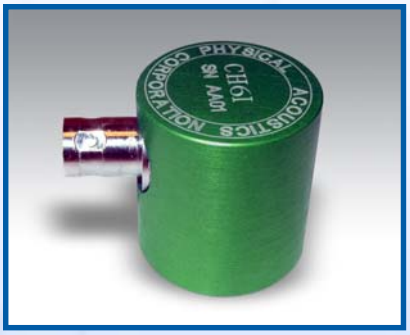


CH6I Sensor

Low Frequency & Low Noise Integral Preamp Acoustic Emission Sensor

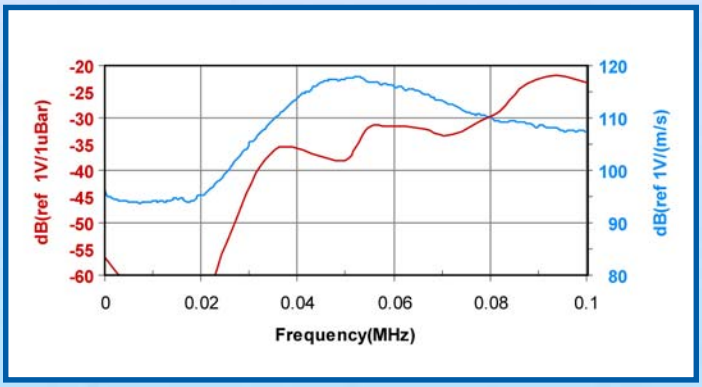
Description and Features

The **CH6I** sensor is a low frequency, resonant, acoustic emission sensor with an integral, low noise, filtered, 40 dB preamplifier, that can drive up to 3000 feet of cable. The sensor comes standard with PAC's unique "Auto Sensor Test" (AST*) function.

The **CH6I** features a strong, insulated, lightweight, aluminum alloy, integrated body structure that is color-coded green to identify the sensor model. This sensor's outside shell is anodized, providing a nonconductive finish to prevent any possible electric shorts from metal testing structures. It is the same size and has the same frequency response and sensitivity as the older R6I sensor. The EMI shielding ability of the CH6I has been improved by more than 300% compared with previous versions.

Applications

- Metal, concrete and composite structures that require an AE sensor response below 100 kHz
- Ideal for fiberglass structure tests (i.e. bucket trucks, storage tanks)
- Pipeline testing, where long distance sensor monitoring is a must
- Leak detection for large sensor spacing



Frequency response of the CH6I. Calibration based on ASTM E1106; Calibration based on ASTM E976.

Operating Specifications

Dynamic

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

Electrical

Gain	40 dB
Power Requirements	16 - 30 Vdc @ 25 mA
Dynamic Range	>80 dB
Output Voltage	20 V peak to peak
Noise Level (RMS rti)	<2.4 µV
Output Drive Impedance	50 Ω
Sensor Drive Capability	up to 3000 ft (1000 m)
AST Pulse	24 V, 3 microseconds into crystal
Grounding	Case grounded, isolated from sensing face

Environmental

Temperature Range	-35 to 75°C
Shock Limit	500 g

Completely enclosed crystal for RFI/EMI immunity

Physical

Dimensions	1.13" dia x 1.54" h (29 x 39.2 mm)
Weight	56 grams
Case Material	Green color, anodized aluminum alloy
Face Material	Ceramic
Connector	BNC
Connector Locations	Side
Seal	Epoxy
Matching Cable	1234-X

Ordering Information and Accessories

Cable (specify cable length)	1234 - X
Magnetic Hold-Down	MHR6I
Amplifier	AE2A

Sensors include

NIST Calibration Certificate, Auto Sensor Test Function & 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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