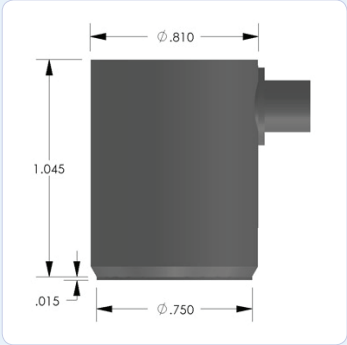
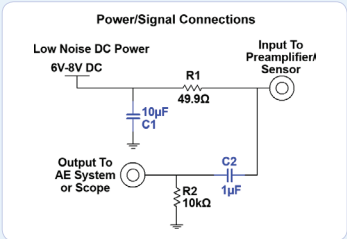
MISTRAS

PRODUCT DATA SHEET

PK15I Sensor

Medium Frequency Integral Preamplifier Resonant Sensor





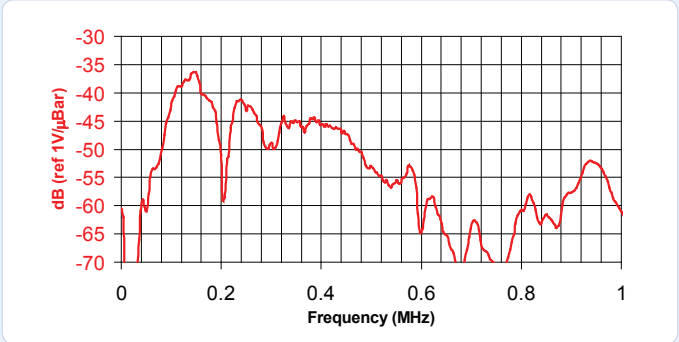
DESCRIPTION AND FEATURES

The PK15I sensor is a medium frequency, resonant, acoustic emission sensor with an integral, ultra low noise, low power, filtered, 26dB preamplifier, 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 PK15I features a strong stainless steel, integrated body structure. The sensor is smaller size and the same frequency response as the R15I sensor.

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 PK15I 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/µbar ..... -36 dB
Operating Frequency Range ..... 100-450 kHz
Resonant Frequency, Ref V/µbar ..... 150 kHz
Directionality ..... +/- 1.5 dB

Environmental

Temperature Range ..... -35 to 80ºC
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 ..... 51 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

PK15I PK15I
Cable (specify cable length) 1234-SMA/BNC-X
Magnetic Hold-Down MHPK15I
Amplifier Subsystem 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.

CE ISO 9001