The Accelerometer shall be marked on the external surface and in a visible place, the conformity mark and the technical characteristics according to the specifications from standards ABNT NBR IEC 60079-0 / ABNT NBR IEC 60079-11 and the conformity assessment requiremnts, attached to INMETRO Ordince n° 179, published in May 18th 2010. This marking must be readable and durable, taking into consideration possible chemical corrosion.

4. The equipment must be installed in compliance with the relevant standards in electrical installations in explosive atmospheres and the manufacturer's recommendations

BUREAU VERITAS 2101201217003

Bureau Veritas Certification
Av. Alfredo Egídio de Souza Aranha, 100, Torre C, 3º andar, Centro Administrativo Santo Amaro
Cep: 04726-170, Chácara Santo Antônio, São Paulo, SP, Brasil
Tel.: + 55 11 2655 9000 - www.bureauveritascertification.com.br

OCP 0018

BUREAU VERITAS Certification

Certificate of Conformity

BVC20.3862-X

5. The activities of installation, inspection, maintenance, repair, overhaul and recovery of equipment are the responsibility of users and must be implemented in accordance with the requirements of current technical standards and the manufacturer's recommendations.

6. The Manufacturer shall provide manual of installation and safe use written in Portuguese.

REVISIONS HISTORY	
DATE OF ISSUE	**DESCRIPTION**
2021/01/20	Initial Issue

BUREAU VERITAS 2101201217004

Bureau Veritas Certification
Av. Alfredo Egídio de Souza Aranha, 100, Torre C, 3º andar, Centro Administrativo Santo Amaro
Cep: 04726-170, Chácara Santo Antônio, São Paulo, SP, Brasil
Tel.: + 55 11 2655 9000 - www.bureauveritascertification.com.br

OCP 0018

MEGGITT

Certificado de Conformidade

CONFERIDO AO SOLICITANTE

MEGGITT SA
ROUTE DE MONCOR 4
1752 VILLARS-SUR-GLÂNE – **SUIÇA**

FABRICANTE: MEGGITT SA
ROUTE DE MONCOR 4
1752 VILLARS-SUR-GLÂNE – **SUIÇA**

O Bureau Veritas Certification certifica que o Produto constante no item escopo de fornecimento abaixo especificado, foi avaliado e encontrado em conformidade com os requisitos dos documentos de referência.

Documento de Referência

PORTARIA INMETRO N° 179 de 18/05/2010, ABNT NBR IEC 60079-0:2013 e ABNT NBR IEC 60079-11:2013.

A CERTIFICAÇÃO PARA ESTE PRODUTO É O MODELO COM AVALIAÇÃO DO SISTEMA DE GESTÃO DA QUALIDADE DO PROCESSO DE PRODUÇÃO DO PRODUTO E ENSAIOS NO PRODUTO.

Escopo de fornecimento

ACELEROMETRO
MODELO: PNR 144-134-000-XXX
MARCAÇÃO: Ex ia IIC T* ou 510 °C Ga (*Conforme tabela 1)

Data de Início da certificação: **20 DE JANEIRO DE 2021.**

Data da validade da certificação: **19 DE JANEIRO DE 2024.**

Este Certificado de Conformidade foi emitido segundo modelo de certificação 5 e é válido somente acompanhado das páginas de 1 a 4. A validade deste Certificado de Conformidade está atrelada à realização das avaliações de manutenção e tratamento de possíveis não conformidades de acordo com as orientações do Bureau Veritas Certification e previstas no RAC específico.

Para verificação da condição atualizada de regularidade deste Certificado de Conformidade deve ser consultado o banco de dados de produtos e serviços certificados do Inmetro.

Número do contrato: **20200003**

Certificado desde: **20 DE JANEIRO DE 2021.**

Número do Certificado INMETRO: **BVC20.3862-X**

Vagner Valentino
Coordenador Técnico de Certificação de Produto

Bureau Veritas Certification
Av. Alfredo Egídio de Souza Aranha, 100, Torre C, 3º andar, Centro Administrativo Santo Amaro
Cep: 04726-170, Chácara Santo Antônio, São Paulo, SP, Brasil
Tel.: + 55 11 2655 9000 - **www.bureauveritascertification.com.br**

Certificado de Conformidade
BVC20.3862-X

ESPECIFICAÇÕES:

Este acelerômetro é um transdutor eletromecânico que entrega em seus blocos terminais uma carga elétrica proporcional à pressão medida.
Funciona com equipamentos piezoelétricos montados em compressão.

CARACTERISTICAS ELÉTRICAS

Sensor: Ci ≤ 1,2nF, Li ≈ 0
Cabo: Ci ≤ 250pF/m, Li ≈ 0

Tabela 1 – Classe de Temperatura x Temperatura Ambiente

Classe de Temperatura	Faixa de Temperatura Ambiente de Operação
T6	-200 °C ≤ *Ta* ≤ +80 °C
T5	-200 °C ≤ *Ta* ≤ +95 °C
T4	-200 °C ≤ *Ta* ≤ +130 °C
T3	-200 °C ≤ *Ta* ≤ +195 °C
T2	-200 °C ≤ *Ta* ≤ +290 °C
T1	-200 °C ≤ *Ta* ≤ +440 °C
510 °C	-200 °C ≤ *Ta* ≤ +500 °C

DOCUMENTAÇÃO TÉCNICA:

- Certificado de Conformidade nº IECEX LCIE 06.0008X de 25/10/2013;
- Relatório de Ensaio LCIE n° 60044315-544914 de 03/07/2006;
- Relatório de Ensaio LCIE n° FR/LCI/ExTR06.0012/01 de 25/10/2010;
- Relatório de Ensaio LCIE n° FR/LCI/ExTR06.0012/02 de 12/12/2011;
- Relatório de Ensaio LCIE n° FR/LCI/ExTR06.0012/03 de 16/10/2013;
- Relatório de Análise (RA) n° 002/2020 de 09/10/2020;
- Data da auditoria no fabricante: 18/11/2020;
- Manual em Português.

Bureau Veritas Certification
Av. Alfredo Egídio de Souza Aranha, 100, Torre C, 3º andar, Centro Administrativo Santo Amaro
Cep: 04726-170, Chácara Santo Antônio, São Paulo, SP, Brasil
Tel.: + 55 11 2655 9000 - **www.bureauveritascertification.com.br**

Certificado de Conformidade
BVC20.3862-X

Desenho	Descrição	Revisão	Data
PZ7653	Capteur D'Acceleration	0	01/10/2004
144-134-000 D 203	Accelerometer Type CA 134	3	21/09/2016
144-134-000 D 612	Accelerometer Type CA 134	4	01/07/2020

OBSERVAÇÕES:

1. A letra "X" após o número do certificado, denota a seguinte condições de uso seguro:
   Os parâmetros elétricos de qualquer equipamento certificado IS conectado ao sensor não devem exceder os seguintes valores:
   Fonte linear: Ui ≤ 28V, Ii ≤ 100mA, Pi ≤ 0,7W
   Fonte não linear: Ui ≤ 28V, Ii ≤ 25mA, Pi ≤ 0,7W
   -200 ° C < *Ta* <+500 ° C
   Classificação de temperatura:
   T6: Tamb <80 °C, T5: Tamb <95 °C, T4: Tamb <130 °C, T3: Tamb <195 °C, T2: Tamb <290 °C, T1: Tamb <440 °C, 510 °C: Tamb <500 °C.
   O material deve ser conectado apenas a um equipamento certificado [ia] ou [ib] e esta combinação, levando em consideração o comprimento do cabo de conexão, deve ser compatível com relação à segurança intrínseca.

2. Este Certificado de Conformidade é válido para os produtos de modelo e tipo idêntico ao protótipo ensaiado. Qualquer modificação de projeto ou utilização de componentes e materiais diferentes daqueles descritos na documentação deste processo, sem autorização prévia do Bureau Veritas Certification, invalidará o certificado.

