

**PRODUCT DATA SHEET**

**ISPK15IUC Sensor**

Intrinsically Safe Underwater Sensor

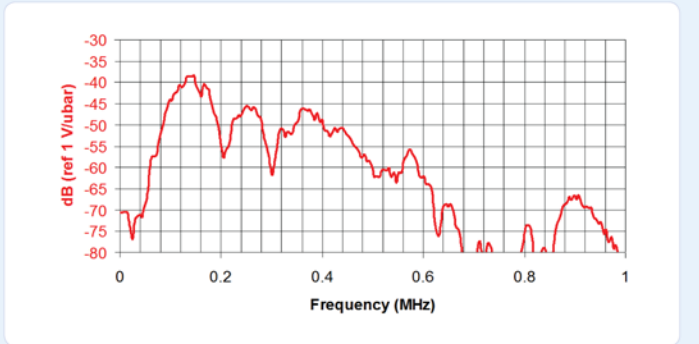
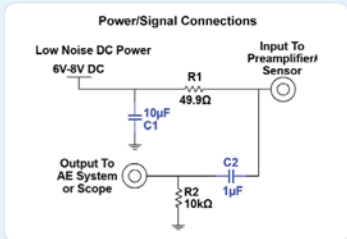
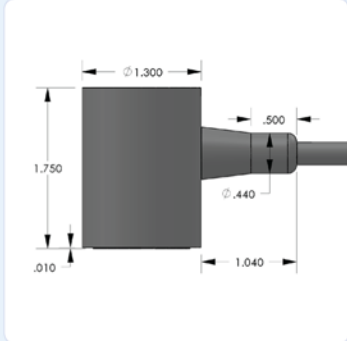


**DESCRIPTION AND FEATURES**

The ISPK15IUC is a medium frequency, resonant acoustic emission sensor with an integral cable. It is designed to meet the intrinsic safety (IS) requirements and can operate in underwater conditions. The sensor features a 26 dB low power, low noise preamplifier that can drive up to 200 meters of cable. The special polymer coatings on the sensor along with an integral waterproof cable make it 100% insulated and non-conductive. The sensor can be used to depths of 1000 psi.

**APPLICATIONS**

The sensor can be readily used for structural health monitoring in environments requiring intrinsic safety. It can be used for the monitoring of structures like pipelines, pressure vessels and storage tanks in petroleum refineries, chemical plants and offshore platforms.



**OPERATING SPECIFICATIONS**

*Dynamic*

Peak Sensitivity, Ref V/(m/s)	94 dB
Peak Sensitivity, Ref V/μbar	-37 dB
Operating Frequency Range	50-400 kHz
Resonant Frequency, Ref V/(m/s)	75 kHz
Resonant Frequency, Ref V/μbar	150 kHz
Directionality	+/-1.5 dB

*Environmental*

Temperature Range	-40 to 70°C
Shock Limit	500 g
Completely enclosed crystal for RFI/EMI immunity	

*Physical*

Dimensions	1.31"OD X 1.75" H 33 mm OD X 45 mm H
Weight	98 grams
Case Material	Stainless Steel/Epoxy
Face Material	Ceramic
Connector	BNC on integral cable
Connector Locations	Side

*Electrical*

Gain	26 dB
Preamp DC power	5-7 V
Grounding	Isolated from mounting surface
Noise level at input	<3 μV
Preamplifier dynamic range	>87 dB
Preamplifier impedance	50 ohm

*Certifications*

II 1 G, Ex ia IIC T4

**ORDERING INFORMATION AND ACCESSORIES**

ISPK15IUC	ISPK15IUC
Cable (specify length in 'XX' m)	XX
IS Zener Barrier/Preamplifier Interface	1281

*Sensors include*

NIST Calibration Certificate & Warranty

