

Simrad ES38-18DK Split

Split beam transducer

The Simrad ES38-18DK Split is a compact split beam transducer.

It is rated for maximum 1500 metres depth, and offers three individual sectors. The transducer is designed for underwater science applications.

The beamwidth is 18 degrees at its nominal operational frequency. The compact size and light weight allows it to be mounted on a large variety of platforms.

The transducer is provided with a two-metre cable. The cable is terminated with an eight-pin male connector, which fits directly into our range of subsea transceivers.

The transducer is thus especially well suited for use with autonomous and portable products, such as the WBAT (Wide Band Autonomous Transceiver), WBT Mini and WBT Tube.



Order information

To order the ES38-18DK Split, 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: 425594

In the box

- Transducer with cable and connector
- Documents

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

- Nominal frequency: 38 kHz
- Frequency range: 35 to 45 kHz

The following specifications are valid for the nominal frequency.

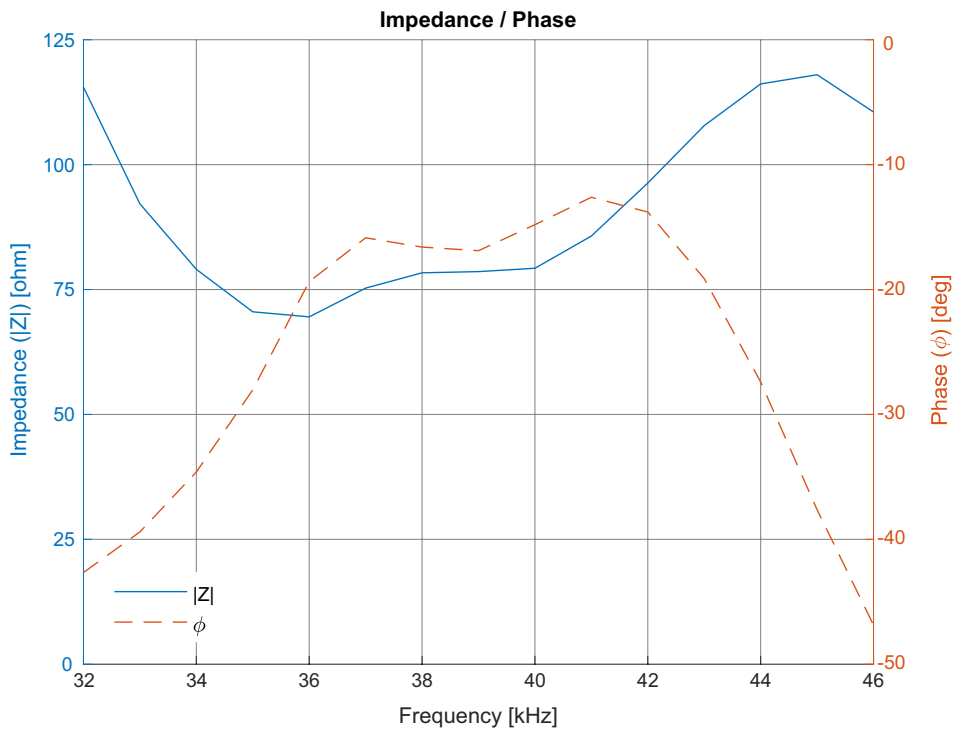
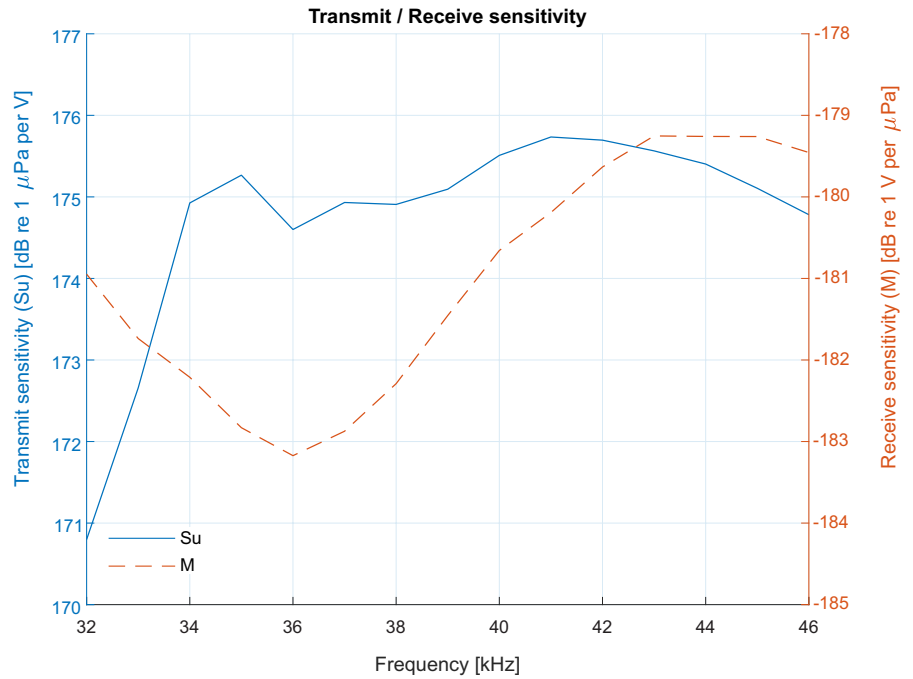
- Beamwidth: 18 degrees
- Equivalent two-way beam angle: 10 log Ψ : -12.5 dB
- Figure of merit(Su+Mv): -10 dB
- Maximum source level: 212 dB re μPa @ 1 m
- Transmit sensitivity (Su): 174 dB re μPa per V @ 1 m
- Receive sensitivity (Mv): -184 dB re 1 V per μPa @ 1 m
- Sidelobe level: -17 dB
- Back radiation level: -20 dB
- Impedance (each sector): 75 Ohms

