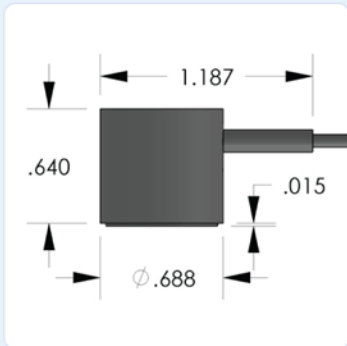


PRODUCT DATA SHEET

WD Sensor

Wideband Differential Sensor

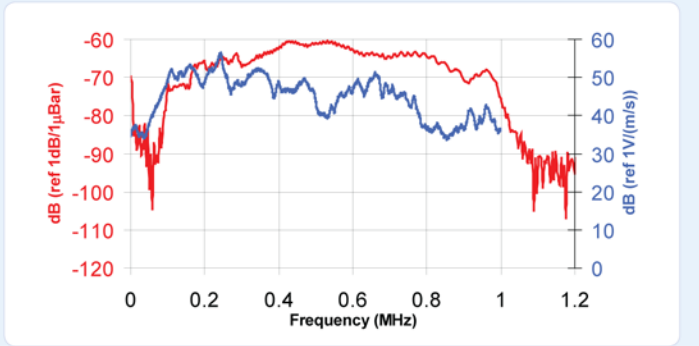


DESCRIPTION AND FEATURES

WD is a true differential wideband sensor with a very high sensitivity and bandwidth. It has a very good frequency response over the range of 100 – 900 kHz. Differential sensors differ from their general purpose counterparts by employing two sensing elements with opposite polarization directions. The two signal leads feed into a differential pre-amplifier which eliminates common-mode noise resulting in a lower noise output from the pre-amplifier. Noise improvements to the tune of 2 dB can be achieved using differential sensors over a single ended sensor. This sensor features a rugged steel construction with an integrated twin axial cable exiting on the side.

APPLICATIONS

This sensor is well suited for structural health monitoring of large structures like storage tanks, pipelines etc. This sensor is an ideal candidate for applications requiring high bandwidth for frequency analysis of the AE signals for noise discrimination and source identification. Wideband sensors are particularly well suited for research applications where a high fidelity AE response is required. It can be easily mounted using epoxy.



OPERATING SPECIFICATIONS

Dynamic

Peak Sensitivity, Ref V/(m/s).....	56 dB
Peak Sensitivity, Ref V/μbar.....	-61 dB
Operating Frequency Range.....	125-1000 kHz
Resonant Frequency, Ref V/(m/s).....	125 kHz
Resonant Frequency, Ref V/μbar.....	450 kHz
Directionality.....	+/-1.5 dB

Environmental

Temperature Range.....	-65 to 177°C
Shock Limit.....	500 g
Completely enclosed crystal for RFI/EMI immunity	

Physical

Dimensions.....	0.7"OD X 0.65"H
	17.8 mm OD X 16.5 mm H
Weight.....	20 grams
Case Material.....	Stainless Steel
Face Material.....	Ceramic
Connector.....	BNC
Connector Locations.....	Side

ORDERING INFORMATION AND ACCESSORIES

WD.....	WD
Cable (specify length in 'XX' m at end of PN).....	1 m
Magnetic Hold-Down.....	MHSTD
Pre-Amplifier.....	0/2/4, 2/4/6
Preamp to System Cable (specify length in 'm').....	1234-X
Amplifier Subsystems.....	AE2A or AE5A

Sensors include

NIST Calibration Certificate & Warranty