3. Os acelerometros devem ter, gravado na sua superficie externa e em local visível, a Marca de Conformidade e as características técnicas da mesma de acordo com as especificações da Norma ABNT NBR IEC 60079-0 / ABNT NBR IEC 60079-11 e Requisitos de Avalização da Conformidade, anexo à Portaria 179 do INMETRO, publicada em 18 de Maio de 2010. Esta marcação deve ser legível e durável, levando-se em conta possivel corrosão química.

4. É de responsabilidade do usuário assegurar que os produtos sejam instalados em atendimento às Normas pertinentes para Instalações Elétricas em Atmosferas Explosivas e as recomendações do Fabricante.

Bureau Veritas Certification
Av. Alfredo Egídio de Souza Aranha, 100, Torre C, 3º andar, Centro Administrativo Santo Amaro
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Certificado de Conformidade
BVC20.3862-X

5. As atividades de instalação, inspeção, manutenção, reparo, revisão e recuperação dos equipamentos são de responsabilidade dos usuários e devem ser executadas de acordo com os requisitos das normas técnicas vigentes e com as recomendações do fabricante.

6. O fabricante deve fornecer manual de instrução para instalação e uso seguro em Português

HISTÓRICO DE REVISÕES	
Data de emissão	**Descrição**
20/01/2021	Emissão Inicial.

Bureau Veritas Certification
Av. Alfredo Egídio de Souza Aranha, 100, Torre C, 3º andar, Centro Administrativo Santo Amaro
Cep: 04726-170, Chácara Santo Antônio, São Paulo, SP, Brasil
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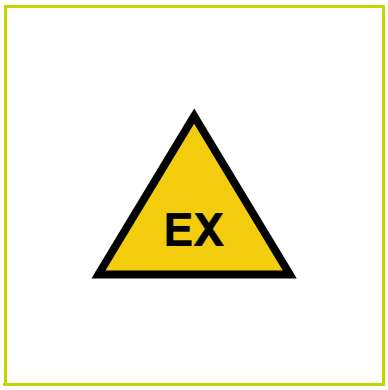
Original copy (Brazilian Portugese)
MEGGITT

EX CERTIFICATE – INMETRO

vibro-meter®

INMETRO BVC20.3863-X
for
CA134 piezoelectric accelerometer



Note: Although the Ex certificate may be included in more than one language, the liability of the notified body applies only on the text of the original copy of the certificate that it published.

Document reference INMETRO BVC20.3863-X
Edition 1 – January 2021

Meggitt SA, Route de Moncor 4, Case postale, 1701 Fribourg, Switzerland

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www.meggitt.com

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Certificate of Conformity

AWARDED TO APPLICANT

MEGGITT SA
ROUTE DE MONCOR 4
1752 VILLARS-SUR-GLÂNE – **SWITZERLAND**

MANUFACTURER: MEGGITT SA
ROUTE DE MONCOR 4
1752 VILLARS-SUR-GLÂNE – **SWITZERLAND**

Bureau Veritas Certification certifies that the Product in the scope of supply specified below has been evaluated and found to comply with the requirements of the reference documents.

Documents of Reference

ORDINANCE N° 179 FROM INMETRO, ISSUED IN MAY 18TH 2010,
ABNT NBR IEC 60079-0:2013 and ABNT NBR IEC 60079-15:2012.
CERTIFICATE ISSUED BASED ON THE MANUFACTURER EVALUATION OF QUALITY MANAGEMENT SYSTEM AND PRODUCT TESTS MODEL

Scope of Supply

ACCELEROMETER
TYPE: PNR 144-134-000-XXX
MARKING: Ex nA IIC T* or 510 °C Gc (*According to table 1)

Initial date of this Certificate: **JANUARY 20TH 2021.**
Certificate valid until: **JANUARY 19TH 2024.**

This Certificate of Conformity was issued according to the certification model 5 and is valid only accompanied by pages 1 to 5. The validity of this Certificate is linked to carrying out assessments maintenance and treatment of possible non-conformity in accordance with the Bureau Veritas Certification guidelines and in the specific Inmetro Ordinances (RAC).
To check the updated condition of regularity of this Certificate must be obtained from the product database and Certificate Services on Inmetro site.

Product Certification Contract: **20200003**

Certificate since: **JANUARY 20TH 2020.**

INMETRO Certificate Number: **BVC20.3863-X**

Vagner Valentino
Coordenador Técnico de Certificação de Produto

Bureau Veritas Certification
Av. Alfredo Egídio de Souza Aranha, 100, Torre C, 3º andar, Centro Administrativo Santo Amaro
Cep: 04726-170, Chácara Santo Antônio, São Paulo, SP, Brasil
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2101201234001

Certificate of Conformity

BVC20.3863-X

SPECIFICATION:
This equipment is composed of an electromechanical transducer which delivers to an electrical load, connected to its terminal, a signal related to the measurement performed.

ELECTRICAL CHARACTERISTICS:
U ≤ 28V, I ≤ 100mA, P ≤ 0,7W

1 – Table - Temperature Class x Ambient Temperature

Temperature Classification	Ambient Operating Temperature Range
T6	-200 °C ≤ *Ta* ≤ +80 °C
T5	-200 °C ≤ *Ta* ≤ +95 °C
T4	-200 °C ≤ *Ta* ≤ +130 °C
T3	-200 °C ≤ *Ta* ≤ +195 °C
T2	-200 °C ≤ *Ta* ≤ +290 °C
T1	-200 °C ≤ *Ta* ≤ +440 °C
510 °C	-200 °C ≤ *Ta* ≤ +500 °C

TECHNICAL DOCUMENTATION:

- Certificate of Conformity n° IECEX LCIE 10.0017X of 2011/12/23;
- Test Report LCIE n° FR/LCI/ExTR10.0019/00 of 2009/10/10;
- Test Report LCIE n° FR/LCI/ExTR10.0019/01 of 2010/10/25;
- Technical File n° 94576-589014 of 2010/07/26;
- Analysis Report (RA) n° 003/2020 of 2020/10/09;
- Factory Inspection performed in: 2020/11/18;
- Manual in Portuguese.

Bureau Veritas Certification
Av. Alfredo Egídio de Souza Aranha, 100, Torre C, 3º andar, Centro Administrativo Santo Amaro
Cep: 04726-170, Chácara Santo Antônio, São Paulo, SP, Brasil
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2101201234002

BUREAU VERITAS Certification

Certificate of Conformity
BVC20.3863-X

Drawing	Description	Revision	Date
PZ5878	Schematic CA134 With MI and MTLN-205-A Cable	0	19/02/1993
PZ3582	Transducer CA134	0	27/11/1992
PZ3583	Transducer CA134 With Soft Line Integral Cable	0	27/11/1992
PZ3584	Transducer CA134 With Hard Line Integral Cable an Connector	0	27/11/1992
PZ3585	Transducer CA134	0	27/11/1992
144-134-000 D 203	Accelerometer Type CA 134	3	21/09/2016
144-134-000 D 612	Accelerometer Type CA 134	4	01/07/2020

OBSERVATIONS:

1. The letter "X" after the Certificate number means the following special conditions for safe use:
   Operating ambient temperature: -200 °C to +500 °C
   Temperature classification in function of the operating temperature:
   T6 at Tamb. +80 °C; T5 at Tamb. +95 °C
   T4 at Tamb. +130 °C; T3 at Tamb. +195 °C
   T2 at Tamb. +290 °C; T1 at Tamb. +440 °C
   T510 °C at Tamb. +500 °C

2. This Certificate is valid only for products with the same model and type as the tested prototype. Any modification in the project, as well as the use of components apart from those defined by the technical documentation, without previous authorization from Bureau Veritas Certification, will invalid this Certificate.

