

AR50

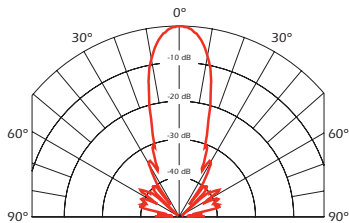


SPECIFICATIONS

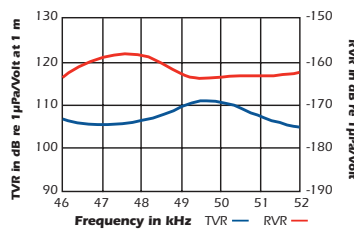
- Best Operating Frequency:** 50 kHz, $\pm 4\%$
- Minimum Transmit Sensitivity at Best Transmit Frequency:** 106 dB, 1 $\mu\text{Pa/V}$ at 1 m
- Minimum Receive Sensitivity at Best Receive Frequency:** -162 dB re 1V/ μPa
- Minimum Parallel Resistance:** 450 Ω , $\pm 30\%$
- Minimum and Maximum Sensing Range*:** 25 cm to 15 m
- Typical Sensing Range:** 30 cm to 10 m
- Free (1 kHz) Capacitance:** 5,700 pF, ± 500 pF
- Beamwidth (@ -3 dB Full Angle):** 12°, $\pm 2^\circ$
- Maximum Driving Voltage (2% Duty Cycle Tone Burst):** 1,500 V_{pp}
- Operating Temperature:** -40°C to 90°C
- Weight:** 560 g
- Housing Material:** Glass filled polyester
- Acoustic Window:** Glass reinforced epoxy

*Pulse-Echo Mode. Minimum and maximum ranges are best case scenarios. Actual range may vary, depending on drive circuitry and signal processing.

Directivity Pattern



Transmit & Receive Voltage Response



Impedance Magnitude & Phase

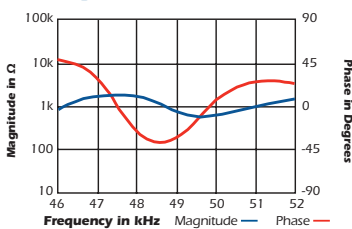
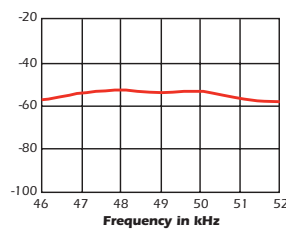


Figure of Merit (Sum of TVR & RVR)



50 kHz

AIRDUCER® Ultrasonic Transducer

Applications

- Level measurement
- Open channel flow
- Obstacle avoidance
- Proximity

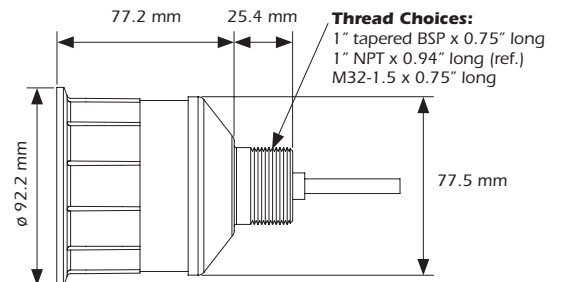
Features

- Rugged sealed construction
- Housing design will accommodate transceiver and signal processing electronics
- Mounting cap available in BSP, NPT, or M32 threads
- Standard internal shielding

Options

- Complete assembly available with standard cable lengths
- 10 K Ω thermistors are optional for temperature compensation
- Available in PVDF housing for use in chemically aggressive environments
- FM approved

Dimensions



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