

Hydrophone Type 10CC

Product Data and Specifications

Features

- *Low noise performance*
- *High sensitivity*
- *Wide frequency range*
- *Flat frequency response*
- *Long term stability*
- *Individually calibrated*



Fig. 1 The Hydrophone Type 10CC

The G.R.A.S. Hydrophone Type 10CC (Fig. 1) is a general-purpose hydrophone which offers high sensitivity, low noise, and a flat frequency response over a wide frequency range. The high sensitivity and acoustic characteristics makes Type 10CC capable of producing absolute sound measurements and detecting even very weak signals at levels below “Sea State 0”.

The Type 10CC incorporates an electro-statically shielded, highly sensitive piezoelectric element connected to an integral low-noise 10 dB preamplifier.

The Type 10CC preamplifier is capable of driving long cables of more than 1000 meters, and the preamplifier features an insert calibration facility.

The acoustic sensor element of the Type 10CC is permanently encapsulated in Chloroprene rubber which has been specially compounded to ensure an acoustic impedance very close to that of water and excellent low water permeability for long-term reliability. The metal body is made of corrosion-resistant, stainless steel.

Fig. 2 shows the pin connections and a simplified circuit diagram.

Fig. 3 shows the overall physical dimensions.

Figs. 4 to 8 show the graphical data in detail.

Figs. 9 to 11 show details of available accessories.

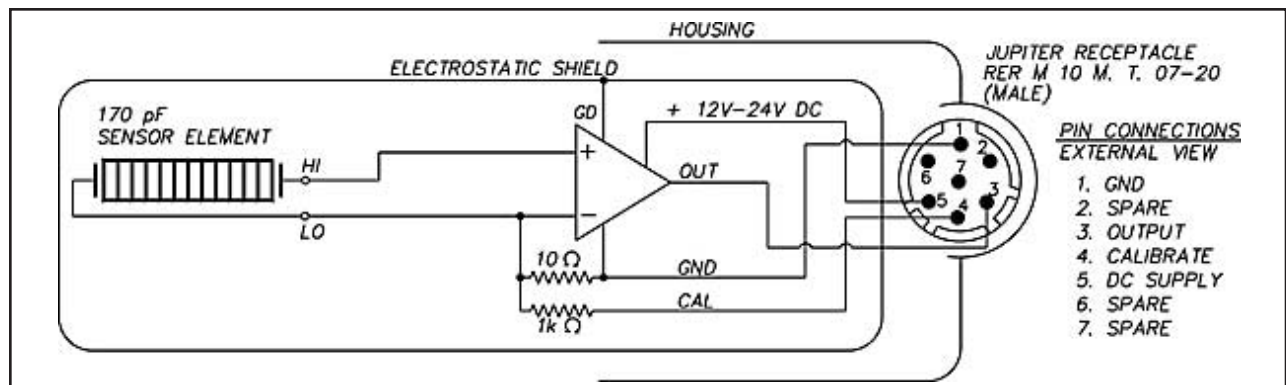


Fig. 2 Pin connections and simplified circuit diagram of The Hydrophone Type 10CC

