

Intrinsically safe accelerometer with integral cable

786F-IS



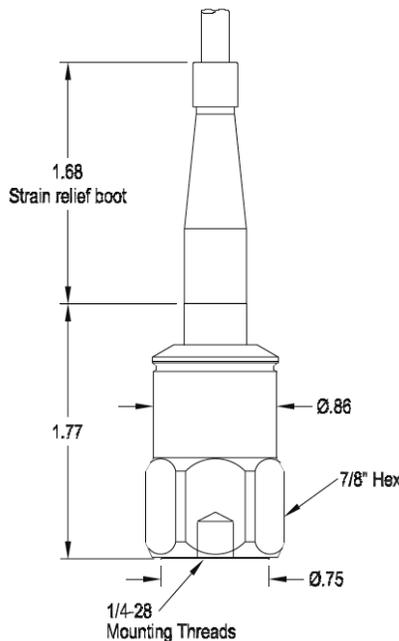
Wilcoxon's top-exit 100 mV/g broadband sensor is ideal for monitoring machine vibration on a wide range of rotating equipment including motors, pumps, fans, compressors, turbines and generators. 316L stainless steel casing provides rugged durability for the most extreme environments. The sensing element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

The 786F-IS sensor is classified for usage in Class I Division 1/Zone 0/1 locations where ignitable concentrations of flammable gases, vapors or liquids are present continuously under normal operating conditions. Class I areas are defined into groups by the presence of the following flammable material:

- Group A - Acetylene
- Group B - Hydrogen
- Group C - Ethylene
- Group D - Propane

For proper protection the installation drawing must be followed.

Connections	
Function	Cable conductor
power/signal	white
common	black
case	shield



Key features

- Integral cable
- Class I, Div 1/Zone 0/1 certified
- Hermetically sealed
- ESD-protected
- Reverse wiring protection
- Manufactured in an approved ISO 9001 facility

Certifications



Class I, Div 1 Groups A, B, C, D
 Class II, Div 1 Groups E, F, G
 Class III, Div 1
 Class I, Zone 0, Ex ia IIC T4
 Class I, Zone 0, AEx ia IIC T4
 Tamb: -50°C to 120°C



II 1 G
 Ex ia IIC T4 Ga
 -50°C ≤ Ta ≤ 120°C



For hazardous area locations, sensor must be installed in accordance with installation instructions or local code requirements. Special conditions for safe use: for applications in explosive atmospheres caused by gases, vapors or mists and where the use of apparatus of category 1 G is required, electrostatic charges on cable and non-metallic parts of the enclosure shall be avoided. The ambient temperature range for these applications is -40°C ≤ Tamb ≤ +80°C.



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
 info@wilcoxon.com

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

Wilcoxon Sensing Technologies
 An Amphenol Company

Intrinsically safe accelerometer with integral cable

786F-IS

SPECIFICATIONS

Sensitivity, $\pm 5\%$, 25° C	100 mV/g
Acceleration range, VDC > 22 V	80 g peak
Amplitude nonlinearity	1%
Frequency response:	
$\pm 10\%$	1.0 - 8,000 Hz
± 3 dB	0.5 - 13,000 Hz
Resonance frequency	30 kHz
Transverse sensitivity, max	5% of axial
Temperature response:	
-25° C	-10%
+120° C	+10%
Power requirement:	
Voltage source	18 - 30 VDC
Current regulating diode	2 - 10 mA
Electrical noise, equiv. g:	
Broadband	2.5 Hz to 25 kHz
Spectral	10 Hz
	100 Hz
	1,000 Hz
	700 μ g
	10 μ g/ $\sqrt{\text{Hz}}$
	5 μ g/ $\sqrt{\text{Hz}}$
	5 μ g/ $\sqrt{\text{Hz}}$
Output impedance, max	100 Ω
Bias output voltage	12 VDC
Grounding	case isolated, internally shielded
Temperature range	-50 to +120° C
Vibration limit	500 g peak
Shock limit	5,000 g
Electromagnetic sensitivity, equiv. g, max	70 μ g/gauss
Sealing	hermetic
Base strain sensitivity, max	0.0002 g/ μ strain
Hydrostatic pressure	100 psi
Sensing element design	PZT, shear
Weight	90 grams (excluding cable)
Case material	316L stainless steel
Mounting	1/4-28 UNF tapped hole
Integral cabling	J9T2A, 16 ft., blunt cut

Contact

Wilcoxon Sensing
Technologies

20511 Seneca Meadows Parkway
Germantown MD 20876, USA

Tel: +1 301 330 8811
Fax: +1 301 330 8873

info@wilcoxon.com

www.wilcoxon.com

Accessories supplied:

- SF6 mounting stud (metric mounting available)
- Calibration data (level 2)

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
info@wilcoxon.com

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

Wilcoxon Sensing Technologies
An Amphenol Company