

Simrad ES70-18CD

Depth rated wideband split beam transducer

The Simrad ES70-18CD is a depth rated wideband split beam transducer designed for fishery research applications. Beamwidth is 18 degrees at nominal operational frequency 70 kHz.

Applications

Due to its depth rating and large beamwidth, the transducer is ideally suited for ecosystem monitoring from both mobile and stationary subsea platforms. The frequency range allows for broadband sweeps to optimize range, resolution and target identification.



Order information

To order the ES70-18CD, or any of the optional items provided with it, contact your local dealer. If you do not have a regular dealer, a list of all our distributors and dealers can be found on our website. Your dealer will also be able to help you with a detailed quotation including price and delivery information.

Basic item

- Order number: 321637

In the box

- The transducer
- Packing sleeve
- Documents

Optional items

Mounting- and clamping rings are required if you wish to install the transducer through a hull plating. You can manufacture these items yourself, or order them from Kongsberg Maritime. The items are not included with the ES70-18CD delivery, and must be ordered separately.

- Mounting ring: 204675
- Clamping ring: 204677

Technical specifications

The technical specifications provided are typical values. They are valid when operating with all sectors excited simultaneously.

We are continuously working to improve the quality and performance of our products. Technical specifications may therefore be changed without prior notice.

Performance specifications

- Nominal frequency: 70 kHz
- Frequency range: 55 to 90 kHz

The following specifications are valid for the nominal frequency:

- Beamwidth: 18 degrees
- Figure of merit: -12 dB
- Max. source level: 216 dB
- Transmit sensitivity (Su): 178 dB
- Receive sensitivity (Mt): -190 dB
- Sidelobe level: -18 dB
- Back radiation level: -30 dB
- Impedance (each sector): 60 Ω

Power specifications

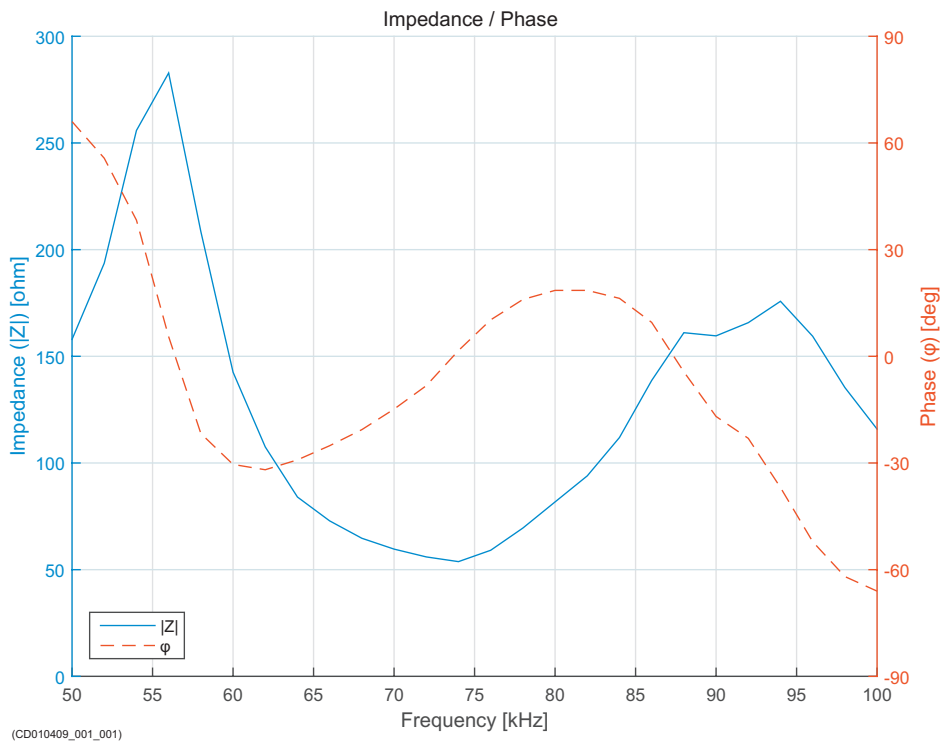
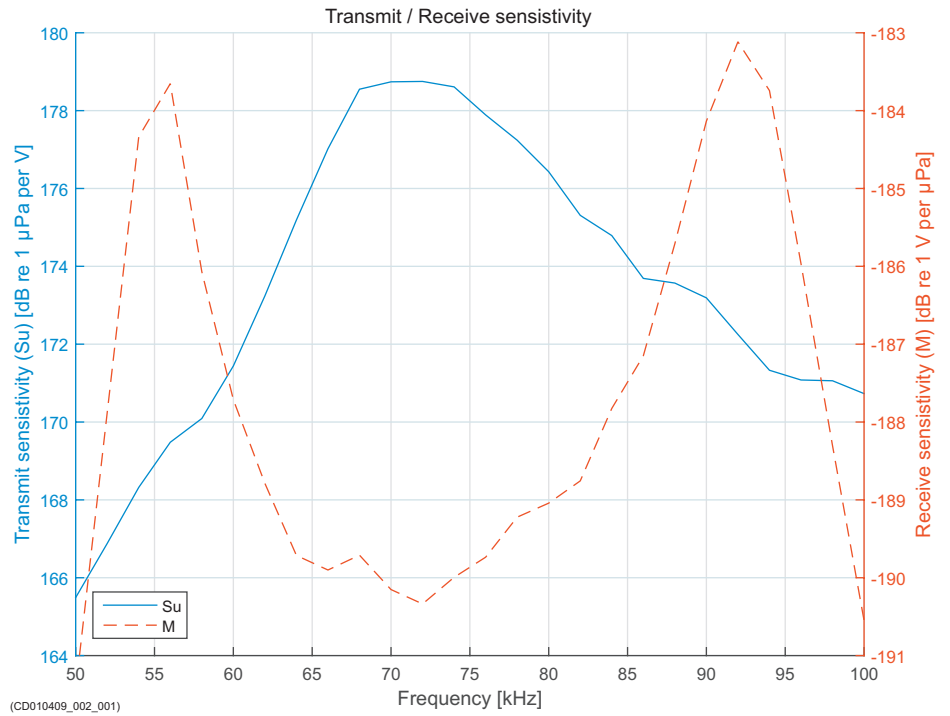
- Max. input power: 400 W
- Max. pulse length: 2 ms
- Max. duty cycle: 2%

