

Simrad ES38-18/200-18CR

Combi split- and single beam transducer

The Simrad ES38-18/200-18CR is a two-in-one combi transducer.

The Simrad ES38-18/200-18CR contains a 38 kHz split beam transducer as well as a 200 kHz single beam transducer. The beamwidth of both is 18 degrees at their nominal operational frequencies. The split beam transducer is designed with three separate sectors.

The Simrad ES38-18/200-18CR is designed for fishery and fishery research applications.

Order information

To order the ES38-18/200-18CR, 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.



Transducer

- Order number: 424437

In the box

- Transducer with a 20 metre open ended cable
- Bushing
- Cable gland
- Mounting hardware
- Documents

Optional items

These optional items are available for the installation. You can manufacture these items yourself, or order them from Kongsberg Maritime. The items are not included with the transducer delivery, and must be ordered separately.

The order number for the transducer cable is included in case the cable fitted to the transducer is too short.

- Mounting ring: 424534
- Clamping ring: 424535
- Transducer cable: 382189

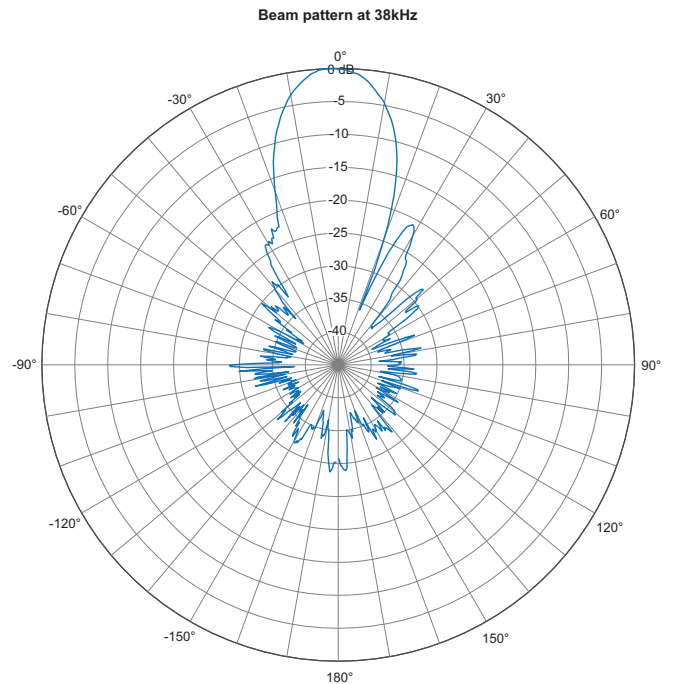
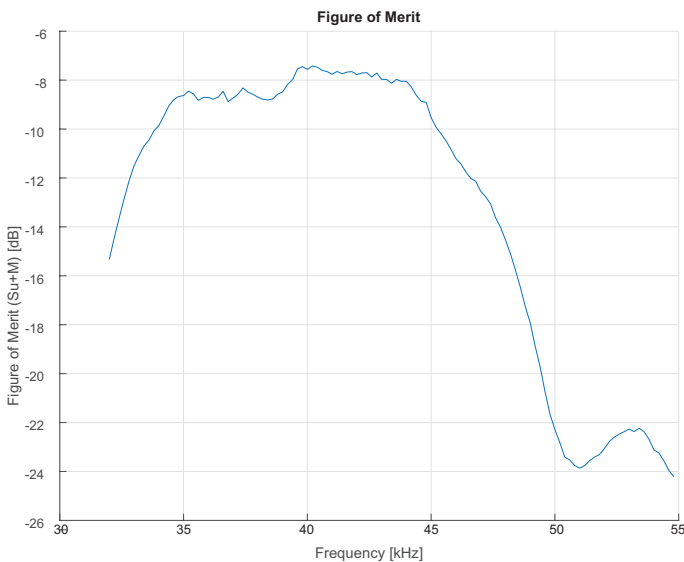
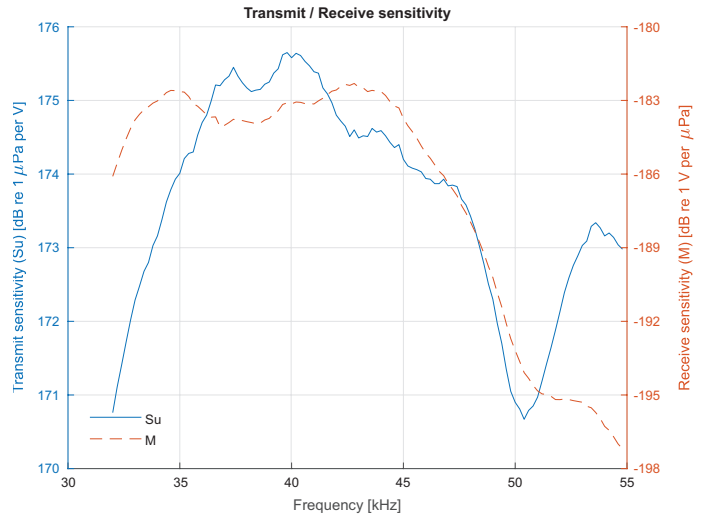
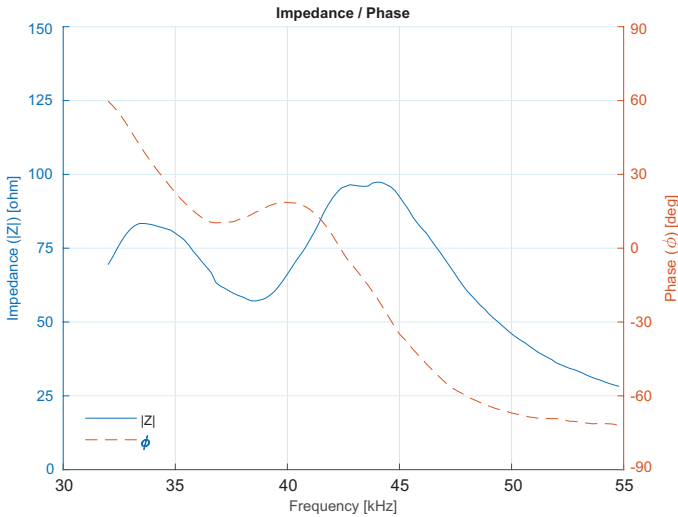
Rules for transducer handling

