



FA1403 SERIES

Accelerometer



- Full Scale Range ± 2 g to ± 500 g
- Bandwidth from DC
- Over-range Stops
- Integrated Amplifier
- Triaxial model available

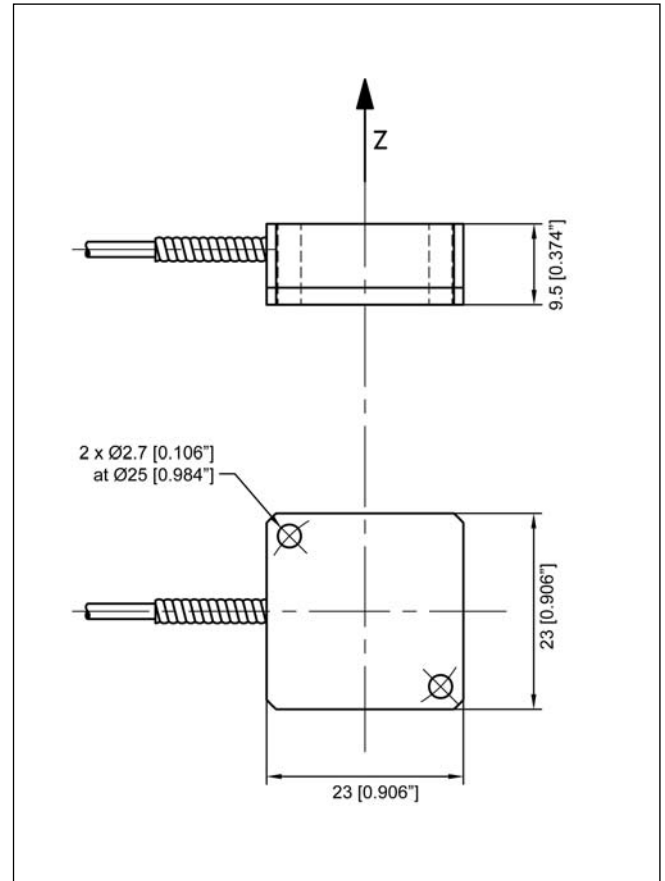
The **FA1403** is a general purpose accelerometer for applications which require low frequency response and minimum mass loading. Packaged in a rugged metal case, this accelerometer is designed for easy handling and is suitable for a wide range of environmental conditions.

The FA1403 includes internal conditioning electronics for direct high level voltage output. It operates from a unipolar voltage supply. Model FA1403-**A1** offers ± 2 Vdc FS output with a zero offset of 2.5Vdc, whereas model FA1403-**A9** offers a differential ± 4 Vdc FS output. Mechanical stops ensure over-range protection up to ± 2000 g for all ranges.

An equivalent triaxial version with a selectable operating range of ± 2 g to ± 500 g for each direction is available under reference FA3403.

With many years of experience as a designer and manufacturer of sensors, FGP Sensors often works with customers to design or customize sensors for specific uses and testing environments.

To meet your needs we also offer complete turnkey systems. The matched components (sensor, power, amplifier and digital display) are formatted, calibrated and ready for immediate use.



Characteristics

Measurement Range (g)	± 2	± 5	± 10	± 20	± 50	± 100	± 200	± 500
Frequency Response $\pm 5\%$ (Hz)	0-100	0-150	0-250	0-400	0-700	0-700	0-700	0-700

Technical Specifications

Range (F. S.)

From ± 2 to ± 500 g (see table on reverse side)

Over-range

± 2000 g (0.1 ms)

Accuracy

Non-Linearity : $< \pm 2\%$ F.S.
 Transverse Sensitivity : $< 3\%$ F.S.

Temperature Range

Operating Temperature Range (OTR) : -40 to 120 °C [-40 to 248 °F]
 Compensated Temperature Range (CTR) : 0 to 60 °C [32 to 140 °F]
 Zero Shift in CTR : $< 2\%$ F.S. / 108 °F
 Sensitivity Shift in CTR : $< 2\%$ of reading / 108 °F

Electrical Characteristics

Reference	FA1403-A1	FA1403-A9
Supply Voltage	10 to 30 Vdc	10 to 30 Vdc
F.S. Output	± 2 Vdc (± 250 mV)	± 4 Vdc (± 250 mV)
Zero Offset	2.5 Vdc (± 250 mV)	0 Vdc (± 250 mV)
Consumption	< 30 mA	< 30 mA
Output Impedance	< 90 Ω	< 90 Ω
Insulation under 50Vdc	≥ 100 M Ω	≥ 100 M Ω

Electrical Termination

Shielded cable standard length 2 m [6.5 ft] with strain relief spring

Mechanical Characteristics

Housing Material : Anodized aluminium
 Weight w/o cable : < 20 grams

Product References

High Level Output Sensor

Model

F.S. Output Reference

A1 : ± 2 Vdc

A9 : ± 4 Vdc

Full Scale Range (F.S.)

In g

Option(s)

L : Linearity $\leq \pm 1\%$ F.S.

ZI : Zero shift $\leq \pm 1\%$ F.S. / 108 °F

ET1 : CTR -20 to 100 °C [-4 to 212 °F]

ET2 : CTR -40 to 120 °C [-40 to 248 °F]

ET5 : CTR -40 to 80 °C [-40 to 176 °F]

LC"X" : Additional cable length in ft

FA1403

A1

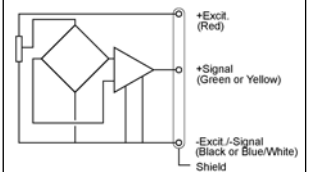
± 2

L

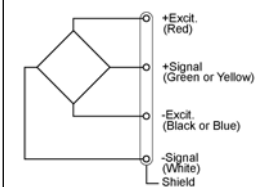
"X" = Custom value

Wiring Schematic / axis

FA1403-A1



FA1403-A9



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Performance specifications nominal and subject to change without notice. Current specifications see web-site. January 23, 2007

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