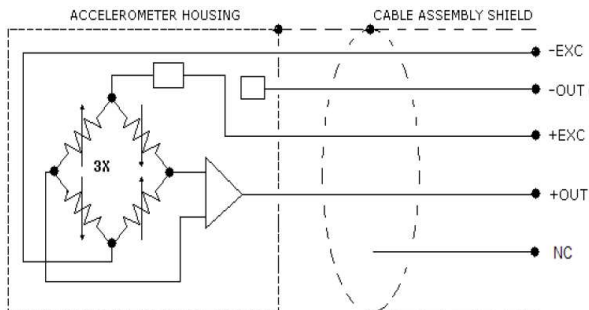
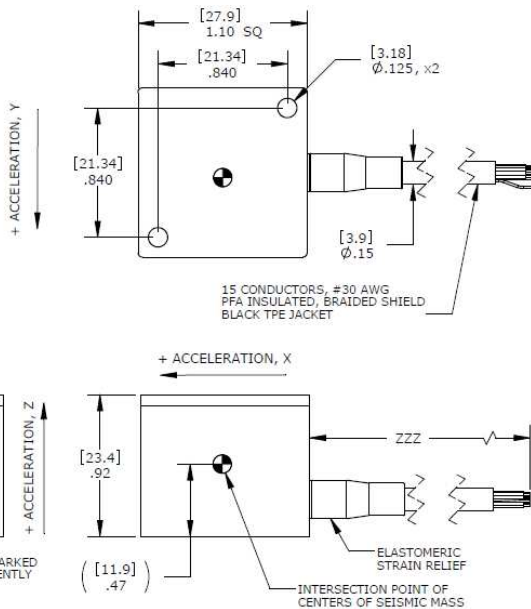




## DIMENSIONS



# MODEL 4630A ACCELEROMETER

## SPECIFICATIONS

- MEMS Triaxial Accelerometer
- Micro-g Resolution, Low Noise
- Accurate Temp Compensation
- Signal Conditioned Output

The Model 4630A is an ultra low-noise triaxial accelerometer offering both static and dynamic response. The silicon MEMS accelerometer is gas damped in order to provide a wide stable frequency response. The three independent circuit assemblies have independent signal conditioning and can operate on common or separate power supplies. The model 4630A accelerometer is available in ranges from  $\pm 2$  to  $\pm 200g$  with an operating temperature range of  $-55^{\circ}C$  to  $+125^{\circ}C$ .

## FEATURES

- Three Independent Circuits
- $\pm 2g$  to  $\pm 200g$  Dynamic Range
- 5,000g Shock Protection
- 8 to 30Vdc Excitation Voltage
- Gas Damping
- Integral Strain Relief
- Temperature Compensated

## APPLICATIONS

- Transportation
- Vibration & Shock Monitoring
- Road Vehicle Testing
- Low Frequency Applications
- Modal Analyses
- Structural Monitoring

X-AXIS	Y-AXIS	Z-AXIS
BLK/BLU	BLK/YEL	BLK
WHT/BLU	WHT/YEL	WHT
RED/BLU	RED/YEL	RED
GRN/BLU	GRN/YEL	GRN
BRN/BLU	BRN/YEL	BRN

**PERFORMANCE SPECIFICATIONS**

All values are typical at +24°C, 80Hz and 12Vdc excitation unless otherwise stated. Measurement Specialties reserves the right to update and change these specifications without notice.

**Parameters**

**DYNAMIC**

	±2	±3	±5	±10	±20	±50	±100	±200	<b>Notes</b>
Range (g)									
Sensitivity (mV/g)	1000	667	400	200	100	40	20	10	±10%
Frequency Response (Hz)	0-150	0-250	0-300	0-400	0-600	0-800	0-1000	0-1000	±5%
Frequency Response (Hz)	0-400	0-450	0-500	0-600	0-800	0-1100	0-1300	0-1300	±1dB
Natural Frequency (Hz)	700	750	800	1000	1500	4000	6000	8000	
Non-Linearity (%FSO)	±1.0	±1.0	±1.0	±1.0	±1.0	±1.0	±1.0	±1.0	
Transverse Sensitivity (%)	<3	<3	<3	<3	<3	<3	<3	<3	<1 Typical
Damping Ratio	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	
Shock Limit (g)	2000	2000	2000	5000	5000	5000	5000	5000	
Residual Noise (µV RMS)	25	30	20	23	31	26	32	32	Passband
Residual Noise (µg/√Hz RMS)	2	3	3	6	13	21	41	82	Spectral

