



- 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

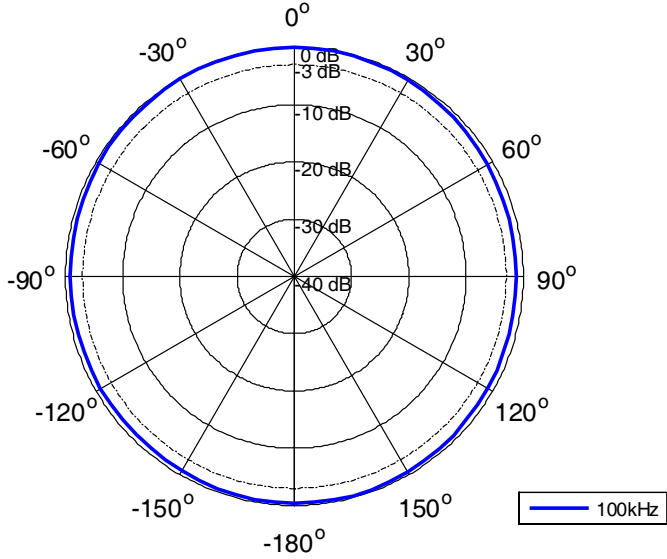
| | |
|---------------------------------|----------------------------------------------------------------|
| Usable Frequency range: | 1Hz to 170kHz |
| Receiving Sensitivity: | -211dB \pm 3dB re 1V/ μ Pa |
| Transmitting Sensitivity: | 130dB \pm 3dB re 1 μ Pa/V at 1m at 100kHz |
| Horizontal Directivity 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 |



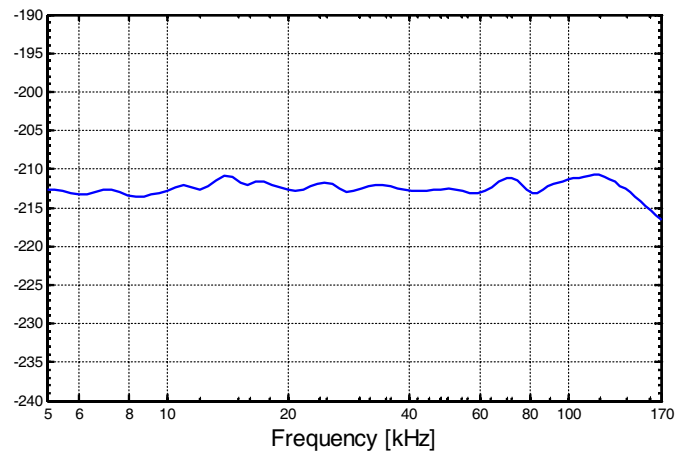
NBR means Nitrile Rubber

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.

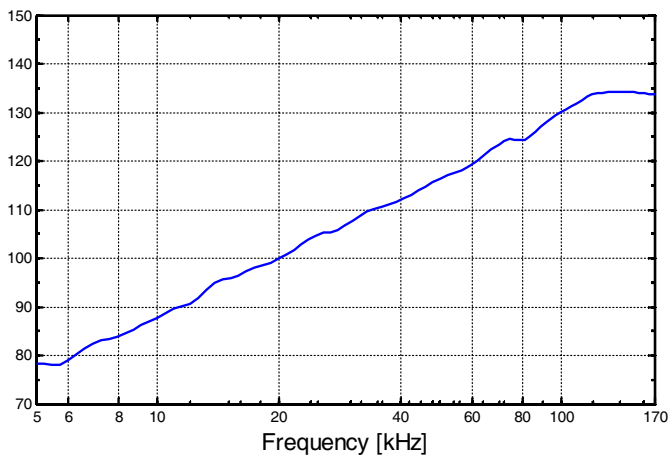
Horizontal directivity pattern



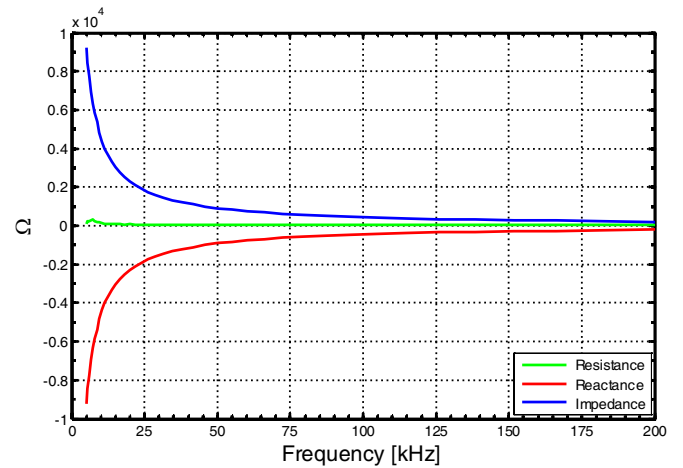
Receiving Sensitivity [dB re 1V/ μ Pa @ 1m]



