

PRODUCT DATA SHEET

R15I-UC & R15-UC Sensor

Underwater Sensor

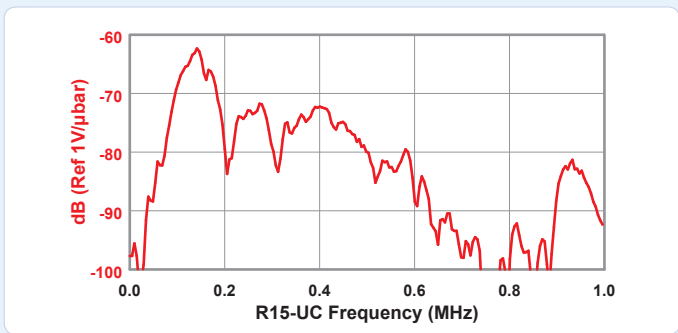
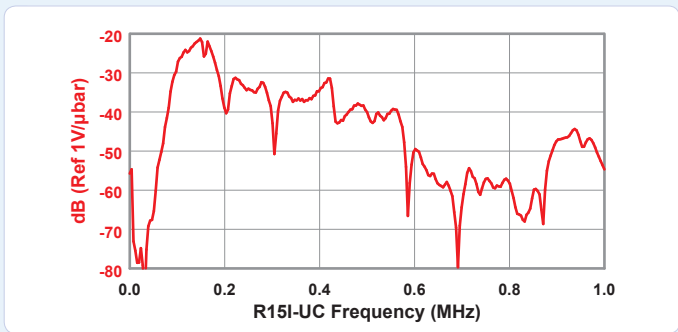
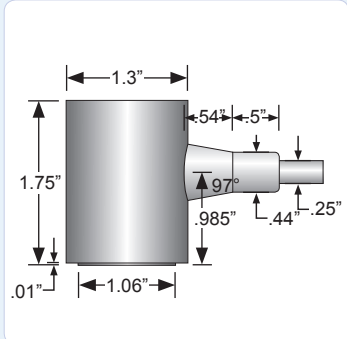


DESCRIPTION AND FEATURES

R15I-UC/R15-UC is an underwater, narrowband sensor with very high sensitivity in the frequency bandwidth 50 – 400 kHz. The sensor features two versions one with an integral preamplifier with 40 dB gain (R15I-UC) and one without (R15-UC). The integrated electronics give the sensor a signal-to-drive capability for depths of 300 meters (1000ft) or more. The sensors feature special polymer coatings making it 100 % insulated and non conductive with an integral neoprene jacketed waterproof cable for underwater use. The sensor is tested to depths of 1000 psi.

APPLICATIONS

The sensor can be used for the structural health monitoring of submerged structures like offshore oil and gas platforms, ships etc. They can be used inside any liquid filled platforms like pipelines, chemical tanks or any other submerged structures.



OPERATING SPECIFICATIONS

Dynamic

Peak Sensitivity, Ref 1V/(m/s) (R15I-UC)	108 dB
Peak Sensitivity, Ref 1V/μbar (R15I-UC)	-21 dB
Peak Sensitivity, Ref 1V/(m/s) (R15-UC)	68 dB
Peak Sensitivity, Ref 1V/μbar (R15-UC)	-62 dB
Operating Frequency Range	50-400 kHz
Resonant Frequency, Ref 1V/(m/s)	75 kHz
Resonant Frequency, Ref 1V/μbar	150 kHz
Directionality	+/-1.5 dB

Environmental

Temperature Range (R15I-UC)	-30 to 65° C
Temperature Range (R15-UC)	-65 to 177° C
Shock Limit	500 g
Completely shielded crystal for maximum RFI/EMI immunity	

Physical

Dimensions*	1.3"OD X 1.75" H
.....	33.0 mm OD X 44.4 mm H
Weight (g)	98
Case Material	Stainless Steel/Epoxy
Face Material	Ceramic
Connector	BNC on integral cable
Connector Locations	Side

Electrical (R15I-UC)

Gain	40 dB
Preamp DC power (V)	20-30
Grounding	Case Isolated
.....	Mounting Surface Isolated
Noise level at input (μV)	< 3
Preamplifier dynamic range (dB)	>87
Preamplifier impedance (ohm)	50

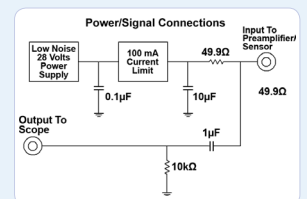
ORDERING INFORMATION AND ACCESSORIES

R15I-UC	R15I-UC
R15-UC	R15-UC
Pre-amplifier (R15-UC)	IL-LP-15S, 0/2/4, 2/4/6
Cable Length (specify in 'm')	XX
Amplifier Subsystems	AE2A or AE5A

Sensors include

Characterization Certificate & Warranty

* Due to variances in coating process, the height



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