

SonoTube 008/D12 HIGH POWER COMMUNICATIONS TRANSDUCER



Typical Uses: Underwater Wireless Communication Applications, Underwater Positioning and Navigation Applications, Underwater Telephones & Acoustic Reference Standards

FEATURES

The SonoTube 008/D12 is a low frequency, broadband, high power transmitter and receiver transducer active over 6-20kHz. It is operational to full ocean depth thanks to the oil filled rubber encapsulated design. It is particularly useful in systems for underwater communications and positioning and navigation.

The SonoTube 008/D12 is designed to be fixed to telemetry units, pressure vessels etc. and a connection can be made via glass to metal seals.



ADVANTAGES

- Rated to Full Ocean Depth
- Long-term stability
- Durable and reliable construction
- Low Frequency High Power Transmitter and Receiver

ORDER NUMBER

CTG 1330-0001

Please specify any additional cable, alternative connectors and/or calibration requirements with order

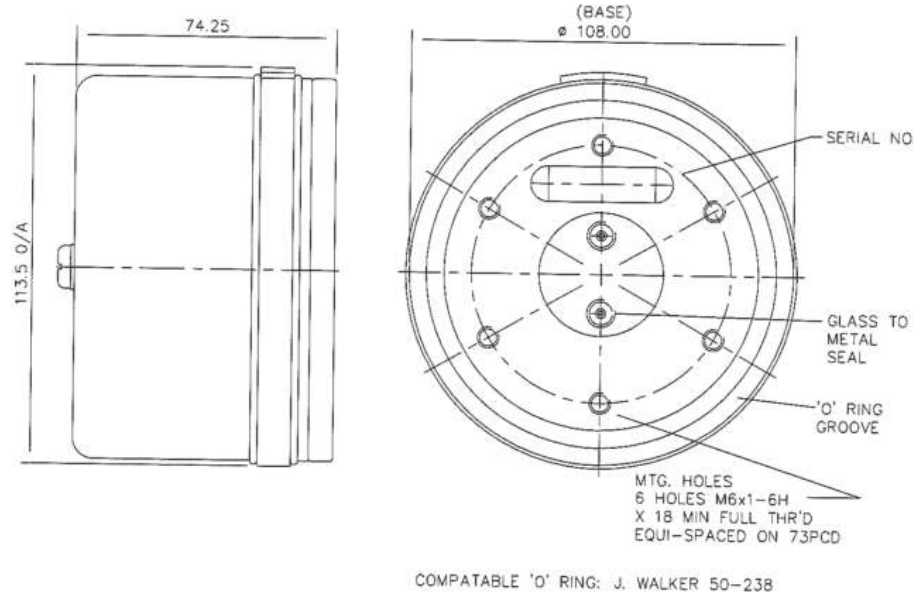
TECHNICAL SPECIFICATION

Nominal resonant frequency	8 & 12.5 kHz
Integral Amplifier or Tuning Element	No
Receive Sensitivity @ 8 kHz	- 170 dB re 1V/ μ Pa
Recommended receive frequency range	6-17 KHz
Linear frequency range	N/a
Maximum acoustic input @ 8 kHz	+ 230 dB re 1 μ Pa
Transmit sensitivity @ 12.4 kHz	+ 139 dB re 1 μ Pa/V at 1m
-3dB bandwidth	7.2 KHz
Quality Factor	1.6
Recommended transmit frequency range	6-20 KHz
Maximum source level @ 12.4 kHz	+ 199 dB re 1 μ Pa at 1m
Maximum applied voltage	1000 Vrms
Low Frequency capacitance (@ 1kHz)	12 nF
Horizontal beam pattern	Omni-directional
Vertical beam pattern	> 270°

MECHANICAL SPECIFICATION

Dimensions	Maximum outer diameter 115 mm, Length 75 mm
Transducer head weight in air	***
Transducer head weight in water	***
Maximum recommended operating depth	Rated to full ocean depth
Survival depth	Rated to full ocean depth
Operating temperature range	-5 to +35°C
Cable	None as standard
Connector	N/a
Mounting	To be fixed to telemetry / pressure vessel etc.

