

TD1040 Communication Transducer



The Colmar TD1040 is a ring-cavity free flooded transducer. A very robust unit typically used for underwater communications. The two main vibration modes have resonant frequencies at 9 and 12 kHz and the usable band is between 7 and 16 kHz. Can be used as a receiver in the same band.



Designed for underwater wireless communications, positioning and navigation.

Oil filled, rated to full ocean depth

Robust design suitable for field operations.

Hemispherical beam pattern, broadband operativity.

Custom interfaces available (cable, connector type, metal to glass pins).

Outside dimensions	108mm diameter, 80mm height.
Moulding material	Polyurethane
Base material	Alluminium (treated with hard oxidation)
Termination type	Metal to glass pins, cable or connector
Resonance frequencies	9, 12 kHz (nominal)
Usable frequency range	7-16 kHz
Max transmitting sensitivity	138 dB re 1 uPa/V @1m (see fig.1).
Max receiving sensitivity	-182dB re 1 volt/ μ Pa (see fig.2).
Horizontal beam pattern	Omni +/- 1dB.
Vertical beam pattern	Omni +/- 1dB @10kHz., directive as figure 4 @12kHz.
Transmit voltage / duty cycle Max	1200Vrms @10% duty cycle, 350 Vrms@100%
Maximum operating depth	Rated to full ocean depth (oil filled).
Capacitance (@1 kHz)	14.200 pF.
Operating temperature	-5°C / + 40°C
Storage temperature	-40°C/ 80°C
Mounting interface	6 x M6 holes (see fig. 5).
Weight in air (without cable):	1,4 kg.

