

ARK50-THD

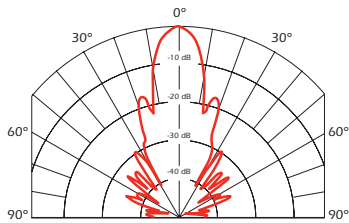


SPECIFICATIONS

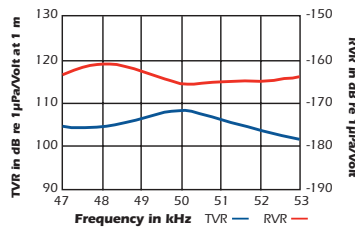
- Best Operating Frequency:** 50 kHz, $\pm 4\%$
- Minimum Transmit Sensitivity at Best Transmit Frequency:** 105 dB, 1 $\mu\text{Pa/V}$ at 1 m
- Minimum Receive Sensitivity at Best Receive Frequency:** -170 dB re 1V/ μPa
- Minimum Parallel Resistance:** 350 Ω , $\pm 30\%$
- Minimum and Maximum Sensing Range*:** 30 cm to 15 m
- Typical Sensing Range:** 35 cm to 10 m
- Free (1 kHz) Capacitance:** 5,000 pF, ± 100 pF
- Beamwidth (@ -3 dB Full Angle):** 10°, $\pm 2^\circ$
- Maximum Driving Voltage (2% Duty Cycle Tone Burst):** 1,000 V_{pp}
- Operating Temperature:** -40°C to 90°C
- Weight:** 250 g
- Housing Material:** PVDF
- Acoustic Window:** PVDF

*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

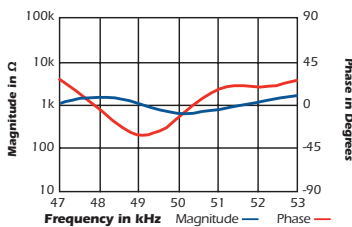
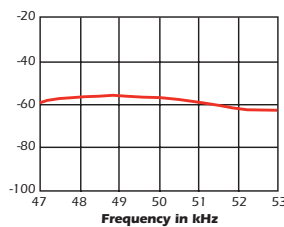


Figure of Merit (Sum of TVR & RVR)



50 kHz

AIRDUCER® Ultrasonic Transducer

Applications

- Level measurement in caustic environments

Features

- Rugged one-piece PVDF housing
- Ideal for chemically aggressive environments
- Threaded design allows for installation in various applications
- Mounting cap available in BSP, NPT, or M 32 threads
- Standard internal shielding

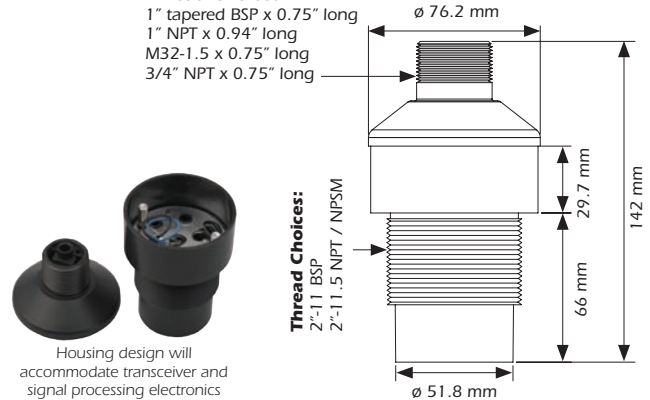
Options

- Nut—2" BSP thread
- Complete assembly available with standard cable lengths
- 10 K Ω thermistors are optional for temperature compensation
- FM approved

Dimensions

Thread Choices:

- 1" tapered BSP x 0.75" long
- 1" NPT x 0.94" long
- M32-1.5 x 0.75" long
- 3/4" NPT x 0.75" long



Housing design will accommodate transceiver and signal processing electronics