

# FA1101-A9 SERIES

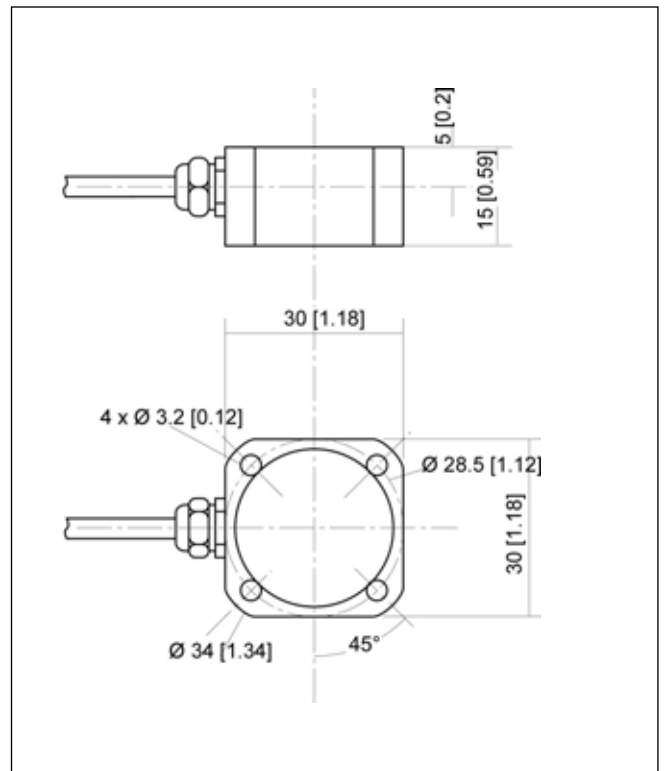
## Accelerometer



- Full-scale Range  $\pm 2$  g to  $\pm 500$  g
- Rugged
- Bandwidth from DC
- Over-range Stops
- High Level Differential Output

The FA1101-A9 is a general purpose accelerometer which is especially useful for measuring low-level ranges. Packaged in a rugged metal case, the FA1101-A9 accelerometers are designed for easy handling to suit a wide range of environmental conditions. The FA1101-A9 includes built-in conditioning electronics for direct high level voltage output. It operates from a unipolar voltage supply and provides  $\pm 4$ Vdc differential output. It is ideally suited for mobile test applications. Moreover, mechanical stops ensure over-range protection up to  $\pm 2000$  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 is supplied with matched components, formatted, calibrated and ready for your immediate use.



### Characteristics

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

Performance specifications subject to change without notice. December 15, 2005

## Technical Specifications

### Range (F. S.)

From  $\pm 2$  to  $\pm 500$  g (see table on reverse side)

### Over-range

$\pm 2000$  g (0.1 ms)

### Accuracy

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

Transverse Sensitivity :  $< 3\%$

### 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

|                         |                             |
|-------------------------|-----------------------------|
| Supply Voltage          | 10 to 30 Vdc                |
| F.S. Output             | $\pm 4$ Vdc ( $\pm 250$ mV) |
| Zero Offset             | 0 V ( $\pm 250$ mV)         |
| Consumption             | $< 30$ mA                   |
| Output Impedance        | $< 90$ $\Omega$             |
| Insulation under 50 Vdc | $\geq 100$ M $\Omega$       |

### Electrical Termination

Cable Gland Termination, 2 m [6.5 ft] cable length standard

### Mechanical Characteristics

Housing Material : Aluminium alloy

Weight w/o cable :  $< 25$  grams

### Product References

#### High Level Output Sensor

##### Model

##### 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

FA1101-A9

$\pm 2$

L

"X" = Custom value

### Wiring Schematic

