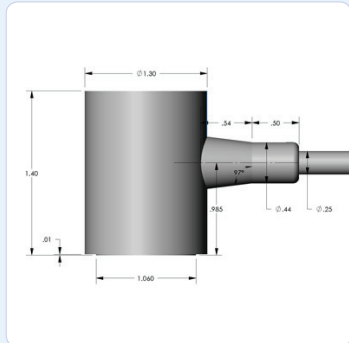


## PRODUCT DATA SHEET

### ISR1.5 Sensor

#### Intrinsically Safe Sensor



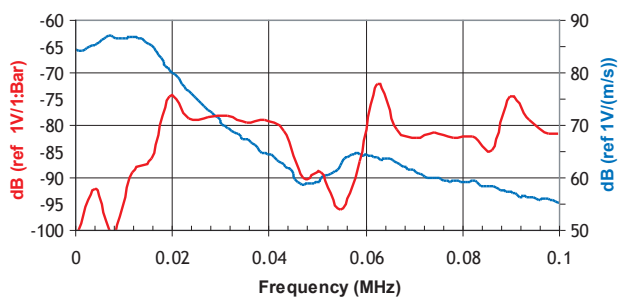
#### DESCRIPTION AND FEATURES

The ISR1.5 is a very low resonance frequency sensor that 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 R1.5 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 concrete and metal pipeline leak detection applications, where intrinsically safe sensors and instrumentation are required, where large distances between sensors is required and there needs to be some acoustic background noise rejection.



#### OPERATING SPECIFICATIONS

##### Dynamic

Peak Sensitivity, Ref V/(m/s)..... 87 dB  
 Operating Frequency Range..... 5-20 KHz  
 Resonant Frequency..... 15 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  
 ..... 33 mm OD X 36 mm H  
 Weight..... 120 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

ISR1.5..... ISR1.5  
 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



**WORLDWIDE HEADQUARTERS:**  
 195 Clarksville Rd •  
 Princeton Jct, NJ 08550 • USA  
 T: +1.609.716.4000 • F: +1.609.716.0706  
 E-MAIL: sales.systems@mistrasgroup.com

**CANADA**  
**CHINA**  
**FRANCE**  
**GERMANY**  
**GREECE**  
 T: +1.403.556.1350  
 T: +86.10.5877.3631  
 T: +331.498.26040  
 T: +49.040.2000.4025  
 T: +30.210.2846.801-4

**HOLLAND**  
**INDIA**  
**JAPAN**  
**MALAYSIA**  
**MIDDLE EAST**  
 T: +31.010.245.0325  
 T: +91.22.2586.2444  
 T: +81.33.498.3570  
 T: +60.9.517.3788  
 T: +973.17.729.356

**RUSSIA**  
**SCANDINAVIA**  
**S. AMERICA**  
**UK**  
 T: +7495.789.4549  
 T: +46(0)31.252040  
 T: +55.11.3082.5111  
 T: +44(0)1954.231.612