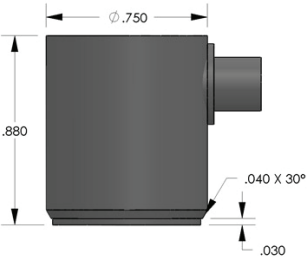


### R30α Sensor

General Purpose, 300 kHz Resonant Frequency Sensor



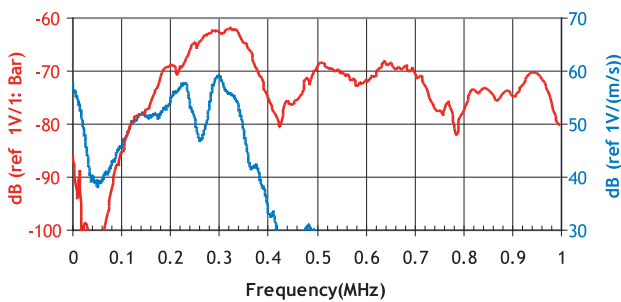
#### DESCRIPTION AND FEATURES

The R30α 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 WSα sensors.

#### APPLICATIONS

This sensor provides additional noise rejection for applications such as production line process monitoring applications such as punch press monitoring, forming operations, stamping, applications and process control applications such as leak detection within process control plants in the presence of flow and process noises.



#### OPERATING SPECIFICATIONS

##### Dynamic

|                                      |             |
|--------------------------------------|-------------|
| Peak Sensitivity, Ref V/(m/s).....   | 58 dB       |
| Peak Sensitivity, Ref V/μbar.....    | -62 dB      |
| Operating Frequency Range.....       | 150-400 kHz |
| Resonant Frequency, Ref V/(m/s)..... | 300 kHz     |
| Resonant Frequency, Ref V/μbar.....  | 330 kHz     |

##### Environmental

|                                                  |              |
|--------------------------------------------------|--------------|
| Temperature Range.....                           | -65 to 175°C |
| Shock Limit.....                                 | 500 g        |
| Completely enclosed crystal for RFI/EMI immunity |              |

##### Physical

|                                             |                                            |
|---------------------------------------------|--------------------------------------------|
| Dimensions.....                             | 0.75" OD X 0.88" H<br>19 mm OD X 22.4 mm H |
| Weight.....                                 | 29 grams                                   |
| Case Material.....                          | Stainless steel                            |
| Face Material.....                          | Ceramic                                    |
| Connector.....                              | SMA                                        |
| Seal.....                                   | Epoxy                                      |
| Sensor to Preamp Cable (1 or 2 meters)..... | 1232-X-SMA                                 |

#### ORDERING INFORMATION AND ACCESSORIES

|                                                            |                |
|------------------------------------------------------------|----------------|
| R30α.....                                                  | R30α or R30α   |
| Cable (Specify length in 'XX' m).....                      | 1234-SMA/BNC-X |
| Magnetic Hold-Down.....                                    | MHR15A         |
| Amplifier subsystems ... AE2A, AE5A 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

