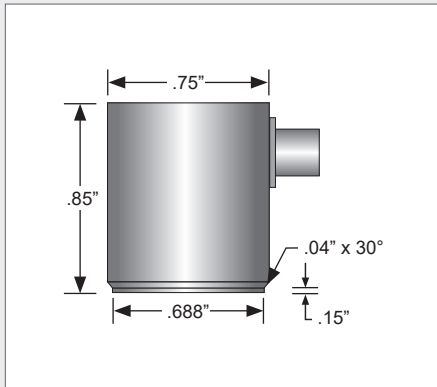


Datasheet

F50α Sensor

General Purpose Sensor



DESCRIPTION AND FEATURES

The F-series sensors are designed to incorporate the latest advances in materials and transducer design principles. These sensors unlike the resonant sensors (R-series) have a very high sensitivity and flat response in the bandwidth of operation. The F50A is a wideband sensor with a flat frequency response over the range of 200 – 800 kHz. This sensor is an ideal candidate for applications requiring high bandwidth for frequency analysis of the AE signals for noise discrimination and source identification. This sensor features a rugged steel construction and an SMA connector exiting from the side of the sensor.

APPLICATIONS

This sensor is well suited for structural health monitoring of large structures like storage tanks, pipelines etc. Flat response of these sensors help eliminate the sharp rise and fall in the sensitivity with frequency commonly seen in resonant sensors, providing additional information for engineers to analyze. 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 1V/(m/s)..... 65 dB
 Peak Sensitivity, Ref 1V/ μ bar..... -65 dB
 Operating Frequency Range 200-800 kHz
 Resonant Frequency, Ref 1V/(m/s) 100 kHz
 Directionality +/-1.5 dB

Environmental

Temperature Range..... -45 to 145°C
 Shock Limit..... 500 g

Physical

Dimensions 0.75"OD X 0.85"H
 19.0 mm OD X 21.6 mm H
 Weight 34 grams
 Case Material Stainless steel
 Face Material..... Ceramic
 Connector SMA
 Connector Locations Side

Electrical

Shielding for EMI Fully shielded

ORDERING INFORMATION AND ACCESSORIES

F50α F50α or F50a
 Cable (specify length in 'm') 1232-X-SMA
 Magnetic Hold-Down MHR15A
 Pre-amplifier IL-LP-WD, PreampOne

Sensors include

Characterization Certificate & Warranty

