



FA1144 SERIES

Miniature Accelerometer



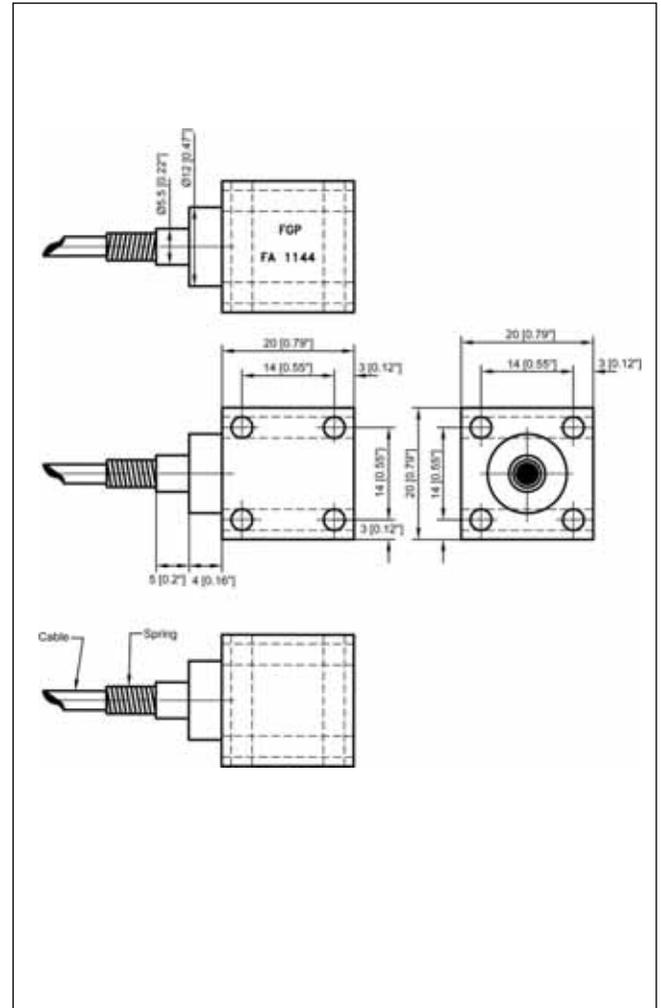
- Full Scale Range ± 2 to ± 500 g
- Industry Standard 20 mm [0.79 inch] Cube
- Bandwidth from DC
- Over-range Stops
- Integrated Amplifier

The FA1144 is an industry standard size accelerometer which is especially useful for applications which require low frequency response and minimum mass loading. Packaged in a rugged metal case, this accelerometer is designed for easy mechanical mounting and maintenance. The FA1144 comprises an internal amplifier for direct high level voltage output. It operates from a unipolar voltage supply. Model **FA1144-A1** offers ± 2 Vdc F.S. output with a zero offset of 2.5Vdc, whereas Model **FA1144-A9** offers differential ± 4 Vdc F.S. output. Mechanical stops provide over-range protection up to ± 2000 g for all ranges.

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.

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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

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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) : -20 to 80 °C [-4 to 176 °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	FA1144-A1	FA1144-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 : Aluminium alloy
 Weight w/o cable : < 30 grams

Product References

High Level Output Sensor Model

Full Scale Range (F.S.)

In g

Option(s)

L : Linearity $< \pm 1\%$ F.S.
 ZI : Zero shift $\leq \pm 1\%$ F.S. / 108 °F
 ET1 : CTR -20 to 100 °C [-4 to 212 °F] OTR=CTR
 ET2 : CTR -40 to 120 °C [-40 to 248 °F] OTR=CTR
 ET5 : CTR -40 to 80 °C [-40 to 176 °F] OTR=CTR
 LC"X" : Additional cable length in ft

FA1144

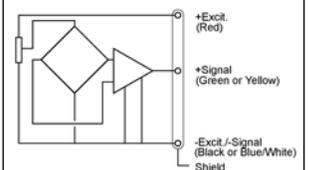
50

ET1

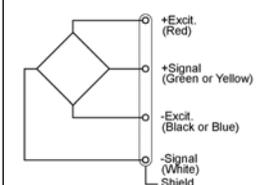
"X" = Custom value

Wiring Schematic

FA1144-A1



FA1144-A9



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Performance specifications nominal and subject to change without notice. Current specifications see web-site. January 12, 2006

FGP Sensors, Inc.

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