3. The Accelerometer shall be marked on the external surface and in a visible place, the conformity mark and the technical characteristics according to the specifications from standards ABNT NBR IEC 60079-0 / ABNT NBR IEC 60079-15 and the conformity assessment requiremnts, attached to INMETRO Ordince n° 179, published in May 18th 2010. This marking must be readable and durable, taking into consideration possible chemical corrosion.

Bureau Veritas Certification
Av. Alfredo Egídio de Souza Aranha, 100, Torre C, 3º andar, Centro Administrativo Santo Amaro
Cep: 04726-170, Chácara Santo Antônio, São Paulo, SP, Brasil
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BUREAU VERITAS 2101201234003

OCP 0018

BUREAU VERITAS Certification

Certificate of Conformity
BVC20.3863-X

4. The equipment must be installed in compliance with the relevant standards in electrical installations in explosive atmospheres and the manufacturer's recommendations.

5. The activities of installation, inspection, maintenance, repair, overhaul and recovery of equipment are the responsibility of users and must be implemented in accordance with the requirements of current technical standards and the manufacturer's recommendations.

6. The Manufacturer shall provide manual of installation and safe use written in Portuguese.

REVISIONS HISTORY	
DATE OF ISSUE	**DESCRIPTION**
2021/01/20	Initial Issue

Bureau Veritas Certification
Av. Alfredo Egídio de Souza Aranha, 100, Torre C, 3º andar, Centro Administrativo Santo Amaro
Cep: 04726-170, Chácara Santo Antônio, São Paulo, SP, Brasil
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BUREAU VERITAS 2101201234004

OCP 0018

BUREAU VERITAS Certification

Certificado de Conformidade

CONFERIDO AO SOLICITANTE

MEGGITT SA
ROUTE DE MONCOR 4
1752 VILLARS-SUR-GLÂNE – **SUIÇA**

FABRICANTE: MEGGITT SA
ROUTE DE MONCOR 4
1752 VILLARS-SUR-GLÂNE – **SUIÇA**

O Bureau Veritas Certification certifica que o Produto constante no item escopo de fornecimento abaixo especificado, foi avaliado e encontrado em conformidade com os requisitos dos documentos de referência.

Documento de Referência

PORTARIA INMETRO N° 179 de 18/05/2010, ABNT NBR IEC 60079-0:2013 e ABNT NBR IEC 60079-15:2012.

A CERTIFICAÇÃO PARA ESTE PRODUTO É O MODELO COM AVALIAÇÃO DO SISTEMA DE GESTÃO DA QUALIDADE DO PROCESSO DE PRODUÇÃO DO PRODUTO E ENSAIOS NO PRODUTO.

Escopo de fornecimento

ACELEROMETRO
MODELO: PNR 144-134-000-XXX
MARCAÇÃO: Ex nA IIC T* ou 510 °C Gc (*Conforme tabela 1)

Data de Início da certificação: **20 DE JANEIRO DE 2021.**

Data da validade da certificação: **19 DE JANEIRO DE 2024.**

Este Certificado de Conformidade foi emitido segundo modelo de certificação 5 e é válido somente acompanhado das páginas de 1 a 4. A validade deste Certificado de Conformidade está atrelada à realização das avaliações de manutenção e tratamento de possíveis não conformidades de acordo com as orientações do Bureau Veritas Certification e previstas no RAC específico.

Para verificação da condição atualizada de regularidade deste Certificado de Conformidade deve ser consultado o banco de dados de produtos e serviços certificados do Inmetro.

Número do contrato: **20200003**

Certificado desde: **20 DE JANEIRO DE 2021.**

Número do Certificado INMETRO: **BVC20.3863-X**

Vagner Valentino
Coordenador Técnico de Certificação de Produto

BUREAU VERITAS 2101201236001

Bureau Veritas Certification
Av. Alfredo Egídio de Souza Aranha, 100, Torre C, 3º andar, Centro Administrativo Santo Amaro
Cep: 04726-170, Chácara Santo Antônio, São Paulo, SP, Brasil
Tel.: + 55 11 2655 9000 - www.bureauveritascertification.com.br

Certificação de Produtos OCP 0018

BUREAU VERITAS Certification

Certificado de Conformidade
BVC20.3863-X

ESPECIFICAÇÕES:

Este acelerômetro é composto por um transdutor eletromecânico que entrega uma carga elétrica, conectada ao seu terminal, um sinal relacionado à medição realizada

CARACTERISTICAS ELÉTRICAS

U ≤ 28V, I ≤ 100mA, P ≤ 0,7W

Tabela 1 – Classe de Temperatura x Temperatura Ambiente

Classe de Temperatura	Faixa de Temperatura Ambiente de Operação
T6	-200 °C ≤ *Ta* ≤ +80 °C
T5	-200 °C ≤ *Ta* ≤ +95 °C
T4	-200 °C ≤ *Ta* ≤ +130 °C
T3	-200 °C ≤ *Ta* ≤ +195 °C
T2	-200 °C ≤ *Ta* ≤ +290 °C
T1	-200 °C ≤ *Ta* ≤ +440 °C
510 °C	-200 °C ≤ *Ta* ≤ +500 °C

DOCUMENTAÇÃO TÉCNICA:

- Certificado de Conformidade nº IECEX LCIE 10.0017X de 23/12/2011;
- Relatório de Ensaio LCIE n° FR/LCI/ExTR10.0019/00 de 10/10/2009;
- Relatório de Ensaio LCIE n° FR/LCI/ExTR10.0019/01 de 25/10/2010;
- Technical File n° 94576-589014 de 26/07/2010;
- Relatório de Análise (RA) n° 003/2020 de 09/10/2020;
- Data da auditoria no fabricante: 18/11/2020;
- Manual em Português.

BUREAU VERITAS 2101201236002

Bureau Veritas Certification
Av. Alfredo Egídio de Souza Aranha, 100, Torre C, 3º andar, Centro Administrativo Santo Amaro
Cep: 04726-170, Chácara Santo Antônio, São Paulo, SP, Brasil
Tel.: + 55 11 2655 9000 - www.bureauveritascertification.com.br

Certificação de Produtos OCP 0018

Certificado de Conformidade
BVC20.3863-X

Desenho	Descrição	Revisão	Data
PZ5878	Schematic CA134 With MI and MTLN-205-A Cable	0	19/02/1993
PZ3582	Transducer CA134	0	27/11/1992
PZ3583	Transducer CA134 With Soft Line Integral Cable	0	27/11/1992
PZ3584	Transducer CA134 With Hard Line Integral Cable an Connector	0	27/11/1992
PZ3585	Transducer CA134	0	27/11/1992
144-134-000 D 203	Accelerometer Type CA 134	3	21/09/2016
144-134-000 D 612	Accelerometer Type CA 134	4	01/07/2020

OBSERVAÇÕES:

1. A letra "X" após o número do certificado, denota a seguinte condições de uso seguro:
   Temperatura ambiente operacional: -200 °C a +500 °C.
   Classificação da temperatura em função da temperatura operacional:
   T6 em Tamb. +80 °C; T5 em Tamb. +95 °C
   T4 em Tamb. +130 °C; T3 em Tamb. +195 °C
   T2 em Tamb. +290 °C; T1 em Tamb. +440 °C
   T510 °C em Tamb. +500 °C

2. Este Certificado de Conformidade é válido para os produtos de modelo e tipo idêntico ao protótipo ensaiado. Qualquer modificação de projeto ou utilização de componentes e materiais diferentes daqueles descritos na documentação deste processo, sem autorização prévia do Bureau Veritas Certification, invalidará o certificado.

3. Os acelerometros devem ter, gravado na sua superfície externa e em local visível, a Marca de Conformidade e as características técnicas da mesma de acordo com as especificações da Norma ABNT NBR IEC 60079-0 / ABNT NBR IEC 60079-15 e Requisitos de Avalização da Conformidade, anexo à Portaria 179 do INMETRO, publicada em 18 de Maio de 2010. Esta marcação deve ser legível e durável, levando-se em conta possivel corrosão química.