Hydrophone Type 10CC

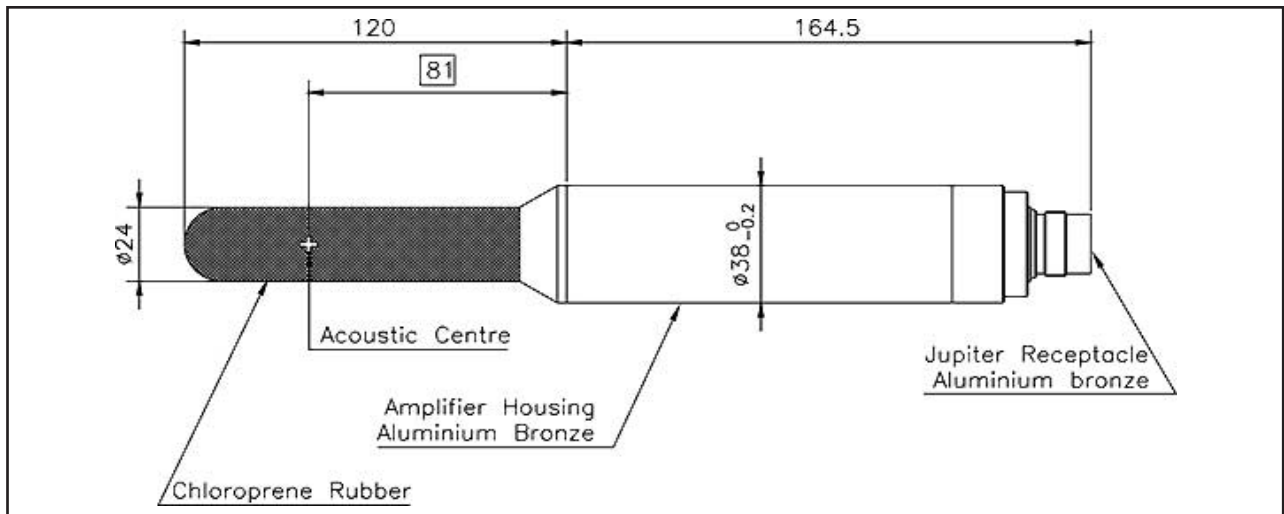


Fig. 3 Overall physical dimensions of the Hydrophone Type 10CC

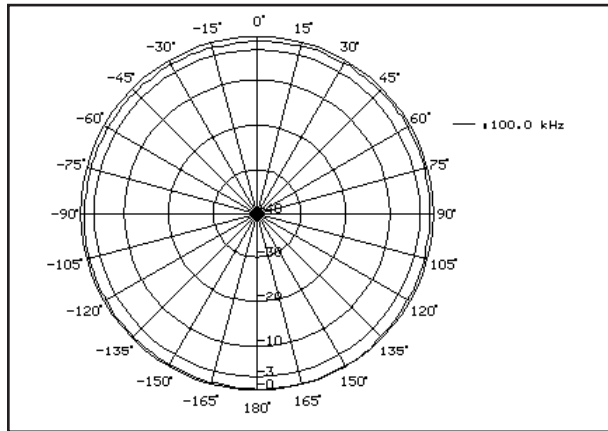


Fig. 4 Horizontal directivity pattern at 100 kHz

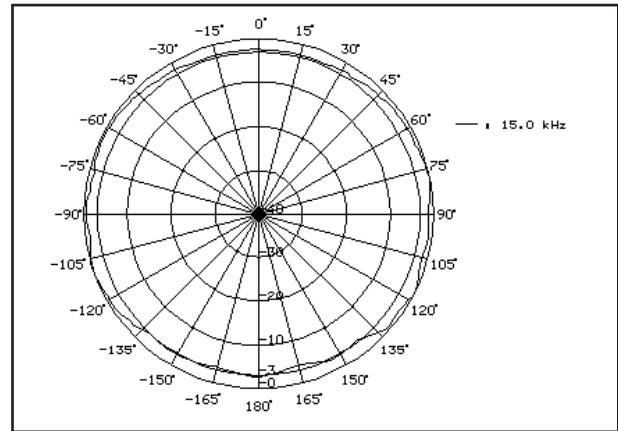


Fig. 5 Vertical directivity pattern at 15 kHz

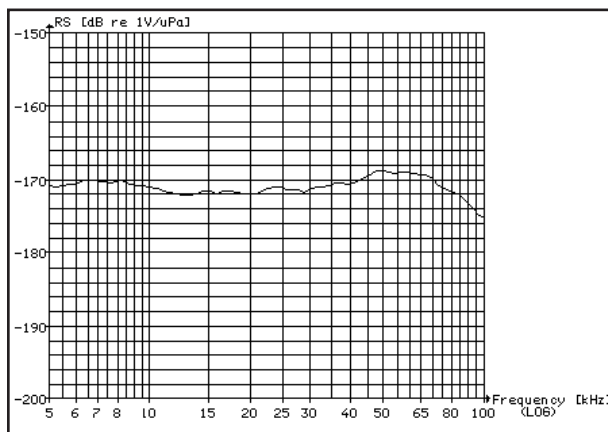


Fig. 6 Receiving sensitivity (decibels re. 1 V/ μ Pa) from 5 kHz to 100 kHz

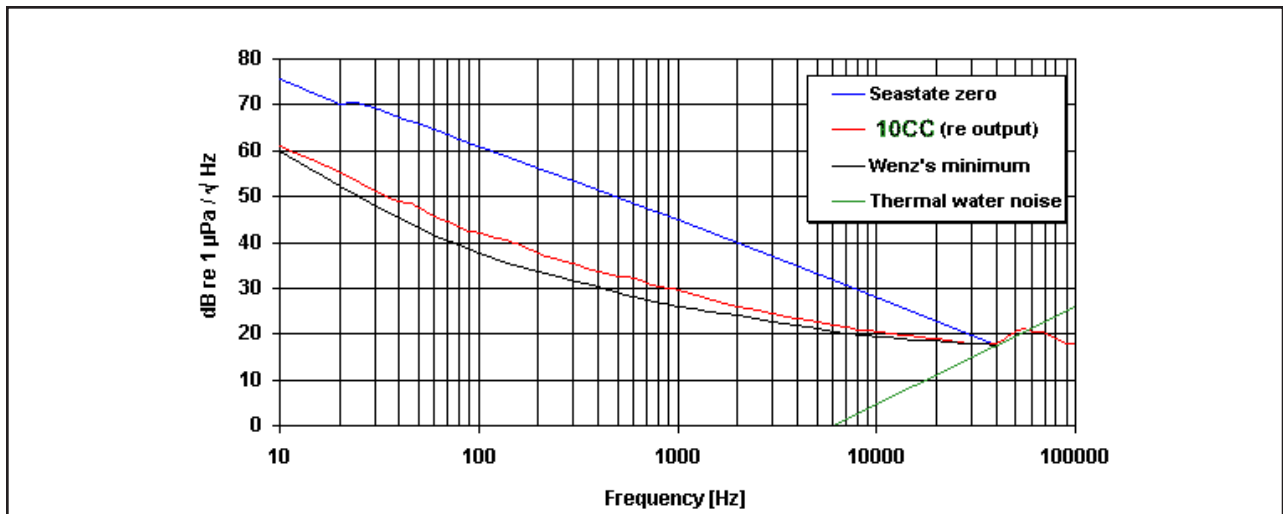


Fig. 7 Equivalent spectral-noise pressure level from 10 Hz to 100 kHz

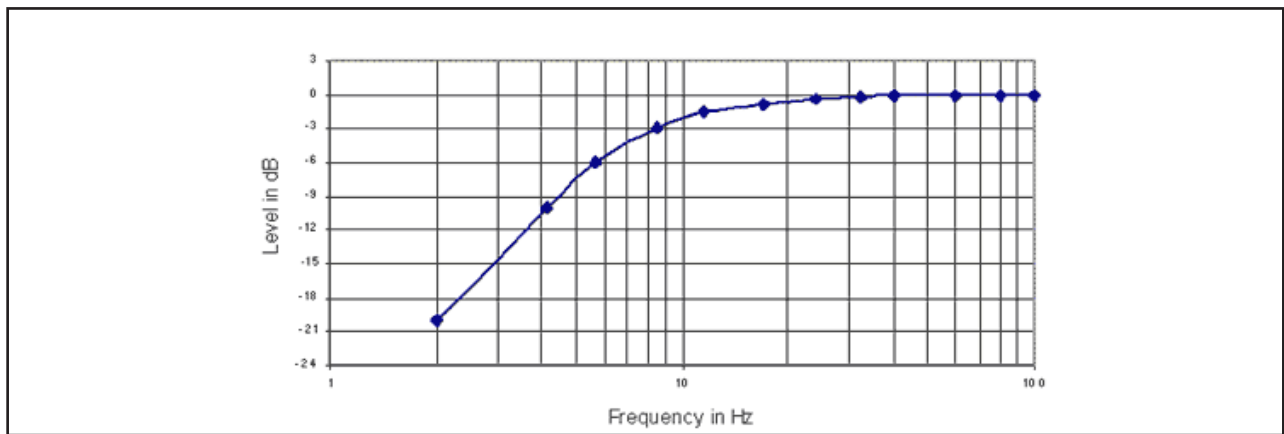


