

ES200-7CDK



KONGSBERG



Simrad ES200-7CDK SPLIT-BEAM TRANSDUCER

The Simrad ES200-7CDK is a compact split-beam transducer of medium size, designed to be deployed on submerged platforms for underwater science applications. The transducer comes in two versions, single beam and split-beam. The single-beam ES200-7CDK is depth rated for 1500m, while the split-beam ES200-7CDK comes in a 1500 m version and a 6000m version. The beamwidth is 7 degrees at a nominal frequency of 200 kHz. The transducer is designed with three separate sectors.

The compact size and light weight of the transducer allows it to be mounted on a large variety of subsea platforms. The transducer is provided with two meters cable, and the cable is terminated with an eight-pin male connector that fits directly into our range of subsea transceivers.

The transducer is especially well suited for use with autonomous and subsea products such as the wideband autonomous transceiver (WBAT), wideband transceiver (WBT) mini and WBT tube.

Order information

To order any of the ES200-7CDK transducers 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

- Deliverables:
 - 421258 Split-beam transducer, depth rating 1500 m
 - 484030 Split-beam transducer, depth rating 6000 m
 - 423429 Single-beam transducer, depth rating 1500 m

Included in the delivery:

- Transducer with cable and 8- or 4-pin male connector
- Documents

KEY FEATURES

- Split-beam transducer for underwater research applications
- Nominal frequency is 200 kHz
- Frequency range: 160 to 260 kHz
- Beamwidth is 7°
- Maximum input power is 250 W
- Physical dimensions:
 - Diameter: 90 mm
 - Height: 78 mm

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Technical specifications

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 refer to typical figures for the product.

Performance specifications

- Nominal frequency: 200 kHz
- Frequency range: 160-260 kHz
- Beamwidth: 7°
- Figure of merit: -5 dB
- Maximum source level: 222 dB re μPa @ 1 m
- Transmit sensitivity (Su): 178 dB μPa per V @ 1 m
- Receive sensitivity (Mt): -183 dB re 1 V per μPa @ 1 m
- Sidelobe level: -16 dB
- Back radiation level: -40 dB
- Impedance (each sector): 75 Ω

Power specifications

- Max. input power: 250 W
- Max. pulse length: 8 ms
- Max. duty cycle: 1%

Weight and outline dimensions

- Physical dimensions:
 - Diameter: 90 mm
 - Height: 45 mm (body)
 - Total height: 78 mm
- Weight
 - In air: 0.85 kg
 - In water: 0.57 kg (without cable)
- Cable length: 2 m
- Bending radius:
 - Static: 150 mm (theoretical)
- Termination: 4-pin male subsea connector MCIL4M SubConn

