MEGGITT

DATA SHEET

Vibro-Meter®

PV660 piezoelectric velocity sensor

CE

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.

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

Tel: +41 26 407 11 11
Fax: +41 26 407 13 01
energy@ch.meggitt.com
www.meggittsensing.com/energy
www.meggitt.com

SPECIFICATIONS

Note: Unless otherwise stated, all values listed are typical values, referenced at 23°C (73°F), 24 V_{DC} 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_{DC} ±25% (18 to 30 V_{DC})
Power supply current	: 0.5 to 8 mA
Bias voltage	: 12 V_{DC} 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)*

Physical

Case material	: Stainless steel
Dimensions	: See **Mechanical drawings on page 4**
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 **Accessories on page 5**)

Mounting

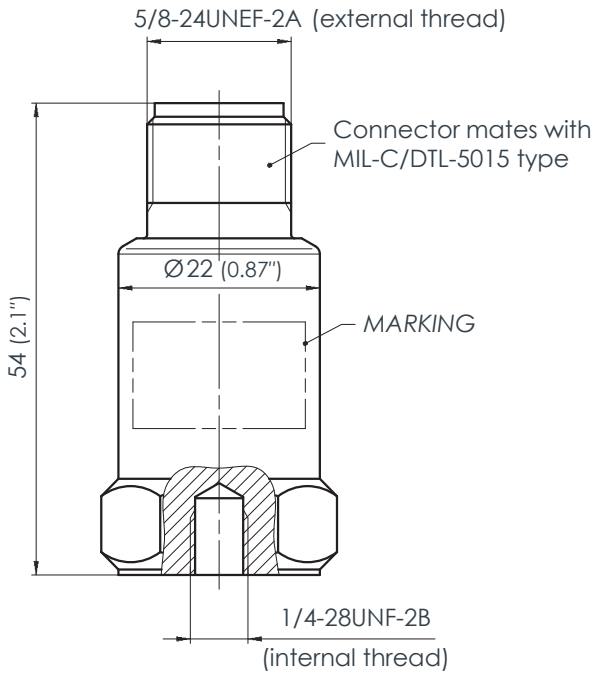
Stud or adaptor	: 1/4-28UNF (see **Accessories on page 5**)
Torque	: 8 N•m (5.9 lb-ft). Refer also to the *CExxx and PVxxx vibration sensors (piezoelectric accelerometers and piezoelectric velocity sensors) installation manual*.

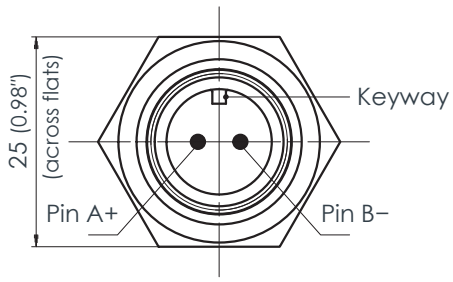
Calibration

Dynamic calibration at factory. No subsequent calibration necessary.

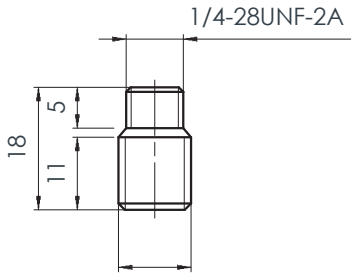
MECHANICAL DRAWINGS

PV660 velocity sensor

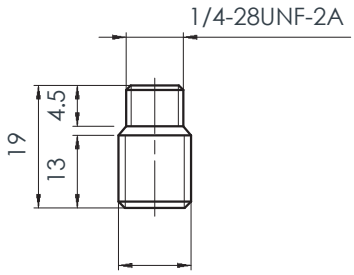




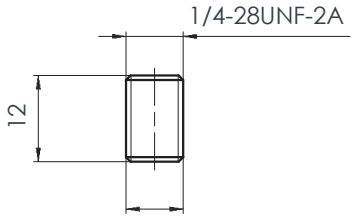
Adaptor studs



M8x1.25



M8x1



1/4-28UNF

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

Environment (A)	
Standard	1

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)*

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

Meggitt (Meggitt PLC) is a leading international engineering company, headquartered in England, that designs and delivers high-performance components and subsystems for aerospace, defence and selected energy markets. Meggitt comprises four customer-aligned divisions: Airframe Systems, Engine Systems, Energy & Equipment and Services & Support.

The Energy & Equipment division includes the Energy Sensing and Controls product group that specialises in sensing and monitoring solutions for a broad range of energy infrastructure, and control valves for industrial gas turbines, primarily for the Power Generation, Oil & Gas and Services markets. Energy & Equipment is headquartered in Switzerland (Meggitt SA) and incorporates the Vibro-Meter® product line, which has over 65 years of sensor and systems expertise and is trusted by original equipment manufacturers (OEMs) globally.

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

Sales offices

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

Local representative

Head office

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

Tel: +41 26 407 11 11
Fax: +41 26 407 13 01
energy@ch.meggitt.com
www.meggittsensing.com/energy
www.meggitt.com