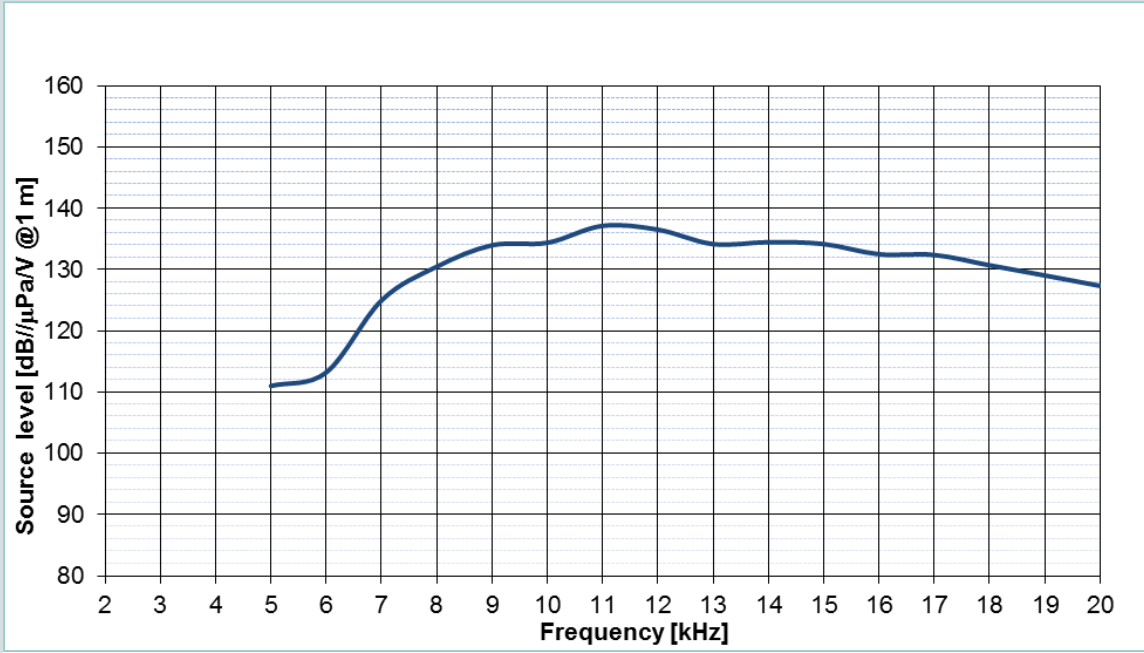


Fig. 1 - Transmitting sensitivity

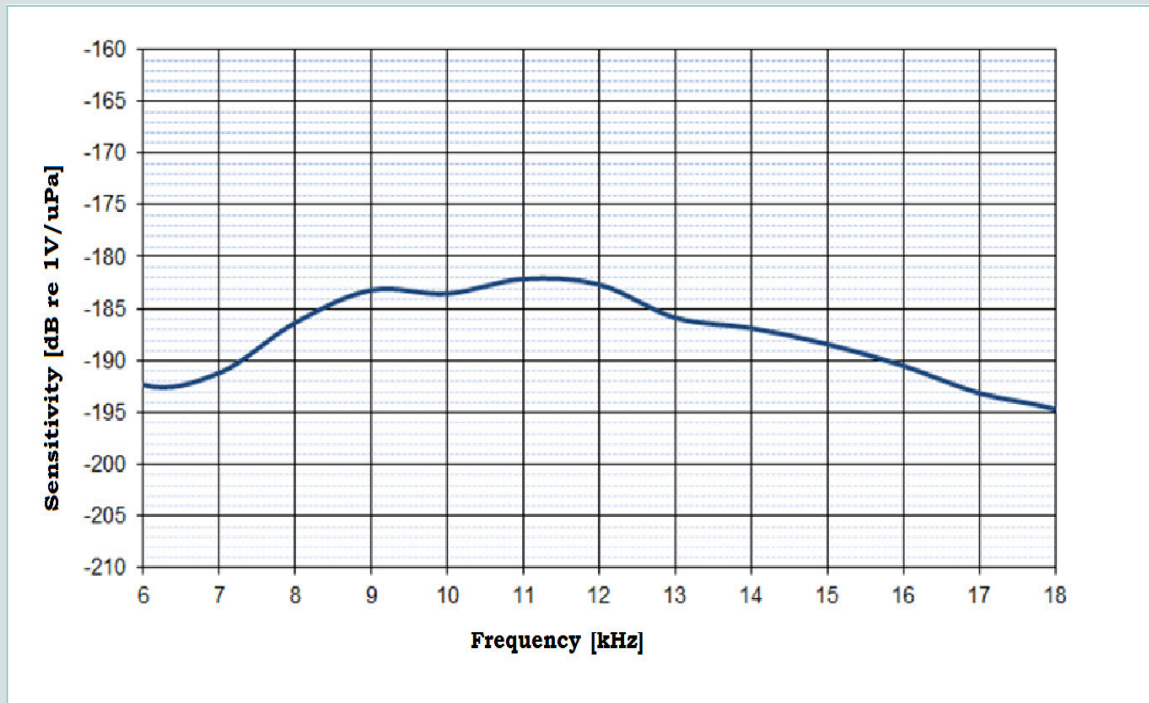


Fig. 2 - Receiving sensitivity

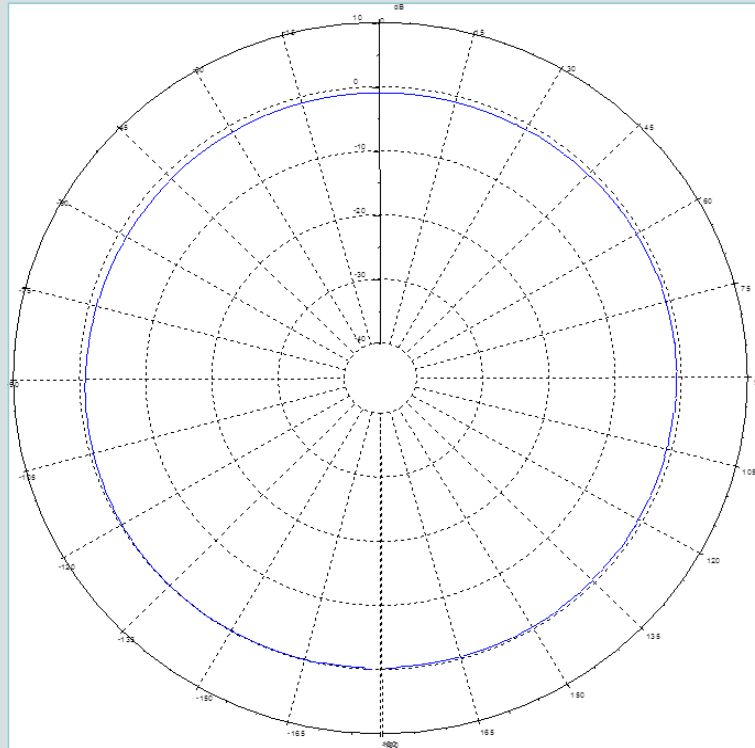


Fig. 3 – Horizontal directivity @12kHz

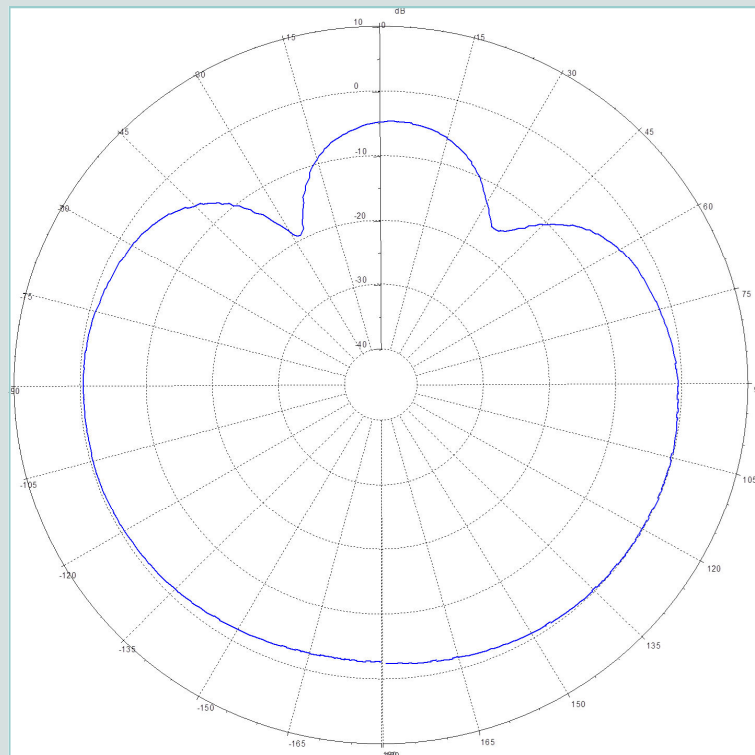


