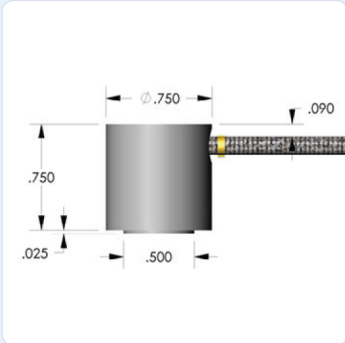


PRODUCT DATA SHEET
D9215 Sensor

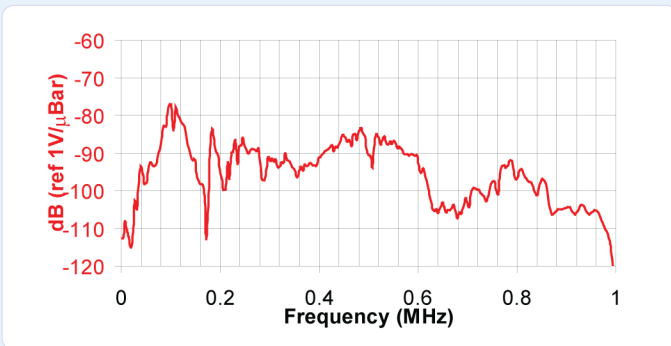
High Temperature Sensor


DESCRIPTION AND FEATURES

The D9215 is a high temperature, radiation resistant differential AE sensor, specially designed for the nuclear power industry. The differential inputs give the sensors a capability to operate even in extremely noisy environments, the differential signals eliminate the common mode noise at the preamplifier improving the signal to noise ratio to the tune of 2 dB or higher. The sensor features a rugged cavity made from Inconel 600 and an integral 2 ft long "hard-line" cable. The hardline cable is crimped to a softline twinaxial cable made from Tefzel interfaces the sensor to instrumentation. The sensor is tightly sealed by welding for use in harsh nuclear environment. The sensor has a 100 kHz resonance frequency and 80 kHz to 560 kHz bandwidth. All the materials used in this sensor have been proven for use in nuclear environments. The Maximum operating temperature of the sensor is 540°C and the softline cable can be operated at a maximum temperature of 150°C.

APPLICATIONS

The sensor is suitable for use in high temperature, radiation environments such as in Nuclear Power Plants. They can be used for monitoring high temperature equipment in power plants, aerospace engine monitoring, pipelines etc.


OPERATING SPECIFICATIONS
Dynamic

Peak Sensitivity, Ref V/(m/s).....	52 dB
Peak Sensitivity, Ref V/μbar.....	-80 dB
Operating Frequency Range.....	50-650 KHz
Resonant Frequency, Ref V/(m/s).....	60 dB
Resonant Frequency, Ref V/μbar.....	100 KHz
Directionality.....	+/- 1.5 dB

Environmental

Temperature Range.....	-200 to 540°C
Relative Humidity.....	90%
Shock Limit.....	10,000 g
Gamma ray 40 yr integrated dose (rads)*.....	1x10 ⁹
Neutron flux 40 yr integrated dose (n/cm ²).....	2.23x10 ¹⁷

Physical

Dimensions.....	0.8"OD X 0.8"H
.....	20 mm OD X 20 mm H
Weight.....	60 grams (with hardline and w/o softline)
Case Material.....	Inconel 600
Face Material.....	Inconel 600
Connector.....	Dual BNC on softline
Connector Locations.....	Side
Seal.....	Welding
Impedance (between lead and ground).....	>20 MΩ

ORDERING INFORMATION AND ACCESSORIES

D9215.....	D9215
Cable (specify length in 'XX' m at end of PN).....	1234-X
Pre-amplifier.....	2/4/6, 1222
Preamp to System Cable (specify length in 'm').....	1234-X
Amplifier Subsystems.....	AE2A, AE5A
Other IS Sensors are available with various resonant frequencies.	

Sensors include

NIST Calibration Certificate & Warranty

- * 1. Sensor Cable must be kept without large relative motion if above 300 MRad's.
- 2. BNC Connectors can be used beyond 1 MRad with suitable non-Teflon radiation resistant insulators.