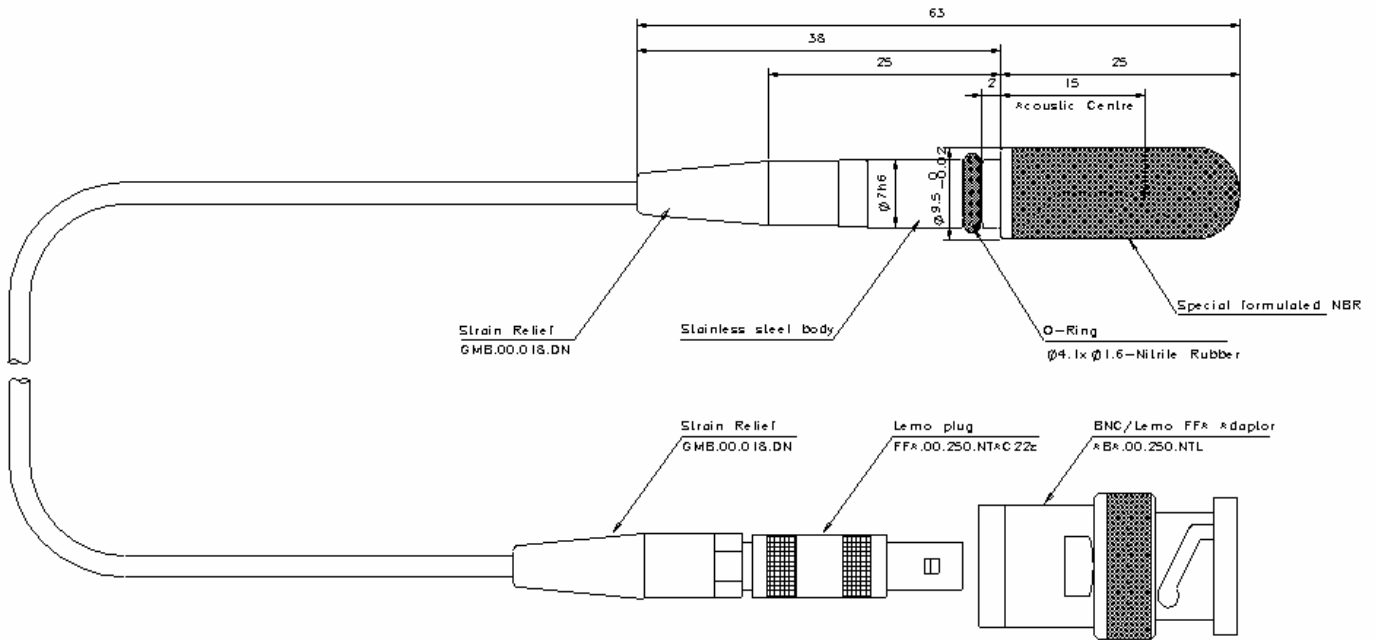
Transmitting Sensitivity [dB re 1 μ Pa/V @ 1m]



Impedance



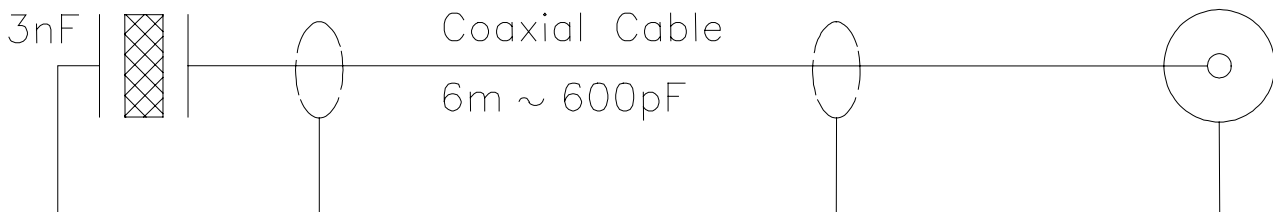
Outline Dimensions



Electrical Diagram

Piezoelectric
Sensor element

Plug + Adaptor



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RESON A/S
Denmark
Tel: +45 4738 0022
E-mail: reson@reson.dk

RESON GmbH
Germany
Tel: +49 431 720 7180
reson@reson-gmbh.de

RESON Inc.
USA
Tel: +1 805 964-6260
E-mail: sales@reson.com

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

RESON Offshore Ltd.
United Kingdom
Tel: +44 1224 709 900
E-mail: sales@reson.co.uk

RESON (Pte.) Ltd
Singapore
Tel: +65 6725 9851
sales@reson.com