R6α Sensor
General Purpose, 60 kHz Resonant Frequency Sensor

DESCRIPTION AND FEATURES

The R6α is a narrow band resonant sensor with a high sensitivity. The sensor cavity is machined from a solid stainless steel rod, making the sensor extremely rugged and reliable. The ceramic face along with a 30 degree chamfer to cavity electrically isolates the sensor cavity from the structure under test assuring a low noise operation.

The compact size of the sensor makes it readily suitable for deploying in tight spaces for monitoring. The Alpha series family of sensors features an SMA connector versus the Microdot connectors found on MISTRAS’ RXX series of sensors. The alpha series includes R3α, R6α, R15α, R30α, R50α, R80α and W5α sensors.

APPLICATIONS

This sensor can be used on metal and FRP structures such as pipelines or storage tanks in petroleum, refineries, chemical plants, and offshore platforms, due to its high sensitivity and low resonance frequency properties.

OPERATING SPECIFICATIONS

Dynamic
- Peak Sensitivity, Ref V/(m/s) ............................................. 75 dB
- Peak Sensitivity, Ref V/µbar ............................................. 64 dB
- Operating Frequency Range ....................................... 35-100 kHz
- Resonant Frequency, Ref V/(m/s)............................... 55 kHz
- Resonant Frequency, Ref V/µbar ............................... 90 kHz
- Directionality .............................................................. +/-1.5 dB

Environmental
- Temperature Range .................................................... -65 to 175ºC
- Shock Limit ................................................................. 500 g
- Completely enclosed crystal for RFI/EMI immunity

Physical
- Dimensions ............................................................... 0.75”OD X 0.88”H
- Weight ........................................................................ 19 mm OD X 22.4 mm H
- Resonant Frequency, Ref V/µbar ................................. -64 dB
- Resonant Frequency, Ref V/(m/s) ................................. 75 dB

ORDERING INFORMATION AND ACCESSORIES

R6α .............................................................. R6a or R6a
Magnetic Hold-Down .................................................. MHR15A
Sensor to Preamp Cable (1 or 2 meters) .............. 1232-X-SMA
Amplifier subsystems ... AE2A, AESA or standard AE systems
Preamplifier .............................................................. 0/2/4, 2/4/6
Preamp to System Cable (specify length in ‘m’) ...... 1234 - X

Sensors Include
- NIST Calibration Certificate & Warranty