

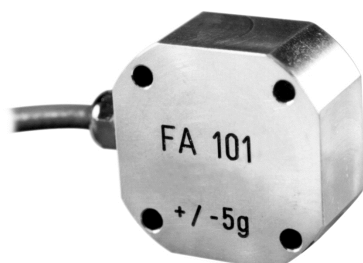
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# FA101 Accelerometer



- 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



## DESCRIPTION

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, Measurement Specialties Inc. 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.

## FEATURES

- 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

## APPLICATIONS

- Structure vibration analysis and control
- Monitoring of machinery
- Robotics and effectors
- Laboratory and Research

## STANDARD RANGES

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

# FA101 Accelerometer

## PERFORMANCE SPECIFICATIONS

Ambient Temperature: 20±1°C (unless otherwise specified)

Parameters	
Operating Temperature Range (OTR)	-20 to 80° C (0 to 176°F)
Compensated Temperature Range (CTR)	0 to 60° C (32 to 140°F)
Zero Shift in CTR	< 2 % F.S./ 50° C (100°F)
Sensitivity Shift in CTR	< 2 % of reading 50° C (100°F)
Range (F.S.)	± 2 to ± 500g
<b>Over-Range</b>	From 400-2000g
<b>Accuracy</b>	
Non-Linearity	<±2% F.S.
Transverse Sensitivity	<3%

### Electrical Characteristics

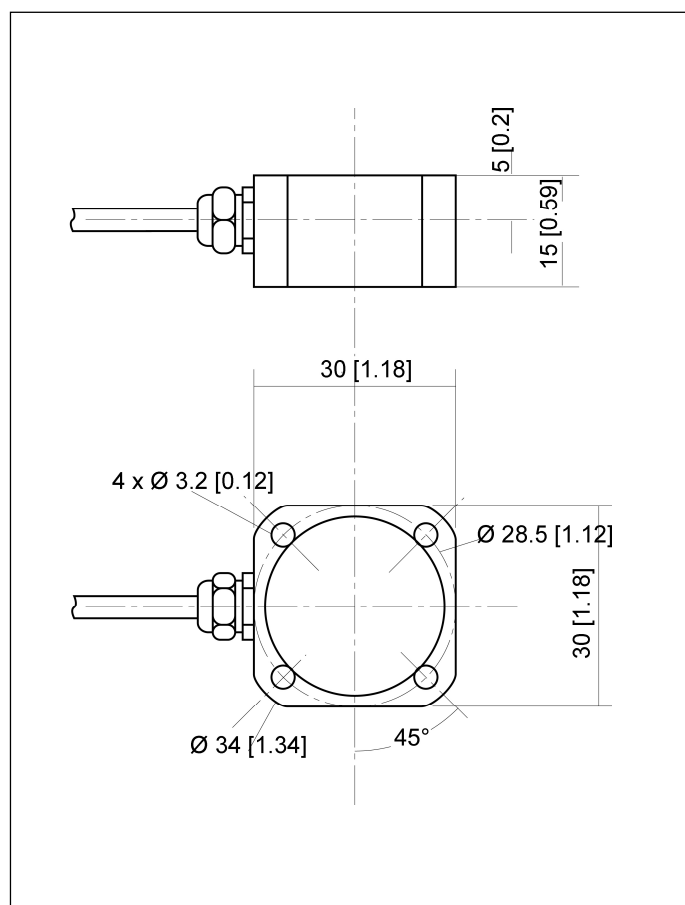
Model	FA101	FA101-24	FA101-A1	FA101-A2	FA101-A3
Supply Voltage	10Vdc	14 – 36Vdc	10 to 30Vdc	±15Vdc	12 to 36Vdc
F.S. Output	±20 to ±100mV	±20 to ±100mV	±2V(±250mV)	±5V±5%F.S	4 to 20mA
Zero Offset	<±10mV	<±10mV	2.5V(±250mV)	0V±5%F.S.	12mA±5%F.S.
Input Impedance	10kΩ	10kΩ	<30mA	<30mA	-
Output Impedance	<5kΩ	<5kΩ	<1kΩ	<1kΩ-	-
Insulation under 50Vdc	≥100MΩ	≥100MΩ	≥100MΩ	≥100MΩ	≥100MΩ

