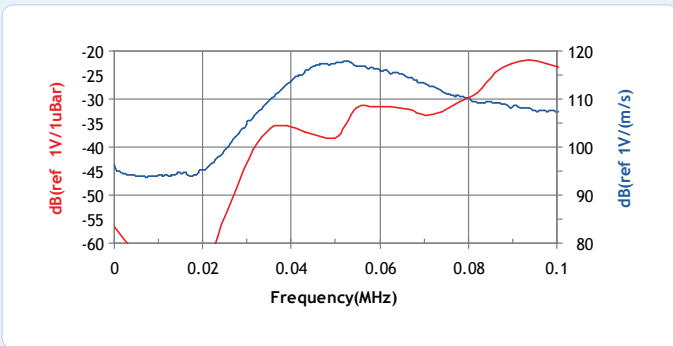
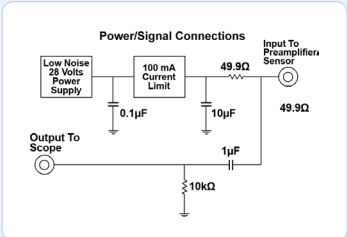
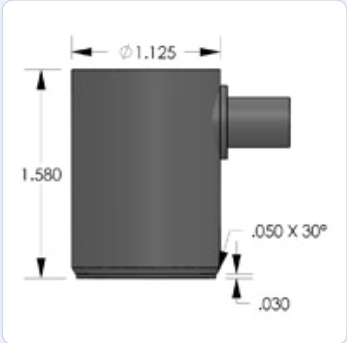


**PRODUCT DATA SHEET**

**R6I-AST Sensor**

**Integral Pre-amplifier Sensor**



**DESCRIPTION AND FEATURES**

PAC's integral preamp sensors were specifically engineered to attain high sensitivity and have the capability to drive long cables without the need for a separate preamplifier. Incorporating a low-noise input, 40 dB preamplifier and a filter all inside the sensor housing, these transducers are completely enclosed in metal stainless steel (or aluminum) housings that are treated to minimize RFI/EMI interference. Care has also been taken to thermally isolate the critical input stage of the preamplifier in order to provide excellent temperature stability over the range of -35° to 75° C.

Their 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 throughout the test.

**APPLICATIONS**

Due to its high sensitivity and low resonant frequency properties, this sensor can be used for applications such as metal and FRP structures including pipelines or storage tanks in petroleum, refineries, chemical plants, and offshore platforms.

**OPERATING SPECIFICATIONS**

*Dynamic*

Peak Sensitivity, Ref V/(m/s)..... 117 dB  
 Peak Sensitivity, Ref V/μbar..... -23 dB  
 Operating Frequency Range..... 40-100 kHz  
 Resonant Frequency, Ref V/(m/s).....55 kHz  
 Resonant Frequency, Ref V/μbar.....98 kHz  
 Directionality..... +/-1.5 dB

*Environmental*

Temperature Range..... -35 to 75°C  
 Shock Limit.....500 g  
 Completely enclosed crystal for RFI/EMI immunity

*Physical*

Dimensions.....1.13"OD X 1.6"H  
 29 mm OD X 40 mm H  
 Weight......98 grams  
 Case Material..... Stainless Steel (304)  
 Face Material..... Ceramic  
 Connector..... BNC  
 Connector Locations.....Side

*Electrical*

Gain..... 40 dB  
 Power Requirements.....20-30 VDC @ 25 mA  
 Dynamic Range..... > 87 dB  
 Noise Level (RMS RTI)..... < 3 μV  
 Output Drive Impedance..... 50 Ω  
 Grounding..... Case Grounding,  
 ..... Isolated from mounting surface

**ORDERING INFORMATION AND ACCESSORIES**

R6I-AST ..... R6I-AST  
 Cable (specify length in '-XX' m at end of PN) ..... 1234 - X  
 Magnetic Hold-Down ..... MHR6I  
 Amplifier Subsystems ..... AE2A, AE5A

*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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