Fig. 4 – Vertical directivity @12kHz

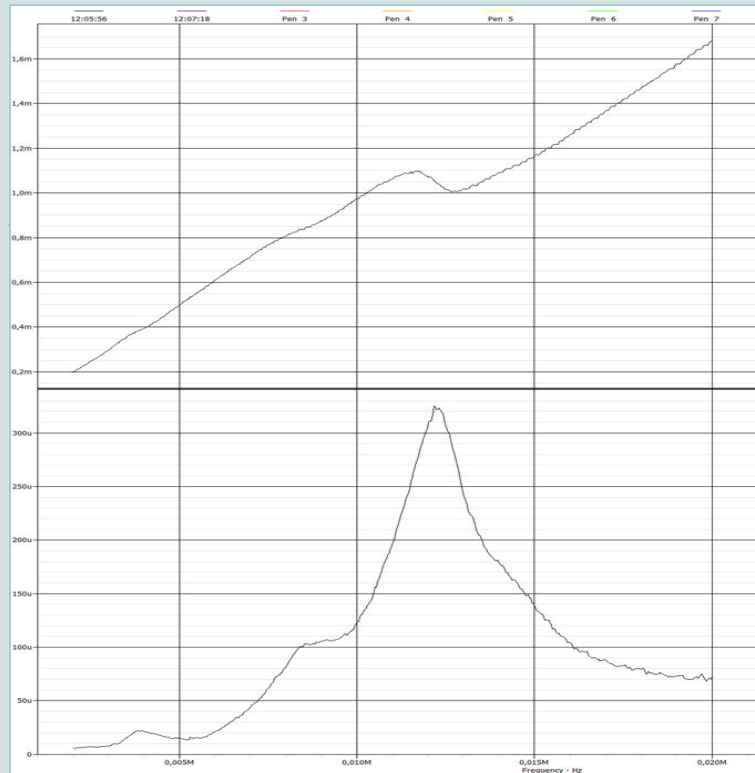


Fig. 5 – Susceptance and conductance curves

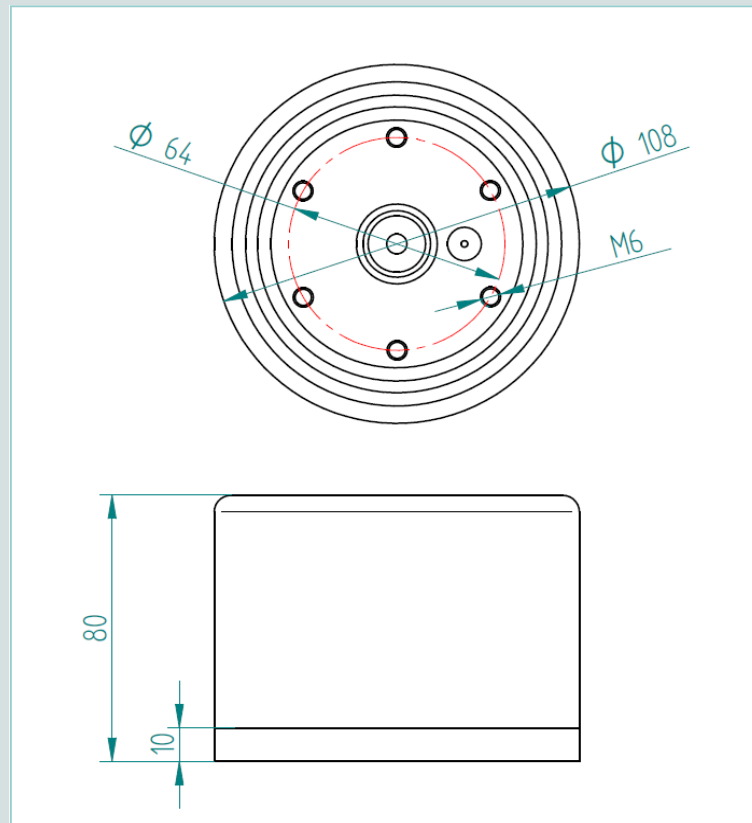


Fig. 6– Dimensions and mechanical interface with n°6 M6 x 20mm holes