



Hydrophone TC4013

Miniature Reference Hydrophone



- High sensitivity
- Omnidirectional to high frequencies
- Broad banded
- O-ring sealed mounting
- Individually calibrated

TC4013

The TC4013 offers a usable frequency range of 1Hz to 170kHz and a high sensitivity relative to its size. It further more provides uniform omnidirectional sensitivities in both horizontal and vertical planes up to high frequencies. The TC4013 is an excellent transducer for making absolute sound measurements and calibrations within a broad frequency range. It can also be applied as an omnidirectional reference projector.

The overall characteristics makes TC4013 extremely applicable for laboratory as well as industrial uses.

TECHNICAL SPECIFICATIONS

Usable Frequency range:	1Hz to 170kHz
Receiving Sensitivity:	-211dB \pm 3dB re 1V/ μ Pa
Transmitting Sensitivity:	130dB \pm 3dB re 1 μ Pa/V at 1m at 100kHz
Horizontal Directivity Pattern:	Omnidirectional \pm 2dB at 100kHz
Vertical Directivity Pattern:	270° \pm 3dB at 100kHz
Nominal capacitance:	3.4nF
Operating depth:	700m
Survival depth:	1000m
Operating temperature range:	-2°C to +80°C
Storage temperature range:	-40°C to +80°C
Weight (in air):	75g
Cable length:	Standard length 6m Optional cable lengths available on request
Encapsulating material:	Special formulated NBR



NBR means Nitrile Rubber

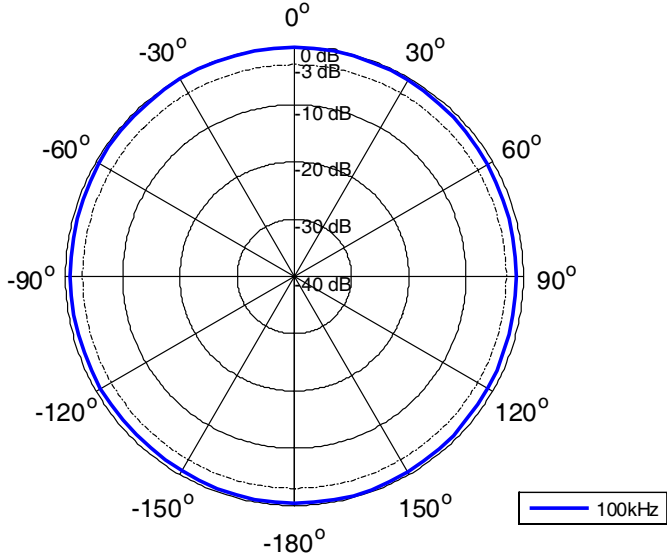
The NBR rubber is first of all resistant to sea and fresh water but also resistant to oil. It is limited resistant to petrol, limited resistant to most acids and will be destroyed by base, strong acids, halogenated hydrocarbons (carbon tetrachloride, trichloroethylene), nitro hydrocarbons (nitrobenzene,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



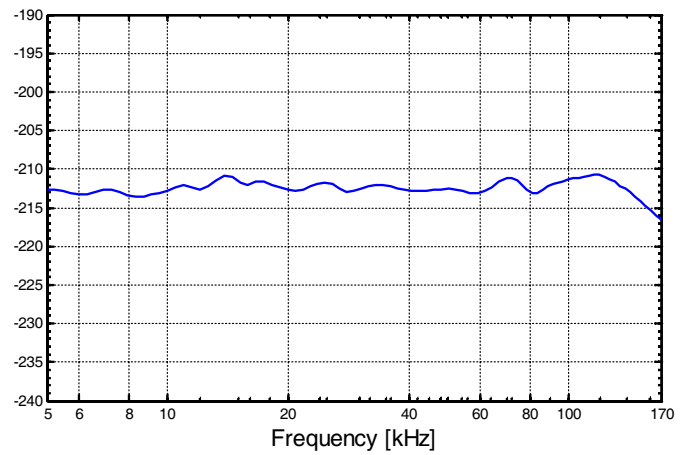
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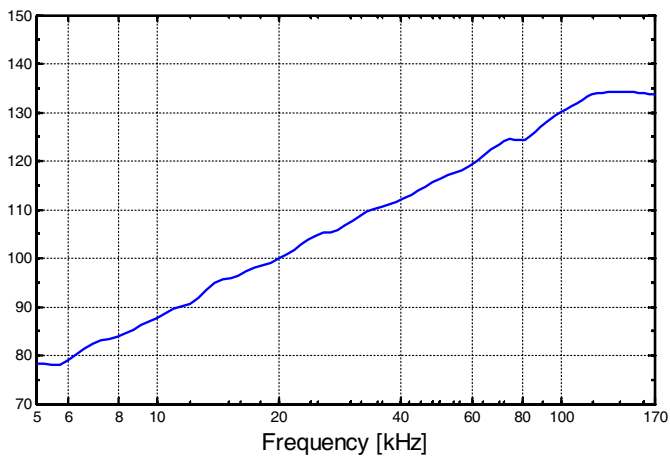
Horizontal directivity pattern



