



FA1105 SERIES

Miniature Accelerometer

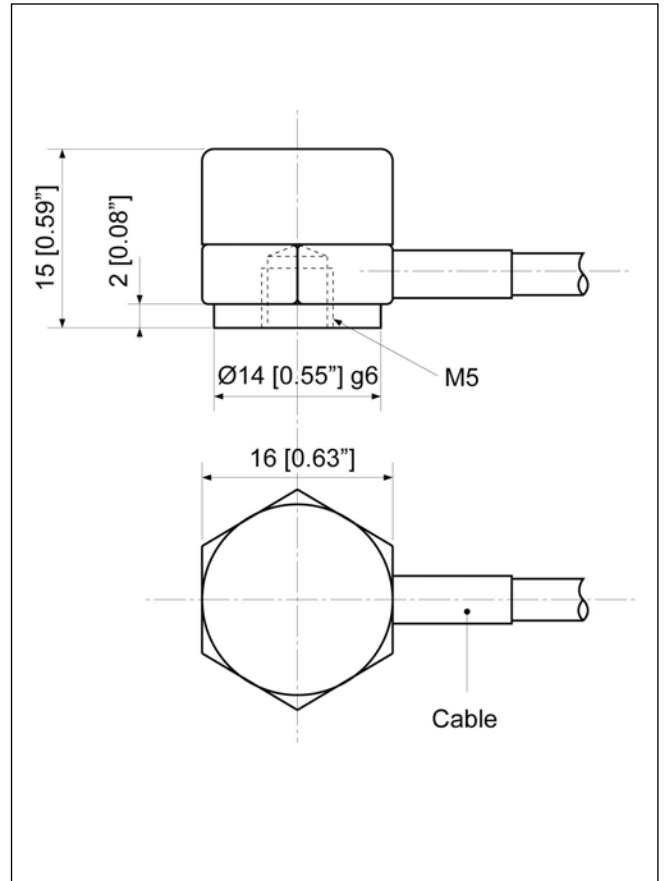


- Full Scale Range from ± 2 g to ± 500 g
- Small Footprint
- Lightweight and rugged: ≤ 8 grams
- Bandwidth from DC
- Over-range Stops
- M5 Thread for easy mounting
- Integrated Amplifier

The FA1105 is a general purpose accelerometer for studies, which require low frequency response and minimum mass loading. With its M5 mounting thread and shielded cable output, it is extremely easy to implement and use. The FA1105 includes an internal amplifier for direct high level voltage output. It operates from unipolar voltage supply.

Model **FA1105-A1** offers ± 2 Vdc F.S output with an offset of 2.5 Vdc, whereas model **FA1105-A9** offers differential ± 4 Vdc F.S. output. Mechanical stops ensure over-range protection up to ± 2000 g for all ranges.

With many years of experience as a designer and manufacturer of sensors, FGP Sensors has the expertise to customize and/or design sensors for specific uses and testing environments. To meet your needs we also offer complete turnkey systems. Our conditioning electronics can power the sensor, amplify the electronic signal, and display the data digitally. A turnkey measurement system arrives with matched components, formatted, calibrated and ready for your 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

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

Model	FA1105-A1	FA1105-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 50 Vdc	≥ 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
 M5 Mounting thread
 Weight w/o cable : ≤ 8 grams

Product References

High Level Output Sensor

Model

F.S. Output Reference

A1 : Single Ended Output

A9 : Differential Output

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] 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

FA1105

A1

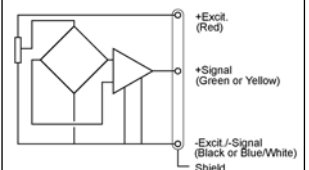
± 2

ET1

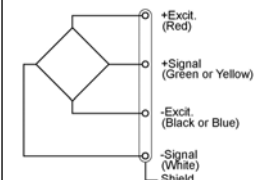
"X" = Custom value

Wiring Schematic

FA1105-A1



FA1105-A9



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Performance specifications nominal and subject to change without notice. Current specifications see web-site. December 15, 2005

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