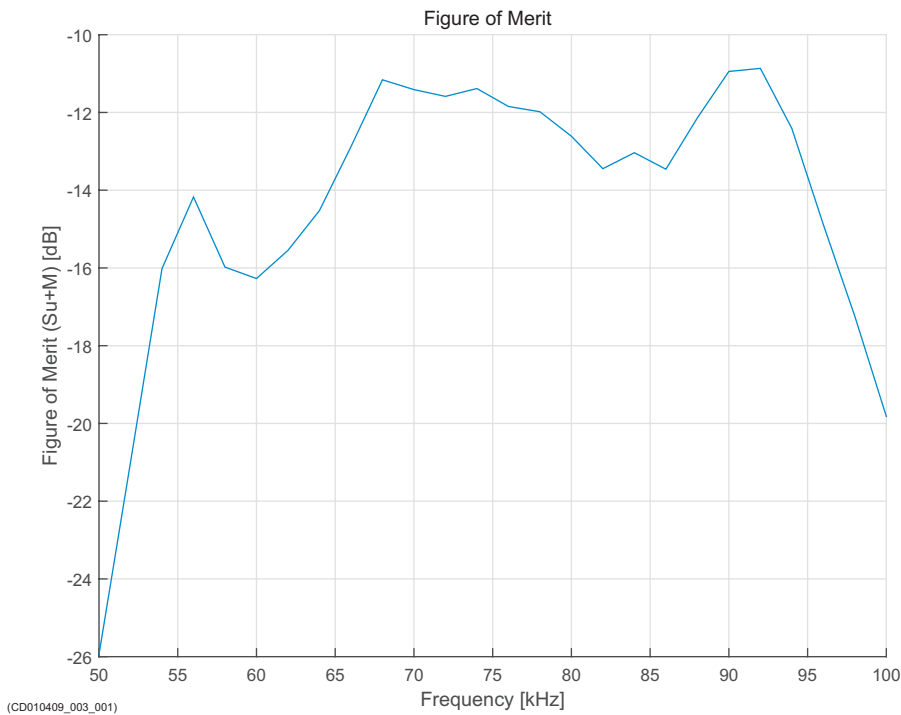
Weights and outline dimensions

- Physical dimensions
 - Diameter: 180 mm
 - Height: 85.2 mm
 - Total height: 165.2 mm
- Weight (without cable)
 - In air: 4 kg
 - In water: 1.9 kg
- Cable length: 2 m