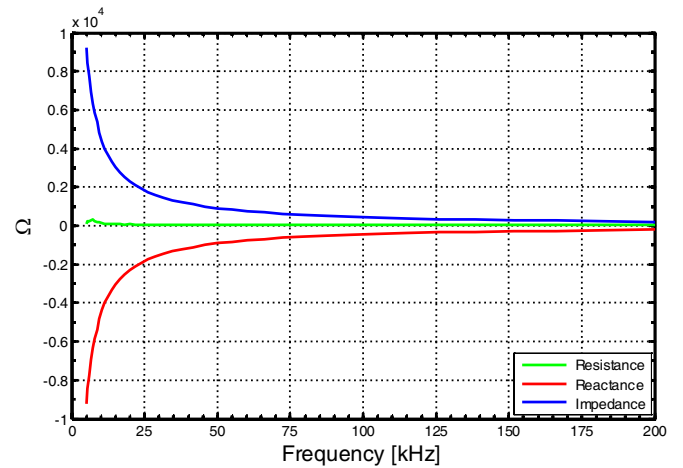
Receiving Sensitivity [dB re 1V/ μ Pa @ 1m]



Transmitting Sensitivity [dB re 1 μ Pa/V @ 1m]



Impedance

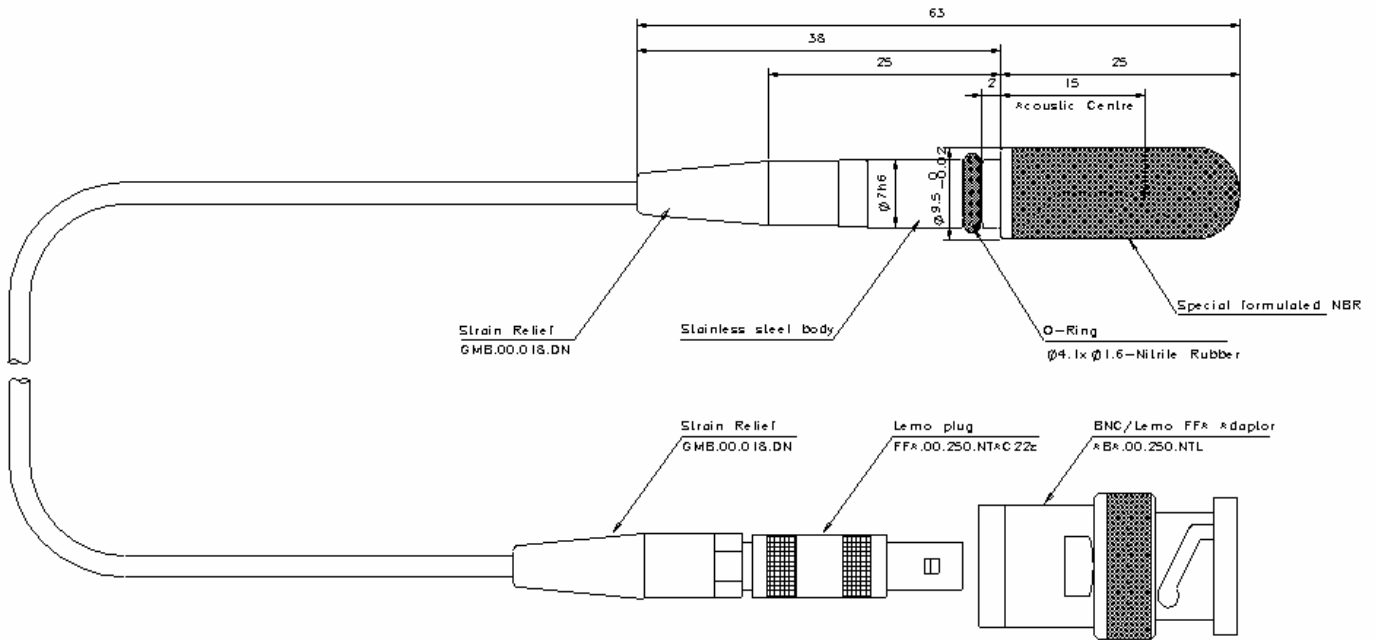




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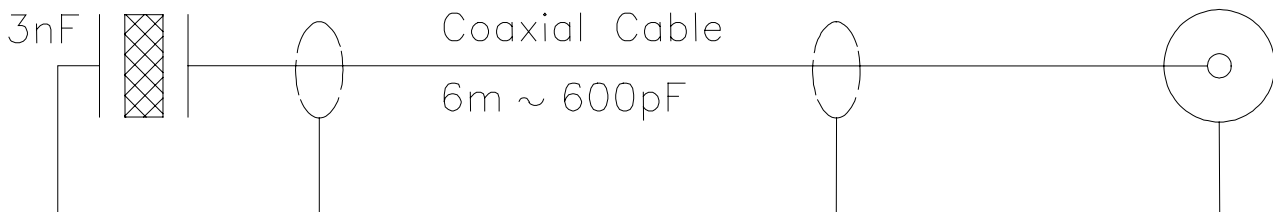
Outline Dimensions



Electrical Diagram

Piezoelectric
Sensor element

Plug + Adaptor



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