

ARK41



Optional cap kit

SPECIFICATIONS

Best Operating Frequency: 41 kHz, $\pm 4\%$
Minimum Transmit Sensitivity at Best Transmit Frequency:
 108 dB re 1 μ Pa/V at 1 m
Minimum Receive Sensitivity at Best Receive Frequency: -175 dB re 1V/ μ Pa
Minimum Parallel Resistance: 200 Ω , $\pm 30\%$
Minimum and Maximum Sensing Range*: 30 cm to 20 m
Typical Sensing Range: 35 cm to 15 m
Free (1 kHz) Capacitance: 5,000 pF, $\pm 20\%$ pF
Beamwidth (@ -3 dB Full Angle): 14°, $\pm 2^\circ$
Maximum Driving Voltage (2% Duty Cycle Tone Burst): 1,800 V_{pp}
Operating Temperature: -40°C to 90°C
Weight: 560 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.

Note: Optimally, performance measurements should be taken when the transducer reaches a steady state.

41 kHz

AIRDUCER[®] Ultrasonic Transducer

Applications

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

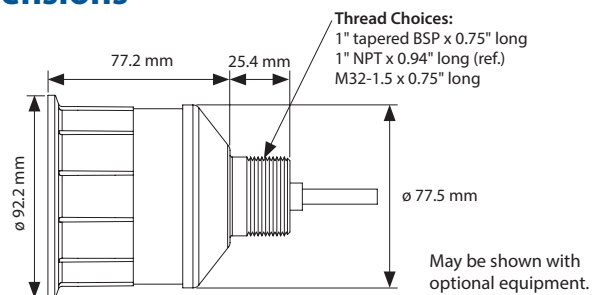
Features

- Rugged one-piece PVDF housing is U.S. FDA compliant
- Housing design will accommodate transceiver and signal processing electronics
- Standard internal shielding

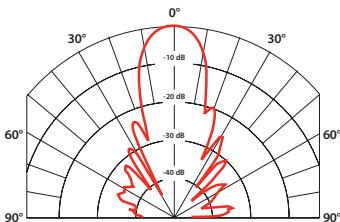
Options

- Cable length can be customized
- 10 K Ω thermistor available for temperature compensation
- Mounting caps available in BSP, NPT, or M32 threads
- Available in alternate housing material (AR41)

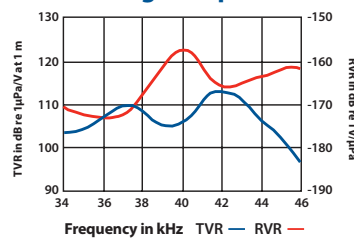
Dimensions



Directivity Pattern



Transmit & Receive Voltage Response



Impedance Magnitude & Phase

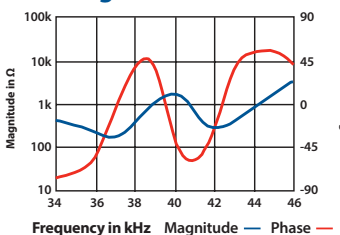
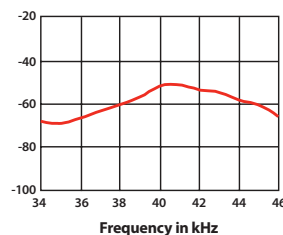


Figure of Merit (Sum of TVR & RVR)



Additional Resources

Theory of Operations



Applying Ultrasonic Technology



T1 Developer Board



Airmar's T1 Developer's Transceiver Module can be used for evaluation of AIRDUCER[®] Transducers.