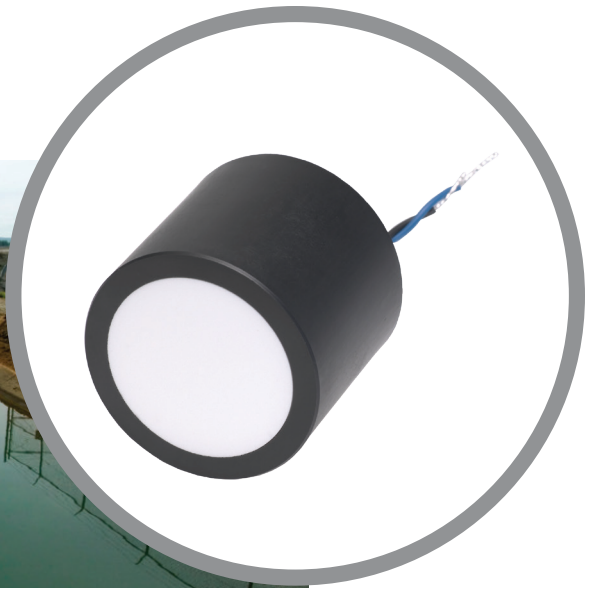


# AR50CH

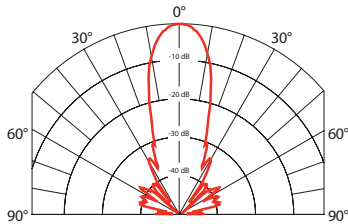


## SPECIFICATIONS

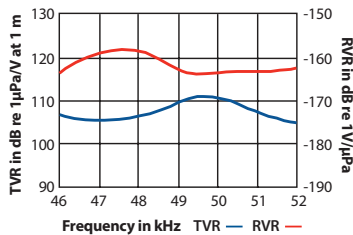
**Best Operating Frequency:** 50 kHz,  $\pm 4\%$   
**Minimum Transmit Sensitivity at Best Transmit Frequency:**  
 106 dB re  $1\mu\text{Pa}/\text{V}$  at 1 m  
**Minimum Receive Sensitivity at Best Receive Frequency:** -162 dB re  $1\text{V}/\mu\text{Pa}$   
**Minimum Parallel Resistance:**  $450\ \Omega$ ,  $\pm 30\%$   
**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,  $\pm 20\%$  pF  
**Beamwidth (@ -3 dB Full Angle):**  $12^\circ$ ,  $\pm 2^\circ$   
**Maximum Driving Voltage (2% Duty Cycle Tone Burst):** 1,500 V<sub>pp</sub>  
**Operating Temperature:** -40°C to 90°C  
**Weight:** 160 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.

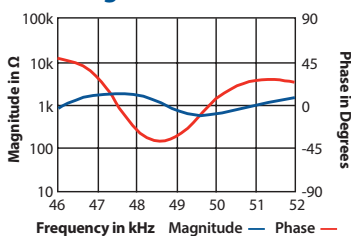
### Directivity Pattern



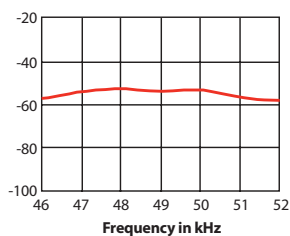
### Transmit & Receive Voltage Response



### Impedance Magnitude & Phase



### Figure of Merit (Sum of TVR & RVR)



## 50 kHz

## AIRDUCER® Ultrasonic Transducer

### Applications

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

### Features

- Improved deadband performance as compared to AT50
- Rugged sealed construction
- Cylindrical design allows for installation in various applications

### Options

- 10 KΩ thermistor available for temperature compensation

### Dimensions