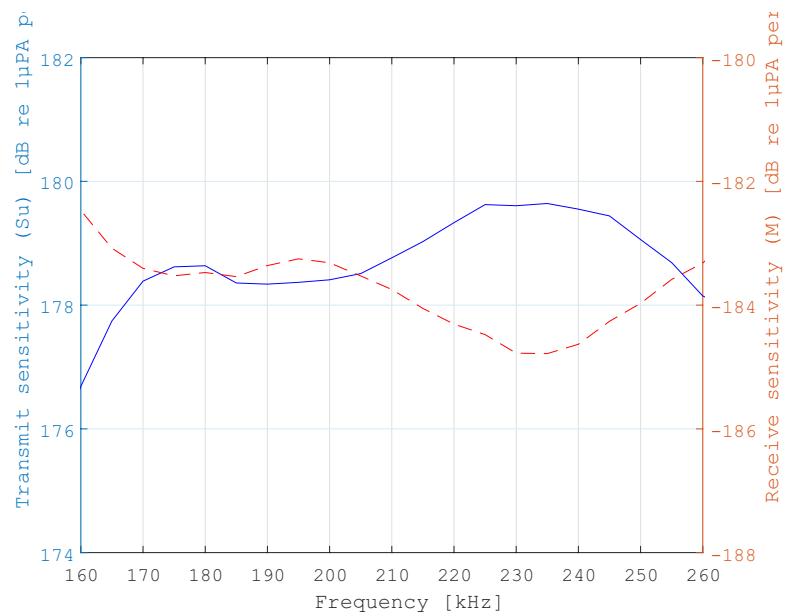
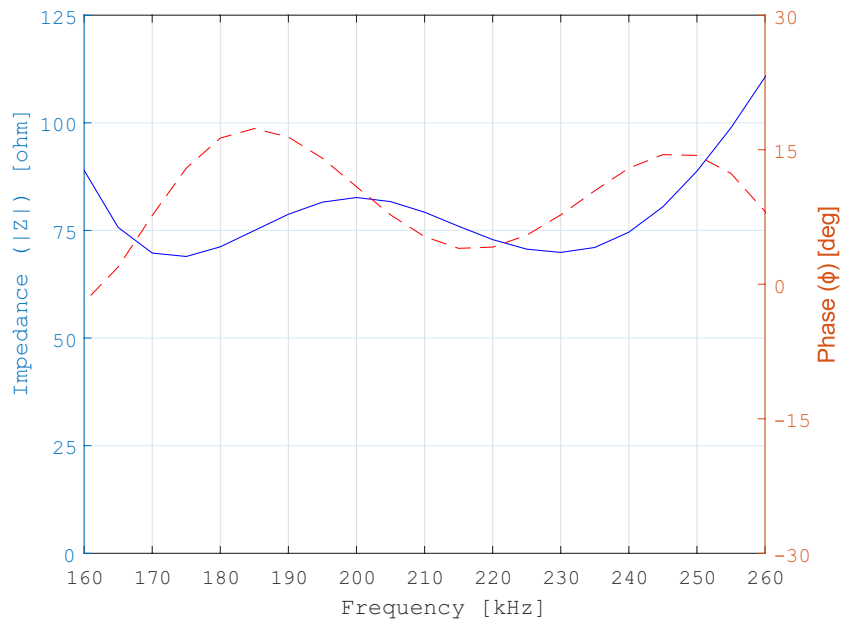
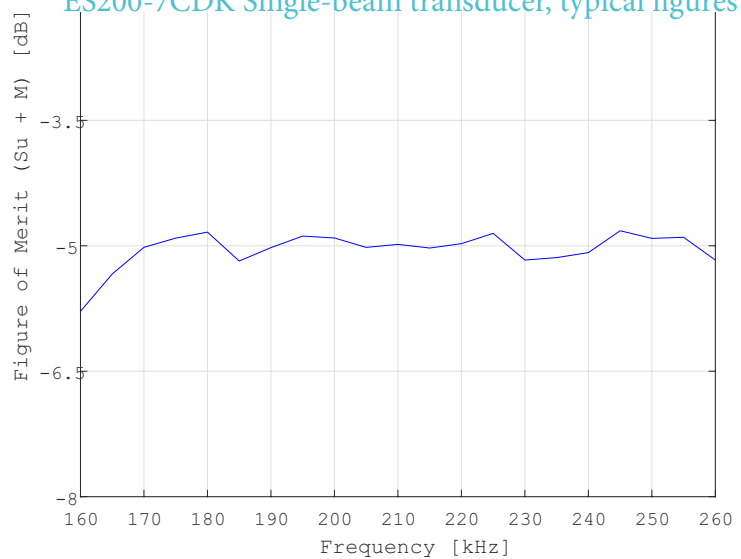
Environment requirements

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

Depth rating

- Maximum depth: 1500m

ES200-7CDK Single-beam transducer, typical figures



Technical specifications

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

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Performance specifications

- Nominal frequency: 200 kHz
- Frequency range: 160-260 kHz
- Beamwidth: 7°
- Figure of merit: -3 dB
- Maximum source level: 222 dB re μPa @ 1 m
- Transmit sensitivity (Su): 184 dB μPa per V @ 1 m
- Receive sensitivity (Mt): -187 dB re 1 V per μPa @ 1 m
- Sidelobe level: -16 dB
- Back radiation level: -40 dB
- Impedance (each sector): 75 Ω

Power specifications

- Max. input power: 250 W
- Max. pulse length: 8 ms
- Max. duty cycle: 1%

Weight and outline dimensions

- Physical dimensions:
 - Diameter: 90 mm
 - Height: 45 mm (body)
 - Total height: 78 mm
- Weight
 - In air: 0.85 kg
 - In water: 0.57 kg (without cable)
- Cable length: 2 m
- Bending radius:
 - Static: 150 mm (theoretical)
- Termination: 8-pin male subsea connector MCIL8M SubConn