Bureau Veritas Certification
Av. Alfredo Egídio de Souza Aranha, 100, Torre C, 3º andar, Centro Administrativo Santo Amaro
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Tel.: + 55 11 2655 9000 - www.bureauveritascertification.com.br

4. É de responsabilidade do usuário assegurar que os produtos sejam instalados em atendimento às Normas pertinentes para Instalações Elétricas em Atmosferas Explosivas e as recomendações do Fabricante.

5. As atividades de instalação, inspeção, manutenção, reparo, revisão e recuperação dos equipamentos são de responsabilidade dos usuários e devem ser executadas de acordo com os requisitos das normas técnicas vigentes e com as recomendações do fabricante.

6. O fabricante deve fornecer manual de instrução para instalação e uso seguro em Português

HISTÓRICO DE REVISÕES	
Data de emissão	**Descrição**
20/01/2021	Emissão Inicial.

Bureau Veritas Certification
Av. Alfredo Egídio de Souza Aranha, 100, Torre C, 3º andar, Centro Administrativo Santo Amaro
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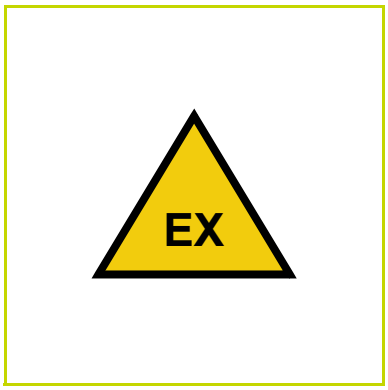
EX CERTIFICATE – INMETRO

vibro-meter®

INMETRO BVC20.3861-X
for
IPC707 signal conditioner



Note: Although the Ex certificate may be included in more than one language, the liability of the notified body applies only on the text of the original copy of the certificate that it published.

Document reference INMETRO BVC20.3861-X
Edition 1 – January 2021

Meggitt SA, Route de Moncor 4, Case postale, 1701 Fribourg, Switzerland

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energy@ch.meggitt.com
www.meggittsensing.com/energy
www.meggitt.com

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BUREAU VERITAS Certification

Certificate of Conformity

AWARDED TO APPLICANT

MEGGITT SA
ROUTE DE MONCOR 4
1752 VILLARS-SUR-GLÂNE – **SWITZERLAND**

MANUFACTURER: MEGGITT SA
ROUTE DE MONCOR 4
1752 VILLARS-SUR-GLÂNE – **SWITZERLAND**

Bureau Veritas Certification certifies that the Product in the scope of supply specified below has been evaluated and found to comply with the requirements of the reference documents.

Documents of Reference

ORDINANCE N° 179 FROM INMETRO, ISSUED IN MAY 18TH 2010,
ABNT NBR IEC 60079-0:2013, ABNT NBR IEC 60079-7:2018 and
ABNT NBR IEC 60079-11:2013.
CERTIFICATE ISSUED BASED ON THE MANUFACTURER EVALUATION OF QUALITY MANAGEMENT SYSTEM AND PRODUCT TESTS MODEL

Scope of Supply

SIGNAL CONDITIONER IPC 707
TYPE: 244-707-000-xxx-A_
MARKING: ACCORDING TO PAGE N° 04

Initial date of this Certificate: **JANUARY 20TH 2021.**
Certificate valid until: **JANUARY 19TH 2024.**

This Certificate of Conformity was issued according to the certification model 5 and is valid only accompanied by pages 1 to 5. The validity of this Certificate is linked to carrying out assessments maintenance and treatment of possible non-conformity in accordance with the Bureau Veritas Certification guidelines and in the specific Inmetro Ordinances (RAC).
To check the updated condition of regularity of this Certificate must be obtained from the product database and Certificate Services on Inmetro site.

Product Certification Contract: **20200003**

Certificate since: **JANUARY 20TH 2021.**

INMETRO Certificate Number: **BVC20.3861-X**

Vagner Valentino
Coordenador Técnico de Certificação de Produto

BUREAU VERITAS 2101201205001

Bureau Veritas Certification
Av. Alfredo Egídio de Souza Aranha, 100, Torre C, 3º andar, Centro Administrativo Santo Amaro
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OCP 0018

BUREAU VERITAS Certification

Certificate of Conformity

BVC20.3861-X

SPECIFICATION:
IPC 707 Signal conditioner is an analogue electronic conditioner which converts the electrical charges coming from a piezoelectric sensor (sensor side) into an analogue voltage or current signal (signal side).
The electronic circuitry of the IPC 707 signal conditioner is totally potted and incorporated into an aluminium enclosure. IPC 707 Signal Conditioner is equipped with terminals (sensor side and signal side) and with an optional clip for DIN rail.

Signal side ouput configurations could be as following:
Voltage output: 3-wires transmission mode,
Current output: 2-wires transmission mode.

ELECTRICAL CHARACTERISTICS:
Ex ia protection mode:
Type: 244-707-000-012-A2

Terminal	Intrinsic safety electrical parameters	
J0 (SUP, COM)	*Ui*: 28V, *Ii*: 100 mA, *Pi*: 700 mW	*Ci*: 2,2 nF, *Li*: 1 µH
J0 (OUT, COM)		*Ci*: 9,6 nF, *Li*: 565 µH
J1 (IN+, COM) (IN-, COM)	*Uo*: 6,6V, *Io*: 66 mA, *Po*: 107 mW, *Co*: 5,69 µF, *Lo*: 3,435 mH	

Ex ec protection mode:
Type: 244-707-000-012-A3

Umax: 30V;
Imax: 20 mA.

1 – Table - Temperature Class x Ambient Temperature

Temperature Classification	Ambient Operating Temperature Range
T6	-40 °C ≤ *Ta* ≤ +70 °C
T5	-40 °C ≤ *Ta* ≤ +80 °C
T4	-40 °C ≤ *Ta* ≤ +85 °C

BUREAU VERITAS 2101201205002

Bureau Veritas Certification
Av. Alfredo Egídio de Souza Aranha, 100, Torre C, 3º andar, Centro Administrativo Santo Amaro
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OCP 0018

Certificate of Conformity
BVC20.3861-X

TECHNICAL DOCUMENTATION:

- Certificate of Conformity IECEX LCIE 18.0023X of 2018/08/30;
- Test Report LCIE n° FR/LCIE/ExTR18.0047/00 of 2018/07/27;
- Test Report LCIE n° FR/LCIE/ExTR18.0048/00 of 2018/08/16;
- Technical File n° 140555-682759 of 2018/07/19
- Technical File n° 140555-682748 of 2018/07/19
- Analysis Report (RA) n° 001/2020 of 2020/10/09;
- Factory Inspection performed in: 2020/11/18;
- Manual in Portuguese.

Drawing	Description	Revision	Date
PZ 8643	Wiring Diagram for Protection Mode ia	0	13/01/2016
PZ 8644	Assy Drawing ia	0	10/01/2018
PZ8645	Oscillator / Charge Amp / HP Filter	0	10/01/2018
PZ8645	Integrator / LP Filter / Amplifier	0	10/01/2018
PZ8645	Output Buffer / Power Supply	0	10/01/2018
PZ8645	C2 C3 Cx Demod And Test	0	10/01/2018
PZ 8646	Critical Components Part List	0	10/01/2018
PZ8647	Copper Layer	0	10/01/2018
PZ 8649	Assy Drawing ec	0	10/01/2018
PZ 8650	Wiring Diagram ec	0	10/01/2018
244-707-000 V 012	SIGNAL CONDITIONER IPC707	5	01/07/2020

Certificate of Conformity
BVC20.3861-X

MARKING:
Ex ia IIC T* Ga (* According to table 1)
-40 °C ≤ *Ta* ≤ +85 °C
Ui: **, Ii: **, Pi: **, Ci: **, Li: **
Uo: **, Io: **, Po: **, Co: **, Lo: **
****completed by intrinsic safety electrical parameters of terminal concerned (see range details).

