

Teledyne RESON

Hydrophone TC4034

Ultra Broad-band Spherical Hydrophone



The TC4034 broad band spherical hydrophone provides uniform omnidirectional characteristics over a wide frequency range of 1Hz to 480kHz.

The overall receiving characteristics makes the TC4034 an ideal transducer for making absolute underwater sound measurements up to 480kHz. The wide frequency range also makes the TC4034 perfect for calibration purposes, particularly in higher frequencies.

NBR means Nitrile Rubber

The NBR rubber is first of all resistant to sea and fresh water but also resistant to oil. It is limited resistant to petrol, limited resistant to most acids and will be destroyed by base, strong acids, halogenated hydrocarbons (carbon tetrachloride, trichloroethylene), nitro hydrocarbons (nitrobenzene, aniline), phosphate ester hydraulic fluids, Ketones (MEK, acetone), Ozone and automotive brake fluid.

TECHNICAL SPECIFICATIONS

Usable Frequency range:	1Hz to 470kHz (+3, -10dB)
Linear Frequency range:	1Hz to 250kHz (+2, -4dB)
Receiving Sensitivity:	(re 1V/μPa) -218dB ±3dB (at 250Hz)
Horizontal Directivity:	Omnidirectional ±2dB (at 100 kHz)
Transmitting Sensitivity:	122dB ±3dB (typical) re 1μPa/V at 1m at 100kHz
Vertical Directivity:	>270° ±3dB (at 300kHz)
Nominal Capacitance:	3nF
Operating depth:	900m
Survival Depth:	1000m
Operating Temperature range:	-2°C to +80°C
Storage Temperature range:	-40°C to +80°C
Weight incl. cable,(in air):	1.6 kg
Cable (length and type):	Standard 10m shielded pair DSS-2MIL-C915. Optional cable length available on request
Encapsulating material:	Special formulated NBR
Metal body:	Aluminum bronze - AlCu10Ni5Fe4
Connector type:	BNC

PRODUCT BENEFITS

- Omnidirectional in the full frequency range
- Long term stability
- Extreme Wide frequency range
- Durable construction
- Individually calibrated



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Documentation:

