

# AT/14.XX

## Tri-axial IEPE accelerometer

IEPE, Side Entry 1/4-28 UNF Connector, Ceramic Isolated Adhesive Mount



### KEY FEATURES

- ✓ Titanium case
- ✓ Ceramic isolated base
- ✓ 13 grams
- ✓ 5 standard sensitivity options; 1mV/g to 100mV/g

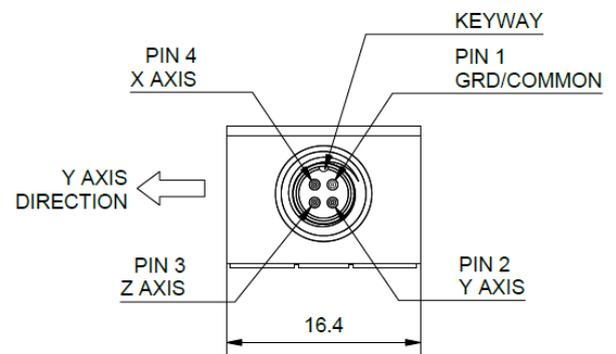
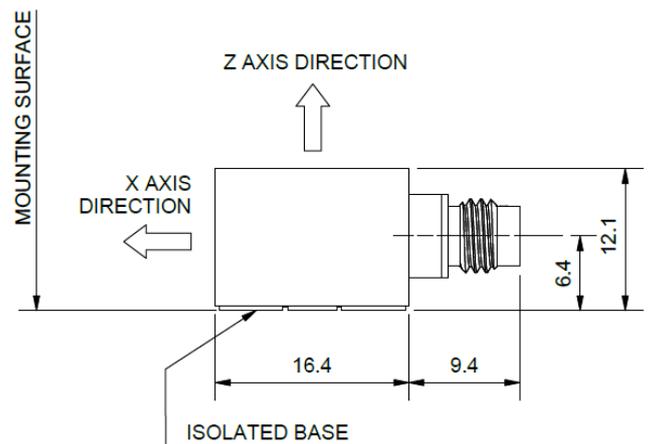
### DEVICE / FAMILY OPTIONS

- ✓ AT/14.XXET - Extended temperature variant to 165°C
- ✓ AT/14.XXT - Transducer Electronic Datasheet (TEDS)
- ✓ Extended low & high frequency calibration
- ✓ Custom sensitivities available on request
- ✓ AT/14/TB.XX 10-32 UNF tapped base

### TYPICAL CABLE OPTIONS

- ✓ 4S-1/ET25/27/4F/3S18/3/BC1 - 4 pin socket, co-axial cable ending in 3x BNC, 3 metres
- ✓ Other options and lengths available

### AT/14 ACCELEROMETER DIMENSIONS

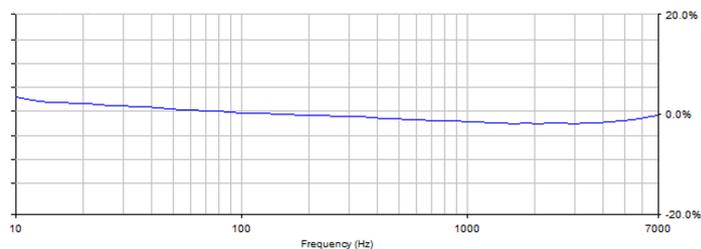


All measurements in millimeters (mm)

# TECHNICAL SPECIFICATIONS

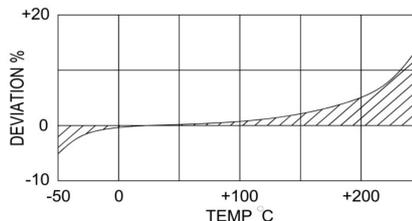
Performance	AT/14.1	AT/14.5	AT/14.10	AT/14.30	AT/14.100
<b>Voltage Sensitivity (<math>\pm 10\%</math>)</b>	1mV/g	5mV/g	10mV/g	30mV/g	100mV/g
<b>Measurement Range</b>	$\pm 5000g$	$\pm 1000g$	$\pm 500g$	$\pm 160g$	$\pm 50g$
<b>Frequency Response (<math>\pm 5\%</math>)</b>	1Hz to 6kHz	1Hz to 6kHz	1Hz to 6kHz	1Hz to 6kHz	1.5Hz to 6kHz
<b>Frequency Response (<math>\pm 10\%</math>)</b>	0.7Hz to 7kHz	0.7Hz to 7kHz	0.7Hz to 7kHz	0.7Hz to 7kHz	1Hz to 7kHz
<b>Resonant Frequency</b>	X, Y Axis $\geq 20kHz$ , Z Axis $\geq 33kHz$				
<b>Cross Axis Error</b>	$\leq 5\%$				
<b>Maximum Shock Limit</b>	5000g				
<b>Non-linearity (% FS)</b>	$\leq 1\%$				
<b>Base Strain Sensitivity</b>	$\leq 0.001g/\mu\epsilon$				
<b>Broadband Resolution</b>	0.002grms (100mV/g)				
<b>Electrical Characteristics</b>					
<b>Supply Voltage</b>	15V to 35V DC				
<b>Supply Current</b>	2mA to 20mA (max 2mA above 125°C)				
<b>Bias Voltage</b>	10V to 14V DC				
<b>Output Impedance</b>	$\leq 100\Omega$				
<b>Base Isolation Impedance</b>	$> 100M\Omega$				
<b>Settling Time Constant</b>	$< 5$ seconds				
<b>Physical</b>					
<b>Case Material</b>	Titanium				
<b>Connector</b>	1/4 UNF, 4 pin				
<b>Mounting</b>	Adhesive, ceramic isolated base				
<b>Recommended Mounting Torque</b>	N/A				
<b>Weight</b>	13.0 grams				
<b>Size (mm)</b>	16.4 x 16.4 x 12.1mm				
<b>(Inches)</b>	0.65 x 0.65 x 0.48"				
<b>Environmental</b>					
<b>Temperature Range (°C)</b>	-50°C to +125°C (Extended temperature option to 165°C)				
<b>(°F)</b>	-58°F to +257°F (Extended Temperature option to 329°F)				
<b>Total Mass Loss (TML)</b>	$< 0.1\%$				

**TYPICAL FREQUENCY RESPONSE**



**TYPICAL THERMAL RESPONSE**

Response shows performance of piezoelectric sensing element, including beyond the stated operating limits.



**TYPICAL SPECTRAL NOISE (100mV/g)**

1 Hz - 345  $\mu g/\sqrt{Hz}$   
 10 Hz - 42.8  $\mu g/\sqrt{Hz}$   
 100 Hz - 11.2  $\mu g/\sqrt{Hz}$   
 1 kHz - 5.67  $\mu g/\sqrt{Hz}$   
 10 kHz - 5.23  $\mu g/\sqrt{Hz}$

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SPECIFICATIONS MAY BE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

ALL DEVICES CALIBRATED IN ACCORDANCE WITH BS ISO 16063-21:2003. ALL DEVICE CALIBRATIONS ARE UKAS TRACEABLE.