Ex ec IIC T* Gc (* According to table 1)
-40 °C ≤ *Ta* ≤ +85 °C

REDUCED MARKING:
Ex ia IIC T* Ga (* According to table 1)

Ex ec IIC T* Gc (* According to table 1)

OBSERVATIONS:

1. The letter "X" after the Certificate number means the following special conditions for safe use:
   Ambient temperature range: -40 °C to +85 °C.
   The apparatus must be connected according to instruction manual.
   a. Ex ia protection mode:
   The intrinsic safety terminal blocks (IS boards) must be connected only to an intrinsically safe certified apparatus. These combinations shall comply with the requirements of the standard IEC 60079-25.
   The equipment contains more than 15% of of aluminum. It must be mounted in such a manner as to eliminate the risk of sparks caused by friction or impact.
   The grounding of the intrinsically safe circuits must be in accordance with requirements of clause 16.2.3 of IEC 60079-14 standard.
   b. Ex ec protection mode:
   For final installation, final end user shall take any precautions to install the apparatus into an IP54 enclosure and keep it connected in compliance with IEC 60079-14 requirements, providing and maintaining degree of protection at last IP54.
   The equipment shall only be used in an area of at least pollution degree 2, as defined in IEC 60664-1 standard.
   Transient protection shall be provided that is set at a level not exceeding 140% of the peak rated voltage value at the supply terminals to equipment.

BUREAU VERITAS
Certification

Certificate of Conformity
BVC20.3861-X

2. This Certificate is valid only for products with the same model and type as the tested prototype. Any modification in the project, as well as the use of components apart from those defined by the technical documentation, without previous authorization from Bureau Veritas Certification, will invalid this Certificate.

3. The Signal Conditioner shall be marked on the external surface and in a visible place, the conformity mark and the technical characteristics according to the specifications from standards ABNT NBR IEC 60079-0 / ABNT NBR IEC 60079-7 / ABNT NBR IEC 60079-11 and the conformity assessment requiremnts, attached to INMETRO Ordince n° 179, published in May 18th 2010. This marking must be readable and durable, taking into consideration possible chemical corrosion.

4. The signal conditioner must have, fixed in a visible place and in a durable way, the following warning:

"WARNING – DO NOT SEPARATE WHEN ENERGIZED"
"WARNING – SEPARATE ONLY IN A NON-HAZARDOUS AREA"

5. The equipment must be installed in compliance with the relevant standards in electrical installations in explosive atmospheres and the manufacturer's recommendations

6. The activities of installation, inspection, maintenance, repair, overhaul and recovery of equipment are the responsibility of users and must be implemented in accordance with the requirements of current technical standards and the manufacturer's recommendations.

7. The Manufacturer shall provide manual of installation and safe use written in Portuguese.

REVISIONS HISTORY	
DATE OF ISSUE	**DESCRIPTION**
2021/01/20	Initial Issue

BUREAU VERITAS
2101201205005

Bureau Veritas Certification
Av. Alfredo Egídio de Souza Aranha, 100, Torre C, 3º andar, Centro Administrativo Santo Amaro
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OCP 0018

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Certificado de Conformidade

CONFERIDO AO SOLICITANTE

MEGGITT SA
ROUTE DE MONCOR 4
1752 VILLARS-SUR-GLÂNE – **SUIÇA**

FABRICANTE: MEGGITT SA
ROUTE DE MONCOR 4
1752 VILLARS-SUR-GLÂNE – **SUIÇA**

O Bureau Veritas Certification certifica que o Produto constante no item escopo de fornecimento abaixo especificado, foi avaliado e encontrado em conformidade com os requisitos dos documentos de referência.

Documento de Referência

PORTARIA INMETRO N° 179 de 18/05/2010, ABNT NBR IEC 60079-0:2013, ABNT NBR IEC 60079-7:2018 e ABNT NBR IEC 60079-11:2013.

A CERTIFICAÇÃO PARA ESTE PRODUTO É O MODELO COM AVALIAÇÃO DO SISTEMA DE GESTÃO DA QUALIDADE DO PROCESSO DE PRODUÇÃO DO PRODUTO E ENSAIOS NO PRODUTO.

Escopo de fornecimento

CONDICIONADOR DE SINAL IPC 707
MODELO: 244-707-000-xxx-A_
MARCAÇÃO: CONFORME PAG. N° 03

Data de Início da certificação: **20 DE JANEIRO DE 2021.**

Data da validade da certificação: **19 DE JANEIRO DE 2024.**

Este Certificado de Conformidade foi emitido segundo modelo de certificação 5 e é válido somente acompanhado das páginas de 1 a 5. A validade deste Certificado de Conformidade está atrelada à realização das avaliações de manutenção e tratamento de possíveis não conformidades de acordo com as orientações do Bureau Veritas Certification e previstas no RAC específico.

Para verificação da condição atualizada de regularidade deste Certificado de Conformidade deve ser consultado o banco de dados de produtos e serviços certificados do Inmetro.

Número do contrato: **20200003**

Certificado desde: **20 DE JANEIRO DE 2021.**

Número do Certificado INMETRO: **BVC20.3861-X**

Vagner Valentino
Coordenador Técnico de Certificação de Produto

Bureau Veritas Certification
Av. Alfredo Egídio de Souza Aranha, 100, Torre C, 3º andar, Centro Administrativo Santo Amaro
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Certificado de Conformidade

BVC20.3861-X

ESPECIFICAÇÕES:

O condicionador de sinal IPC 707 é um condicionador eletrônico analógico que converte as cargas elétricas provenientes de um sensor piezelétrico (lado do sensor) em uma tensão analógica ou sinal de corrente (lado do sinal).
O circuito eletrônico do condicionador de sinal IPC 707 é totalmente encapsulado e incorporado em um invólucro de alumínio. O condicionador de sinais IPC 707 é equipado com terminais (lado do sensor e lado do sinal) e com um clipe opcional para trilho DIN.

As configurações de saída do lado do sinal podem ser as seguintes:
Saída de tensão: modo de transmissão de 3 fios;
Saída de corrente: modo de transmissão de 2 fios.

CARACTERISTICAS ELÉTRICAS

Tipo de proteção Ex ia:
Modelo: 244-707-000-012-A2

Terminal	Parâmetros elétricos de segurança intrínseca	
J0 (SUP, COM)	*Ui*: 28V, *Ii*: 100 mA, *Pi*: 700 mW	*Ci*: 2,2 nF, *Li*: 1 µH
J0 (OUT, COM)		*Ci*: 9,6 nF, *Li*: 565 µH
J1 (IN+, COM) (IN-, COM)	*Uo*: 6,6V, *Io*: 66 mA, *Po*: 107 mW, *Co*: 5,69 µF, *Lo*: 3,435 mH	

Tipo de proteção Ex ec:
Modelo: 244-707-000-012-A3

Umax: 30V;
Imax: 20 mA

Tabela 1 – Classe de Temperatura x Temperatura Ambiente

Classe de Temperatura	Faixa de Temperatura Ambiente de Operação
T6	-40 °C ≤ *Ta* ≤ +70 °C
T5	-40 °C ≤ *Ta* ≤ +80 °C
T4	-40 °C ≤ *Ta* ≤ +85 °C

Bureau Veritas Certification
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Certificado de Conformidade
BVC20.3861-X

DOCUMENTAÇÃO TÉCNICA:

- Certificado de Conformidade IECEX LCIE 18.0023X de 30/08/2018;
- Relatório de Ensaio LCIE n° FR/LCIE/ExTR18.0047/00 de 27/07/2018;
- Relatório de Ensaio LCIE n° FR/LCIE/ExTR18.0048/00 de 16/08/2018;
- Technical File n° 140555-682759 de 19/07/2018;
- Technical File n° 140555-682748 de 19/07/2018;
- Relatório de Análise (RA) n° 001/2020 de 09/10/2020;
- Data da auditoria no fabricante: 18/11/2020;
- Manual em Português.