Vertical directivity:
At 250 kHz 100,200,300 kHz

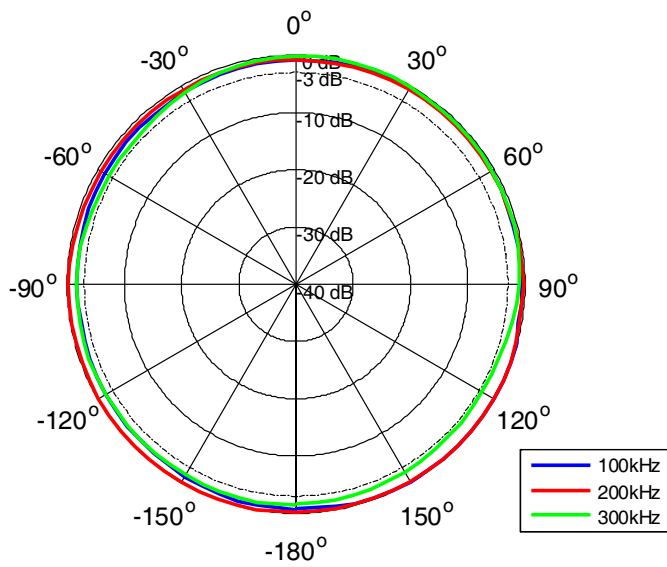
Receiving sensitivity:
5 kHz to 500 kHz

Transmitting sensitivity:
5 kHz to 500 kHz

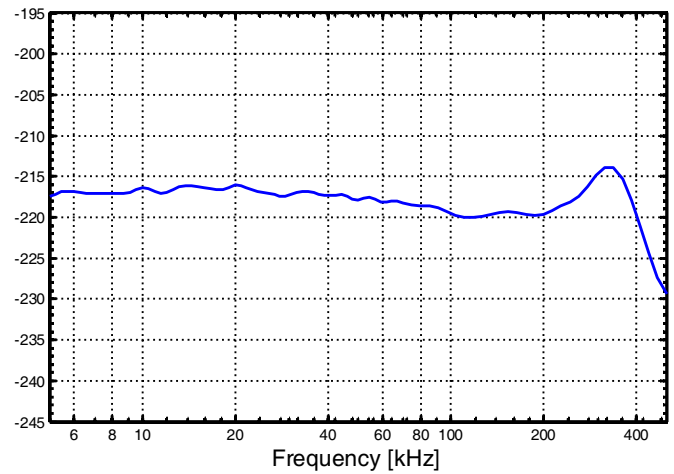
Horizontal directivity:
At 100, 200, 300 kHz

Impedance:
5 kHz to 500 kHz

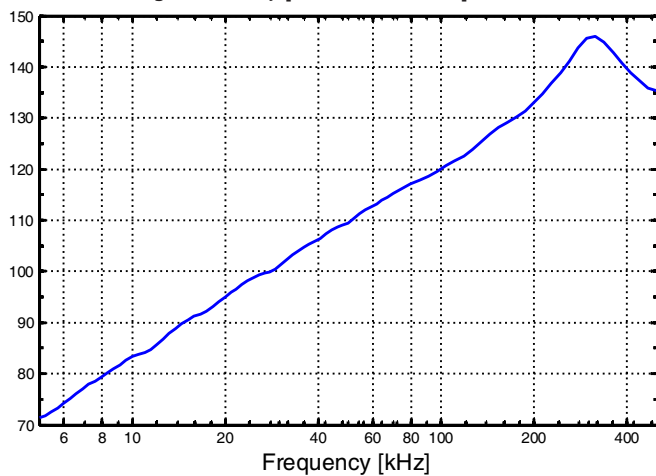
Horizontal directivity pattern



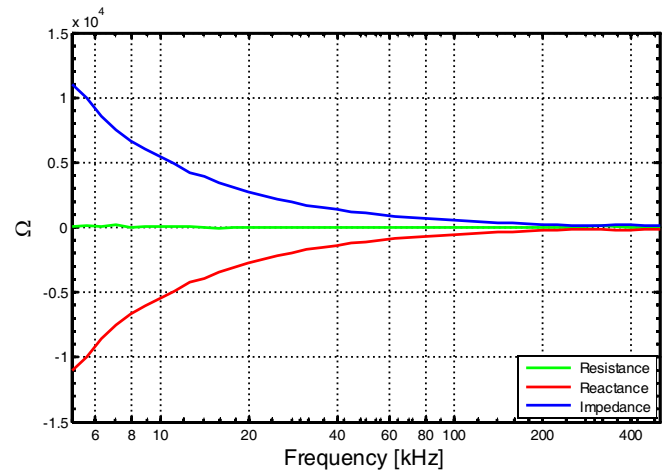
Receiving Sensitivity [dB re 1V/μPa @ 1m]



Transmitting Sensitivity [dB re 1μPa/V @ 1m]



