SensorsX

SX-MVPNA Series

4–20 mA Vibration Velocity Transmitter

Piezoelectric velocity sensor for industrial vibration monitoring



■ OVERVIEW

The SensorsX SX-MVPNA Series is a piezoelectric vibration velocity transmitter designed for industrial machinery condition monitoring. Featuring a built-in signal conditioning circuit, it provides a standard 4–20 mA analog output with a measurement range of 0–20 mm/s RMS and a frequency response of 10–1,000 Hz (±5%). Its stainless-steel housing, compact design, and 2-pin electrical connector make it suitable for vibration monitoring of motors, pumps, compressors, and other rotating machinery.

■ FEATURES

◆ Vibration Velocity Measurement	◆ 0–20 mm/s RMS vibration velocity measurement range
◆ Standard Analog Output	◆ Standard 4–20 mA analog output
◆ Sensitivity and Frequency Response	◆ ±5% sensitivity accuracy and ±5% frequency response accuracy
◆ Wide Frequency Range	◆ 10–1,000 Hz frequency range (±5%)
◆ Stainless Steel Housing	◆ 304 / 316L stainless steel housing
◆ Wide Operating Temperature Range	◆ −40℃ to +85℃ operating temperature range
◆ Industrial Electrical Interface	◆ 15–34 VDC power supply with 2-pin MIL-C-5015 connector

■ TYPICAL APPLICATIONS

Rotating Machinery Monitoring

- Motor and pump vibration monitoring

Industrial Condition Monitoring

- Compressor vibration monitoring

Structural & Process Monitoring

- Industrial vibration monitoring systems

Specifications are subject to change without notice. Confirm the final configuration at time of order.

- Fan and blower vibration monitoring
- Gearbox vibration monitoring
- Machine tool vibration monitoring
- Rotating equipment vibration monitoring
- Industrial machinery condition monitoring
- Vibration alarm and system integration

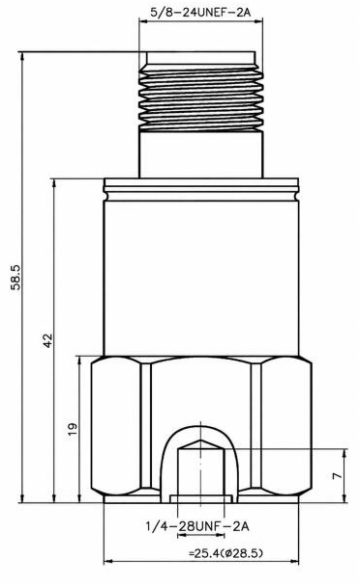
■TECHNICAL SPECIFICATIONS

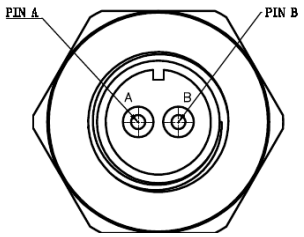
Measurement Performance	
Measurement Range (RMS)	0–20 mm/s
Sensitivity	0.8 mA/(mm/s), ±5%
Frequency Response (±5%)	10–1,000 Hz
Frequency Response (±3 dB)	3–1,500 Hz
Transverse Sensitivity	<5%
Amplitude Linearity	≤2%
Resolution	0.01 mm/s
Electrical Specifications	
Output Signal	4–20 mA
Supply Voltage	15–34 V DC
Supply Current	2–10 mA
Load Resistance	50 × (Vs − 12) Ω
Insulation Resistance	≥10^8 Ω
Dielectric Withstand Voltage	≥350 V AC
Environmental Specifications	
Operating Temperature	-40°C~+85 °C
Shock Resistance (Peak)	2,000 g
Physical Specifications	
Housing Material	304 stainless steel
Sensing Element	PZT-5 piezoelectric ceramic
Weight	130 g
Mounting Thread	1/4-28 UNF
Electrical Connector	MIL-C-5015, 2-pin
Connector Thread	5/8-24 UNEF-2A
Transmission Distance	≥100 m
Overall Dimensions	29 × 29 × 59 mm
Supplied Accessories	
Thread Adapter	1/4-28 to M6, 1 pc

Test conditions: 23 °C, 80 Hz. Other measurement ranges are available upon request.

Specifications are subject to change without notice. Confirm the final configuration at time of order.

■ TECHNICAL DRAWINGS





■ ORDER INFORMATION

Complete model number example: SX-MVPNA-111111

Model Number	
MVPNA	
Measurement Range	
1	0~20 mm·s^{-1}
Amplitude Linearity	
1	2%
Connection	
1	1/4-28 UNF-Female
Output	
1	4...20 mA
Electrical Connection	
1	5/8-24 UNEF-Male
Housing Materials	
1	304 Stainless Steel
2	316L Stainless Steel
Optional	
D	Specify requirements when ordering

Specifications are subject to change without notice. Confirm the final configuration at time of order.