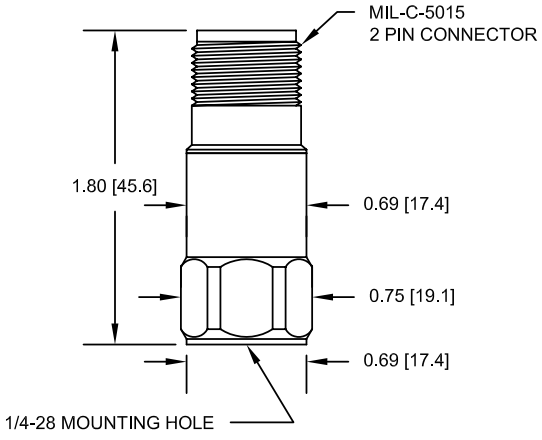
Wilcoxon Research®

High temperature, compact accelerometer

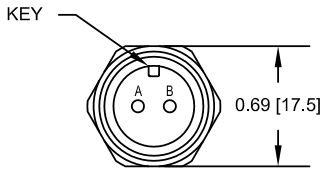
HT780A

For applications in which extremely high temperature operation is needed, Meggitt offers the HT-series of accelerometers. Dryer sections of a paper machine regularly create conditions up to 150º C. Vibration monitoring sensors must be capable of operating continuously in hot environments without degradation. HT-series sensors are built with extended range components that are manufactured to withstand high temperatures for long periods of time without failing.

The top-exit Wilcoxon Research® 100 mV/g broadband sensor operates at high temperatures for monitoring machine vibration on a wide range of rotating equipment such as motors, pumps, fans, compressors, turbines and generators. Compact size allows the sensor to be mounted in tight areas not accessible by full sized sensors. The 316L stainless steel case 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.



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
- Hermetically sealed
- ESD-protected
- Reverse wiring protection
- Manufactured in an approved ISO 9001 and AS9100 facility

Certifications

CE

Meggitt Sensing Systems

Our energy product competencies and services
Machinery protection | Condition monitoring | Integrated performance monitoring | Partial discharge monitoring | Sensors for extreme environments
Ignition systems | Flame detection and analysis | Industrial monitoring solutions | Nuclear products

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MEGGiTT
smart engineering for
extreme environments

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Specifications

		English		Metric	
Sensitivity, ± 5%, 25° C		100 mV/g		9.8 mV/m/sec^2	
Acceleration range, VDC ›25 V		80 g peak		784 m/sec^2	
Amplitude nonlinearity		1%		1%	
Frequency response	**± 5%**	180 - 300,000 CPM		3 - 5,000 Hz	
	± 10%	60 - 540,000 CPM		1 - 9,000 Hz	
	± 3 dB	30 - 840,000 CPM		0.5 - 14,000 Hz	
Resonance frequency, nominal		1.80 kCPM		30 kHz	
Transverse sensitivity, max		5% of axial		5% of axial	
Temperature response	**-25° C**	-10%		-10%	
	+150° C	+15%		+15%	
Voltage source		18 - 30 VDC		18 - 30 VDC	
Current regulating diode		2 - 10 mA		2 - 10 mA	
Electrical noise, equiv g		**25° C**	**150° C**	**25° C**	**150° C**
Broadband 2. 5 Hz to 25 kHz		700 µg	1100 µg	6.9 x 10^{-3} m/sec^2	10.8 x 10^{-3} m/sec^2
Spectral	**10 Hz**	10 µg/√Hz	14 µg/√Hz	9.8 x 10^{-5} m/sec^2/√Hz	13.7 x 10^{-5} m/sec^2/√Hz
	100 Hz	5 µg/√Hz	7 µg/√Hz	4.9 x 10^{-5} m/sec^2/√Hz	6.9 x 10^{-5} m/sec^2/√Hz
	1000 Hz	5 µg/√Hz	7 µg/√Hz	4.9 x 10^{-5} m/sec^2/√Hz	6.9 x 10^{-5} m/sec^2/√Hz
Output impedance, max		100 Ω		100 Ω	
Bias output voltage	**+25° C**	13 VDC		13 VDC	
	+150° C	12 VDC		12 VDC	
Grounding		case isolated, internally shielded		case isolated, internally shielded	
Temperature range		-58 to +302° F		-50 to +150° 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		6.9 x 10^{-4} m/sec^2/gauss	
Sealing		hermetic		hermetic	
Base strain sensitivity, max		0.0002 g/µstrain		1.9 x 10^{-3} m/sec^2/µstrain	
Sensing element design		PZT, shear		PZT, shear	
Weight		2.19 oz		62 g	
Case material		316L stainless steel		316L stainless steel	
Mounting		1/4-28 UNF tapped hole		1/4-28 UNF tapped hole	
Mating connector		2 pin, MIL-C-5015 style		2 pin, MIL-C-5015 style	

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.

Contact

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