

XL403A Accelerometer

Rugged ± 1 g to ± 15 g
Uniaxial, Biaxial, or Triaxial
Quick Shipment

Analog Accelerometer

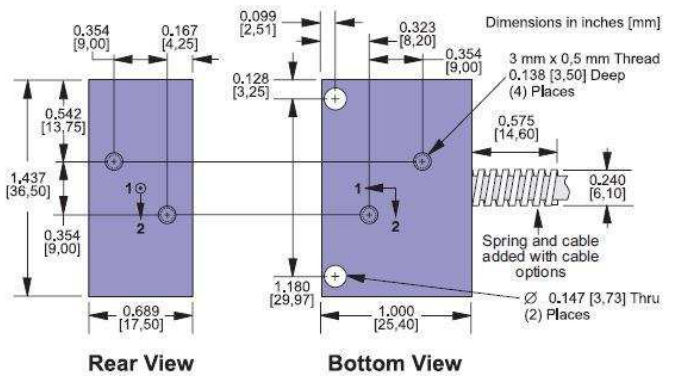
Measurement Specialties' XL403A analog accelerometers offer precision measurements over the entire the -40°C to $+85^{\circ}\text{C}$ temperature range. Each DC-coupled output is fully scaled, referenced, and temperature compensated. Accuracy is improved by minimizing variations due to temperature and aging effects, and their tough, compact housing holds potted electronics.

Choose the number of axes and specify any bandwidth and range option up to ± 15 g and 800 Hz to best suit your application. In stock and ready for calibration, you can be taking measurements in less time than with built-to-order accelerometers.

Users are supplied with a calibration certificate listing sensitivity and offset for each sensor. Custom versions can be provided.



dimensions



FEATURES

- Quick Ship
- High Accuracy and Linearity over Wide Temperature Range
- Rugged for Harsh Environments
- Small Size
- Built-in Power Supply Regulation
- Easy Installation
- Three Year Warranty

Two through holes and four 3 mm x 0.5 mm threaded holes are provided for mounting.

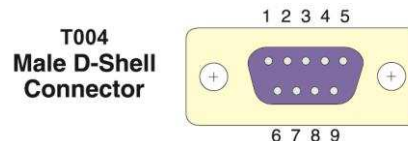
Mounting adapters (sold separately)



APPLICATIONS

- Vehicle dynamics
- Construction Equipment
- Research & Development
- Test & Measurement
- Military/Aerospace

connections



Pin	1	2	3	4	5	6	7	8	9
Signal	A1+	A2+	A3+	Signal -	Reserved	Reserved	Self Test	+Vs	Gnd
Wire	Brown	Red	Orange	Yellow	Green	Blue	Violet	Grey	White

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performance specifications

$T_A = T_{min}$ to T_{max} ; $8.5 \leq V_S \leq 36$ V; Acceleration = 0 g unless otherwise noted; within one year of calibration. Improved specifications available upon request.

PARAMETERS	Min	Typical	Max	Units	Conditions/Notes
Range: Measurement Full Scale	±1		±15	g	On each axis. Must specify via Option Rnnn
Sensitivity					
At 25 °C, Option R005		400*		mV/g	Precise values on cal certificate
Drift T_{min} to T_{max}		±0.65	±3	%	Percent of sensitivity at 25°C
Zero g Bias Level					
At 25 °C		2.5		V	Precise values on cal certificate
Drift to T_{min} or T_{max}		±20		mg	At <1.25°C/min. temperature rate of change
Alignment					
Deviation from Ideal Axes		±1.0	±3.0	degrees	Precise values on cal certificate. Can be compensated if required
Transverse Sensitivity		±0.25		%	Inherent sensor error, excluding misalignment
Nonlinearity		±0.1	±0.5	% FSR	Best fit straight line
Frequency Response , 5-pole	0		800	Hz	Upper cutoff per Option Bnnn, -3 dB pt ±10%
Noise Density		100		µg/√Hz	10 Hz to 400 Hz
Self-Test Pull-Up Resistor	5			kΩ	Logic "1" ≥3.5 V, Logic "0" ≤1.5 V; "0" causes self-test
Temperature Sensor					
Sensitivity		6.45		mV/°C	
0°C Bias Level		509		mV	
Outputs					
Output Voltage Swing	0.05		4.95	V	$I_{out} = \pm 0.5$ mA
Capacity Drive Capability		1000		pF	
Power Supply (V_S)					
Input Voltage Limits	-80		+80	V	-80 V continuous, >38 V if ≤550 ms, duty <1%
Input Voltage - Operating	+8.5		+36	V	Continuous
Input Current		12		mA	
Rejection Ratio		>120		dB	DC
Temperature Range (T_A)	-40		+85	°C	
Mass		38		grams	Precise values on cal certificate
Shock Survival	-5000		+5000	g	Any axis for 0.5 ms, powered or unpowered

*Scale linearly with range option Rnnn; see Ordering Information

ordering info