MECHANICAL DRAWING

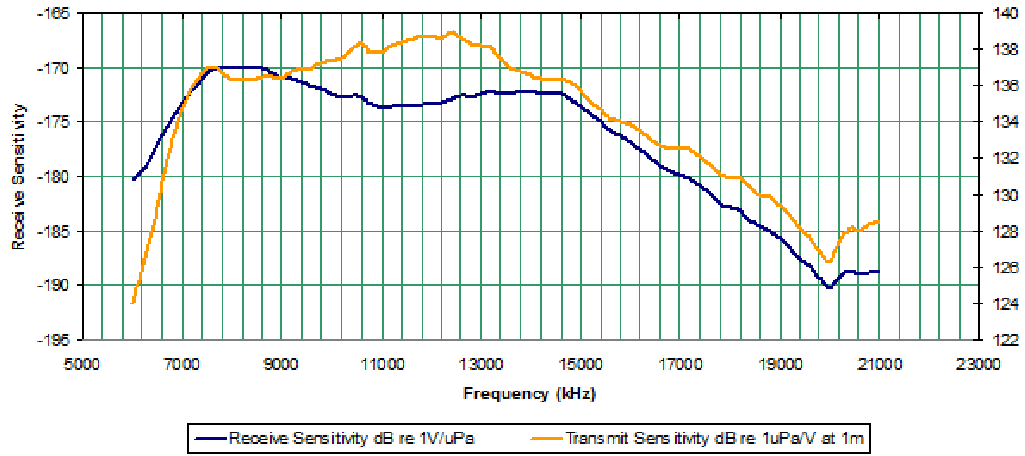


CONNECTOR LAYOUT

N/a

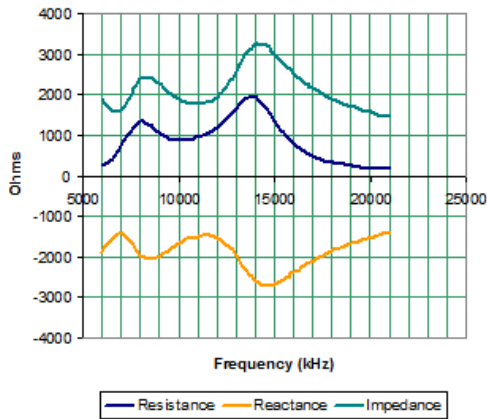
SENSITIVITY

SonoTube 008/D12 Sensitivity



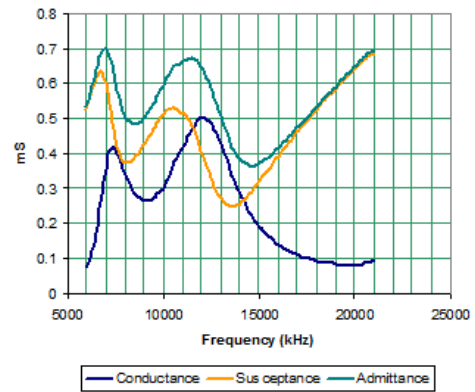
IMPEDANCE

SonoTube 008/D12 Impedance



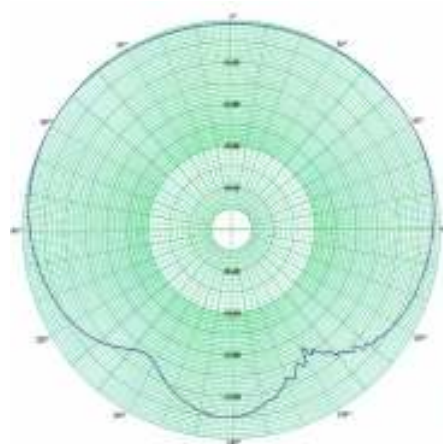
ADMITTANCE

SonoTube 008/D12 Admittance



HORIZONTAL BEAM PATTERN

VERTICAL BEAM PATTERN @ 10 kHz



VARIATIONS

The SonoTube 008/D12 – UW variation includes an LPMBH-4MP Underwater connector and a protective cage.

The SonoTube 008/D12 – DT is also available as the SonoTube 008/D12 unit as a dunking transducer including a protective cage and a cable for easy deployment.

The SonoTube 008/D12 – PA – DT is also available as the SonoTube 008/D12-DT with an integral pre-amplifier.



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*** Please contact CTG for further information

In view of our policy of continual improvement, the designs and specifications of our products may vary from those described 2271-031-RS-A)