Power specifications (maximum)

- Input power: 450 W
- Pulse length: 8 ms
- Duty cycle: 2 %

Weight and outline dimensions

- Physical dimensions
 - Diameter: 190 mm
 - Height: 131 mm (body)
 - Total height: 212 mm
- Weight
 - In air: 9.2 kg
 - In water: 5.5 kg
- Cable length: 2 metres
- Termination: 8-pin male subsea connector MCIL8M (MacArtney)
- Nominal cable bending radius: 150 mm (theoretical)



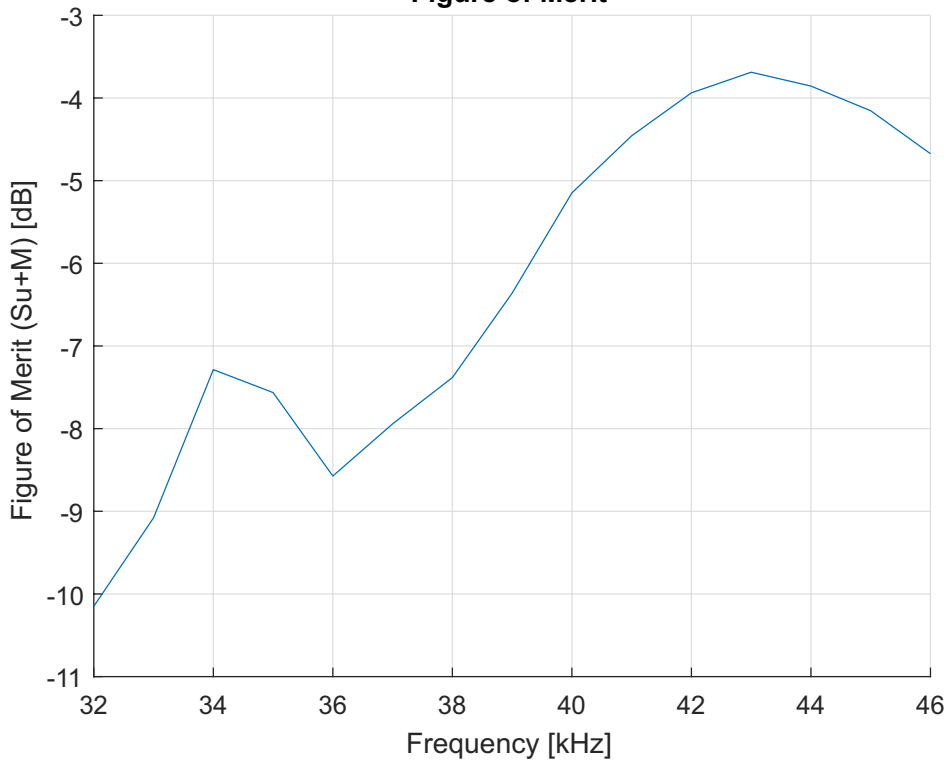
Environmental requirements

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

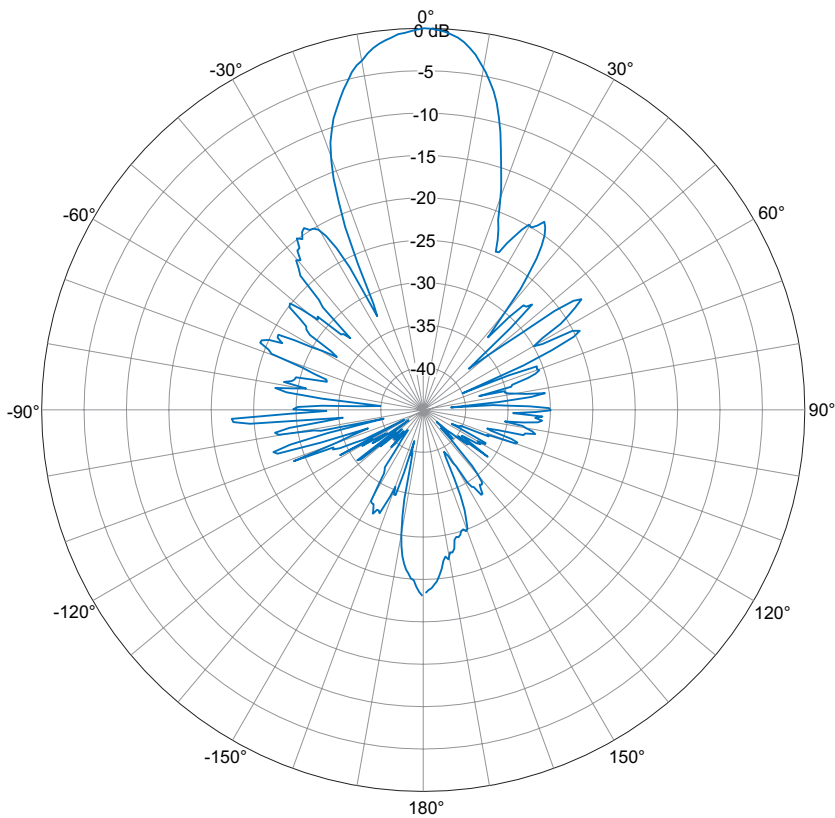
Depth rating

- Maximum 1500 metres

Figure of Merit



Beam pattern at nominal frequency

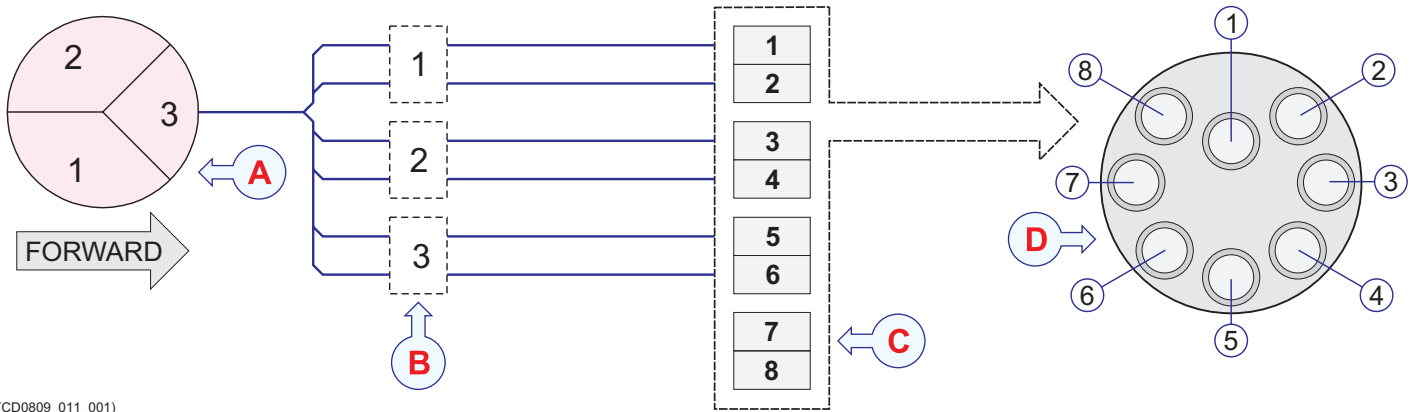