To secure 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, sand blasting, 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.

38 kHz split beam



Technical specifications

The technical specifications and requirements provided are design values when operating with all sectors excited simultaneously.

In Kongsberg Maritime, we are continuously working to improve the quality and performance of our products. The technical specifications may be changed without prior notice.

Performance specifications

38 kHz split beam

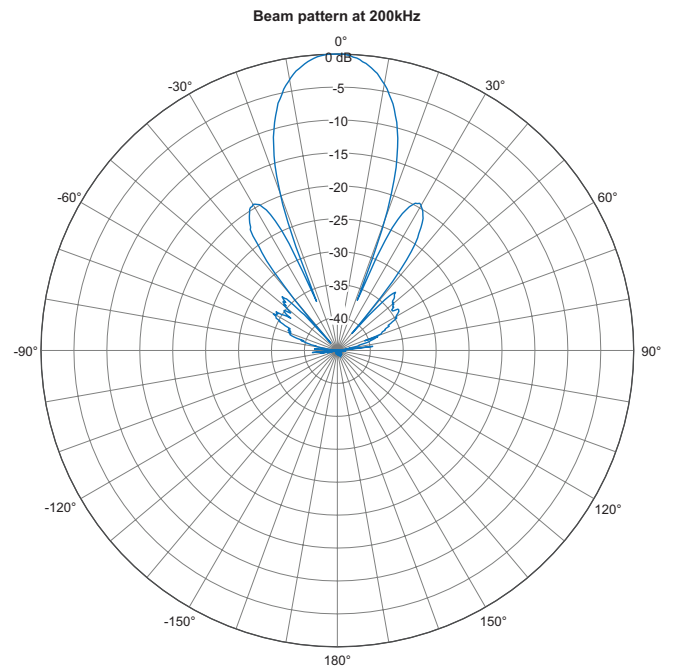
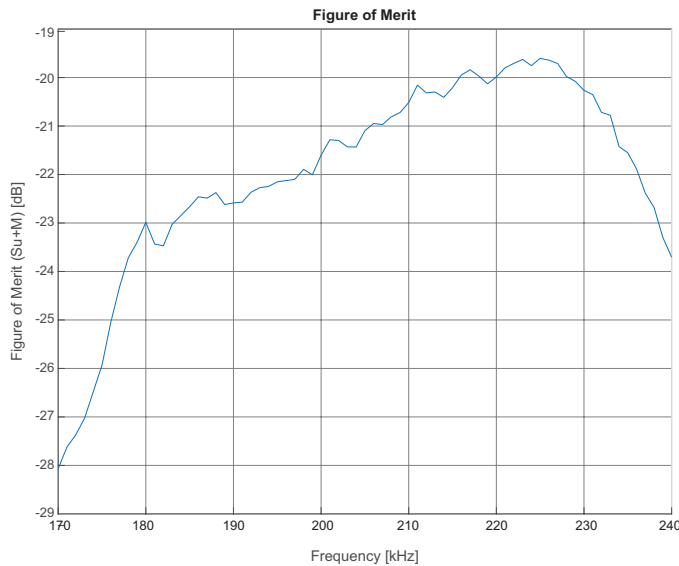
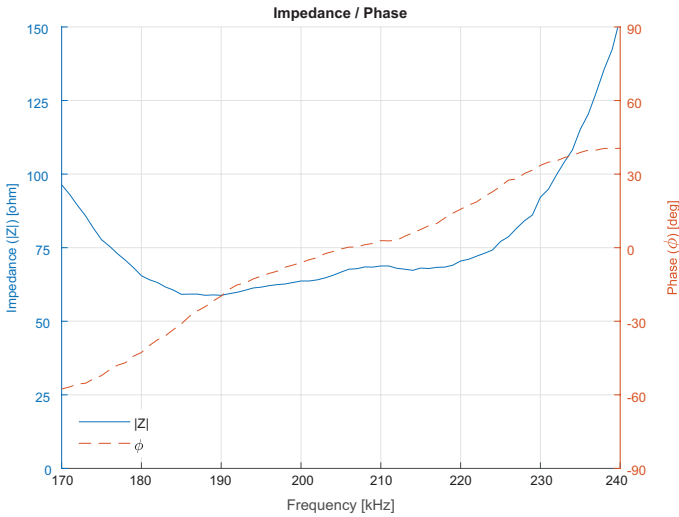
- Nominal frequency: 38 kHz
- Frequency range: 35 to 45 kHz
- Beamwidth: 18 degrees
- Equivalent two-way beam angle: $10 \log \Psi$: -12.5 dB
- Figure of merit (S_u+M_v): -9 dB
- Maximum source level: 217 dB re μPa @ 1 m
- Transmit sensitivity (S_u): 176 dB re μPa per V @ 1 m
- Receive sensitivity (M_v): -184 dB re 1 V per μPa @ 1 m

