

# ES333-7CD



KONGSBERG



## Simrad ES333-7CD DEPTH-RATED SPLIT-BEAM TRANSDUCER

The Simrad ES333-7CD is a split-beam transducer with a large bandwidth designed for fishery and research applications. The beamwidth is 7° at a nominal operational frequency of 333 kHz. The transducer is designed having four separate sectors.

The ES333-7CD transducer has been designed to withstand a 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 ES333-7CD 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. The transducer is available with two different transducer cables.

### KEY FEATURES

- Wide-band split-beam transducer for fishery and fishery research applications
- Resonant frequency is 333 kHz
- Frequency rate: 280 to 450 kHz
- Depth range is 1500 m
- Beamwidth is 7°
- Maximum input power is 200 W
- Physical dimensions:  
Diameter: 120 mm  
Height: 75 mm

### Transducer

- Order number:  
418886 transducer with a 2 m cable using a SubConn connector  
Included in all deliveries:
- Mounting hardware
- Documents

### Optional items

- Order these optional items from Kongsberg Maritime, or manufacture them yourself. These items are not part of the standard delivery.
- ES2-200879 Clamping ring
  - ES2-204464 Mounting ring

## 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

- Resonant frequency: 333 kHz
- Frequency range: 280 to 450 kHz
- Beamwidth: 7°
- Depth rating: 1500 m
- Figure of merit: -11 dB
- Max. source level: 220 dB re  $\mu\text{Pa}$  per V @ 1 m
- Transmit sensitivity (Su): 183 dB re  $\mu\text{Pa}$  per V @ 1 m
- Receive sensitivity (Mt): -194 dB re 1 V per  $\mu\text{Pa}$  @ 1 m
- Sidelobe level: -25 dB
- Back radiation level: -35 dB
- Impedance (each sector): 75  $\Omega$