Rules for transducer handling

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.



(CD0809_011_001)

Connections

The transducer is terminated with an 8-pin subsea connector.

A Transducer seen from top. Observe the sector locations relative to the forward direction!

B Sectors

C Pin numbers on the connector

D Male face view of the connector

Cable colours

Sector 1:

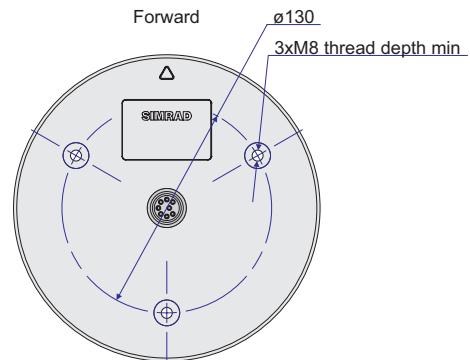
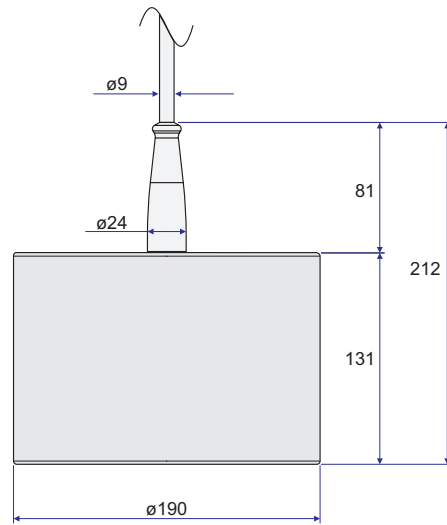
- Black cable to pin 1
- White cable to pin 2

Sector 2:

- Red cable to pin 3
- Green cable to pin 4

Sector 3:

- Orange cable to pin 5
- Blue cable to pin 6



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