

DATA SHEET

Vibro-Meter®

PV660 piezoelectric  
velocity sensor



KEY FEATURES AND BENEFITS

- From the Vibro-Meter® product line
- Voltage output signal: 4 mV/mm/s
- Frequency response: 5 Hz to 4 kHz
- Temperature range: -25 to 140°C
- Ground isolated from case
- Isolated electronics for reduced noise and increased bias voltage stability

APPLICATIONS

- General-purpose vibration monitoring in harsh industrial environments

DESCRIPTION

The PV660 piezoelectric velocity sensor from Meggitt's Vibro-Meter® product line is a general-purpose vibration sensor designed for the monitoring and protection of machinery in harsh industrial environments.

The PV660 is an industry standard IEPE (integrated electronics piezo electric) velocity sensor that requires a constant current power supply and provides a dynamic vibration output signal (AC voltage) on a bias level (DC voltage). The PV660 is available with a sensitivity of 4 mV/mm/s.

A range of 2-wire shielded cables are available to connect the sensor to the monitoring system, depending on the environment.

For specific applications, contact your local Meggitt representative.



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## SPECIFICATIONS

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**Note: Unless otherwise stated, all values listed are typical values, referenced at 23°C (73°F), 24 V<sub>DC</sub> supply, 4 mA constant current and 80 Hz.**

### Operating

Sensitivity	: 4 mV/mm/s ±5%
Dynamic range	: ±80 g
Transverse sensitivity	: <5%
Linearity	: <1% up to full scale
Frequency response	
• 5 Hz to 4kHz	: ±5%
• 1.5 Hz	: -3 dB
Resonant frequency	: 18 kHz nominal
Temperature response	
• -25 to 140°C (-13 to 284 °F)	: ±5% typical deviation

### Electrical

Power supply voltage (for current source)	: 24 V <sub>DC</sub> ±25% (18 to 30 V <sub>DC</sub> )
Power supply current	: 0.5 to 8 mA
Bias voltage	: 12 V <sub>DC</sub> nominal
Output impedance	: 150 Ω nominal
Residual electrical noise	: 0.3 mg maximum
Grounding	: Base isolated
Reversed polarity	: Protected

### Environmental

Temperature range	: -25 to 140°C (-13 to 284°F)
Protection rating (according to IEC 60529)	: IP67

### Approvals

Conformity	: CE marking, European Union (EU) declaration of conformity
Environmental management	: RoHS compliant (2011/65/EU)

## SPECIFICATIONS *(continued)*

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### Physical

Case material	: Stainless steel
Dimensions	: See <b>Mechanical drawings on page 4</b>
Weight	: 110 g (0.24 lb) approx.

### Connector

Type	: MIL-C/DTL-5015 type – rugged circular, threaded coupling, 2-pin connector with keyway. Mates with MIL-C/DTL-5015 type connectors used by the recommended cable assemblies.
Pinout	
• Pin A+	: Power supply and output signal
• Pin B-	: Common
Recommended cable assemblies	: EC602, EC612, EC318 or EC319 (see <b>Accessories on page 5</b> )

### Mounting

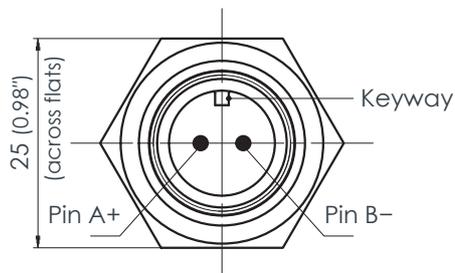
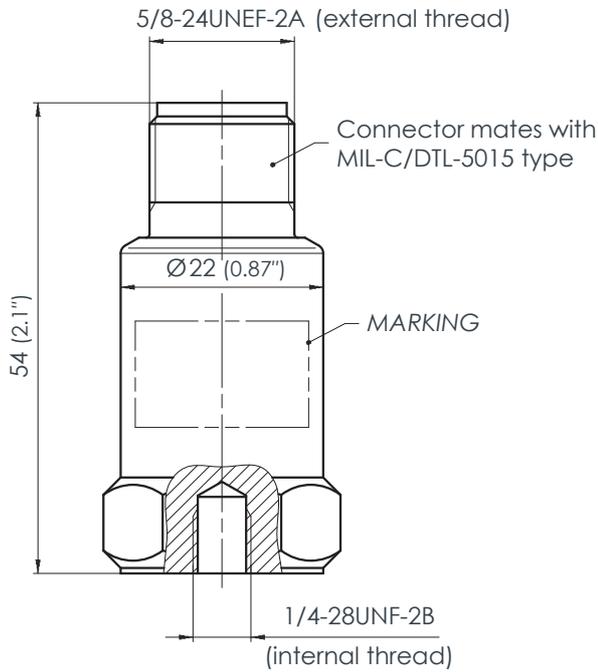
Stud or adaptor	: 1/4-28UNF (see <b>Accessories on page 5</b> )
Torque	: 8 N•m (5.9 lb-ft). Refer also to the <i>CExxx and PVxxx vibration sensors (piezoelectric accelerometers and piezoelectric velocity sensors) installation manual</i> .

