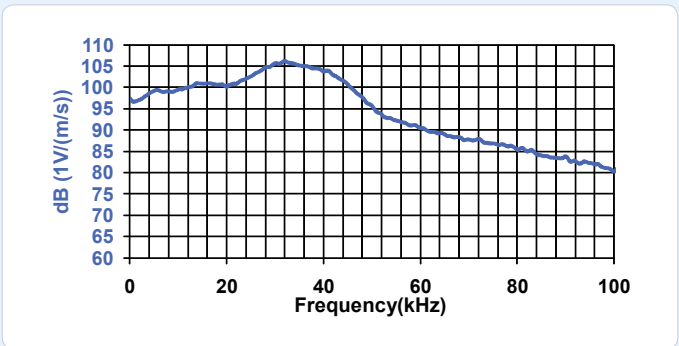
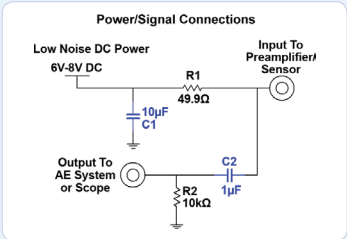
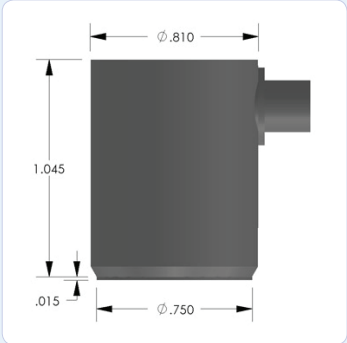


**PRODUCT DATA SHEET**

**PK3I Sensor**

Low Frequency Integral Pre-amplifier Resonant Sensor



**DESCRIPTION AND FEATURES**

The PK3I sensor is a low frequency, resonant, acoustic emission sensor with an integral, ultra low noise, low power, filtered, 26dB pre-amplifier, which can drive up to 200 meters of cable. This new sensor represents an improvement in both noise and low power consumption performance, with noise level below 3 µV and power consumption of 25 mW. The PK3I features a strong stainless steel, integrated body structure. The sensor has a similar frequency response as the R3I sensor, except smaller.

The integrated Auto Sensor Test (AST\*) capability allows these sensors to pulse as well as receive. This feature lets you verify the sensor coupling and performance at any time before, during or after the test.

**APPLICATIONS**

The PK3I sensor has been designed to be used with the Pocket AE, a small handheld AE system, or with the Sensor Highway II, an outdoor rated, on-line monitoring system.

**OPERATING SPECIFICATIONS**

*Dynamic*

Peak Sensitivity, Ref V/(m/s)..... 106 dB  
 Operating Frequency Range..... 15-40 kHz  
 Resonant Frequency, Ref V/(m/s).....28 kHz  
 Directionality..... +/-1.5 dB

*Environmental*

Temperature Range..... -35 to 80°C  
 Shock Limit.....500 g  
 Completely enclosed crystal for RFI/EMI immunity

*Physical*

Dimensions.....0.812"OD X 1.06"H  
 20.6 mm OD X 27 mm H  
 Weight.....52 grams  
 Case Material..... Stainless Steel  
 Face Material..... Ceramic  
 Connector..... SMA  
 Connector Locations.....Side

*Electrical*

Gain..... 26 dB  
 Power Requirements.....4-7 VDC @ 5 mA  
 Operating/Max Current..... 5/35 mA  
 Noise Level (RMS RTI)..... <3 µV

**ORDERING INFORMATION AND ACCESSORIES**

PK3I ..... PK3I  
 Cable (specify cable length)..... 1234-SMA/BNC-X  
 Magnetic Hold-Down ..... MHPK15I

*Sensors include*

NIST Calibration Certificate & Warranty

\* AST — Auto Sensor Testing feature allows AE systems to control the sensor as a pulser and a receiver at the same time. It can therefore characterize its own condition as well as send out a simulated acoustic emission wave that other sensors can detect, so the condition of the nearby sensors also can be tested.



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