ES70-18CD

KONGSBERG

DEPTH-RATED SPLIT-BEAM TRANSDUCER

Simrad ES70-18CD

KEY FEATURES

- Wide-band split-beam transducer for fishery and fishery research applications
- Nominal freqency is 70 kHz
- Frequency range: 55 to 90 kHz
- Depth rate is 1500 m
- Beamwidth is 18°
- Max. transmit power is 400 W
- Physical dimensions:
  Diameter: 180 mm
  Height: 85 mm

The Simrad ES70-18CD is a split-beam transducer with a large bandwidth designed for fishery and research applications. The beamwidth is 18° at a nominal operating frequency of 70 kHz. The small physical size of the transducer is a great advantage for installations in narrow spaces. The transducer is designed to have four separate sectors.

The ES70-18CD transducer has been designed to withstand large water pressure and is therefore well suited for towed bodies or autonomous vehicles. The recommended installation method is through the hull plating using mounting and clamping rings provided. Alternatively, the transducer is mounted using brackets and M8 screws at the back of the transducer.

Order information

To order the ES70-18CD or any of the optional items provided with it, contact your local dealer or visit our website.

https://www.kongsberg.com/es70-18cd

Transducer

- Order number:
  321637 transducer with a 2 m cable using a SubConn connector

Included in all deliveries:
- Mounting hardware
- Test Report

Optional items

Order these optional items from Kongsberg Maritime, or manufacture them yourself. These items are not part of the standard delivery.
- 599-204676 Clamping ring
- 599-204674 Mounting ring

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Technical specifications

The technical specifications and requirements provided are those valid when operating at the nominal frequency with all sectors excited simultaneously.

Kongsberg Maritime are continuously working to improve the quality and performance of our products. The technical specifications may be changed without prior notice and the specifications refers to typical figures for the product.

Performance specifications

- Nominal frequency: 70 kHz
- Frequency range: 55 to 90 kHz
- Beamwidth: 18°
- Depth rating: 1500 m
- Figure of merit: -11 dB
- Max. source level: 216 dB re µPa per V @ 1 m
- Transmit sensitivity (Su): 179 dB re µPa per V @ 1 m
- Receive sensitivity (Mt): -190 dB re 1 V per µPa @ 1 m
- Sidelobe level: -18 dB
- Back radiation level: -30 dB
- Impedance (each sector): 60 Ω

Power specifications

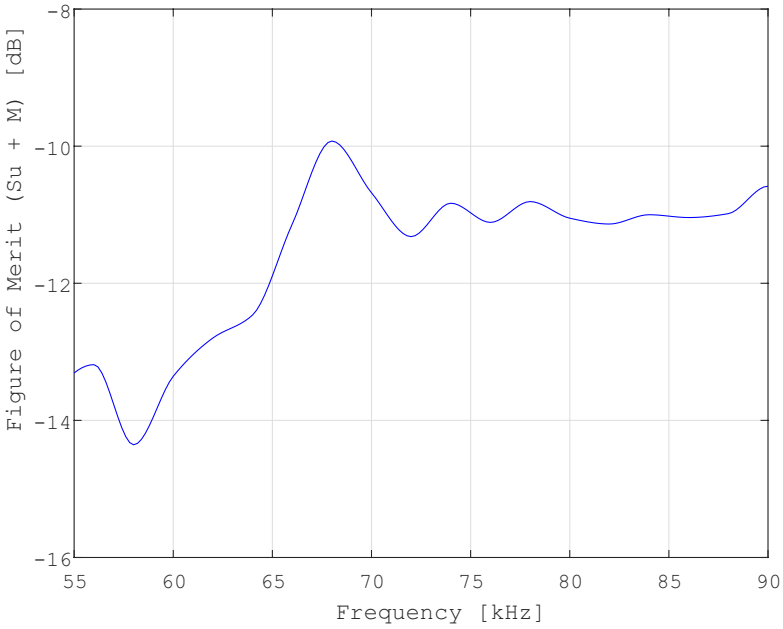
- Max. transmit power: 400 W
- Max. pulse length: 2 ms
- Max. duty cycle: 2 %

