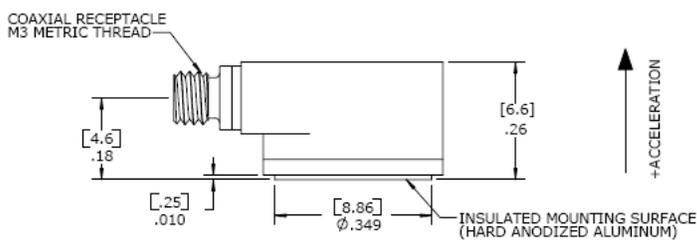
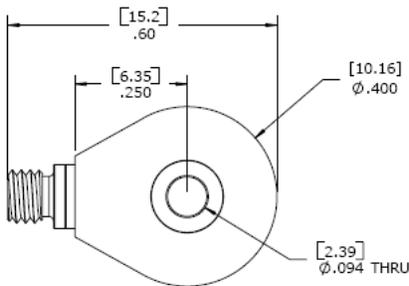


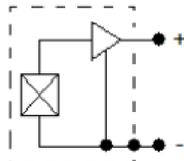
# MODEL 7101A ACCELEROMETER



## DIMENSIONS



ACCELEROMETER



## SPECIFICATIONS

- ◆ IEPE Accelerometer
- ◆ Wide Bandwidth to 10kHz
- ◆ M3 Side Connector
- ◆ Miniature, Lightweight (2.4gm)

The Model 7101A is a miniature, high performance IEPE accelerometer available in  $\pm 50g$  to  $\pm 1000g$  dynamic ranges. The accelerometer is designed for high frequency vibration and shock measurements and offers a wide bandwidth to  $>10kHz$  utilizing stable piezo-ceramic crystals in annular shear mode. The model 7101A features a hermetically sealed titanium housing and the popular through hole mount configuration. The standard operating temperature range extends from  $-55^{\circ}C$  to  $+125^{\circ}C$ .

## FEATURES

- ◆  $\pm 50g$  to  $\pm 1000g$  Dynamic Range
- ◆ Wide bandwidth up to 10kHz
- ◆ Welded Construction, Titanium
- ◆ Hermetically Sealed
- ◆ Annular Shear Mode
- ◆ Stable Temperature Response
- ◆ Miniature, Through-Hole Mount

## APPLICATIONS

- ◆ Vibration & Shock Monitoring
- ◆ Laboratory Testing
- ◆ Modal Applications
- ◆ High Frequency Applications
- ◆ General Purpose Usage

**PERFORMANCE SPECIFICATIONS**

All values are typical at +24°C, 80Hz and 4mA excitation unless otherwise stated. Measurement Specialties reserves the right to update and change these specifications without notice.

**Parameters**

**DYNAMIC**

	±50	±500	±1000	<b>Notes</b>
Range (g)	±50	±500	±1000	
Sensitivity (mV/g)	100	10	5	±10%
Frequency Response (Hz)	1-8000	1-8000	1-8000	±5%
Frequency Response (Hz)	0.5-10000	0.5-10000	0.5-10000	±1dB
Natural Frequency (Hz)	>50000	>50000	>50000	
Non-Linearity (%FSO)	±1	±1	±1	
Transverse Sensitivity (%)	<5	<5	<5	
Shock Limit (g)	5000	5000	5000	

**ELECTRICAL**

Compliance Voltage (Vdc)	18 to 30	18 to 30	18 to 30	
Excitation Current (mA)	2 to 10	2 to 10	2 to 10	
Bias Voltage (Vdc)	8 to 12	8 to 12	8 to 12	Room Temperature
Bias Voltage (Vdc)	6 to 14	6 to 14	6 to 14	-55 to +125°C
Output Impedance (Ω)	<100	<100	<100	
Full Scale Output Voltage (V)	±5	±5	±5	
Residual Noise (g RMS)	0.0004	0.0008	0.001	Broadband 1Hz to 10kHz
Discharge Time Constant (sec)	0.8 to 1.2			
Ground Isolation	Isolated from Mounting Surface			

**ENVIRONMENTAL**

Temperature Response (%)	See Typical Temperature Response Curve
Operating Temperature (°C)	-55 to +125
Storage Temperature (°C)	-55 to +125
Humidity	Hermetically Sealed

