

CTG0052-0001 BROADBAND TRANSDUCER



Features

The CTG0052 acoustic transducer is the industry standard transducer for telemetry and communications, in the 9-15 kHz frequency range. The range of transducers in this series covers the spectrum of telemetry, telephony or acoustic source needs in the underwater environment. The base model (bottom right) employs an oil filled, rubber encapsulated design, which is rated to full ocean depth. Below is the specification for this reliable design. The standard model is designed to be fixed to telemetry units, pressure vessels, etc. where connection is made via glass to metal seals.

Advantages

- Broadband operation
- Low noise performance
- Omni-directional response

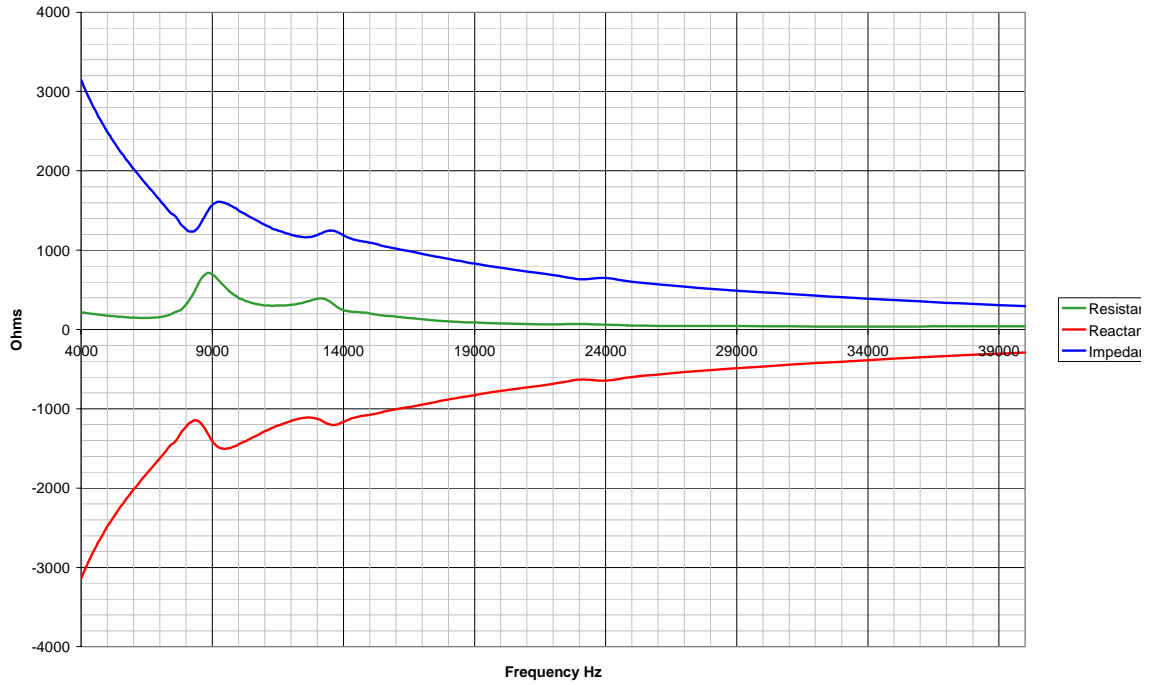
Technical Specification

Nominal Resonant Frequency	8 / 13 kHz
Receive Sensitivity	-180
Transmit Sensitivity	132 / 138 dB
Useable Frequency Range	8-16 kHz
Linear Frequency Range	See Graph
Horizontal Beam Pattern	Omnidirectional ± 1 dB
Vertical Beam Pattern	Hemispherical ± 1 dB

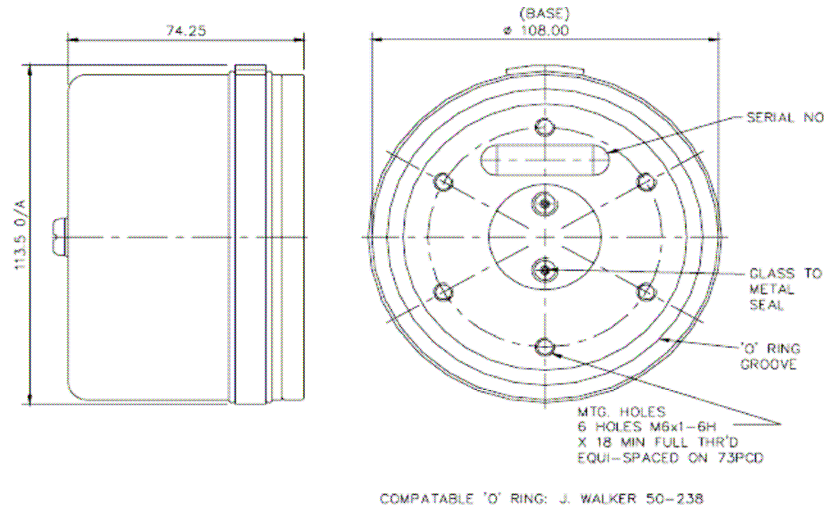
Mechanical Specification

Operating Depth	Full ocean depth
Temperature Range	-2 to +35°C in water
Cable	N/A
Connector	pins
Dimensions	Length 74mm Max OD 108mm
Weight	Approx. kg in air, kg in water
Mounting	6 x M6 mounting holes see diagram
Order Number	CTG0052-0001 Base model (shown above far right)
	CTG0052-0010 Dunking transducer (shown above far left)
	CTG0052-0012 Dunking transducer with preamp for improved receive response
	CTG0052-0014 Dunking transducer with integrated hydrophone (shown above left)
	CTG0052-0016 Hull mounted version (not shown)
	CTG0052-0018 High power dual transducer
	CTG0052-0022 Extra robust solid transducer
Specify alternative cable and connector requirements.	

CTG0052-0001



Connector Pin No.	Signal name
1	+ve as marked
2	-ve



We have developed these recommendations to improve measurements, and extend the life of our transducers.

Care

- Never physically touch the sensing part of the device.
- Limit the amount of time the device is immersed in liquid.
- Rinse with fresh water and store carefully in a (non waterproof) robust case after use.
- Take extra care to protect the cable from damage.

The device and the cable must not be left in direct sunlight when out of the water. These transducers are quite a robust, however direct sunlight on the moulded surface can produce high temperatures. This could not only degrade the polyurethane but also the ceramics inside, inner wiring and cable jacket.

Preparation

Ensure the device is cleaned prior to use, to minimise surface contamination ensure good wetting. Wetting is the readiness of a liquid to bond to the surface of a solid. A mild detergent will usually be sufficient for cleaning general dirt and grease. In addition it is recommended the device is soaked in water for at least 1hr prior to use to get optimum performance.

Mounting Considerations

A number of mounting methods can be used ranging from free-flooding tubular poles made from carbon-fibre, metal or plastic, to miniature clamping brackets or some times custom designs to fit a particular hydrophone model. In general, the mount should possess enough rigidity and strength to enable accurate positioning and orientation of the hydrophone, but should perturb the acoustic field as little as possible and introduce as few artifacts into the hydrophone response as possible. These requirements may conflict and a compromise must be reached.



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