

# Model 786T-IS Intrinsically safe certified accelerometer with internal temperature sensor

**Features**

- Hazardous area certified - Intrinsically safe
- Rugged design
- Corrosion resistant
- Hermetic seal
- Case isolated
- ESD protection
- Reverse wiring protection

**Dynamic, acceleration**

Sensitivity, ±5%, 25°C .....	100 mV/g
Acceleration range .....	60 g peak
Amplitude nonlinearity .....	1%
Frequency response:	
± 5% .....	3 - 5,000 Hz
± 10% .....	1 - 7,000 Hz
± 3 dB .....	0.5 - 12,000 Hz
Resonance frequency .....	30 kHz
Transverse sensitivity, max .....	5% of axial
Temperature response:	
-50°C .....	-10%
+120°C .....	+10%
Temperature output sensitivity .....	10 mV/°C
Temperature measurement range .....	+2°C to +120°C (36°F to 248°F)

**Electrical**

Power requirement:	voltage source .....	18 - 28 VDC
	current regulating diode .....	2 - 10 mA
Electrical noise, equiv. g:		
Broadband 2.5 Hz to 25 kHz .....		700 µg
Spectral 10 Hz .....		10 µg/√Hz
100 Hz .....		5 µg/√Hz
1000 Hz .....		5 µg/√Hz
Output impedance, max .....		100 Ω
Bias output voltage, nominal .....		12 VDC
Grounding .....		case isolated, internally shielded

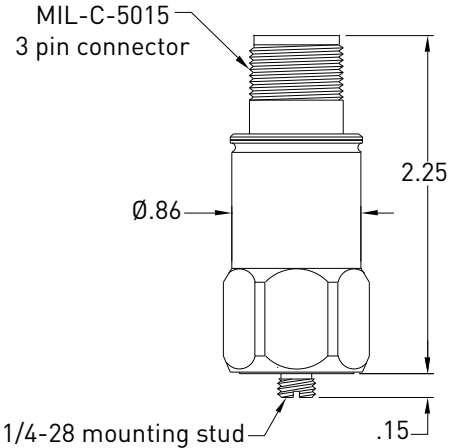
**Environmental**

Temperature range .....	-50 to 120°C
Vibration limit .....	500 g peak
Shock limit .....	5,000 g peak
Electromagnetic sensitivity, equiv. g, max .....	70 µg/gauss
Sealing .....	hermetic
Base strain sensitivity, max .....	0.0002 g/µstrain

**Physical**

Sensing element design .....	PZT ceramic / shear
Weight .....	90 grams
Case material .....	316L stainless steel
Mounting .....	1/4 - 28 UNF tapped hole
Output connector .....	3 pin, MIL-C-5015 style
Mating connector .....	R6G
Recommended cabling .....	J9T3A

Connector pin	Function	Color
Shell	ground	
A	accelerometer power/ signal	red
B	accelerometer and temp sensor common	black
C	temperature sensor signal	white



**CSA** 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

**Ex** Ga Ex ia IIC T4

**IEC** **IECEx**

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.



Accessories supplied: SF6 mounting stud  
(International customers specify mounting requirements);  
calibration data (level 2).  
Optional required accessories available:  
ISBS-STD-08: MTL 7728 + safety barrier

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