Desenho	Descrição	Revisão	Data
PZ 8643	Wiring Diagram for Protection Mode ia	0	13/01/2016
PZ 8644	Assy Drawing ia	0	10/01/2018
PZ8645	Oscillator / Charge Amp / HP Filter	0	10/01/2018
PZ8645	Integrator / LP Filter / Amplifier	0	10/01/2018
PZ8645	Output Buffer / Power Supply	0	10/01/2018
PZ8645	C2 C3 Cx Demod And Test	0	10/01/2018
PZ 8646	Critical Components Part List	0	10/01/2018
PZ8647	Copper Layer	0	10/01/2018
PZ 8649	Assy Drawing ec	0	10/01/2018
PZ 8650	Wiring Diagram ec	0	10/01/2018
244-707-000 V 012	SIGNAL CONDITIONER IPC707	5	01/07/2020

MARCAÇÃO
Ex ia IIC T* Ga (* Conforme tabela 1)
-40 °C ≤ *Ta* ≤ +85 °C
Ui: **, Ii: **, Pi: **, Ci: **, Li: **
Uo: **, Io: **, Po: **, Co: **, Lo: **
** Conforme parâmetros elétricos de segurança intrínseca do terminal em questão (ver tabela).

Ex ec IIC T* Gc (* Conforme tabela 1)
-40 °C ≤ *Ta* ≤ +85 °C

MARCAÇÃO REDUZIDA:
Ex ia IIC T* Ga (* Conforme tabela 1)

Ex ec IIC T* Gc (* Conforme tabela 1)

Bureau Veritas Certification
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Certificado de Conformidade
BVC20.3861-X

OBSERVAÇÕES:

1. A letra "X" após o número do certificado, denota a seguinte condições de uso seguro:
   Faixa de temperatura ambiente: -40 °C a +85 °C.
   O equipamento deve ser conectado de acordo com o manual de instruções.
   Tipo de proteção Ex ia:
   Os blocos de terminais de segurança intrínseca (placas IS) devem ser conectados apenas a um equipamento intrinsecamente seguro certificado. Essas combinações devem atender aos requisitos da norma IEC 60079-25.
   O equipamento contém mais de 15% de alumínio. Deve ser montado de forma a eliminar o risco de centelhas causadas por atrito ou impacto.
   Tipo de proteção Ex ec:
   Para a instalação final, o usuário final deve tomar todas as precauções para instalar o equipamento em um invólucro IP54 e mantê-lo conectado em conformidade com os requisitos da norma IEC 60079-14, fornecendo e mantendo o grau de proteção IP54.
   O equipamento deve ser utilizado apenas em uma área de pelo menos grau de poluição 2, conforme definido na norma IEC 60664-1.
   A proteção contra transientes deve ser fornecida e definida em um nível não superior a 140% do valor de tensão nominal de pico nos terminais de alimentação do equipamento.
   O aterramento dos circuitos intrinsecamente seguros deve estar de acordo com os requisitos 16.2.3 da norma IEC 60079-14.

2. Este Certificado de Conformidade é válido para os produtos de modelo e tipo idêntico ao protótipo ensaiado. Qualquer modificação de projeto ou utilização de componentes e materiais diferentes daqueles descritos na documentação deste processo, sem autorização prévia do Bureau Veritas Certification, invalidará o certificado.

3. Os condicionadores de sinal devem ter, gravado na sua superfície externa e em local visível, a Marca de Conformidade e as características técnicas da mesma de acordo com as especificações da Norma ABNT NBR IEC 60079-0 / ABNT NBR IEC 60079-7 / ABNT NBR IEC 60079-11 e Requisitos de Avalização da Conformidade, anexo à Portaria 179 do INMETRO, publicada em 18 de Maio de 2010. Esta marcação deve ser legível e durável, levando-se em conta possivel corrosão química.

Bureau Veritas Certification
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Certificado de Conformidade
BVC20.3861-X

4. Os condicionadores de sinal devem ter, afixada em lugar visível e de modo indelével , as seguintes advertências:

"ATENÇÃO – NÃO DESCONECTE QUANDO ENERGIZADO"

"ATENÇÃO – SEPARE SOMENTE EM ÁREA NÃO CLASSIFICADA"

5. É de responsabilidade do usuário assegurar que os produtos sejam instalados em atendimento às Normas pertinentes para Instalações Elétricas em Atmosferas Explosivas e as recomendações do Fabricante.

6. As atividades de instalação, inspeção, manutenção, reparo, revisão e recuperação dos equipamentos são de responsabilidade dos usuários e devem ser executadas de acordo com os requisitos das normas técnicas vigentes e com as recomendações do fabricante.

7. O fabricante deve fornecer manual de instrução para instalação e uso seguro em Português

HISTÓRICO DE REVISÕES	
Data de emissão	**Descrição**
20/01/2021	Emissão Inicial.

BUREAU VERITAS 2101201209005

Bureau Veritas Certification
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Certificação de Produtos OCP 0018

附录 I：CNEx / CCC Ex 认证

表 I-1：相关 CNEx / CCC Ex 证书

涵盖的产品	证书编号
CA134	CNEx 22.2014X
IPC707	CCC Ex 2022312310000425

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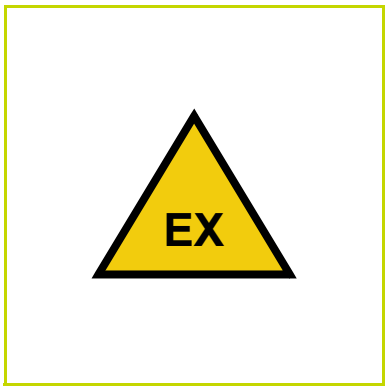
EX CERTIFICATE – CNEx

vibro-meter®

CNEx 22.2014X
for
CA134 piezoelectric accelerometer



Note: Although the Ex certificate may be included in more than one language, the liability of the notified body applies only on the text of the original copy of the certificate that it published.

Document reference CNEx 22.2014X
Edition 1 – June 2022

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www.meggitt.com

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编号：CNEx22.2014X

CNEX 国家防爆

防爆合格证

制造单位	Meggitt SA Route de Moncor 4, 1752 Villars-sur-Glâne, Switzerland
产品名称	加速计
型号规格	144-134-000-XXX
防爆标志	Ex ia IIC T6~T510℃ Ga
产品标准	--
总装图号	PZ 6920, PZ 7653

经对上述产品图样及技术文件的审查和样品检验,确认符合下列标准：
GB3836.1-2010《爆炸性环境　第 1 部分：设备　通用要求》
GB3836.4-2010《爆炸性环境　第 4 部分：由本质安全型"i"保护的设备》

记事:见附页（共 1 页）。

中心主任

颁发日期　2022 年 04 月 08 日

本证有效期　2022 年 04 月 08 日至 2027 年 04 月 07 日

Ex CQST 南阳防爆电气研究所
国家防爆电气产品质量检验检测中心

公众号

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地址：中国河南省南阳市仲景北路20号
邮编：473008　电话：0377-63258564 传真：0377-63208175 网址：www.china-ex.com

编号：CNEx22.2014X

CNEX 国家防爆

防爆合格证 （附页）

共 1 页 第 1 页

1. 本产品已取得 IECEx 认证，证书编号：IECEx LCI 06.0008X，版本 3，颁发日期：2013-10-25。
2. 本安参数：
   传感器：Ci ≤ 1.2nF, Li ≈ 0
   电缆：Ci ≤ 250pF/m, Li ≈ 0
3. 安全使用条件：
   - 连接到本传感器的本安设备参数应满足以下要求:
     线性：Ui≤28V, Ii≤100mA, Pi≤0.7W;
     非线性：Ui≤28V, Ii≤25mA, Pi≤0.7W
   - 使用环境温度：-200℃< Ta < +500℃
   - 温度组别：T6 : Tamb < 80℃, T5 : Tamb < 95℃, T4 : Tamb < 130℃, T3 : Tamb < 195℃, T2 : Tamb < 290℃, T1 : Tamb < 440℃, 510℃ : Tamb < 500℃。
   - 本产品只能连接到已取得防爆合格证的[ia]或[ib]设备，考虑到连接电缆的长度，组合后本安参数应相互匹配。

