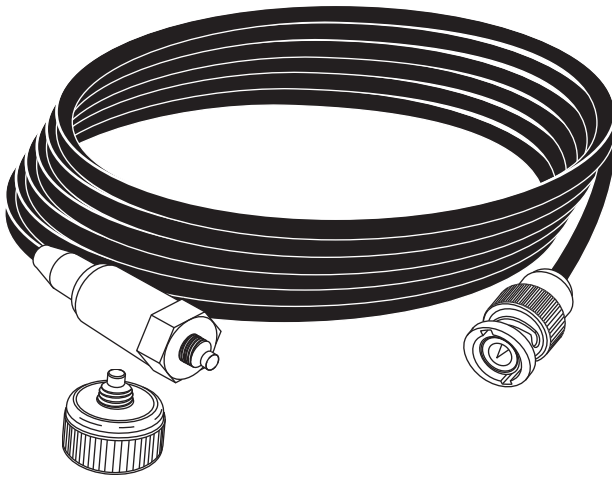


TA095 and TA096

IEPE Accelerometer and Mounting Magnet

Introductory Guide



1. General safety summary

Please review the following safety precautions to avoid injury and prevent damage to both the accelerometer and surrounding devices.

DO handle with care

The accelerometer in this guide is very sensitive, and therefore must be treated with care. Failure to do this could result in damage to the device.



WARNING

The mounting magnet described in this guide has a strong magnetic field. Users of pacemakers and insulin pumps must avoid using this item.

Magnetic media (such as credit cards), analogue watches, televisions, computer monitors, sensitive electronic equipment, and mobile storage devices, should all be kept away from this magnet to avoid permanent damage.

This magnet can attract steel objects or other magnets from large distances, causing trapping injuries. Care must always be taken to prevent this hazard.

Do not give this magnet to small children.

Do not use this magnet in explosive atmospheres.

2. Connection Instructions

1. The Accelerometer is designed to be used with industry standard IEPE instruments only.

3. Mounting Instructions

Note: A correctly prepared mounting surface is critical for obtaining reliable measurements, especially at high frequencies. Poor installations can cause as much as 50% drop in the sensor frequency range.

1. Verify the mounting surface is flat and smooth.
2. Slide the keeper washer off the mounting magnet.
Note: When in storage, the keeper washer should be fitted to the magnet in order to prolong the life of the magnet.
3. Using the supplied grub screw, secure the mounting magnet to the accelerometer.
4. Mount the magnet/sensor assembly to the prepared test surface by gently rolling or sliding it into place.

Note: Magnetically mounting accelerometers carelessly has the potential to generate very high (and damaging) *g* levels. To prevent damage, install the assembly gently, as advised in Step 3 above.

4. Technical Specifications

Performance	SI*	Environmental	SI*
Sensitivity (\pm 15%)	10.2 mV/(m/s ²)	Overload Limit (Shock)	49 050 m/s ² pk
Measurement range	\pm 490 m/s ²	Temperature Range	-54 °C to +121 °C
Frequency range	0.5 Hz to 10 kHz	Enclosure Rating	IP68
Broadband Resolution (1 to 10,000 Hz)	3434 μ m/s ²	Physical	
Non-Linearity	\pm 1%	Size (Hex x Height)	14 mm x 64 mm
Transverse Sensitivity	\leq 7%	Weight (with cable)	99.3 g
Electrical		Mounting	Stud
Settling Time (within 1% of bias)	\leq 2.0 sec	Mounting Thread	1/4-28 Female
Discharge Time Constant	\geq 0.3 sec	Mounting Torque	2.7 to 6.8 Nm
Excitation Voltage	18 to 28 VDC	Sensing Element	Ceramic
Constant Current Excitation	2 to 20 mA	Sensing Geometry	Shear
Output Impedance	<150 Ω	Housing Material	Stainless Steel
Output Bias Voltage	8 to 12 VDC	Sealing	Molded
Spectral Noise (10 Hz)	78.5 (μ m/s ²)/ \sqrt Hz	Electrical Connector	Molded Integral Cable
Spectral Noise (100 Hz)	49.1 (μ m/s ²)/ \sqrt Hz	Electrical Connection Position	Top
Spectral Noise (1 kHz)	39.2 (μ m/s ²)/ \sqrt Hz	Cable Length	3 m
Electrical Isolation (Case)	>10 ⁸ Ω	Cable Type	Polyurethane

* For English units and further technical detail, please refer to the full manual (DO182), located at :

www.picotech.com

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