

# Intrinsically safe certified accelerometer 780A-IS



## Key features

- Prevents ground loops in permanent mount applications with proper cabling
- Can be submersed with proper connector
- Compact size
- Hermetically sealed
- ESD protected
- Reverse wiring protection
- EMI/RFI shielded
- Class I, II, III Div 1/ Zone 0 certified
- Manufactured in an approved ISO 9001 facility

## Certifications



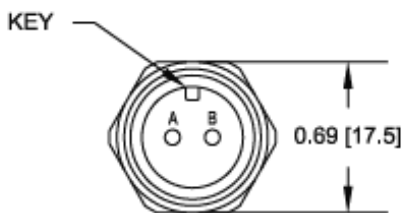
Class I, Div 1/Zone 0  
Groups A, B, C, D  
Class II, Div 1 Groups  
E, F, G  
Class III, Div 1  
AEx/Ex ia IIC T4



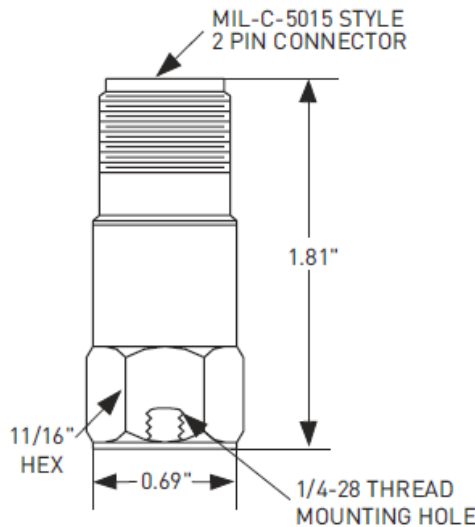
Ga Ex nA IIC T4



For hazardous area locations, sensor must be installed in accordance with installation instructions or local code requirements. Electrical safety barrier required for hazardous area installations.



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



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

Wilcoxon Sensing Technologies  
20511 Seneca Meadows Parkway  
Germantown, MD 20876  
wilcoxon@wilcoxon.com

Tel: (301) 330 8811  
Fax: (301) 330 8873  
www.wilcoxon.com

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## SPECIFICATIONS

<b>Sensitivity, <math>\pm 5\%</math>, 25° C</b>	100 mV/g
<b>Acceleration range</b>	80 g peak
<b>Amplitude nonlinearity</b>	1%
<b>Frequency response:</b>	
$\pm 5\%$	1 - 7,000 Hz
$\pm 10\%$	0.7 - 9,000 Hz
$\pm 3$ dB	0.4 - 14,000 Hz
<b>Resonance frequency</b>	30 kHz
<b>Transverse sensitivity</b>	5% of axial
<b>Temperature response:</b>	
-25° C	-10%
+120° C	+10%
<b>Power requirement:</b>	
Voltage source	18 - 30 VDC
Current regulating diode	2 - 10 mA
<b>Electrical noise, equiv. g, nominal:</b>	
Broadband      2.5 Hz to 25 kHz	500 $\mu$ g
Spectral              10 Hz	7 $\mu$ g/ $\sqrt{\text{Hz}}$
100 Hz	4 $\mu$ g/ $\sqrt{\text{Hz}}$
1,000 Hz	2 $\mu$ g/ $\sqrt{\text{Hz}}$
<b>Output impedance</b>	100 $\Omega$
<b>Bias output voltage</b>	12 VDC
<b>Grounding</b>	case isolated, internally shielded
<b>Temperature range</b>	-50 to +120° C
<b>Vibration limit</b>	500 g peak
<b>Shock limit</b>	5,000 g peak
<b>Electromagnetic sensitivity, equiv g, max</b>	70 $\mu$ g/gauss
<b>Sealing</b>	hermetic
<b>Base strain sensitivity, max</b>	0.0002 g/ $\mu$ strain
<b>Sensing element design</b>	PZT, shear
<b>Weight</b>	62 grams
<b>Case material</b>	316L stainless steel
<b>Mounting</b>	1/4-28 UNF tapped hole
<b>Output connector</b>	2-pin, MIL-C-5015 style
<b>Mating connector</b>	R6 type
<b>Recommended cabling</b>	J10 / J9T2A

## Contact

Wilcoxon Sensing  
Technologies

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Germantown MD 20876, USA

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Fax: +1 301 330 8873

wilcoxon@wilcoxon.com

www.wilcoxon.com

## Accessories supplied:

- Calibration data (level 2)
- SF6 mounting stud (international customers specify mounting requirements)

**Optional accessories:**  
ISBS-STD-08: MTL 7728+  
safety barrier

**Note:** Frequency response and spectral noise values are typical.

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