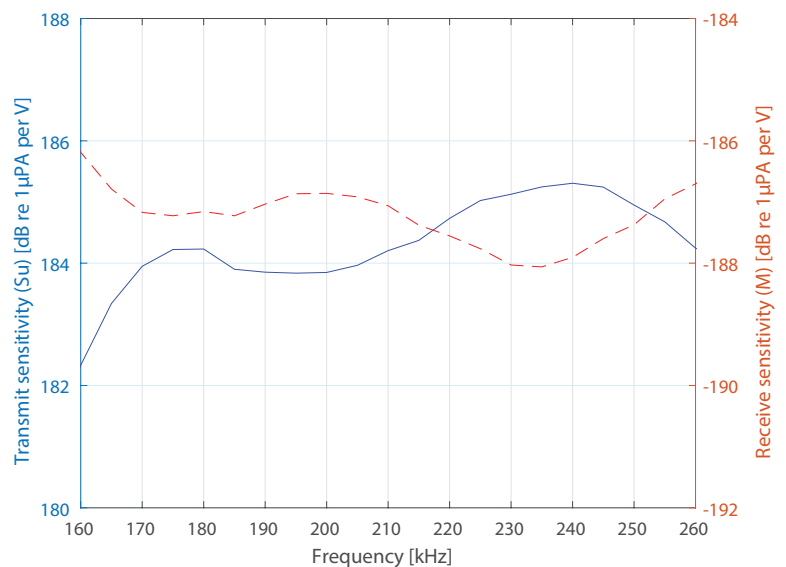
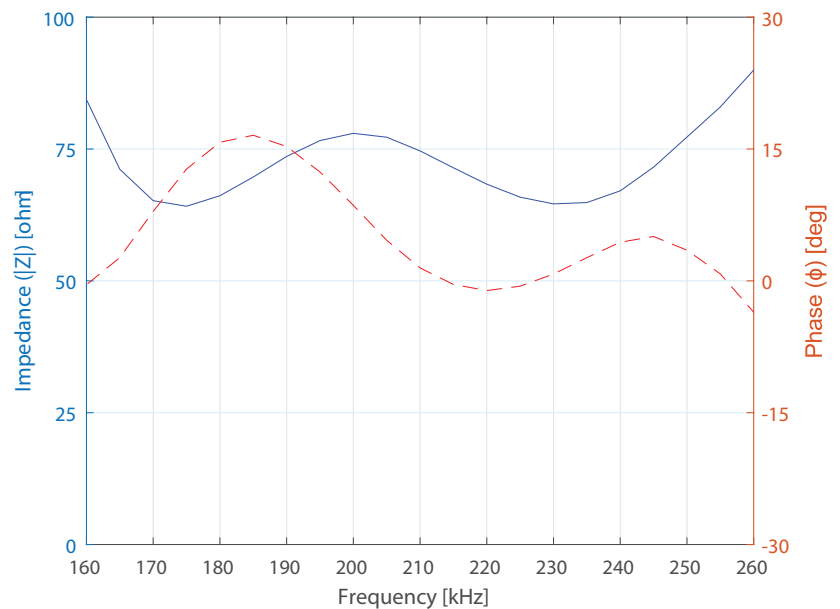
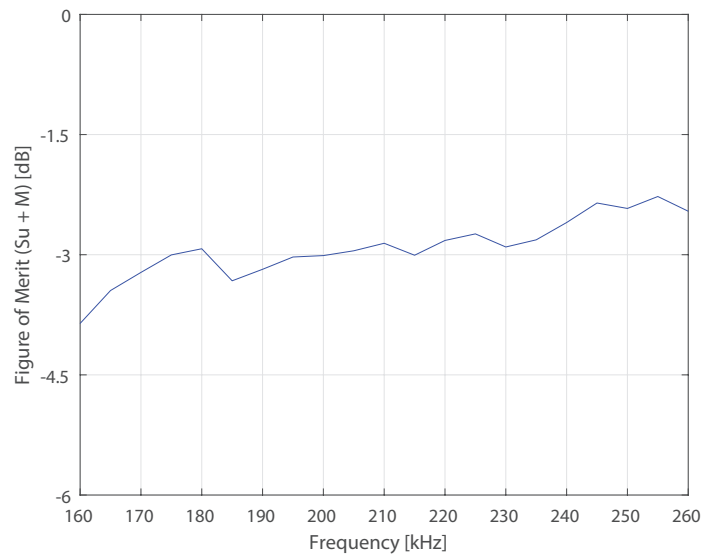
Environment requirements

