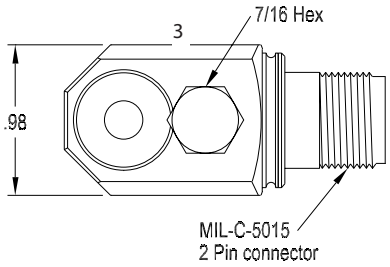
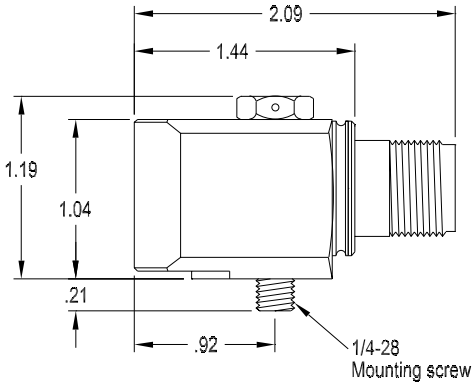
Wilcoxon Research model 787T
General purpose accelerometer with internal temperature sensor

Features

- Measures both acceleration and temperature
- Rugged design
- Corrosion resistant
- Hermetic seal
- Case isolated
- ESD protection
- Reverse wiring protection





Dynamic

Sensitivity, ± 5%, 25° C	100 mV/g
Acceleration range, VDC >25V	80 g peak
Amplitude nonlinearity	1%
Frequency response:	
± 5%	1 - 5,000 Hz
± 10%	0.7 - 10,000 Hz
± 3 dB	0.5 - 12,000 Hz
Resonance frequency	22 kHz
Transverse sensitivity, max	5% of axial
Temperature response:	
–25° C	–10%
+120° C	+10%

Temperature sensor

Output sensitivity	10 mV/°C
Measurement range	2 to 120° C

Electrical

Power requirement:		
Voltage source[1]		18 - 30 VDC
Current regulating diode[1,2]		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.	0.002 g/µstrain

Physical

Sensing element design	PZT, shear
Weight	145 g
Case material	316L stainless steel
Mounting	1/4-28 captive screw with 0.046" dia safety wire hold
Output connector	3 pin, MIL-C-5015 style
Mating connector	3 socket, MIL-C-5015 style
Recommended cabling	3 conductor, shielded

Connections

Function	Connector pin
ground	shell
accelerometer power / signal	A
accelerometer and temperature sensor common	B
temperature sensor signal	C

Accessories supplied: 1/4-28 captive screw; optional M6 captive screw

Notes:
[1] To minimize the possibility of signal distortion during high vibration signals, 24 to 28 VDC powering is recommended. The higher level constant current source should be used when driving long cables (please consult the manufacturer).
[2] A maximum current of 6 mA is recommended for operating temperatures in excess of 100° C.

Meggitt Sensing Systems
20511 Seneca Meadows Parkway
Germantown MD 20876
USA

Tel: 301 330 8811
Fax: 301 330 8873
Email: wilcoxon@meggitt.com

www.wilcoxon.com
www.meggitt.com

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