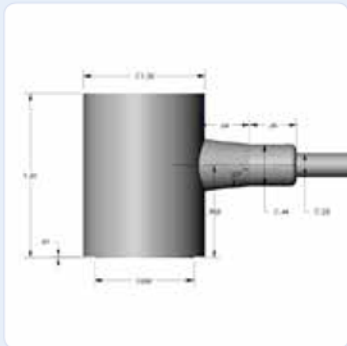


**PRODUCT DATA SHEET**

**ISR.45 Sensor**

Intrinsically Safe Sensor



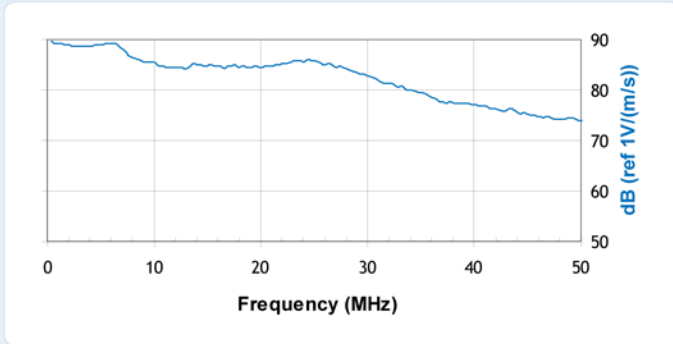
**DESCRIPTION AND FEATURES**

The ISR.45 is our lowest resonant frequency sensor 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 R.45 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).....	87 dB
Operating Frequency Range .....	3-30 KHz
Resonant Frequency.....	7 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.....	1.30"OD X 1.40"H
.....	33 mm OD X 36 mm H
Weight .....	155 grams with 1 meter cable
Case Material.....	Stainless steel / Epoxy
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**

ISR.45.....	ISR.45
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

