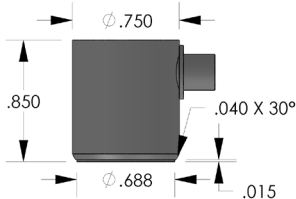


PRODUCT DATA SHEET

F30 α Sensor

General Purpose Sensor

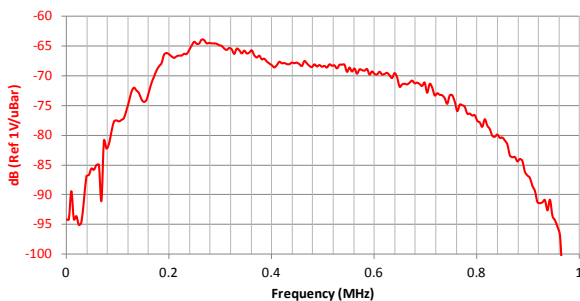


DESCRIPTION AND FEATURES

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 F30A is a wideband sensor with a flat frequency response over the range of 150 – 750 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 V/(m/s) | 58 dB |
| Peak Sensitivity, Ref V/ μ bar | -63 dB |
| Operating Frequency Range | 150-750 kHz |
| Resonant Frequency, Ref V/(m/s) | 300 kHz |
| Resonant Frequency, Ref V/ μ bar | 300 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 | 0.75"OD X 0.85" H 19 mm OD X 21.6 mm H |
| Weight | 34 grams |
| Case Material | Stainless steel |
| Face Material | Ceramic |
| Connector | SMA |
| Connector Locations | Side |
| Sensor to Preamp Cable (1 or 2 meters) | 1232-X-SMA |

ORDERING INFORMATION AND ACCESSORIES

| | |
|-------------------------------|----------------------|
| F30 α | F30 α or F30A |
| Cable (specify length in 'm') | 1232-X-SMA |
| Magnetic Hold-Down | MHR15A |
| Pre-amplifier | 0/2/4, 2/4/6 |

Sensors include

NIST Calibration Certificate & Warranty



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