

ARK50-THD

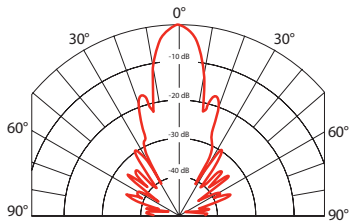


SPECIFICATIONS

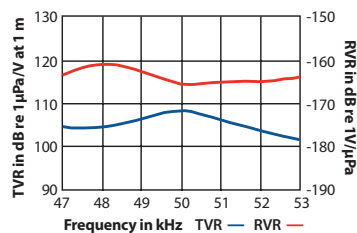
Best Operating Frequency: 50 kHz, $\pm 4\%$
Minimum Transmit Sensitivity at Best Transmit Frequency:
 105 dB re 1 μ Pa/V at 1 m
Minimum Receive Sensitivity at Best Receive Frequency: -170 dB re 1V/ μ Pa
Minimum Parallel Resistance: 350 Ω , $\pm 30\%$
Minimum and Maximum Sensing Range*: 30 cm to 15 m
Typical Sensing Range: 35 cm to 10 m
Free (1 kHz) Capacitance: 5,000 pF, $\pm 20\%$ 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: Kynar® 720
Acoustic Window: Kynar® 720

*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

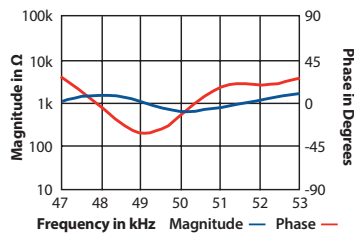
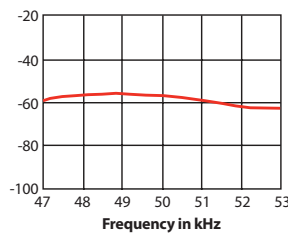


Figure of Merit (Sum of TVR & RVR)



50 kHz

AIRDUCER® Ultrasonic Transducer

Applications

- Level measurement in chemically aggressive environments
- Food and beverage processing
- Flow monitoring

Features

- Rugged one-piece PVDF housing is U.S. FDA compliant
- Threaded design allows for installation in various applications
- Standard internal shielding
- 8 mm M32 PCB standoff

Options

- Nut—2" BSP thread
- Complete assembly available with standard cable lengths
- 10 K Ω thermistor available for temperature compensation
- FM approved
- 12 mm extension sleeve
- Mounting caps available in BSP, NPT, or M32 threads

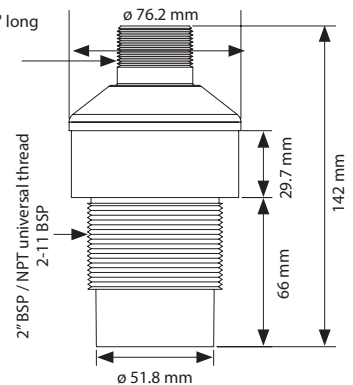
Dimensions

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



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