- Sidelobe level: -18 dB
- Back radiation level: -25 dB
- Impedance (each sector): 70 Ohm

Power specifications (maximum)

- Input power @ 38 kHz: 500 W
- Pulse length @ 38 kHz: 16 ms
- Duty cycle: 2 %

200 kHz single beam



Performance specifications

200 kHz single beam

- Nominal frequency: 200 kHz
- Frequency range: 190 to 230 kHz
- Beamwidth: 18 degrees
- Equivalent two-way beam angle: 10 log Ψ : -12.6 dB
- Figure of merit(Su+Mv): -22 dB
- Max. source level: 214 dB re μPa @ 1 m
- Transmit sensitivity (Su): 170 dB re μPa per V @ 1 m
- Receive sensitivity (Mv): -193 dB re 1 V per μPa @ 1 m
- Sidelobe level: -18 dB
- Back radiation level: -30 dB
- Impedance (each sector): 70 Ohms

Power specifications (maximum)

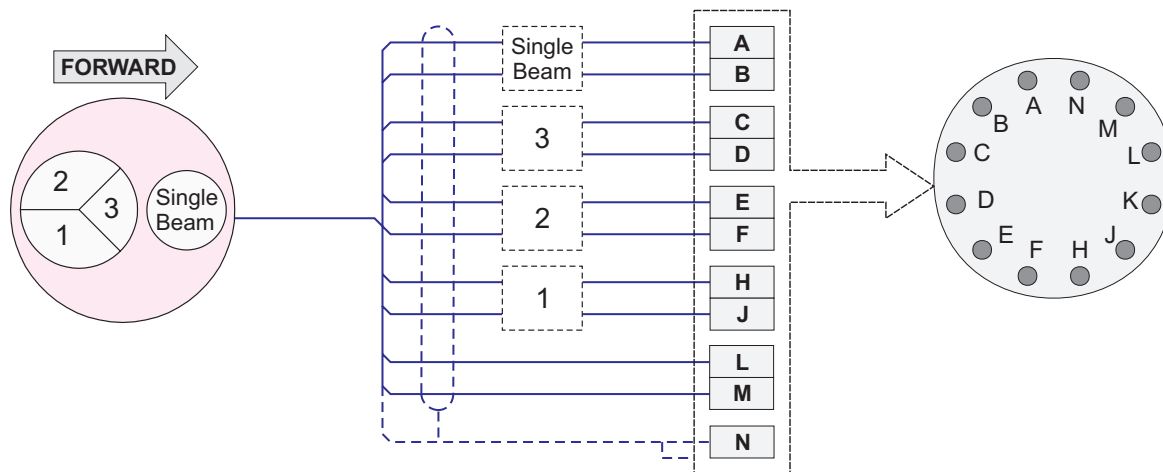
- Input power @ 200 kHz: 250 W
- Pulse length @ 200 kHz: 4 ms
- Duty cycle: 2 %