Impedance



Hydrophone TC4034

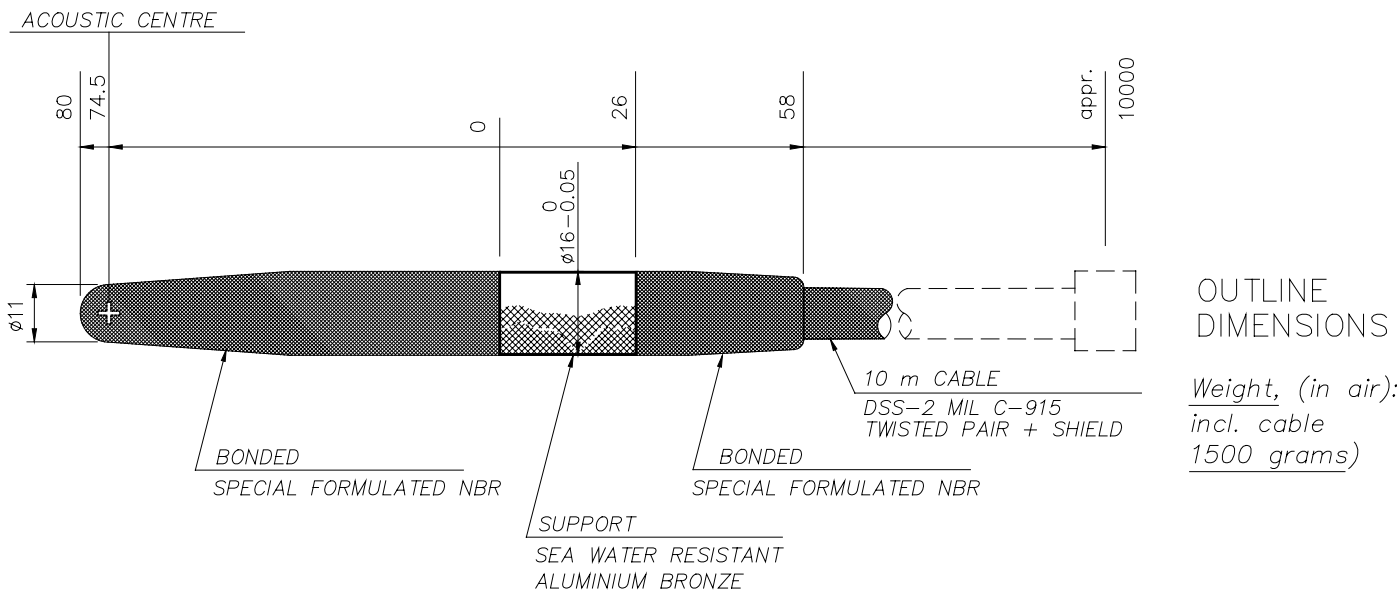
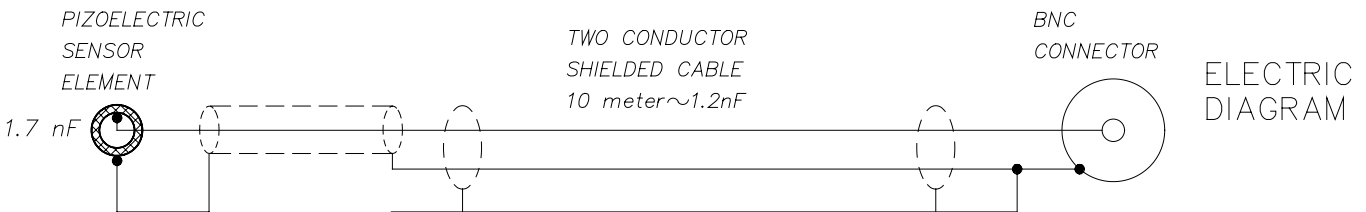
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Documentation:

The hydrophone is permanently encapsulated in Special formulated NBR to provide long term reliability. The rubber has been specially compounded to ensure an acoustic impedance close to that of water.

The TC4034 is supplied with an integral water blocked two conductor shielded cable, type DSS-2, which complies with Mil C915

Electrical Diagram and Outline Dimensions



For more details visit www.teledyne-reson.com or contact your local Teledyne RESON Office. Teledyne RESON reserves the right to change specifications without notice. 2016@Teledyne RESON

Teledyne RESON A/S

Denmark
Tel: +45 4738 0022
info@teledyne-reson.com

Teledyne RESON Inc.

U.S.A.
Tel: +1 805 964-6260
sales@teledyne-reson.com

Teledyne RESON U.K. Ltd.

Scotland U.K.
Tel: +44 1224 709 900
sales@reson.co.uk

Teledyne RESON B.V.

The Netherlands
Tel: +31 (0) 10 245 1500
info@reson.nl

Teledyne RESON GmbH

Germany
Tel: +49 421 3770 9600
info@teledyne-reson.com

Teledyne RESON Shanghai Office

Shanghai
Tel: +86 21 6110 8320
shanghai@teledyne-reson.com