**ELECTRICAL**

Zero Acceleration Output (mV)	±50								Differential
Excitation Voltage (Vdc)	8 to 30								
Excitation Current (mA)	<36								
Bias Voltage (Vdc)	2.5								
Full Scale Output Voltage (Vdc)	±2								
Output Resistance (Ω)	<100								
Insulation Resistance (MΩ)	>100								@100Vdc
Turn On Time (msec)	<100								
Ground Isolation	Isolated from Mounting Surface								

**ENVIRONMENTAL**

Thermal Zero Shift (%FSO/°C)	±0.010								-40 to +100°C
Thermal Sensitivity Shift (%/°C)	±0.014								-40 to +100°C
Operating Temperature (°C)	-55 to +125								
Compensated Temperature (°C)	-40 to +100								
Humidity	Epoxy Sealed, IP65								

**PHYSICAL**

Case Material	Anodized Aluminum								
Cable	15x #30 AWG Conductors PFA Insulated Leads, Braided Shield, TPE Jacket								
Weight (grams)	65 (cable not included)								
Mounting	2x #4 or M3 Screws								
Mounting Torque	6 lb-in (0.7 N-m)								

**Calibration supplied:** CS-FREQ-0100 NIST Traceable Amplitude Calibration from 20Hz to ±5% Frequency Response Limit

**Supplied accessories:** AC-D02855 2x #4-40 (1<sup>1/8</sup> length) Socket Head Cap Screw and Washer

**Optional accessories:** AC-D02744 Adhesive Mounting Adaptor  
121 3-Channel Precision Low Noise DC Amplifier

The information in this sheet has been carefully reviewed and is believed to be accurate; however, no responsibility is assumed for inaccuracies. Furthermore, this information does not convey to the purchaser of such devices any license under the patent rights to the manufacturer. Measurement Specialties, Inc. reserves the right to make changes without further notice to any product herein. Measurement Specialties, Inc. makes no warranty, representation or guarantee regarding the suitability of its product for any particular purpose, nor does Measurement Specialties, Inc. assume any liability arising out of the application or use of any product or circuit and specifically disclaims any and all liability, including without limitation consequential or incidental damages. Typical parameters can and do vary in different applications. All operating parameters must be validated for each customer application by customer's technical experts. Measurement Specialties, Inc. does not convey any license under its patent rights nor the rights of others.

## ORDERING INFORMATION

PART NUMBERING Model Number+Range+Cable Length

4630A-GGG-CCC

    |      |  
    |      |\_\_\_\_\_Cable (060 is 60 inches)  
    |\_\_\_\_\_Range (002 is 2g)

Example: 4630A-002-060  
          Model 4630A, 2g, 60" (5ft) Cable

### NORTH AMERICA

Measurement Specialties, Inc.,  
a TE Connectivity Company  
1000 Lucas Way  
Hampton, VA 23666  
Sales and Customer Service  
Tel: +1-800-745-8008 or  
+1-757-766-1500  
Fax: +1-757-766-4297  
t&m@meas-spec.com

### EUROPE

MEAS France SAS  
a TE Connectivity Company  
26 Rue des Dames  
F78340 Les Clayes-sous-Bois  
France  
Sales and Customer Service  
Tel: +33 (0) 1 79 33 00  
Fax: +33(0)1 34 81 03 59  
t&m@meas-spec.com

### ASIA

Measurement Specialties (China), Ltd.,  
a TE Connectivity Company  
No. 26 Langshan Road  
Shenzhen High-Tech Park (North)  
Nanshan District, Shenzhen 518057  
China  
Sales and Customer Service  
Tel: +86 755 3330 5088  
Fax: +86 755 3330 5099  
t&m@meas-spec.com

### [TE.com/sensorsolutions](http://TE.com/sensorsolutions)

Measurement Specialties, Inc., a TE Connectivity company.

Measurement Specialties, TE Connectivity, TE Connectivity (logo) and EVERY CONNECTION COUNTS are trademarks. All other logos, products and/or company names referred to herein might be trademarks of their respective owners.

The information given herein, including drawings, illustrations and schematics which are intended for illustration purposes only, is believed to be reliable. However, TE Connectivity makes no warranties as to its accuracy or completeness and disclaims any liability in connection with its use. TE Connectivity's obligations shall only be as set forth in TE Connectivity's Standard Terms and Conditions of Sale for this product and in no case will TE Connectivity be liable for any incidental, indirect or consequential damages arising out of the sale, resale, use or misuse of the product. Users of TE Connectivity products should make their own evaluation to determine the suitability of each such product for the specific application.

© 2015 TE Connectivity Ltd. family of companies All Rights Reserved.