



Fribourg, 20 December 2018

Vibro-Meter® VM600 machinery protection system (MPS) certified SIL 2

Dear colleagues, partners and customers,

Meggitt is proud to announce that Exida, one of the world's leading system safety and certification companies, has certified the Vibro-Meter® VM600 rack-based machinery protection system (MPS) as suitable for use in safety-related applications up to and including SIL 2.

Due to the quality of our Meggitt Vibro-Meter® product development, production processes and the reliability of our VM600 rack-based systems, we were able to demonstrate that VM600 machinery protection systems fulfil all of the requirements necessary to be SIL 2 capable, in accordance with the IEC 61508:2010 standard.

The Exida safety certificate and functional safety assessment report can be obtained from the safety/security automation equipment List (SAEL) pages of the Exida website, here: <https://www.exida.com/SAEL-Safety/meggitt-sa-vm600-machinery-protection-system>

(These documents will also be available from the Meggitt Vibro-Meter® website soon.)

It is important to note that the SIL 2 functional safety certification for VM600 machinery protection systems includes the standard system (ABE04x) versions of the VM600 rack, using *standard versions* of the MPC4/IOC4T machinery protection card pair, AMC8/IOC8T analog monitoring card pair and RLC16 relay card. Accordingly, this new certification covers all of our machinery monitoring and protection solutions for vibration, temperature and process measurement applications, and is ideally suited for the increasingly important oil & gas market.

In comparison with our earlier SIL 1 functional safety certification for VM600 machinery protection systems (awarded by TÜV Nord in 2009), the latest SIL 2 certification is less restrictive and includes more functionality. For example, some of the key features and improvements are:

- Machinery protection systems (MPSs) and condition monitoring systems (CMSs) are allowed in the same VM600 rack.
- Use of standard versions of the MPC4/IOC4T machinery protection card pair. All configurable MPC4 processing are allowed covering a wide range of machinery vibration protection applications.
- Use of standard AMC8/IOC8T analog monitoring card pairs. Allows machinery protection based on process and temperature parameters.
- "Special" SIL versions of cards are not required, resulting in easier ordering, maintenance and spare parts management.
- Safety output(s) are VM600 card relays only, which must be configured redundantly in a 1oo2 (one out of two) architecture.
- Safe state is de-energised, so VM600 card relays must be configured as normally energised (that is, de-energised to trip).



- At least one relay per VM600 card must be configured for system-level diagnostics, including sensor/measurement chain status and card status.
- A proof test has been defined to detect dangerous faults which are undetected by automatic diagnostic tests. The level of Proof Test Coverage (PTC) are provided in the safety manual.
- Proof test interval of 1 year (typical), higher proof test interval may be recommended based on the optimal PFDavg value as required to be calculated for the Safety Instrumented Function (SIF).
- Networked VM600 racks with CPUx “rack controller” and communications interface cards are allowed (not allowed by the SIL 1 certification).

Given the many improvements and advantages, SIL 2 certified VM600 machinery protection systems are now the recommended solution for all new safety-related applications. However, in order to support existing customers, SIL 1 certified systems will continue to be available in the future and it will still be possible to order the MPC4SIL card.

Note: SIL 2 and SIL 1 certified VM600 machinery protection systems have their own separate certifications and safety manuals. In safety-related applications, all instructions and recommendations in the relevant safety manual must be implemented as appropriate by the end user.

More information on VM600 machinery protection systems and SIL 2 certification, including a new *VM600 (SIL 2) safety manual*, will be available soon, expected in Q1, 2019.

Please do not hesitate to contact your Meggitt representative, who will help you with any questions regarding this new SIL 2 capability for the VM600 machinery protection system.

Yours faithfully,

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