



ISR6 Sensor

Intrinsically Safe Acoustic Emission Sensor

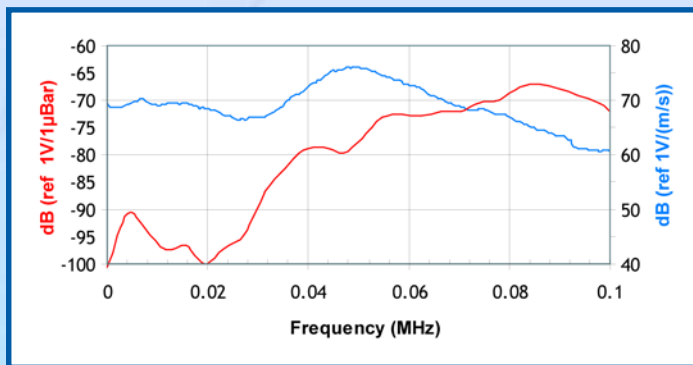
Description and Features

The ISR6 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 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 IS Preamplifier or Subsystem. The sensor has similar frequency response as the R6 sensor. Its maximum operating temperature is 125°C.

Applications

This sensor is ideal for use 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.



Frequency response of the ISR6. Calibration based on ASTM E1106;
Calibration based on ASTM E976.

Operating Specifications

Dynamic

Peak Sensitivity, Ref V/(m/s)	76 dB
Peak Sensitivity, Ref V/μbar	-63 dB
Operating Frequency Range	35 - 100 kHz
Resonant Frequency, Ref V/(m/s)	50 kHz
Resonant Frequency, Ref V/μbar	850 kHz
Directionality	+/-1.5 dB

Environmental

Temperature Range	-45 to 125°C
Shock Limit	1,000 g
Completely shielded crystal for maximum RFI/EMI immunity	

Physical

Dimensions	0.89" diameter x 0.755" h (22.6 x 19.2 mm)
Weight	33 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

Ordering Information and Accessories

ISR6	ISR6
Preamplifier	1276-2
ASL-4-20 ma Subsystem	1276-1
Preamp to System Cable	1276C
IS Zener Barrier	1276B
Other IS Sensors are available with various resonant frequencies.	

Sensors include

NIST Calibration Certificate & Warranty



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