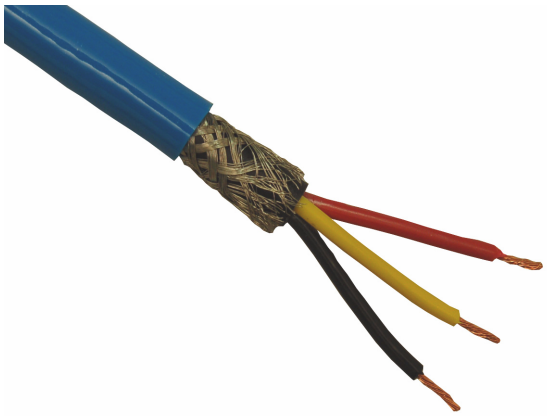
MEGGiTT
smart engineering for
extreme environments

K 310

Transmission cable

FEATURES



- From the Vibro-Meter® product line
- For use in potentially explosive atmospheres
- 3 x 0.5 mm^2 twisted cores
- PUR outer sheath
- Good chemical resistance
- Low capacitance
- Temperature range: −40 °C to +70 °C

DESCRIPTION

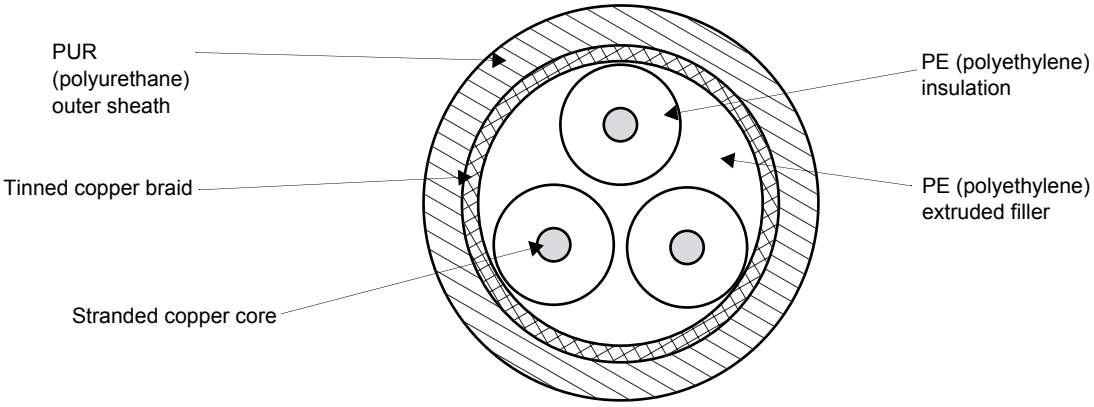
The K 310 signal transmission cable is used to connect a transducer with electronics or a signal conditioner to the processing/monitoring system. It is a three-core shielded cable designed to withstand extreme ambient temperatures and hostile industrial environments, such as oil and solvents. This cable is recommended for Ex petrochemical screened connections of field-mounted transducers/electronics to remote electronics, where high mechanical performance combined with oil and petroleum resistance is required.

When used in VIBRAX proximity installations the K 310 cable supplies the DC power (−24 V) to operate the IQS signal conditioner and transmit the gap/vibration signal to the processor's modules. Due to its low capacitance and resistance, cable lengths can be greater than 300 metres for transmission of voltage modulated signals up to a frequency of 10 kHz without significant signal distortion.

To ensure proper functioning of systems and to facilitate field installation, flexible protection tubes (conduits) made of metal can be used to provide mechanical protection. It is recommended that the cable ends are terminated at a barrier terminal strip (conditioner or junction box), or terminated with transducer or matching electronics connectors or lugs.

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

MECHANICAL CONSTRUCTION



SPECIFICATIONS

PHYSICAL

Conductors	: Stranded copper core: 19 x 0.18 mm; Ø1.1 mm
Colour code	: Yellow (signal), black (common) and red (power supply)
Conductor insulation	: PE
Shield	: Tinned copper braid
Outer sheath	: Blue PUR with thickness ~ 0.9 mm
Cable diameter	: 7.7 ±0.3 mm
Weight	: 78 g/m
Bending radius	: 45 mm
Operating temperature (continuous)	: −40 °C to +70 °C

ELECTRICAL

(at +20 °C)	
Voltage rating	: 500 V_{RMS}
Test voltage	: 2500 V_{RMS}
Resistance	
• *Core*	: 39 Ω/km
• *Shield*	: 14 Ω/km
Capacitance (nominal)	
• *Core to cores + shield clamped*	: 100 pF/m
• *Core to core*	: 56 pF/m
• *Cores to shield*	: 225 pF/m
Inductance of the measuring and supply loop	: 0.9 µH/m

SPECIFICATIONS *(continued)*

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	: Good
Water resistance at +70 °C	: Average
Acid resistance	: Poor
Alkaline solution resistance	: Poor
Oil resistance	: Good
Gasoline resistance	: Good

ORDERING INFORMATION

To order please specify:

Type	Designation	Ordering number	Cable length
K 310	Transmission cable	957.34.30.5066	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 spaces. Example : 12345.67890.

Sales offices

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

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