

Model 7114A Accelerometer



IEPE Accelerometer
Wide Bandwidth to 15kHz
10-32 Side Connector
Stud Mount, Hermetic

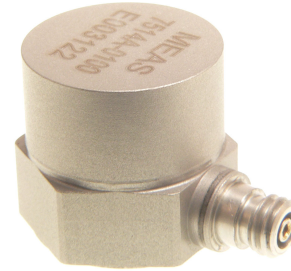
The Model 7114A is a high performance IEPE accelerometer available in $\pm 10g$ to $\pm 500g$ dynamic ranges. The stud mounted accelerometer features a welded hermetic construction with a side mount connector. The model 7114A incorporates stable piezo-ceramic crystals in annular shear mode which provide a flat frequency response up to $>15kHz$. The standard operating temperature range extends from $-55^{\circ}C$ to $+125^{\circ}C$. For a miniature stud mount version please review model 7104A, available in $\pm 50g$ to $\pm 500g$ dynamic ranges

FEATURES

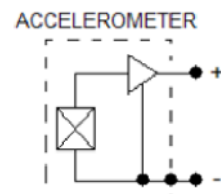
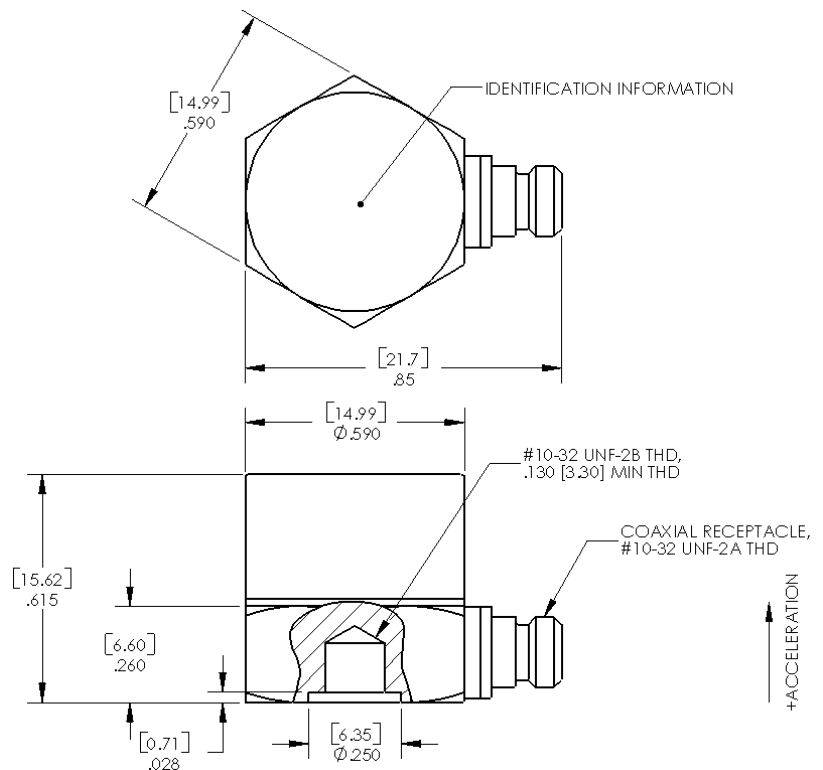
- $\pm 10g$ to $\pm 500g$ Dynamic Range
- Wide bandwidth up to 15kHz
- Welded Construction
- Hermetically Sealed
- Annular Shear Mode
- Stable Temperature Response
- TEDS Option

APPLICATIONS

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



dimensions



Model 7114A Accelerometer

performance specifications

All values are typical at +24°C, 100Hz and 4mA excitation unless otherwise stated. Measurement Specialties reserves the right to update and change these specifications without notice.

Parameters

DYNAMIC

	±10	±50	±500	Notes
Range (g)	±10	±50	±500	
Sensitivity (mV/g)	500	100	10	
Frequency Response (Hz)	1-3000	1-5000	1-7000	±5%
Frequency Response (Hz)	0.5-6000	0.5-10000	0.5-15000	±1dB
Natural Frequency (Hz)	25000	33000	43000	
Non-Linearity (%FSO)	±1	±1	±1	
Transverse Sensitivity (%)	<5	<5	<5	
Shock Limit (g)	5000	10000	10000	

ELECTRICAL

Compliance Voltage (Vdc)	18 to 30	18 to 30	18 to 30	See Note 1 Room Temperature -55 to +125°C
Excitation Current (mA) ¹	2 to 10	2 to 10	2 to 10	
Bias Voltage (Vdc)	8 to 12	8 to 12	8 to 12	
Bias Voltage (Vdc)	6 to 13	6 to 13	6 to 13	
Output Impedance (Ω)	<100	<100	<100	Broadband 1Hz to 10kHz
Residual Noise (g RMS)	0.0002	0.0004	0.0008	
Grounding	Case Grounded			

ENVIRONMENTAL

Temperature Response (%)	±5	±5
Operating Temperature (°C)	-55 to +125	
Storage Temperature (°C)	-55 to +125	

PHYSICAL

Sensing Element	Ceramic (shear mode)
Case Material	Stainless Steel
Weight (grams)	18
Mounting	#10-32 to #10-32 Mounting Stud (included)
Mounting Torque	18 lb-in (2.0 N-m)

¹ Maximum 4mA at +125°C

Supplied accessories: AC-D02298 10-32 to 10-32 mounting stud

Optional accessories: 310-XXX Cable Assembly, 10-32 to 10-32 (XXX designates length in inches, 10ft standard)
 314-XXX Cable Assembly, 10-32 to BNC (XXX designates length in inches, 10ft standard)
 AC-D30105 Adhesive Mounting Adaptor
 AC-D03106 Magnetic Mounting Adaptor
 161 PE & IEPE Signal Conditioner

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ordering info

PART NUMBERING Model Number+Range

7114AT-GGGG

I I Range (0050 is 50g)

I TEDS compliant to IEEE 1451.4 when 'T' option is included

Example: 7114A-0050
Model 7114A, 50g

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