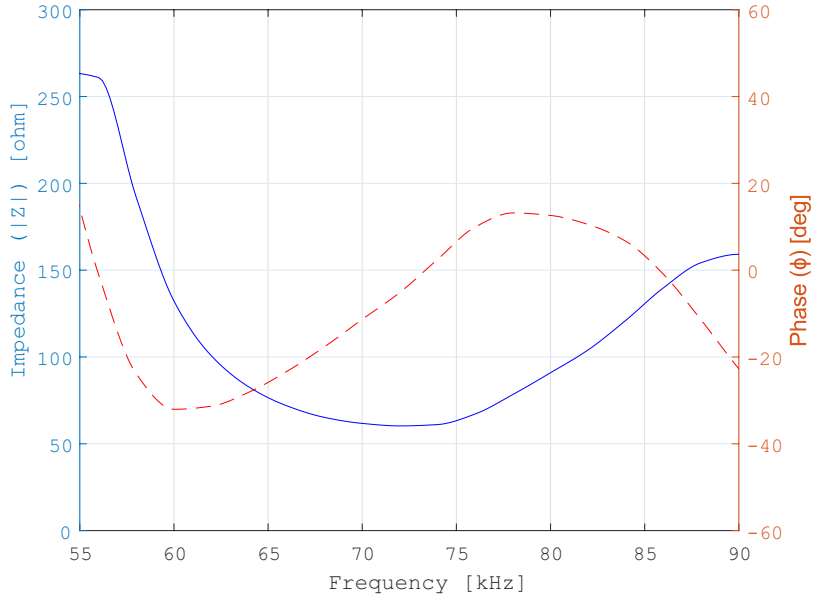
Weight and outline dimensions

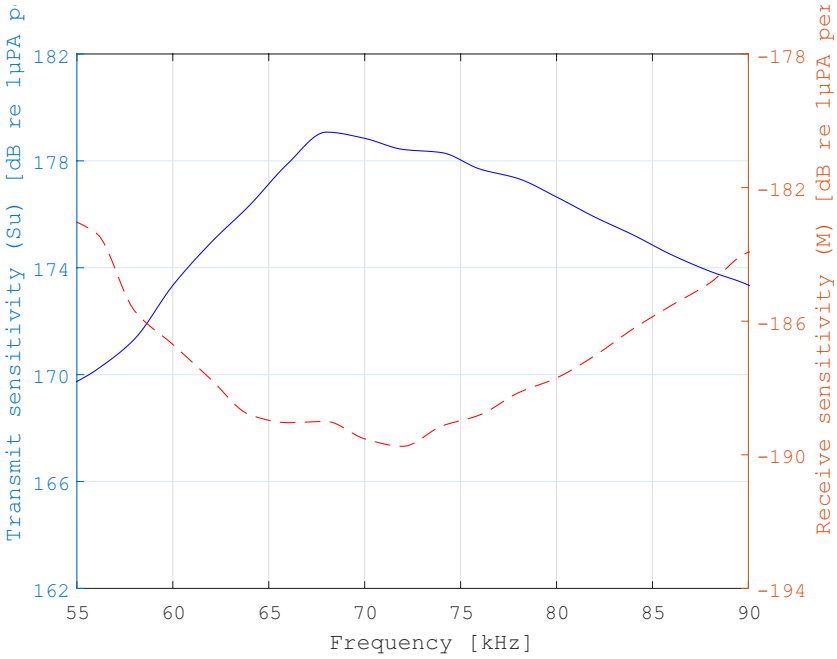
- Physical dimensions:
  Diameter: 180 mm
  Height: 85 mm (body)
  Total height: 165 mm
- Weight
  In air: 4 kg (incl. 2 m cable with SubConn®)
  In water: 1,9 kg (incl. 2 m cable with SubConn)
- Cable length:
  2 m and SubConn® connector (MCIL8M)
- Cable diameter: 10.4±0.5 mm
- Bending radius:
  Static: 100 mm (theoretical)
  Dynamic: 185 mm (theoretical)

Environment requirements

- Storage temperature:
  Max.: +60°C
  Min.: -20°C
- Operating temperature:
  Max.: +40°C
  Min.: -5°C