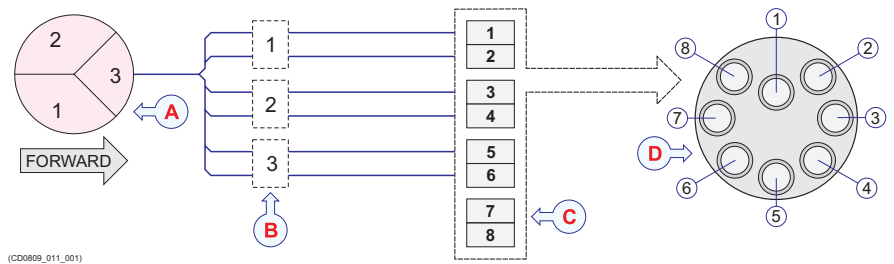
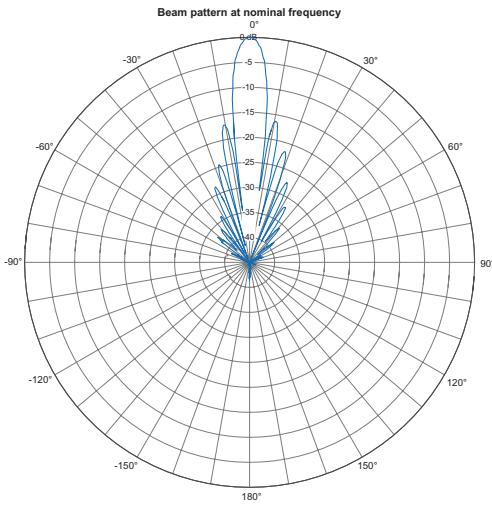
- Storage temperature:
 - Max.: +60°C
 - Min.: -20°C
- Operating temperature:
 - Max.: +40°C
 - Min.: -5°C

Depth rating

- Maximum depth:
 - 1500 m version
 - 6000 m version

ES200-7CDK Split-beam transducer, typical figures





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Connections to a SubConn socket for split-beam

The transducer connects to terminals 1 through 8 on a circular 8-pin SubConn socket. This socket is used for the WBAT, WBT Mini and WBT Tube (WideBand Transceiver).

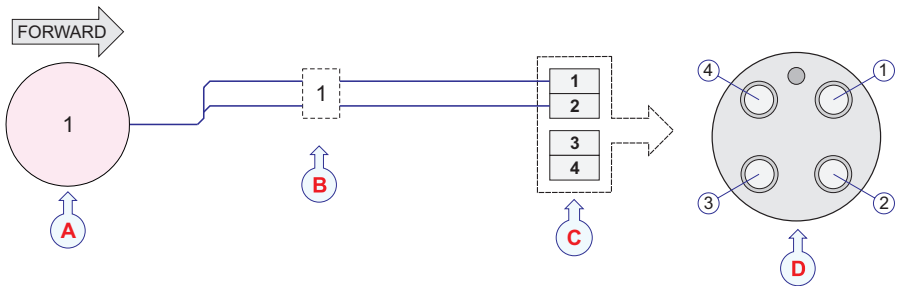
- (A) Transducer seen from top - observe the sector locations relative to the forward direction!
- (B) Sectors
- (C) Terminals
- (D) Transducer connector face view

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.



Connections to a SubConn socket for single-beam

The transducer connects to terminals 1 through 8 on a circular 8-pin SubConn socket. This socket is used for the WBAT, WBT Mini and WBT Tube (WideBand Transceiver).

- (A) Transducer seen from top - observe the sector locations relative to the forward direction!
- (B) Sectors
- (C) Terminals
- (D) Transducer connector seen face view

