



## FA101 SERIES

### Accelerometer

#### SPECIFICATIONS

- ◆ Full Scale Range  $\pm 2$  g to  $\pm 500$  g
- ◆ DC Response
- ◆ Integrated Over-range Stops
- ◆ Solid State Reliability
- ◆ High Level Output Model with Integrated Amplifier

The FA101 is a general purpose accelerometer which is especially useful for measuring low-level ranges. Packaged in a rugged metal case, the FA101 accelerometers are designed for easy handling to suit a wide range of environmental conditions. They are also available with built-in A1/A2 module, providing internal signal conditioning.

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)	$\pm 2$	$\pm 5$	$\pm 10$	$\pm 20$	$\pm 50$	$\pm 100$	$\pm 200$	$\pm 500$
Over-range (g)	400	400	400	400	1000	2000	2000	2000
Frequency Response $\pm 5\%$ (Hz) FA101/FA101-24/FA101-A2	0-200	0-250	0-300	0-500	0-750	0-1000	0-1200	0-1250
Frequency Response $\pm 5\%$ (Hz) FA101-A1	0-100	0-150	0-250	0-400	0-700	0-700	0-700	0-700
Frequency Response $\pm 5\%$ (Hz) FA101-A3	0-200	0-250	0-300	0-500	0-750	0-1000	0-1000	0-1000

**TECHNICAL SPECIFICATIONS****Range (F. S.)**From  $\pm 2$  to  $\pm 500$  g (see table on reverse side)**Over-range**

From 400 to 2000 g (see table on reverse side)

**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**

Model	FA101	FA101-24	FA101-A1	FA101-A2	FA101-A3
Supply Voltage	10 Vdc	14 to 36 Vdc	10 to 30 Vdc	$\pm 15$ Vdc	12 to 36 Vdc
F.S. Output	$\pm 20$ to $\pm 100$ mV	$\pm 20$ to $\pm 100$ mV	$\pm 2$ V ( $\pm 250$ mV)	$\pm 5$ V $\pm 5\%$ F.S.	4 to 20 mA
Zero Offset	$<\pm 10$ mV	$<\pm 10$ mV	2,5 V ( $\pm 250$ mV)	0 V $\pm 5\%$ F.S.	12 mA $\pm 5\%$ F.S.
Input Impedance/Consumption	10 k $\Omega$	10 k $\Omega$	$<30$ mA	-	-
Output Impedance	$<5$ k $\Omega$	$<5$ k $\Omega$	$<90$ $\Omega$	-	-
Insulation under 50 Vdc	$\geq 100$ M $\Omega$	$\geq 100$ M $\Omega$	$\geq 100$ M $\Omega$	$\geq 100$ M $\Omega$	$\geq 100$ 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**

**Low Level Output Sensor**

<b>Model</b>	<b>Full Scale Range (F.S.)</b> In g	<b>Option(s)</b>
FA101 FA101-24	±2	L : Linearity $\leq \pm 1\%$ F.S. Zl : 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 LC"X" : Additional cable length in ft

  

**High Level Output Sensor**

<b>Model</b>	<b>Power Supply Reference</b>	<b>Full Scale Range (F.S.)</b> In g	<b>Option(s)</b>
FA101 FA101-24	A1 : Unipolar-tension A2 : Bipolar-tension A3 : Current loop	±2	L : Linearity $\leq \pm 1\%$ F.S. Zl : Zero shift $\leq \pm 1\%$ F.S. / 108 °C ET1 : CTR -20 to 100 °C [-4 to 212 °F] OTR=CTR <sup>(1)</sup> ET2 : CTR -40 to 120 °C [-40 to 248 °F] OTR=CTR <sup>(1)</sup> LC"X" : Additional cable length in ft

FA101    A1    ±2    ET1

"X" = Custom value

**Wiring Schematic**

**FA101 / FA101-24**

**FA101-A1**

**FA101-A2**

<sup>(1)</sup> Option unavailable with version A3