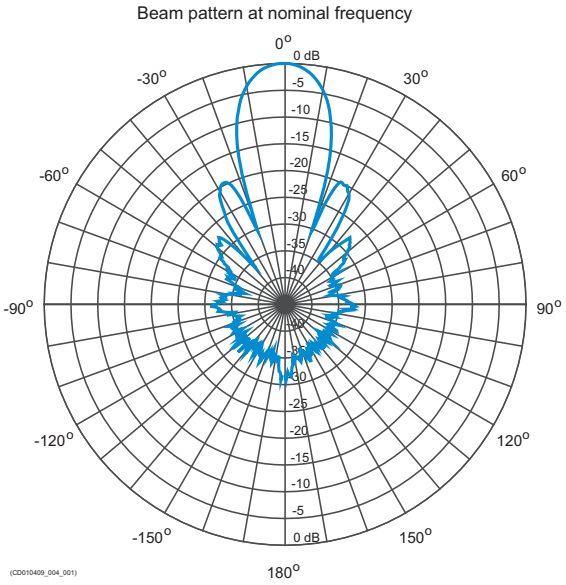


Rules for transducer handling

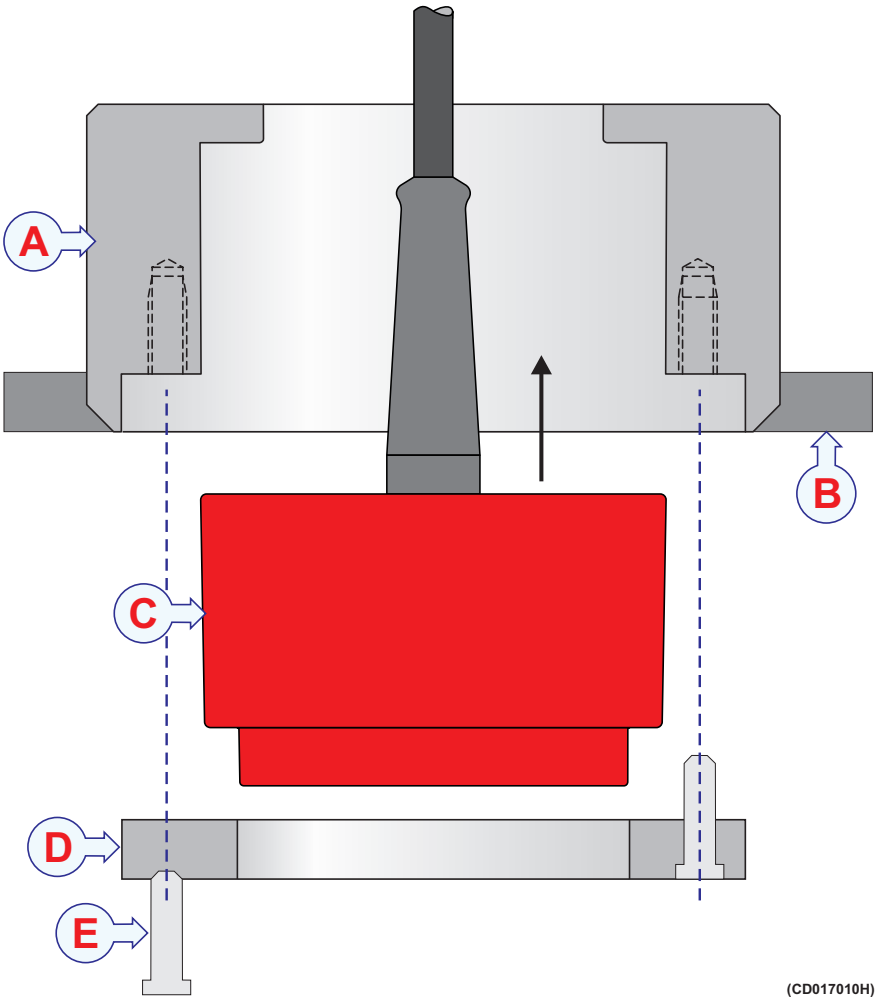
To secure the long life and accurate results, the transducer must be handled correctly.

A transducer must always be handled as a delicate item. Wrongful actions may damage the transducer beyond repair. Observe these transducer handling rules:

- Do not activate the transducer when it is out of the water.
- 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, sandblasting, metal tools, or strong solvents to clean the transducer face.
- Do not damage the outer protective skin on the transducer face.
- Do not lift the transducer by the cable.
- Do not step on the transducer cable.
- Do not damage the transducer cable, avoid sharp objects.



Beam pattern



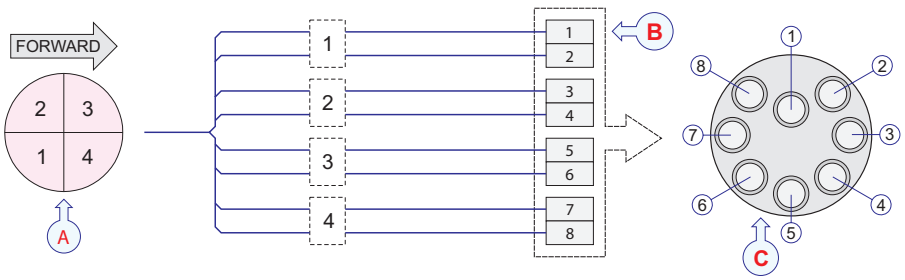
Installation principle

- (A) Mounting ring, can be supplied by Kongsberg Maritime
- (B) Towed body's hull plating
- (C) Transducer
- (D) Clamping ring
- (E) Bolts

Connections

The transducer is delivered with a MacArtney MCIL8M connector. Pinout looking into the plug is shown at the right in the figure. This connector is used for the WBAT, WBT Mini and WBT Tube (WideBand Transceiver).

