MEGGiTT
smart engineering for
extreme environments

K 230

Transmission cable

FEATURES

- From the Vibro-Meter® product line
- Low-noise transmission cable
- 2 x 0.45 mm^2 twisted cores
- PTFE sheath with glass-fibre and metallic overbraids
- High-level of mechanical protection
- Temperature range: −54 to 200 °C

K 230

DESCRIPTION

The K 230 transmission cable is used to connect a piezoelectric sensor such as an accelerometer to an external charge amplifier.

It is a low-noise, twin-core, twisted-pair, shielded cable that is designed to withstand high temperatures. Its construction also features glass-fibre and metallic overbraids that provide a high-level of mechanical protection.

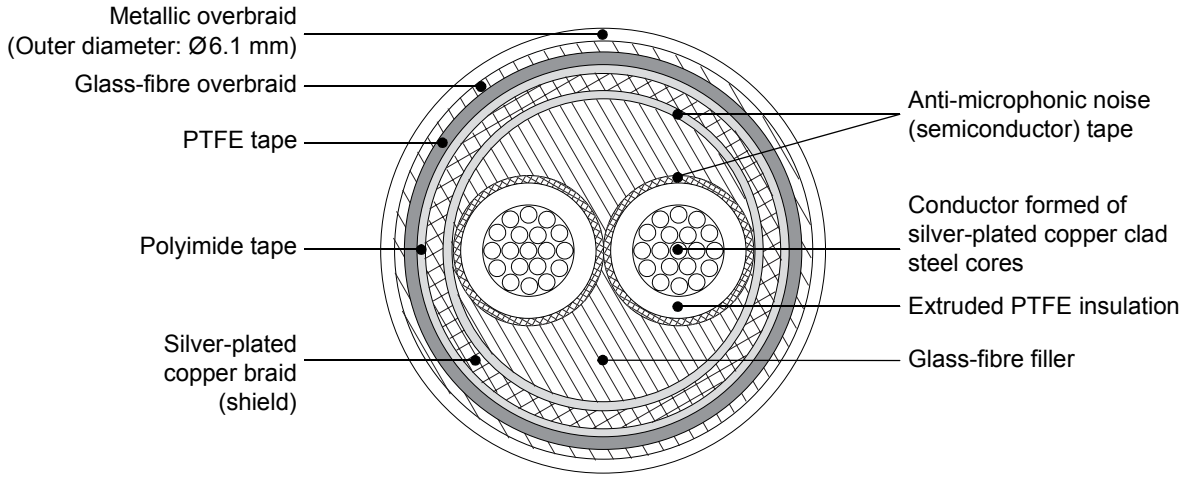
Due to its low-noise capability, cable lengths up to 30 metres can be installed between a sensor and its charge amplifier (signal conditioner).

To ensure proper functioning of systems, a flexible cable protection can be used to provide additional mechanical protection. It is recommended that the cable ends are terminated at a junction box or with mating connectors.

Cable assemblies to facilitate field installations, or to match special installation requirements, are available on request.

For specific applications, contact your nearest Meggitt Sensing Systems representative.

MECHANICAL CONSTRUCTION



SPECIFICATIONS

Physical

Conductors	: Two 0.45 mm^2 (≈21 AWG) conductors, each formed of 19 x 0.171 mm silver-plated copper clad steel cores
Conductor insulation	: Extruded PTFE (nom. Ø1.40 mm)
Anti-microphonic noise measures	: Semiconductor tape around individual conductors and around overall inner cable (nom. Ø1.58 mm). See **Triboelectrical (microphonic) noise on page 3**.
Shield	: 0.12 mm silver-plated copper braid
Inner sheath	: Polyimide tape inner. PTFE tape outer (nom. Ø4.2 mm).
Outer sheath	: Glass-fibre overbraid (nom. Ø5.28 mm). Metallic overbraid outer (0.2 mm stainless steel).
Outer diameter	: Ø5.8 mm min. Ø6.1 mm max.
Colour	
• *Conductors*	: One white and one blue
• *PTFE sheath (inner)*	: White
Weight	: 95 g/m (1.02 oz/ft) max.
Bending radius	: 50 mm min.

Environmental

Operating temperature	
• *Continuous*	: −54 to 200 °C (−65 to 392 °F)
• *Short-term survival (500 cycles max.)*	: −62 to 250 °C (−80 to 482 °F)

SPECIFICATIONS *(continued)*

Electrical

(At 20 °C, 68 °F)

Voltage rating	: 600 V_{AC}
Withstand voltage	
• *Core to core*	: 1500 V_{AC}
• *Core to shield*	: 1500 V_{AC}
Insulation resistance	: ≥10^{12} Ω•m at 23 °C (73 °F)
Resistance (conductors)	: ≤100 Ω/km
Capacitance (core to shield)	: 210 pF/m (64 pF/ft) nom.
Inductance (conductors)	: 500 nH/m (152 nH/ft) nom.
Triboelectrical (microphonic) noise	
• *2 Hz, 40 mm pk-pk displacement*	: ≤10 pC
• *5 to 50 Hz, 5 mm pk-pk displacement*	: ≤1 pC
• *10 to 70 Hz, 2 mm pk-pk displacement*	: ≤0.15 pC

Mechanical

Notched bar impact resistance	: High
Abrasion resistance	: High
Breaking strength	: High
Impact and bending resistance	: High
Cold flexibility	: Good

Chemical

Weather resistance	: Good
Water resistance	
• *At 20 °C (68 °F)*	: Good
• *At 70 °C (158 °F)*	: Good
Acid resistance	: Good
Alkaline solution resistance	: Good
Oil resistance	: Good
Gasoline resistance	: Good

ORDERING INFORMATION

To order please specify

Type	Designation	Ordering number	Cable length (in metres)
K 230	Transmission cable	957.37.20.5999	*xx* m

Headquartered in the UK, Meggitt PLC is a global engineering group specializing in extreme environment components and smart sub-systems for aerospace, defence and energy markets.

Meggitt Sensing Systems is the operating division of Meggitt specializing in sensing and monitoring systems, which has operated through its antecedents since 1927 under the names of ECET, Endevco, Ferroperm Piezoceramics, Lodge Ignition, Sensorex, Vibro-Meter and Wilcoxon Research. Today, these operations are integrated under one strategic business unit called Meggitt Sensing Systems, headquartered in Switzerland and providing complete systems, using these renowned brands, from a single supply base.

The Meggitt Sensing Systems facility in Fribourg, Switzerland was formerly known as Vibro-Meter SA, but is now Meggitt SA. This site produces a wide range of vibration and dynamic pressure sensors capable of operation in extreme environments, leading-edge microwave sensors, electronics monitoring systems and innovative software for aerospace and land-based turbo-machinery.

In this publication, a dot (.) is used as the decimal separator and thousands are separated by thin spaces. Example: 12345.67890.

Sales offices

Meggitt Sensing Systems has offices in more than 30 countries. For a complete list, please visit our website.

ISO 9001
FS 584089

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