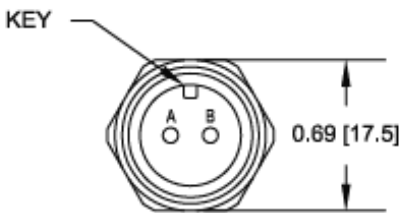


Class I Division 2 certified accelerometer 780A-D2

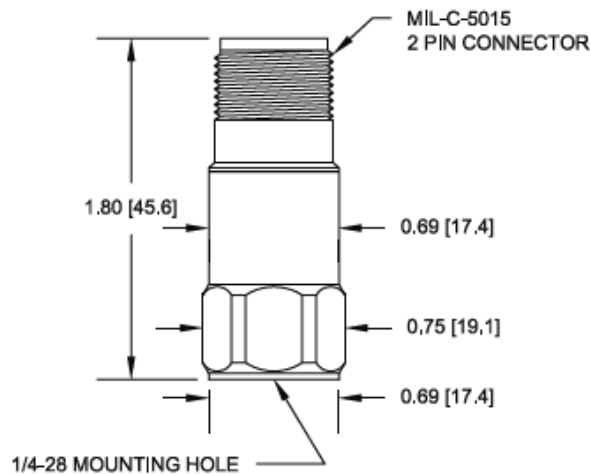


Wilcoxon's top-exit 100 mV/g sensor is designed for monitoring areas with limited space. The general purpose accelerometer is ideal for monitoring machine vibration on a wide range of rotating equipment such as motors, pumps, fans, compressors, turbines and generators. A 316L stainless steel casing provides rugged durability for most extreme environments. The sensing element is housed in a case-isolated Faraday shield, providing maximum protection from ground loops and RF interference.

The 780A-D2 is classified for usage in Class I Division 2/Zone 2 locations where ignitable gases, vapors or liquids are handled, processed or used but are not usually present during normal operation and can only escape through accidental rupture, breakdown or leaks.



Connections	
Function	Connector pin
power/signal	A
common	B
ground	shell



Key features

- Lightweight for walkaround programs
- Prevents ground loops in permanent mount applications with proper cabling
- Can be submersed with proper connector
- Hermetically sealed
- ESD protected
- Reverse wiring protection
- Class I, Div 2/Zone 2 certified, non-incendive
- Manufactured in an approved ISO 9001 facility

Certifications



Class I, Div 2 Groups A, B, C, D
Class I, Zone 2
AEx/Ex nA II T4
Tamb: -50°C to 120°C



II 3 G
Ex nA IIC T4 Gc

For hazardous area locations, sensor must be installed in accordance with installation instructions or local code requirements. Special conditions for safe use: ambient temperature range is dependent on the cable type used:
FEP (Teflon): -50°C to 120°C
Santoprene: -45°C to 115°C



Note: Due to continuous process improvement, specifications are subject to change without notice. This document is cleared for public release.

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Wilcoxon Sensing Technologies
An Amphenol Company

Class I Division 2 certified accelerometer 780A-D2

SPECIFICATIONS

	English	Metric
Sensitivity, ±5%, 25° C	100 mV/g	9.8 mV/m/sec ²
Acceleration range	80 g peak	784 m/sec ²
Amplitude nonlinearity	1%	1%
Frequency response:		
± 5%	60 - 420,000 RPM	1 - 7,000 Hz
± 10%	42 - 540,000 RPM	0.7 - 9,000 Hz
± 3 dB	24 - 840,000 RPM	0.4 - 14,000 Hz
Resonance frequency	1.80 kCPM	30 kHz
Transverse sensitivity, max	5% of axial	5% of axial
Temperature response:		
-25° C	-10%	-10%
+120° C	+10%	+10%
Power requirement:		
Voltage source	18 - 30 VDC	18 - 30 VDC
Current regulating diode	2 - 10 mA	2 - 10 mA
Electrical noise, equiv. g, nominal:		
Broadband 2.5 Hz to 25 kHz	500 µg	4.9 x 10 ⁻³ m/s ²
Spectral 10 Hz	7 µg/√Hz	6.8 x 10 ⁻⁵ m/s ²
100 Hz	4 µg/√Hz	3.9 x 10 ⁻⁵ m/s ²
1,000 Hz	2 µg/√Hz	1.9 x 10 ⁻⁵ m/s ²
Output impedance, max	100 Ω	100 Ω
Bias output voltage	12 VDC	12 VDC
Grounding	case isolated, internally shielded	
Temperature range	-58 to +248° F	-50 to +120° C
Vibration limit	500 g peak	4,900 m/sec ² peak
Shock limit	5,000 g peak	49,000 m/sec ² peak
Electromagnetic sensitivity, equiv g, max	70 µg/gauss	6.8 x 10 ⁻⁴ m/s ² /gauss
Sealing	hermetic	
Base strain sensitivity, max	0.0002 g/µstrain	1.9 x 10 ⁻³ m/s ² /µstrain
Sensing element design	PZT, shear	
Weight	2.19 oz	62 grams
Case material	316L stainless steel	
Mounting	1/4-28 UNF tapped hole	
Output connector	2-pin, MIL-C-5015 style	
Mating connector	R6 type	
Recommended cabling	J10 / J9T2A	

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Accessories supplied:

- Calibration data (level 2)
- SF6 mounting stud

Note: Frequency response and spectral noise values are typical.