- (A) Transducer seen from above - observe the sector locations relative to the forward direction!
- (B) Terminals
- (C) Transducer plug face view



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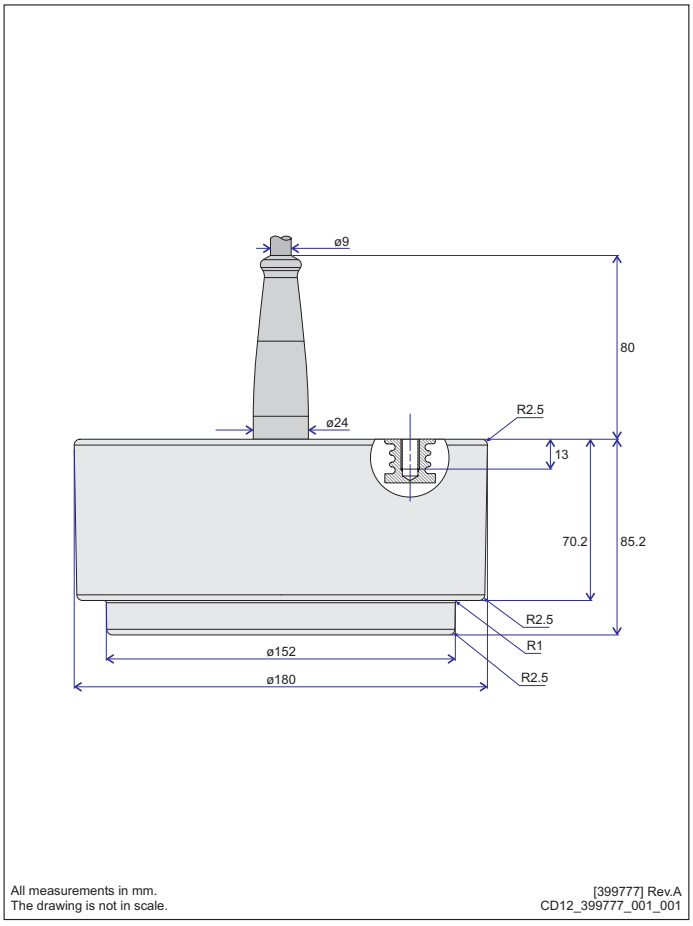

All measurements in mm.
The drawing is not in scale.

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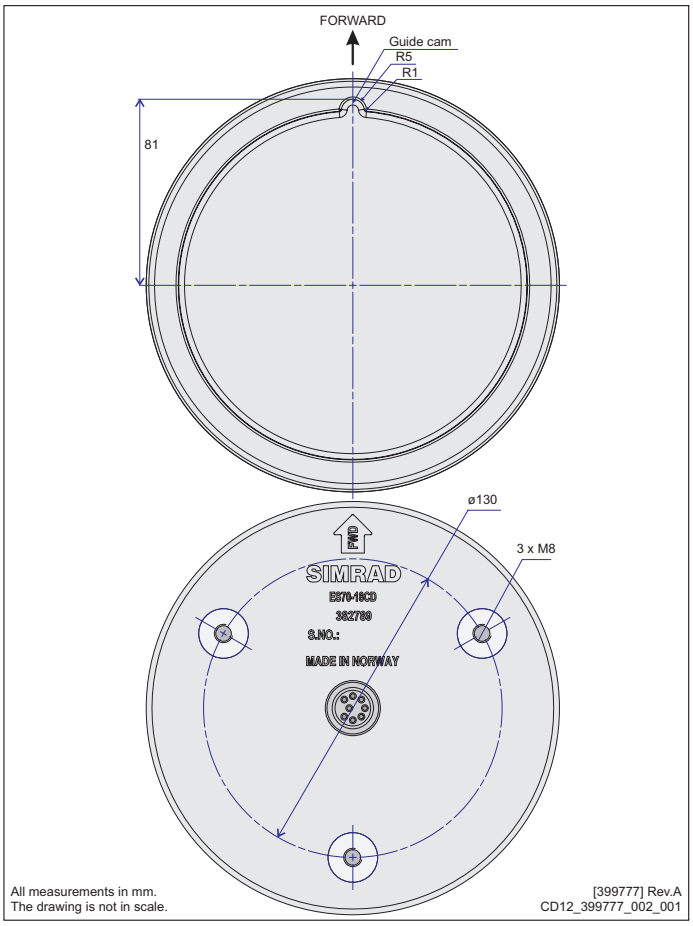

All measurements in mm.
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