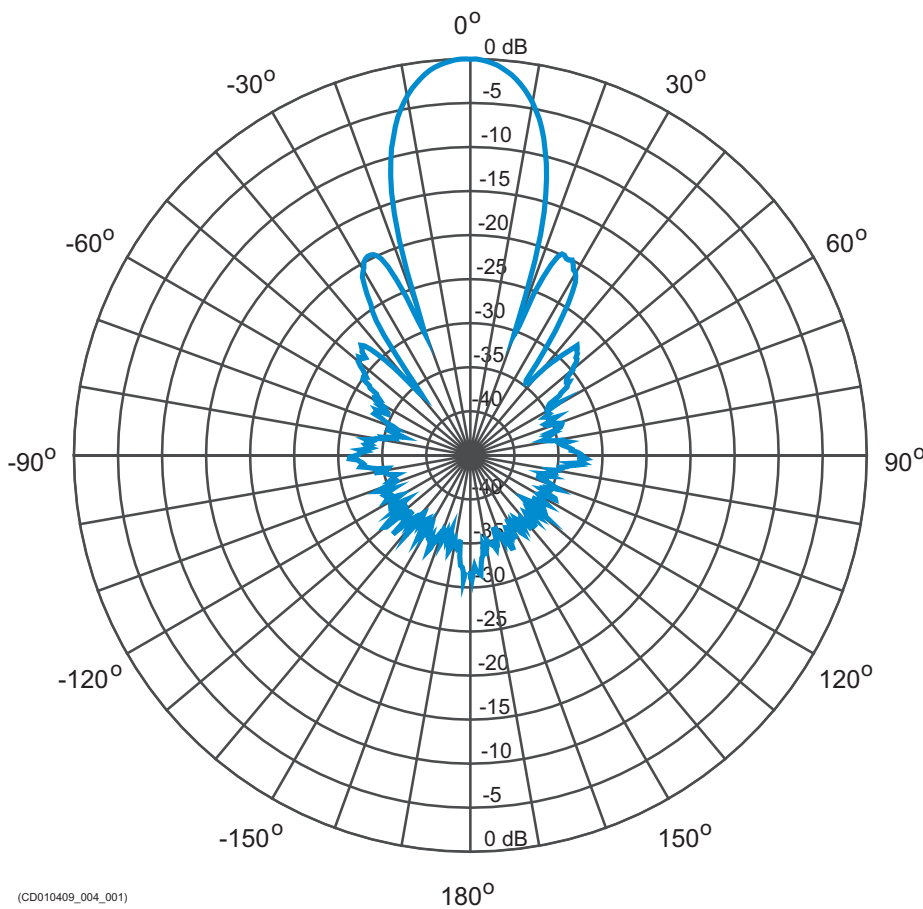
Environmental requirements

- Storage temperature
 - Max.: +60°C
 - Min.: -20°C
- Operating temperature
 - Max.: +40°C
 - Min.: -5°C
- Standard depth rating: 1500 m





Beam pattern at nominal frequency



Rules for transducer handling

To secure long life and accurate results, each transducer must be handled correctly. Any wrongful handling may damage the transducer beyond repair.

Observe these rules

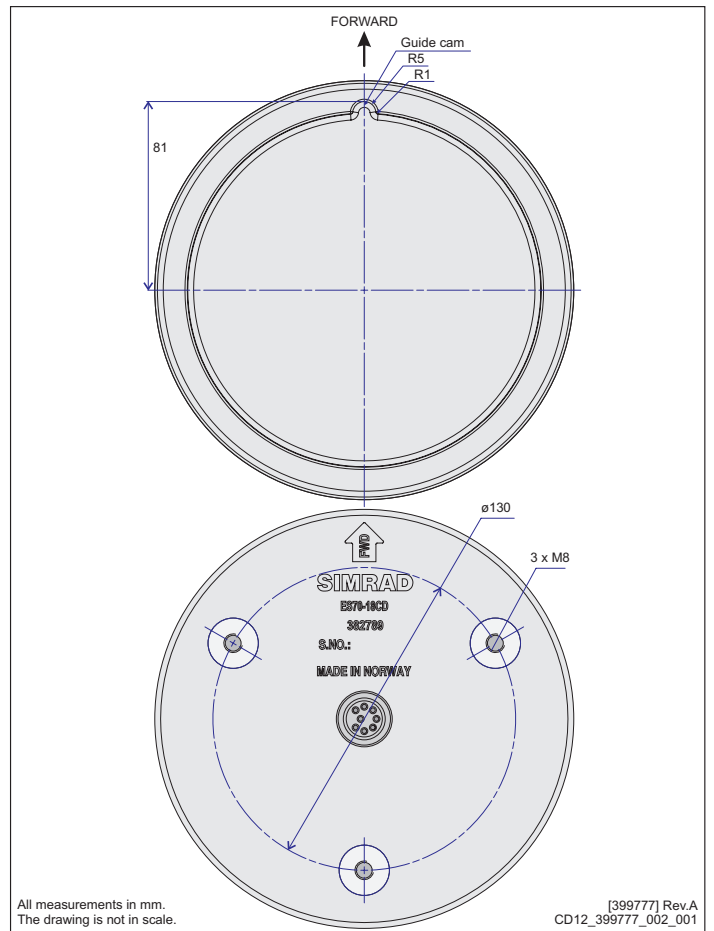
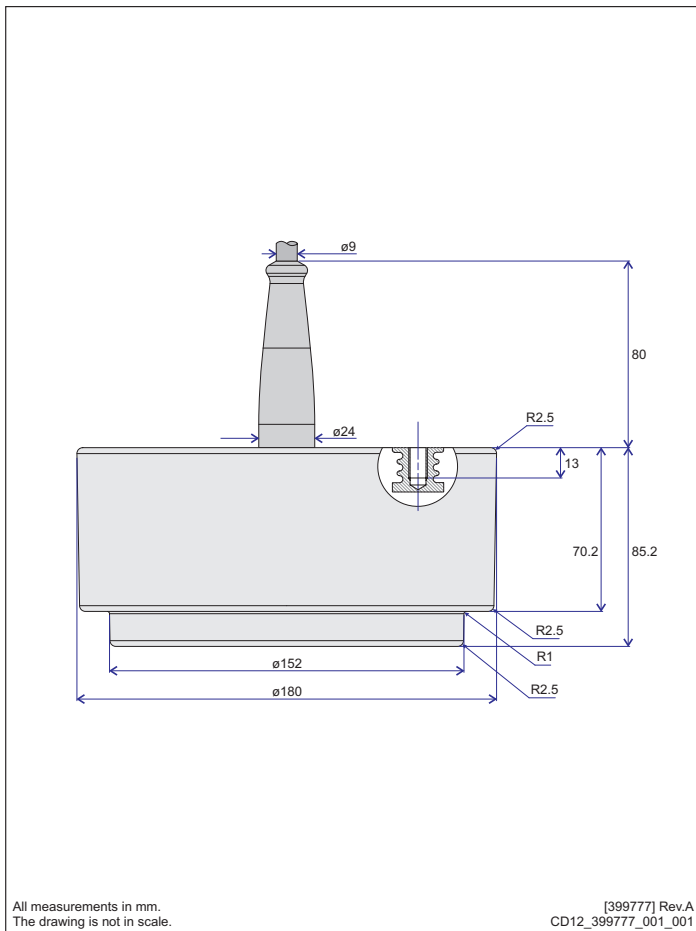
- **Do not** activate the transducer when it is out of the water.
- **Do not** lift the transducer by the cable.
- **Do not** step on the transducer cable.
- **Do not** handle the transducer roughly, avoid impacts.
- **Do not** expose the transducer to direct sunlight or excessive heat.
- **Do not** use high pressure water, sand blasting, metal tools or strong solvents to clean the transducer face.

