



## TC4034



The TC4034 broad band spherical hydrophone provides uniform omnidirectional characteristics over a very 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 480 kHz. The wide frequency range also makes the TC4034 perfect for calibration purposes, particularly in higher frequencies.

### FEATURES

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

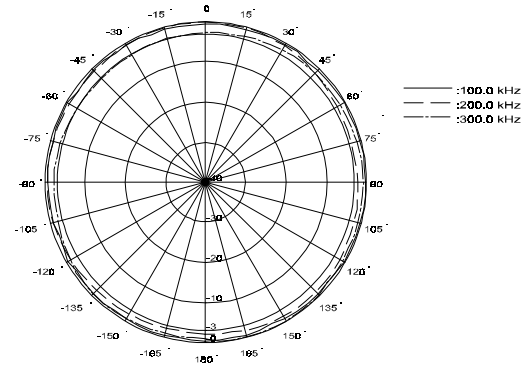
### TECHNICAL SPECIFICATIONS

<b>Usable Frequency range:</b>	1 Hz to 470 kHz (+3, -10 dB)	<b>Operating Depth:</b>	900 m
<b>Linear Frequency range:</b>	1 Hz to 250 kHz (+1, -4 dB)	<b>Survival Depth:</b>	1000 m
<b>Receiving Sensitivity:</b> (re 1V/ $\mu$ Pa)	-218 dB $\pm$ 3 dB (at 250 Hz)	<b>Operating Temperature range:</b>	-2°C to +80°C
<b>Horizontal directivity:</b>	Omnidirectional $\pm$ 2 dB (at 100 kHz )	<b>Storage Temperature range:</b>	-40°C to +80°C
<b>Transmitting sensitivity:</b>	122 dB $\pm$ 3 dB re 1 $\mu$ Pa/V at 1 m at 100 kHz	<b>Weight incl. cable, (in air):</b>	1.6 kg
<b>Vertical directivity:</b>	>270° $\pm$ 3 dB (at 300 kHz)	<b>Cable:</b> (length and type)	10m shielded pair DSS-2MIL-C915
<b>Nominal Capacitance:</b>	3 nF	<b>Encapsulating Material:</b>	Chloroprene
		<b>Metal body:</b>	Alu-bronze
		<b>Connector type:</b>	BNC

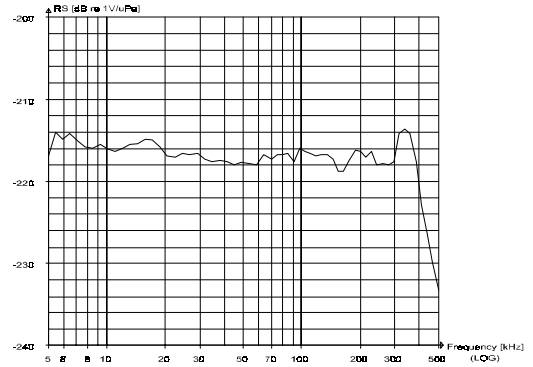


# Typical graphs

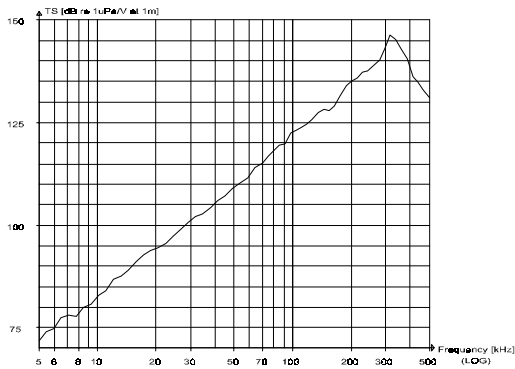
Horizontal directivity pattern



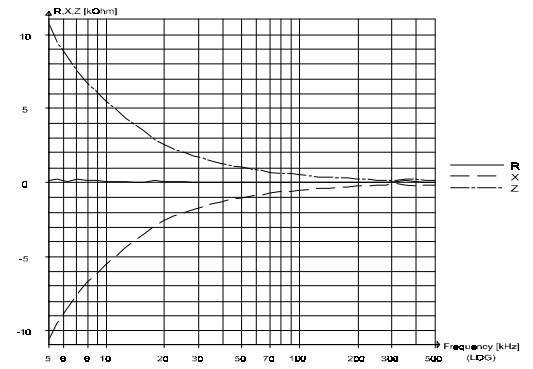
Receiving sensitivity



Transmitting sensitivity



Impedance

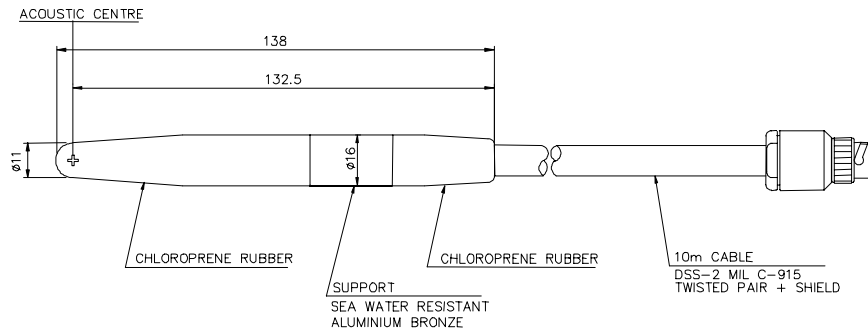


**Documentation:**

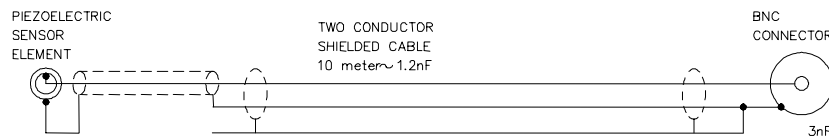
Receiving sensitivity: 5 kHz to 500 kHz  
 Horizontal directivity: At 100, 200, 300 kHz

Vertical directivity: At 250 kHz 100,200,300 kHz  
 Transmitting sensitivity: 5 kHz to 500 kHz  
 Impedance: 5 kHz to 500 kHz

OUTLINE DIMENSIONS



ELECTRIC DIAGRAM



The hydrophone is permanently encapsulated in poly-Chloroprene rubber 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 10 meter water blocked two conductor shielded cable, type DSS-2, which complies with Mil C915.



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