中心主任

颁发日期　2022 年 04 月 08 日

本证有效期　2022 年 04 月 08 日至 2027 年 04 月 07 日

Ex CQST 南阳防爆电气研究所
国家防爆电气产品质量检验检测中心

公众号

注：本证书仅对与认可文件和样品一致的产品有效。登录网站或关注公众号查询真伪
地址：中国河南省南阳市仲景北路20号
邮编：473008　电话：0377-63258564 传真：0377-63208175 网址：www.china-ex.com

Certificate number: CNEx22.2014X

防爆合格证

Electrical Apparatus for Explosive Atmospheres

CERTIFICATE OF CONFORMITY

Manufacturer	Meggitt SA Route de Moncor 4, 1752 Villars-sur-Glâne, Switzerland
Product	Accelerometer
Type	144-134-000-XXX
Marking	Ex ia IIC T6~T510℃ Ga
Standard(s)	--
Drawing No.	PZ 6920, PZ 7653

The drawings, technical documents and the samples are verified and certified according to standard(s) for safety as below:

GB 3836.1-2010	Explosive atmospheres - Part 1: Equipment - General requirements
GB 3836.4-2010	Explosive atmospheres - Part 4: Equipment protection by intrinsic safety "i"

Note:

See Annex (1 page in total).

Director **Date:** 2022-04-08

Valid until: 2027-04-07

南阳防爆电气研究所
NANYANG EXPLOSION PROTECTED ELECTRICAL APPARATUS RESEARCH INSTITUTE
国家防爆电气产品质量检验检测中心
CHINA NATIONAL QUALITY SURVEY AND TEST CENTER FOR EXPLOSION PROTECTED ELECTRICAL PRODUCTS
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Tel:0377-63208864 Fax:0377 63208175 http://www.china-ex.com

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Note:This certificate is only valid for products which are identical with the sample(s) tested and verified.Holder of this certificate has the responsibility to ensure the products comply with relevant standards.

Certificate number: CNEx22.2014X

防爆合格证 （附页）

Electrical Apparatus for Explosive Atmospheres

CERTIFICATE OF CONFORMITY

1. This product has been IECEx certified, certificate No. IECEx LCI 06.0008X, issue 3, dated on 2013-10-25.
2. SPECIFIC PARAMETERS OF THE MODE OF PROTECTION "ia" :
   Sensor : Ci ≤ 1.2nF, Li ≈ 0
   Cable : Ci ≤ 250pF/m, Li ≈ 0
3. Specific conditions of safety use:

- Electrical parameters of any IS certified equipment connected to the sensor shall not exceed the following values:
  Linear source : Ui ≤ 28V,Ii≤ 100mA,Pi≤ 0.7W;
  Non linear source : Ui≤ 28V,Ii≤ 25mA,Pi≤ 0.7W
- Ambient temperature range: -200℃< Ta < +500℃
- Temperature classification : T6 : Tamb < 80℃, T5 : Tamb < 95℃, T4 : Tamb < 130℃, T3 : Tamb < 195℃, T2 : Tamb < 290℃, T1 : Tamb < 440℃, 510℃ : Tamb < 500℃.
- The materiel shall only be connected to a certified [ia] or [ib] apparatus and this combination, taking account to the length of joining cable, shall be compatible as regards intrinsic safety.

Director **Date:** 2022-04-08

Valid until: 2027-04-07

南阳防爆电气研究所
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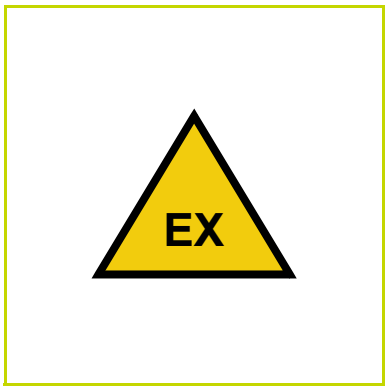
EX CERTIFICATE – CCC Ex

vibro-meter®

CCC Ex 2022312310000425
for
IPC707 signal conditioner



Note: Although the Ex certificate may be included in more than one language, the liability of the notified body applies only on the text of the original copy of the certificate that it published.

Document reference CCC Ex 2022312310000425
Edition 2 – December 2022

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www.meggitt.com

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中国国家强制性产品认证证书

编　号：2022312310000425

委　托　人	Meggitt SA
地　　址	Route de Moncor 4, 1752 Villars-sur-Glâne, Switzerland
生　产　者	Meggitt SA
地　　址	Route de Moncor 4, 1752 Villars-sur-Glâne, Switzerland
生 产 企 业	Meggitt SA
生 产 地 址	Route de Moncor 4, 1752 Villars-sur-Glâne, Switzerland
产 品 名 称	信号调节器
型 号 规 格	244-707-000-012-A*-B*-C*****-D*-E**-F*****-G*
防 爆 标 志	Ex ia IIC T6/T5/T4 Ga, Ex ec IIC T6/T5/T4 Gc
依 据 标 准	GB/T3836.1-2021, GB/T3836.3-2021, GB/T3836.4-2021
认 证 模 式	型式试验+初始工厂检查+获证后监督

上述产品符合 CNCA-C23-01: 2019《强制性产品认证实施规则　防爆电气》和 CNEX-C2301-2019《强制性产品认证实施细则　防爆电气》的要求。

产品相关信息见附页（共 4 页）。

首次发证日期：2022 年 01 月 22 日

颁发日期：2022 年 10 月 25 日　　有效期至：2027 年 01 月 21 日

证书有效期内本证书的有效性依据发证机构的定期监督获得保持。

主任：

南阳防爆电气研究所有限公司

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CN 0020333

中国国家强制性产品认证证书（附页）

编　号：2022312310000425

产品相关信息：

1、本证书覆盖产品如下：

- 244-707-000-012-A*-B*-C*****-D*-E**-F*****-G*

244-707-000-012	-	A	*	-	B	*	-	C	*****	-	D	*	-	E	**	-	F	*****	-	G	*
			1)			2)			3)			4)			5)			6)			7)

1) 环境

2	防爆型式 Ex i
3	防爆型式 Ex ec

2) 诊断功能

1	无诊断功能
2	具有诊断功能（SIL）

3) 传输灵敏度

0.1	无积分器
0.2	
0.5	
1	
2	
5	
10	
20	
50	

颁发日期：2022 年 10 月 25 日

主任：

南阳防爆电气研究所有限公司

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中国国家强制性产品认证证书
（附页）

编　号：2022312310000425

981	有积分器
1962	
4905	
9810	
19620	
49050	
98100	

4) 传输单元

1	μA/pC	无积分器
2	mV/pC	
3	μA/pCs	有积分器
4	mV/pCs	

5) 高通滤波器

0.5	以 Hz 为单位的值
1	
2	
5	
10	
20	

6) 低通滤波器

500	以 Hz 为单位的值
1000	
2000	
5000	
10000	
20000	

颁发日期：2022 年 10 月 25 日　　主任：

南阳防爆电气研究所有限公司

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中国国家强制性产品认证证书
（附页）

编　号：2022312310000425

7) 安装

1	无 DIN 导轨适配器
2	带 DIN 导轨适配器

额定参数：
对本质安全型 Ex ia：

端子	本安参数	
J0 (SUP, COM)	U_i：28V，I_i：100 mA，P_i：700 mW	C_i：2.2 nF，L_i：1 μH
J0 (OUT, COM)		C_i：9.6 nF，L_i：565 μH
J1 (IN+, COM) (IN-, COM)	U_o：6.6V，I_o：66 mA，P_o：107 mW，C_o：5.69 μF，L_o：3.435 mH	