**PHYSICAL**

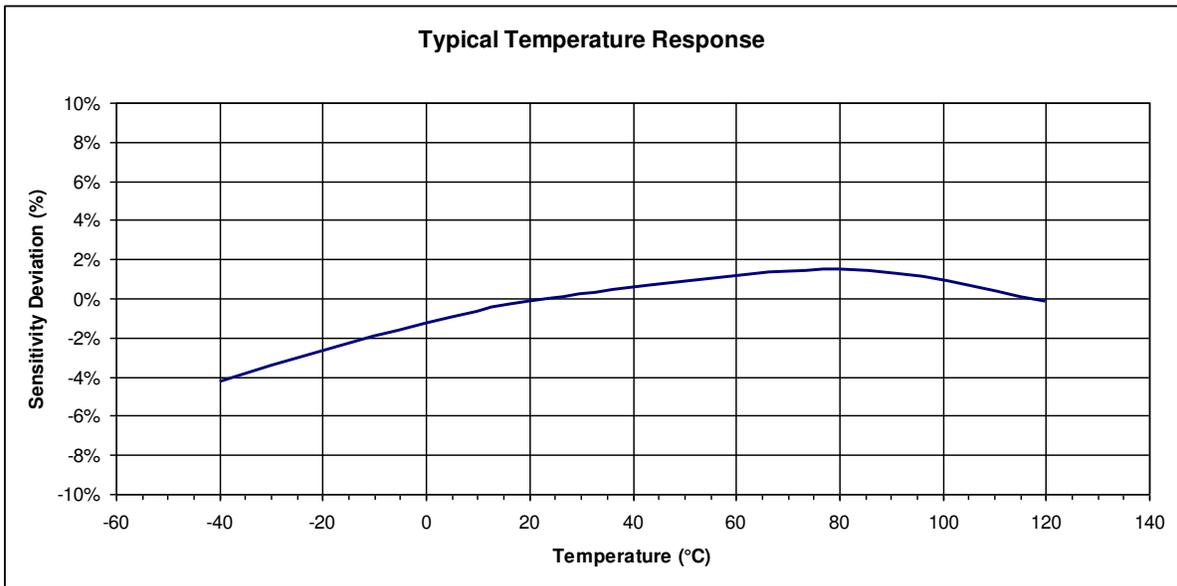
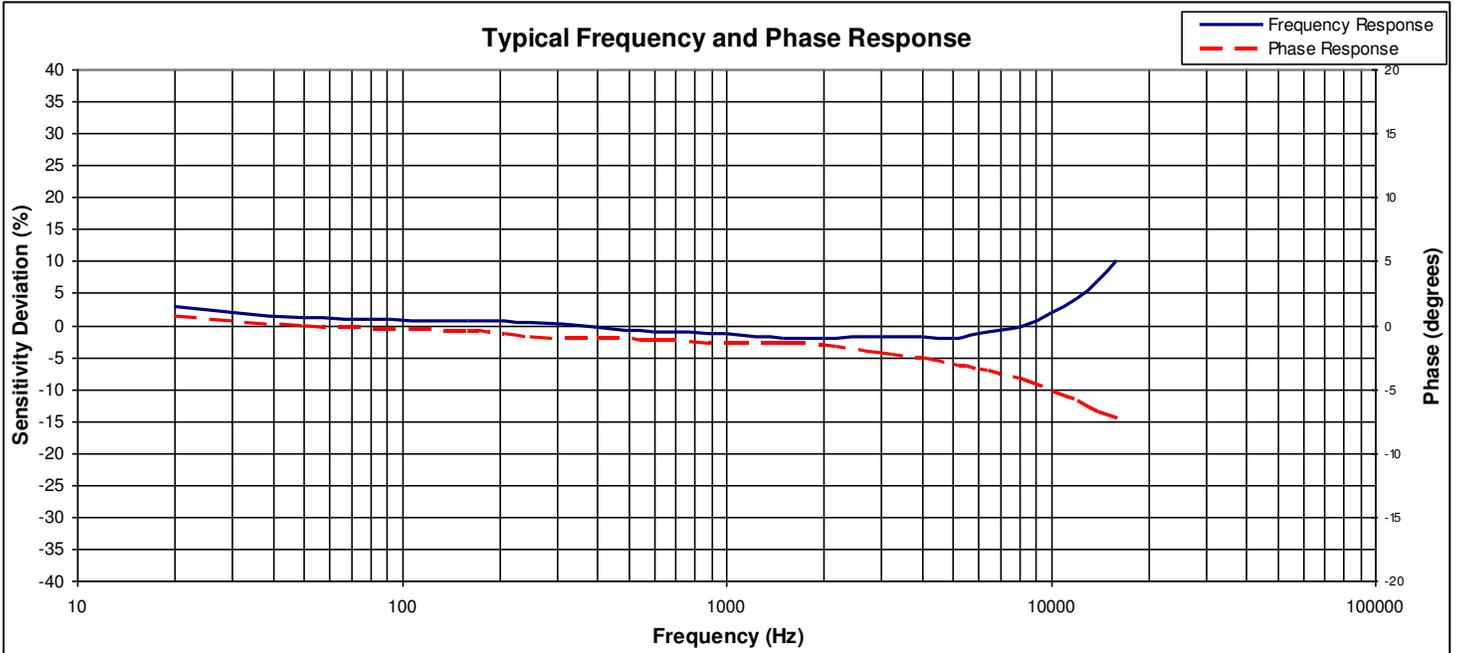
Sensing Element	Ceramic (shear mode)
Case Material	Titanium
Electrical Connector	M3 Coaxial Receptacle
Weight (grams)	2.4
Mounting	#2-56 Insulated Mounting Screw (included)
Mounting Torque	5 lb-in (0.6 N-m)

**Calibration supplied:** CS-FREQ-0100 NIST Traceable Amplitude Calibration from 20Hz to ±1dB Frequency Response Limit

**Supplied accessories:** AC-A03230 1x #2-56 Insulated Mounting Screw Assembly (7/16 inch length)

**Optional accessories:** 311-XXX Cable Assembly, M3 to BNC (XXX designates length in inches, 10ft standard)  
 AC-A04018 Triaxial Mounting Block  
 161A 4-Channel PE & IEPE Signal Conditioner, Bench Top

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

7101A-GGGG  
    |\_\_\_\_\_ Range (0050 is 50g)

Example: 7101A-0050  
          Model 7101A, 50g

**NORTH AMERICA**

Measurement Specialties, Inc.,  
a TE Connectivity Company  
Tel: 800-522-6752  
Email: [customercare.hmpt@te.com](mailto:customercare.hmpt@te.com)

**EUROPE**

MEAS France SAS  
a TE Connectivity Company  
Tel: 800-440-5100  
Email: [customercare.lcsb@te.com](mailto:customercare.lcsb@te.com)

**ASIA**

Measurement Specialties (China), Ltd.,  
a TE Connectivity Company  
Tel: 0400-820-6015  
Email: [customercare.shzn@te.com](mailto:customercare.shzn@te.com)

**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.