### Notes

1. Electrical Termination: Cable gland termination; 2 m [6.5ft] cable length standard
2. Material: Housing in aluminum alloy
3. Weight w/o cable: <25g [0.055 lb]
4. CE conformance according to EN 61010-1, EN 50081-1, EN 50082-1

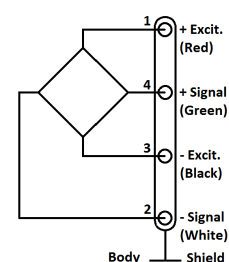
# FA101 Accelerometer

## DIMENSIONS & WIRING SCHEMATIC (IN METRIC AND IMPERIAL)

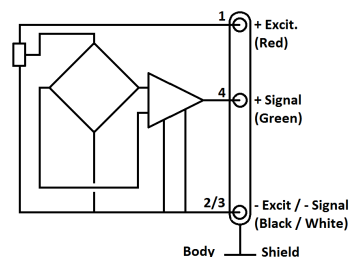


### Wiring Schematic

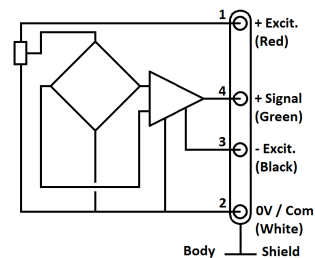
#### FA101 / FA101-24



#### Version -A1



#### Version -A2

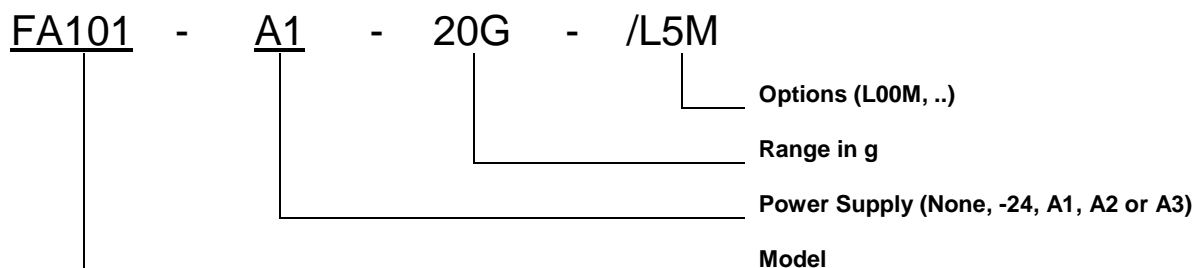


# FA101 Accelerometer

## OPTIONS

<b>-24</b> : Regulated excitation
<b>A1</b> : Amplified Tension output with unipolar power supply
<b>A2</b> : Amplified Tension output with bipolar power supply
<b>A3</b> : Amplified Current loop output
<b>ET1</b> : CTR -20 to 100°C [-4 to 212°F] OTR=CTR (Option unavailable with version A3)
<b>ET2</b> : CTR -40 to 120°C [-40 to 248°F] OTR=CTR (Option unavailable with version A3)
<b>L</b> : Linearity $\leq \pm 1\%$ F.S.
<b>ZI</b> : Zero shift $\leq \pm 1\%$ F.S. / 50°C (100°F)
<b>L00M</b> : special cable length, replace "00" with total length in meters

## ORDERING INFO



### NORTH AMERICA

Measurement Specialties, Inc.  
Vibration Design Center  
32 Journey - Suite 150  
Aliso Viejo, CA 92656  
United States USA  
Tel: 1-949-716-0877  
Fax: 1-949-916-5677  
[t&m@meas-spec.com](mailto:t&m@meas-spec.com)

### EUROPE

Measurement Specialties  
(Europe), Ltd.  
26 Rue des Dames  
78340 Les Clayes-sous-Bois,  
France  
Tel: +33 (0) 130 79 33 00  
Fax: +33 (0) 134 81 03 59  
[cs.lcsb@meas-spec.com](mailto:cs.lcsb@meas-spec.com)

### ASIA

Measurement Specialties  
(China), Ltd.  
No. 26 Langshan Road  
Shenzhen High-Tech Park (North)  
Nanshan District, Shenzhen  
518057  
China  
Tel: +86 755 3330 5088  
Fax: +86 755 3330 5099  
[pfg.cs.asia@meas-spec.com](mailto:pfg.cs.asia@meas-spec.com)

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