

Wilcoxon Research®

High temperature, compact accelerometer HT780A



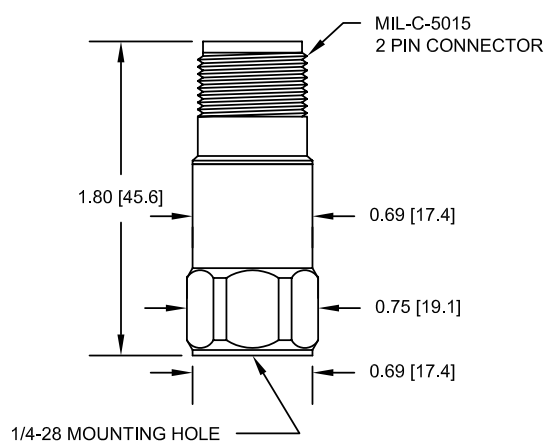
For applications in which extremely high temperature operation is needed, Meggitt offers the HT-series of accelerometers. Dryer sections of a paper machine regularly create conditions up to 150° C. Vibration monitoring sensors must be capable of operating continuously in hot environments without degradation. 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.

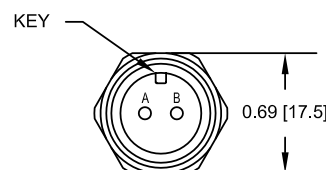
Key features

- 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



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



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,		case isolated,		
	internally shielded		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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