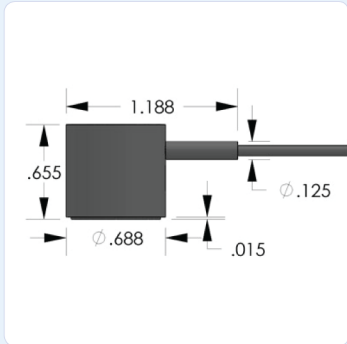


PRODUCT DATA SHEET

D9203B Sensor

Wideband Differential Sensor

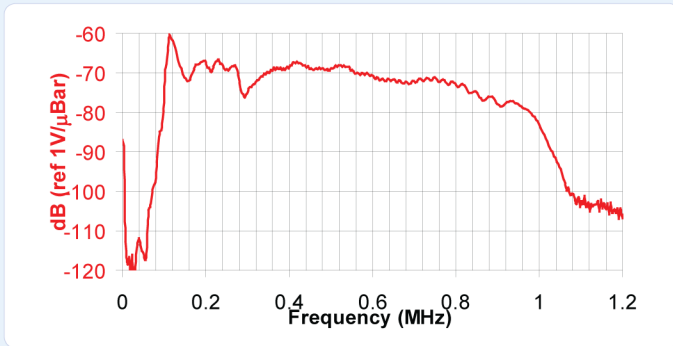


DESCRIPTION AND FEATURES

D9203B is a wideband differential sensor with a very high sensitivity and bandwidth. It has a very good frequency response over the range of 150 – 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

Differential sensors are used in environments where very low level AE signals need to be processed, they are particularly useful in environments with high background noise. This sensor is well suited for structural health monitoring of large structures like storage tanks, pipelines etc. Wideband sensors are 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)	65 dB
Peak Sensitivity, Ref V/μbar	-60 dB
Operating Frequency Range	150-900 kHz
Resonant Frequency, Ref V/(m/s)	175 kHz
Resonant Frequency, Ref V/μbar	500 kHz
Directionality	+/-1.5 dB

Environmental

Temperature Range	-65 to 125°C
Shock Limit	500 g
Completely enclosed crystal for RFI/EMI immunity	

Physical

Dimensions	0.7"OD X 0.65"H
	18 mm OD X 17 mm H
Weight	8 grams
Case Material	Stainless steel
Face Material	Ceramic
Connector	BNC
Connector Locations	Side

ORDERING INFORMATION AND ACCESSORIES

D9203B	D9203B
Cable (specify length in 'XX' at end of PN)	1 m
Cable (Pre-amplifier to system)	1234-X
Magnetic Hold-Down	MHSTD
Amplifier Subsystems	AE2A, AE5A
Pre-Amplifier	0/2/4, 2/4/6

Sensors include

NIST Calibration Certificate & Warranty