对增安型 Ex ec：
U_{max}：30V，I_{max}：20 mA

温度组别对应表：

温度组别	环境温度范围
T6	-40°C ≤ T_{amb} ≤ +70°C
T5	-40°C ≤ T_{amb} ≤ +80°C
T4	-40°C ≤ T_{amb} ≤ +85°C

防爆标志：Ex ia IIC T6/T5/T4 Ga, Ex ec IIC T6/T5/T4 Gc

- 生产者应按照认证机构批准的技术文件组织生产。

2、安全使用条件：

- 环境温度：-40℃~+85℃。
- 设备必须按照使用说明书进行连接。
- 对于本质安全型 Ex ia：

颁发日期：2022 年 10 月 25 日　　主任：

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中国国家强制性产品认证证书
（附页）

编　号：2022312310000425

- 本质安全接线端子（IS 板）必须且仅能连接到经本质安全认证的设备。它们组成的系统应符合 GB/T 3836.18 标准的要求。
- 该设备外壳材质铝含量超过 15%，其安装方式必须能够消除由于冲击或摩擦引起的点燃危险。
- 本安电路的接地必须符合 GB/T 3836.15 标准第 12.2.4 条的要求。

- 对增安型 Ex ec:

- 现场安装时，用户应将本产品安装到 IP54 的外壳中，并按照 GB/T 3836.15 要求安装接线，以保证最终达到 IP54 的防护等级。
- 根据 GB/T 16935.1，该设备只应在污染程度不低于 2 级的区域使用。
- 瞬态保护应提供不超过设备的供电端子额定峰值电压值 140%的保护。

- 其他见产品使用说明书。

3、证书关联报告：

- 产品型式试验报告：CQST2110C006，CQST2110C006/01
- 工厂检查报告：CN2022Q010015

4、证书变更信息：

- 2022 年 10 月 25 日第 1 次变更：产品认证依据标准变更。

颁发日期：2022 年 10 月 25 日

主任：穆大玉

南阳防爆电气研究所有限公司

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CERTIFICATE FOR CHINA COMPULSORY PRODUCT CERTIFICATION

No.: 2022312310000425

Applicant	Meggitt SA
Address	Route de Moncor 4, 1752 Villars-sur-Glâne, Switzerland
Manufacturer	Meggitt SA
Address	Route de Moncor 4, 1752 Villars-sur-Glâne, Switzerland
Production Factory	Meggitt SA
Production Address	Route de Moncor 4, 1752 Villars-sur-Glâne, Switzerland
Product	Signal Conditioner
Model/Type	244-707-000-012-A*-B*-C*****-D*-E**-F*****-G*
Ex marking	Ex ia IIC T6/T5/T4 Ga, Ex ec IIC T6/T5/T4 Gc
Reference Standards	GB/T3836.1-2021, GB/T3836.3-2021, GB/T3836.4-2021
Certification mode	Type Test + Initial Factory Inspection + Post-Certification Surveillance

The product(s) is verified and certified according to CNCA-C23-01: 2019 *China Compulsory Certification Implementation Rule on Explosion Protected Electrical Product* and CNEX-C2301-2019 *Guideline of China Compulsory Certification Implementation Rule on Explosion Protected Electrical Product.*

See Annex for the detailed product information (4 pages)

Initial issue date: 2022-01-22

Issued date: 2022-10-25　　Valid to: 2027-01-21

The validity of this certificate is maintained through the regular supervision of the issuing authority during the validity period.

Where any discrepancy arises between the English translation and the original Chinese version, the Chinese version shall prevail.

Director: 穆大玉

Nanyang Explosion Protected Electrical Apparatus Research Institute Co.,Ltd.

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CN 0001433

CERTIFICATE FOR CHINA COMPULSORY PRODUCT CERTIFICATION

(Annex)

No.: 2022312310000425

Product information:

1. This certificate covers the following models:

- 244-707-000-012-A*-B*-C*****-D*-E**-F*****-G*

244-707-000-012	-	A	*	-	B	*	-	C	*****	-	D	*	-	E	**	-	F	*****	-	G	*
			1)			2)			3)			4)			5)			6)			7)

1) Environment

2	Explosive Ex i
3	Explosive Ex ec

2) Diagnostic

1	Without diagnostic
2	With diagnostic(SIL)

3) Transfer sensitivity

0.1	Without integrator
0.2	
0.5	
1	
2	
5	
10	
20	
50	
981	With integrator
1962	
4905	
9810	

Issued date: 2022-10-25

Director:

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CERTIFICATE FOR CHINA COMPULSORY PRODUCT CERTIFICATION

(Annex)

No.: 2022312310000425

19620	
49050	
98100	

4) Transfer unit

1	μA/pC	Without integrator
2	mV/pC	
3	μA/pCs	With integrator
4	mV/pCs	

5) HP Filter

0.5	Value in Hz
1	
2	
5	
10	
20	

6) LP Filter

500	Value in Hz
1000	
2000	
5000	
10000	
20000	

7) Installation

1	Without rail DIN adaptor
2	With rail DIN adaptor

Rating:
Ex ia protection mode:

Terminal	Intrinsic safety electrical parameters

Issued date: 2022-10-25

Director:

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Original copy (Chinese)
MEGGiTT

CERTIFICATE FOR CHINA COMPULSORY PRODUCT CERTIFICATION

(Annex)

No.: 2022312310000425

J0 (SUP, COM)	U_i: 28V, I_i :100 mA, P_i :700 mW	C_i :2,2 nF, L_i :1 μH
J0 (OUT, COM)		C_i :9,6 nF, L_i :565 μH
J1 (IN+, COM) (IN-, COM)	U_o :6.6V, I_o :66 mA, P_o :107 mW, C_o :5.69 μF, L_o :3.435 mH	

Ex ec protection mode: U_{max} : 30V, I_{max} : 20 mA

Temperature classification table:

Temperature classification	Ambient operating temperature range
T6	-40°C ≤ T_{amb} ≤ +70°C
T5	-40°C ≤ T_{amb} ≤ +80°C
T4	-40°C ≤ T_{amb} ≤ +85°C

Ex marking: Ex ia IIC T6/T5/T4 Ga, Ex ec IIC T6/T5/T4 Gc

- Producers should organize production in accordance with the technical documents approved by the certification body.

2. Specific conditions of safety use:

- Ambient temperature: -40℃~+85℃.

- The apparatus must be connected according to instruction manual.

- Ex ia protection mode:

• The intrinsic safety terminal blocks (IS boards) must be connected only to an intrinsically safe certified apparatus. These combinations shall comply with the requirements of the standard GB/T 3836.18.

• The equipment contains more than 15% of of aluminum. It must be mounted in such a manner as to eliminate the risk of sparks caused by friction or impact.

• The grounding of the intrinsically safe circuits must be in accordance with

Issued date: 2022-10-25

Director:

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CERTIFICATE FOR CHINA COMPULSORY PRODUCT CERTIFICATION

(Annex)

No.: 2022312310000425

requirements of clause 12.2.4 of GB/T 3836.15 standard.

- Ex ec protection mode:

• For final installation, final end user shall take any precautions to install the apparatus into an IP54 enclosure and keep it connected in compliance with GB/T 3836.15 requirements, providing and maintaining degree of protection at last IP54.

• The equipment shall only be used in an area of at least pollution degree 2, as defined in GB/T 16935.1 standard.

• Transient protection shall be provided that is set at a level not exceeding 140% of the peak rated voltage value at the supply terminals to equipment.

- See instruction for other information.

3. Certificate related report(s):

- Type test report: CQST2110C006, CQST2110C006/01

- Factory inspection report: CN2022Q010015

4. Certificate change information:

- 1st change on October 25, 2022: Updated the standards for certification.

Issued date: 2022-10-25

Director:

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