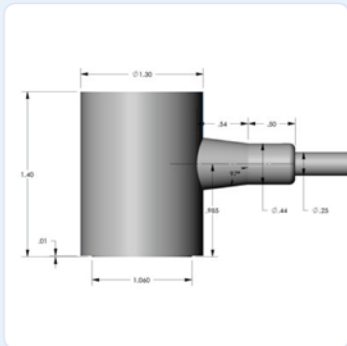


**PRODUCT DATA SHEET**

**ISR3 Sensor**

Intrinsically Safe Sensor



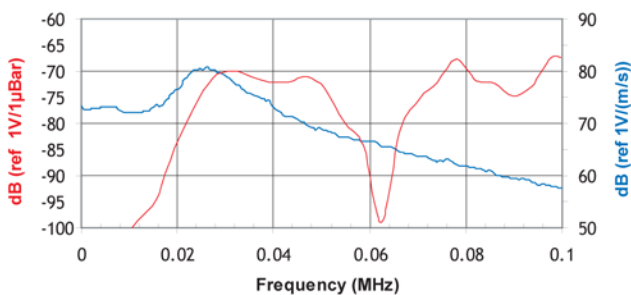
**DESCRIPTION AND FEATURES**

The ISR3 sensor was designed specially to meet Intrinsic Safety (IS) and IP65 environmental requirements. Certified as Intrinsically Safe (IS) for use with our 1276-2 IS preamplifier and 1276-1 and 1278 IS ASL-C subsystem, this sensor has a thicker ceramic wear-plate and an epoxy coating completely covering the sensor and cable exit. An IS voltage protection circuit is built into the sensor.

It has an integrated one-meter long differential cable with extruded TPE jacket and a pigtail for connecting into a 1276 or 1278 IS Preamplifier or Subsystem. The sensor has similar frequency response as the R3 sensor. Its maximum operating temperature is 125°C.

**APPLICATIONS**

This sensor is normally selected for structural health monitoring of large-scale concrete structures, geologic structures and for pipeline leak detection applications where large distances between sensors is required, where there is little acoustic background noise and where intrinsically safe sensors and instrumentation are required.



**OPERATING SPECIFICATIONS**

*Dynamic*

Peak Sensitivity, Ref V/(m/s)..... 8 dB  
Peak Sensitivity, Ref V/µbar .....-63 dB  
Operating Frequency Range ..... 10-50 KHz  
Resonant Frequency, Ref V/µbar ..... 29 KHz  
Directionality ..... +/- 1.5 dB

*Environmental*

Temperature Range ..... -45 to 125°C  
Shock Limit .....1,000 g  
Waterproof..... IP66  
Completely enclosed crystal for RFI/EMI immunity

*Physical*

Dimensions..... 1.32"OD X 1.42"H  
.....32 mm OD X 36 mm H  
Weight .....50 grams with 1 meter cable  
Case Material.....Stainless steel/Epoxy  
Face Material..... Ceramic  
Connector .....Pigtail  
Connector Locations.....Side  
Seal..... Epoxy  
Sensor to Preamp Cable (1 meter) ..... Integral

*Certifications*

ATEX Certified, II1, GD, EEx, ia, IIC T4

**ORDERING INFORMATION AND ACCESSORIES**

ISR3..... ISR3  
Pre-amplifier..... 1276-2  
ASL-4-20 ma Subsystem ..... 1276-1  
Preamp to System Cable (specify length in 'm') ..... 1276C  
IS Zener Barrier..... 1276B  
Other IS Sensors are available with various resonant frequencies.

*Sensors include*

NIST Calibration Certificate & Warranty