### Calibration

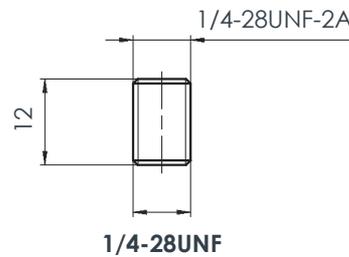
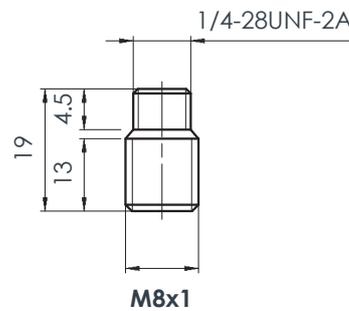
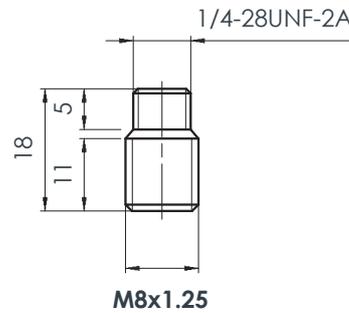
Dynamic calibration at factory. No subsequent calibration necessary.

MECHANICAL DRAWINGS

PV660 velocity sensor



Adaptor studs



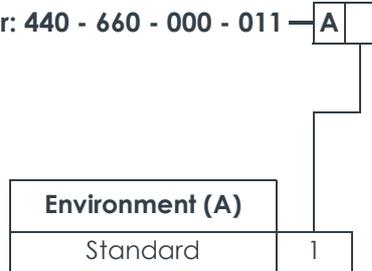
Note: All dimensions are in mm (in) unless otherwise stated.

**ORDERING INFORMATION**

To order please specify

Type	Designation	Part number (PNR)
PV660	Piezoelectric velocity sensor	See below

Ordering number: 440 - 660 - 000 - 011 — **A**



**ACCESSORIES**

**Supplied**

Item	Type	Part number (PNR)
• Adaptor studs	M8x1.25 (1/4-28UNF-2A to M8x1.25)	
	M8x1 (1/4-28UNF-2A to M8x1)	
	1/4-28UNF (1/4-28UNF-2A to 1/4-28UNF-2A)	

Note: One of each type of adaptor stud is supplied with a PV660, that is, one M8x1.25, one M8x1 and one 1/4-28UNF.

**Optional**

Item	Type	Part number (PNR)
• Cable assemblies	EC602 (Standard version with a 2-pin MIL-C/DTL-5015 type connector and ETFE 2-wire cable)	922-602-000-001
	EC612 (Standard version with a 2-pin MIL-C/DTL-5015 type connector and ETFE 2-wire cable with metallic overbraid)	922-612-000-001
	EC318 (Standard version with a 2-pin MIL-C/DTL-5015 type connector and RADOX® 125 2-wire cable)	922-318-000-002
	EC318 (Standard version with a 2-pin MIL-C/DTL-5015 type connector and RADOX® 125 2-wire cable with protection tube)	922-318-000-403
	EC319 (Splashproof version with a 2-pin MIL-C/DTL-5015 type connector and RADOX® 125 2-wire cable)	922-319-000-002
	EC319 (Splashproof version with a 2-pin MIL-C/DTL-5015 type connector and RADOX® 125 2-wire cable with sealed protection tube (leaktight))	922-319-000-103

Note: The cable length must be specified when ordering a cable assembly.

## ACCESSORIES (continued)

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Item	Type	Part number (PNR)
• Mounting adaptor	MA122_012 (1/4-28UNF-2A to M6, with a conic base)	809-122-000-012
• Insulating stud	MA122_021 (1/4-28UNF-2A to M6, with a conic base)	809-122-000-021

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