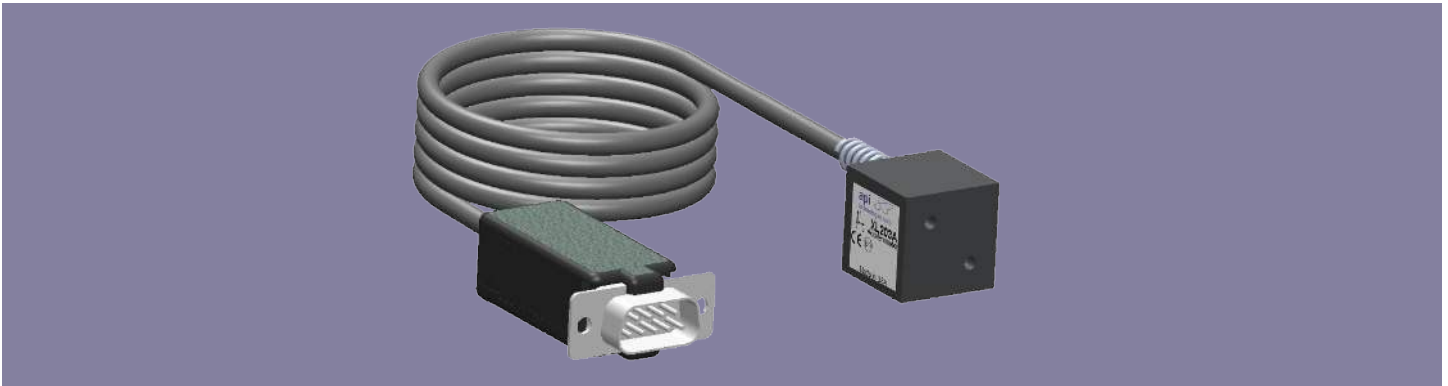


# Triaxial Analog Accelerometer

Rugged, Small,  $\pm 6$  g or  $\pm 15$  g



- **High Accuracy Acceleration Measurement** - The voltage output of the XL203A is directly proportional to the acceleration along the axes. Each DC-coupled sensor output is fully scaled, referenced, and calibrated.
- **Rugged for Harsh Environments** - The XL203A is robust and can be used in harsh environments. The machined 6061-T6 aluminum case has a black anodized finish per MIL-A-8625, plus the shielded cable has a high-temperature PVC jacket and Teflon-insulated conductors. The unit has resilient power and will survive 5000 g powered and unpowered.
- **Small Size** - Completely conditioned triaxial accelerometer in less than one cubic inch.
- **Built-In Power Supply Regulation** - Unregulated DC power from +8.5 to +36 Volts is all that is required to measure acceleration and temperature.
- **Calibration Certificate** - Each XL203A is supplied with a calibration certificate listing sensitivity and offset, as well as the on-axis and transverse alignment parameters needed to ensure rapid and efficient system implementation. The alignment data can be used to compensate the measured values if needed.
- **Self-Test** - A TTL-compatible self-test input causes a simulated acceleration to be injected into the accelerometer to verify channel integrity and wiring connections.
- **Easy Installation** - Integrated cable with 9-pin connector makes it easy to wire. Four tapped holes simplify mounting, and optional mounting adapters are also available.
- **Earth Friendly Design** - Lead-free design makes the XL203A environmentally safe while API Technologies' assembly process ensures reliable functionality. Fully potted electronics eliminates the possibility of tin whiskers-related failures.
- **Three-Year Warranty** - API Technologies accelerometers come with a three-year factory warranty.

\*Technical Data subject to change without notice

The XL203A is ready when you are. In stock and ready to ship, you can be taking measurements in less time than with built-to-order accelerometers.

The small size and built-in power regulation allow the XL203A to fit where other accelerometers can't. Choose bandwidth of 100 Hz or 800 Hz and range options of  $\pm 6$  g or  $\pm 15$  g to measure accelerations on three axes.

