

AC153-M12A Series

Low Cost, Low Frequency Accelerometer, Top Exit 4 Pin M12 Connector, 500 mV/g, $\pm 15\%$



VIBRATION ANALYSIS HARDWARE



Product Features

Designed for Low-Speed Rotors, Main Bearings, and Gear Box Inputs, but May Also be Used for High Frequency Detection

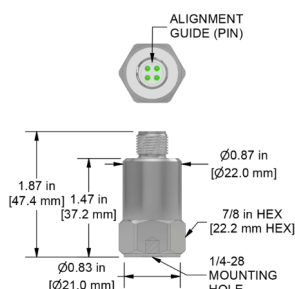
Low-Cost Accelerometer

- ▶ 500 mV/g Sensitivity
- ▶ 0.1 Hz for Low-Frequency Measurements
- ▶ 10 kHz for High-Frequency Detection

AC153-M12A

4 Pin Connector

Connector Pin	Polarity
1	(+) Signal/Power
2	(-) Common
3	Not Used
4	Not Used



Stock Product

Specifications	Standard	Metric	Specifications	Standard	Metric
Part Number	AC153-M12A	M/ or M8/AC153-M12A	<u>Environmental</u>		
Sensitivity ($\pm 15\%$)	500 mV/g		Operating Temperature Range	-58 to 250 °F	-50 to 121 °C
Frequency Response ($\pm 3\text{dB}$)	6-600,000 CPM	0.1-10000 Hz	Maximum Shock Protection	5,000 g, peak	
Dynamic Range	$\pm 16\text{g}$, peak		Electromagnetic Sensitivity	CE	
Transverse Sensitivity	$*V_{\text{source}} \geq 22\text{V}$, 12Vbias		Sealing	Welded, Hermetic	
	$\leq 5\%$		SIL Rating	SIL 2	
<u>Electrical</u>			<u>Physical</u>		
Settling Time	<2 Seconds		Sensing Element	PZT Ceramic	
Voltage Source	18-30 VDC		Sensing Structure	Shear Mode	
Constant Current Excitation	2-10 mA		Weight	3.2 oz	92 grams
Spectral Noise @ 10 Hz	1.7 $\mu\text{g}/\sqrt{\text{Hz}}$		Case Material	316L Stainless Steel	
Spectral Noise @ 100 Hz	0.2 $\mu\text{g}/\sqrt{\text{Hz}}$		Mounting Thread	1/4-28 Blind Tapped Hole	
Spectral Noise @ 1000 Hz	0.12 $\mu\text{g}/\sqrt{\text{Hz}}$		Connector (Non-Integral)	4 Pin M12	
Output Impedance	<100 ohm		Resonant Frequency	1,080,000 CPM	18000 Hz
Bias Output Voltage	10-14 VDC		Mounting Torque	2 to 5 ft. lbs.	2.7 to 6.8 Nm
Case Isolation	>10 ⁸ ohm		Mounting Hardware Supplied	1/4-28 Stud	M6x1 or M8x1.25 Adapter Stud
			Calibration Certificate	2.7 to 6.8 Nm	

Typical Frequency Response