Fig. 8 Typical lower-limiting frequency from 2 Hz to 100 Hz

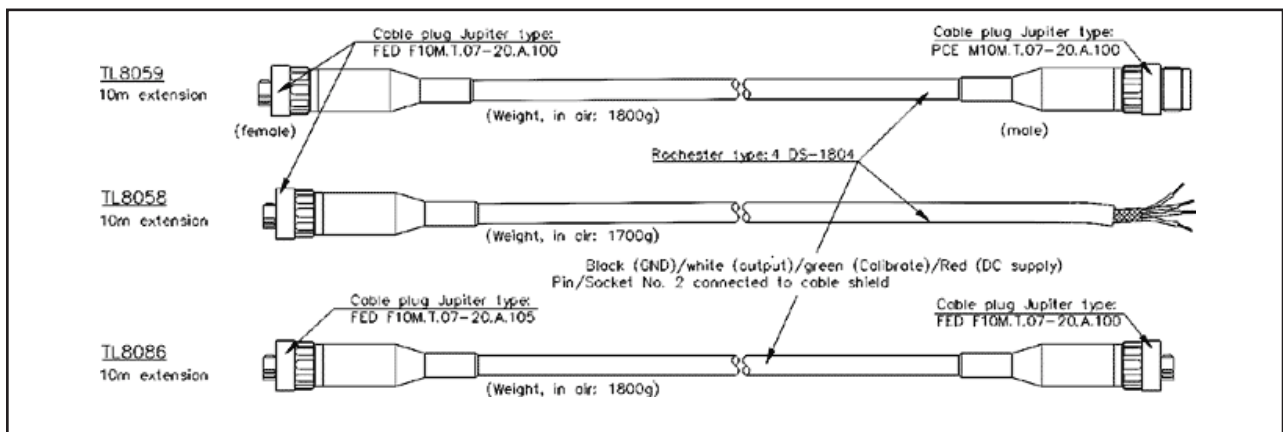


Fig. 9 Available accessories - Cables TL8059, TL8058 and 8086

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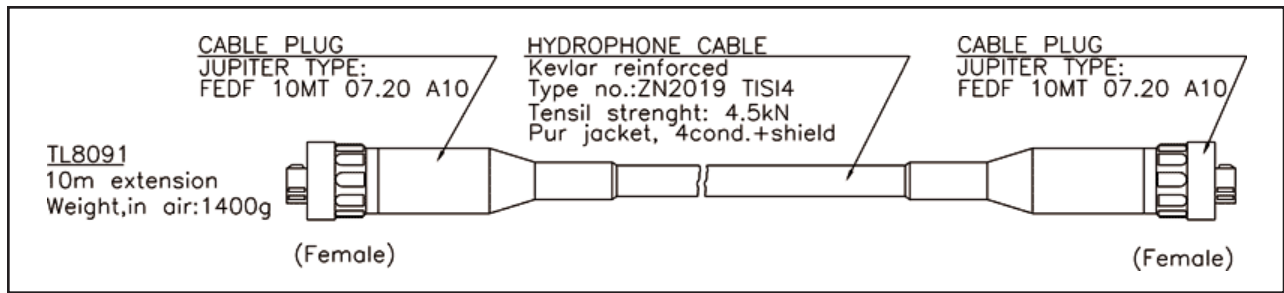


Fig. 10 Available accessories - Cable TL8091

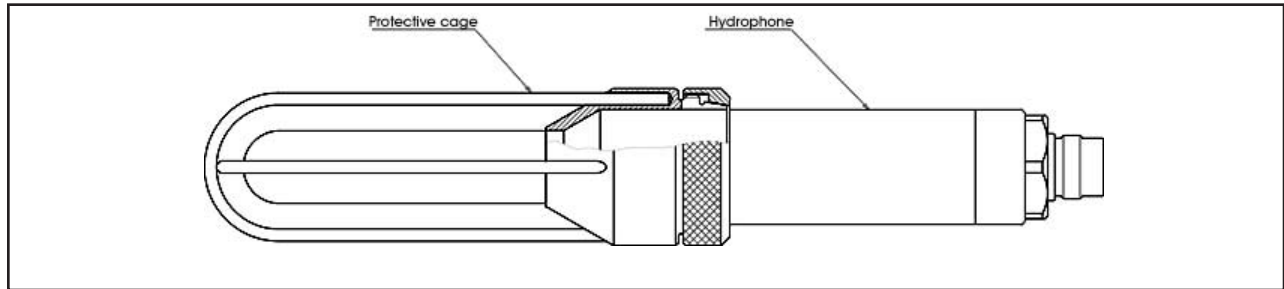


Fig. 11 Available accessories - Protective cage TL8085

Specifications

Usable frequency range:	5 Hz-120 kHz	Storage temperature range:	-30°C to +70°C
Linear frequency range:		Weight in air:	720 gm without cable
15 Hz to 40 kHz	±2 dB	Preamplifier gain:	10 dB
10 Hz to 80 kHz	±2.5 dB	Maximum output voltage:	3.5 V RMS at 12 V DC
Receiving sensitivity (typical):	-170 dB re 1V/μPa	Supply voltage:	12 V to 24 V DC
Horizontal directivity pattern:		High-pass filter:	
360°	±2dB at 100 kHz	-3 dB	7 Hz
Vertical directivity Pattern:		Power supply:	<19 mA at 12 V DC
270°	±2 dB at 15 kHz	Housing material:	Aluminum bronze
Operating depth:	600 m	Encapsulating material:	Chloroprene rubber
Survival depth:	700 m		
Operating temperature range:	-2° to +55°C		

G.R.A.S. Sound & Vibration reserves the right to change specifications and accessories without notice

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