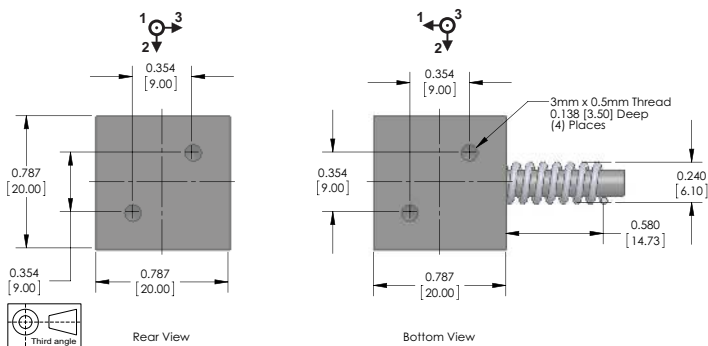
The accelerometers have a nominal full scale output swing of  $\pm 2$  Volts. The zero g output level is nominally +2.5 Volts. Precise values are available on the included calibration certificate.

# Specifications for XL203A - improved specifications available upon request

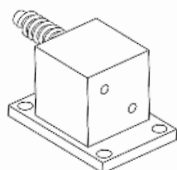
$T_A = T_{MIN}$  to  $T_{MAX}$ ;  $8.5 \leq V_S \leq 36$  V; Acceleration = 0 g, unless otherwise noted; within one year of calibration.

Parameter	Min	Typical	Max	Units	Conditions/Notes
Range - Measurement Full Scale Option R006 Option R015	-6 -15		+6 +15	g g	FSR = 12 g FSR = 30 g
Sensitivity At 25°C, Option R006 At 25°C, Option R015 Drift $T_{MIN}$ to $T_{MAX}$		333.3 133.3 ±0.1		mV/g mV/g %/°C	Precise values on calibration certificate Precise values on calibration certificate Percent of sensitivity at 25°C
Zero g Bias Level At 25°C Drift $T_{MIN}$ to $T_{MAX}$		2.500 ±1.0		V mg/°C	Precise values on calibration certificate At 1.25°C/min. temperature rate of change
Alignment Deviation from ideal axes		±1.0	±3.0	degrees	Precise values on calibration certificate Can be compensated if required
Transverse Sensitivity		±2		%	Inherent sensor error, excluding misalignment
Nonlinearity		0.1	0.5	% FSR	Best fit straight line
Frequency Response Option B100 Option B800		100 800		Hz Hz	Upper cutoff per Option Bnnn, -3 dB pt ±20%
Noise Density		100		µg/√Hz	
Self Test Pull-up Resistor	5			kΩ	Logic "1" ≥ 3.5 V, Logic "0" ≤ 1.5 V, "0" causes self test
Temperature Sensor at 25°C Sensitivity 25 °C Bias Level		2.5 2.5		mV/°C V	
Outputs Output Voltage Swing Output Resistance ( $R_{OUT}$ ) Capacitive Drive Capability	0.2	100 1000	4.8	V Ω pF	$I_{OUT} = \pm 2.5$ mA (exclusive of $R_{OUT}$ )
Power Supply ( $V_S$ ) Input Voltage Limits Input Voltage - Operating Input Current Rejection Ratio	-20 +8.5	15 >120	+38 +36 20	V V mA dB	Continuous DC
Temperature Range ( $T_A$ )	-40		+85	°C	
Mass		20		grams	
Shock Survival	-5000		+5000	g	Any axis for 0.5 ms, powered or unpowered

## Mechanical

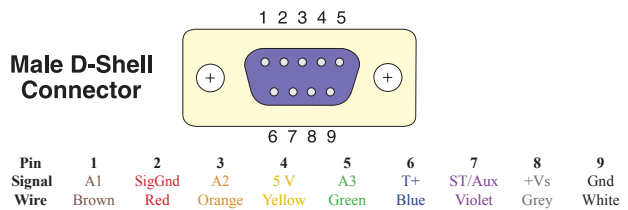


Custom mounting adapters available upon request.

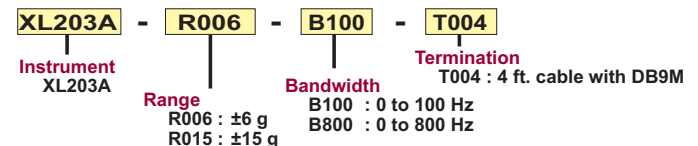


Shown with 34170B Mounting Adapter (sold separately)

## Connections



## Ordering Information



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