Weight and outline dimensions

- Physical dimensions:
 - Diameter: 260 mm
 - Height: 116 mm (body)
- Weight
 - In air: 7.2 kg
 - In air with cable: 10.3 kg
 - In water: 1.3 kg
- Cable length: 20 m
- Bending radius: 185 mm (theoretical)

Environmental requirements

- Storage temperature
 - Maximum: +50 °C
 - Minimum: -20 °C
- Operating temperature
 - Maximum: +40 °C
 - Minimum: -5 °C

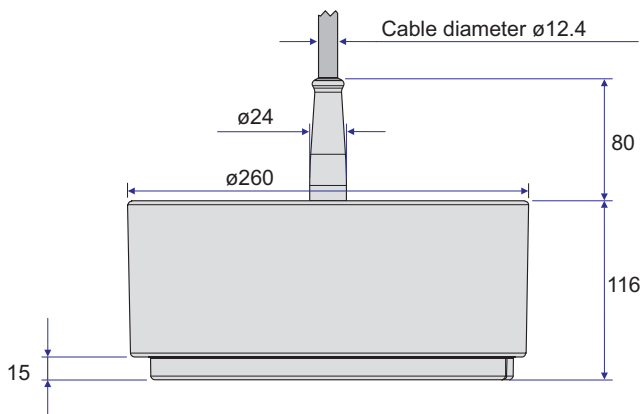
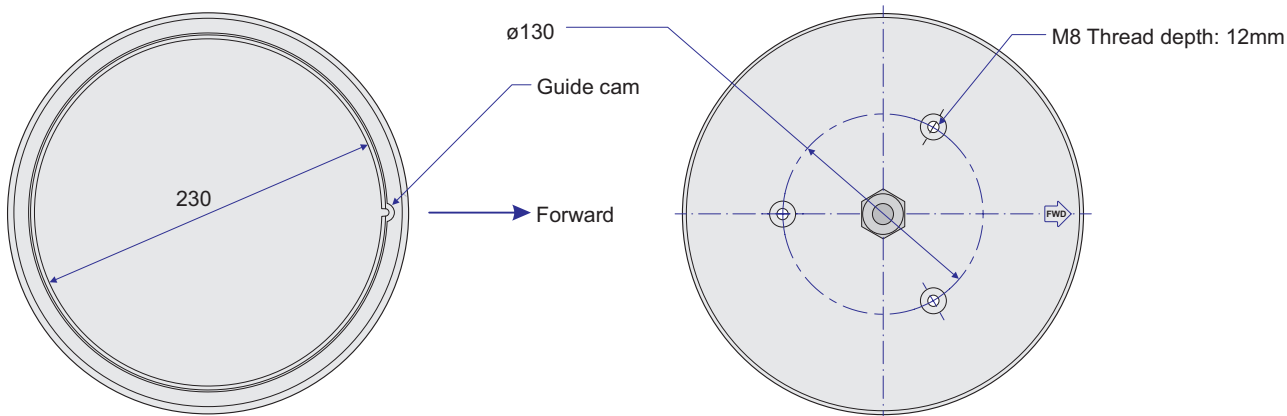


Transducer connection

The transducer shall be connected to terminals A through N on a circular 12-pin Amphenol transducer socket.

The transducer is seen from top. Observe the sector locations relative to the forward direction! The Amphenol transducer is socket seen from the outside.

- Sector 1:
White cable to pin H
Black cable to pin J
- Sector 2:
Green cable to pin E
Black cable to pin F
- Sector 3:
Yellow cable to pin C
Black cable to pin D
- Single-beam transducer:
Blue cable to pin A
Black cable to pin B
- Digital:
Red cable to pin L
Black cable to pin M
- Cable screen to pin N



All measurements are made in mm. Installation drawings can be downloaded in PDF and DWG format from our website.

Simrad

Kongsberg Maritime AS
Strandpromenaden 50
P.O.Box 111
N-3191 Horten, Norway

Telephone: +47 33 03 40 00
Telefax: +47 33 04 29 87
www.simrad.com
simrad.sales@simrad.com