Painting and cleaning the transducer face

Anti-fouling paint may be applied to the transducer face. Because some paint types may be aggressive to the polyurethane in the transducer, consult our list of approved paints on our website www.simrad.com.

Whenever opportunity arise, the transducer face should be cleaned for shells and other bio-fouling.

- Be careful not to make cuts or other physical damage to the transducer face.
- Use a piece of soft wood or a very fine grade emery paper.
- **Do not** use high pressure water or sand blasting.

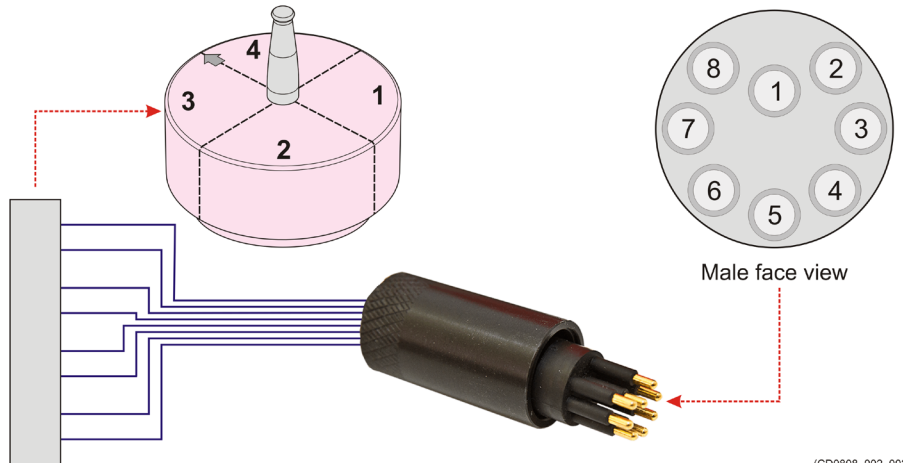


Pin configuration, sectors and cable colours

The male connector in use on the transducer cable is manufactured by MacArtney. Its type identification is MCIL8M. Several female sockets are available to fit different purposes.

The pin numbers, sectors and cable colours are:

1. Sector 1+: Black
2. Sector 1-: White
3. Sector 2+: Red
4. Sector 2-: Green
5. Sector 3+: Orange
6. Sector 3-: Blue
7. Sector 4+: White/Black
8. Sector 4-: Red/Black



NOTE: The sectors are referred to “Forward” on the transducer. It is therefore very important that the transducer is installed as indicated by the arrow and the physical guide cam on its body.

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Simrad

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