## Power specifications

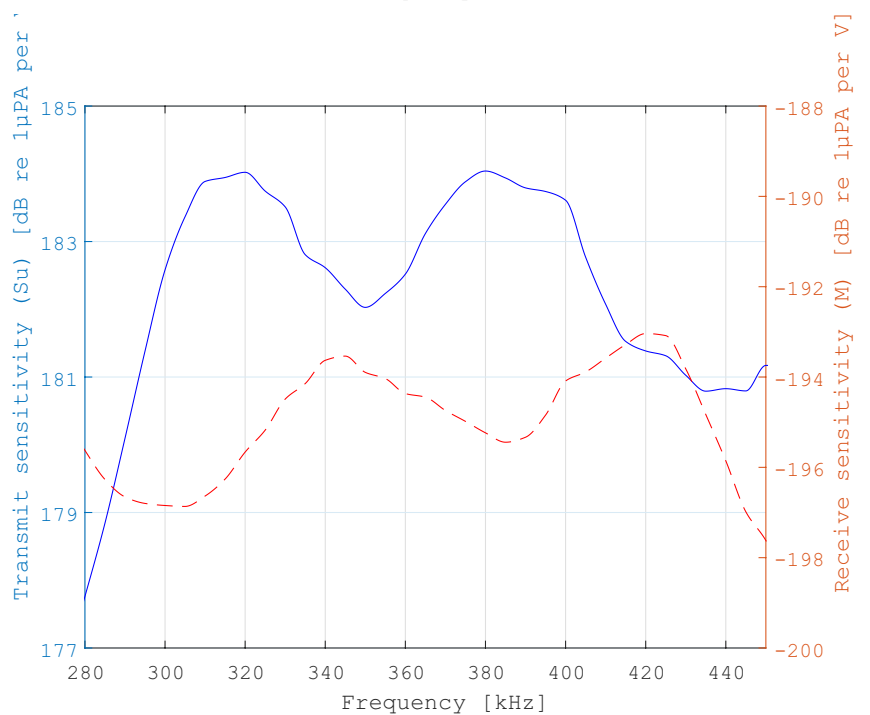
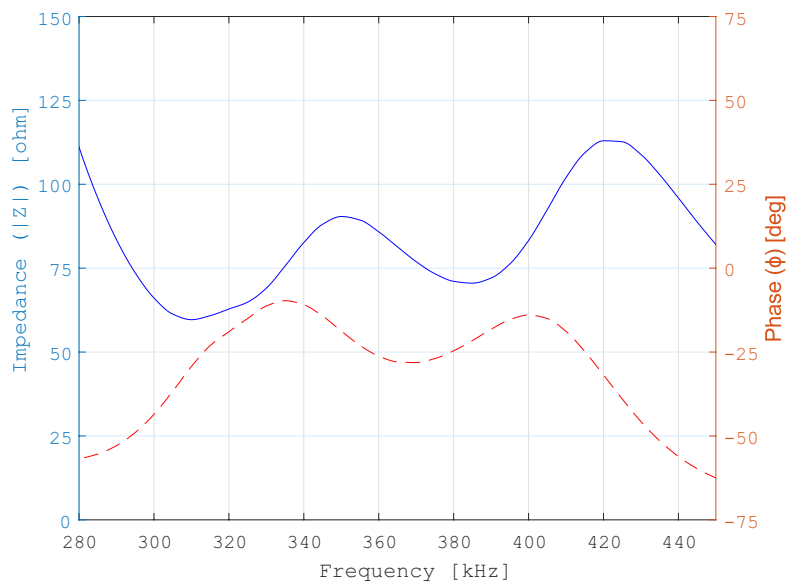
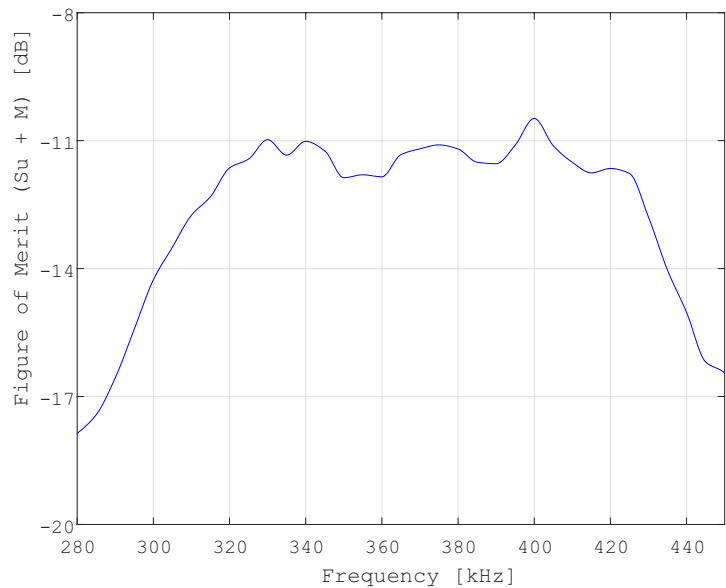
- Max. input power: 200 W
- Max. pulse length: 16 ms
- Max. duty cycle: 1 %

## Weight and outline dimensions

- Physical dimensions:
  - Diameter: 120 mm
  - Height: 61 mm (body)
  - Total height: 75 mm
- Weight
  - In air: 2 kg (incl. 2 m cable with SubConn)
  - In water: 1 kg
- Cable length: 2 m and SubConn connector
- Cable diameter: 12.4±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

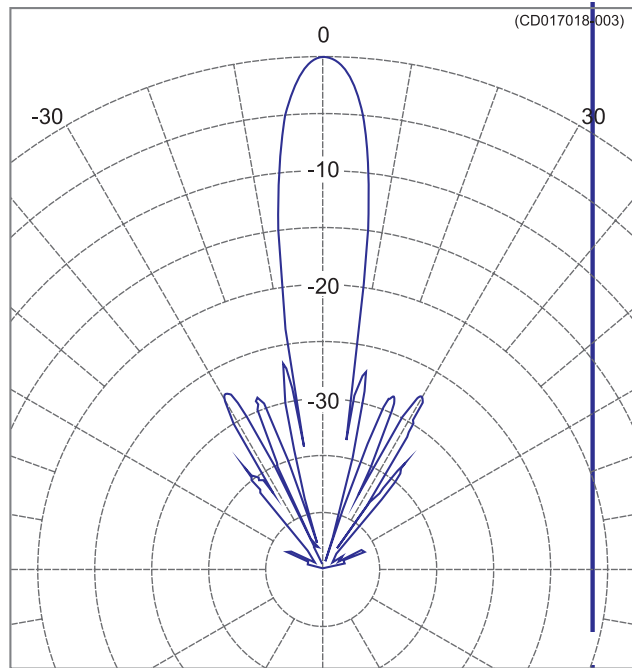


## Rules for transducer handling

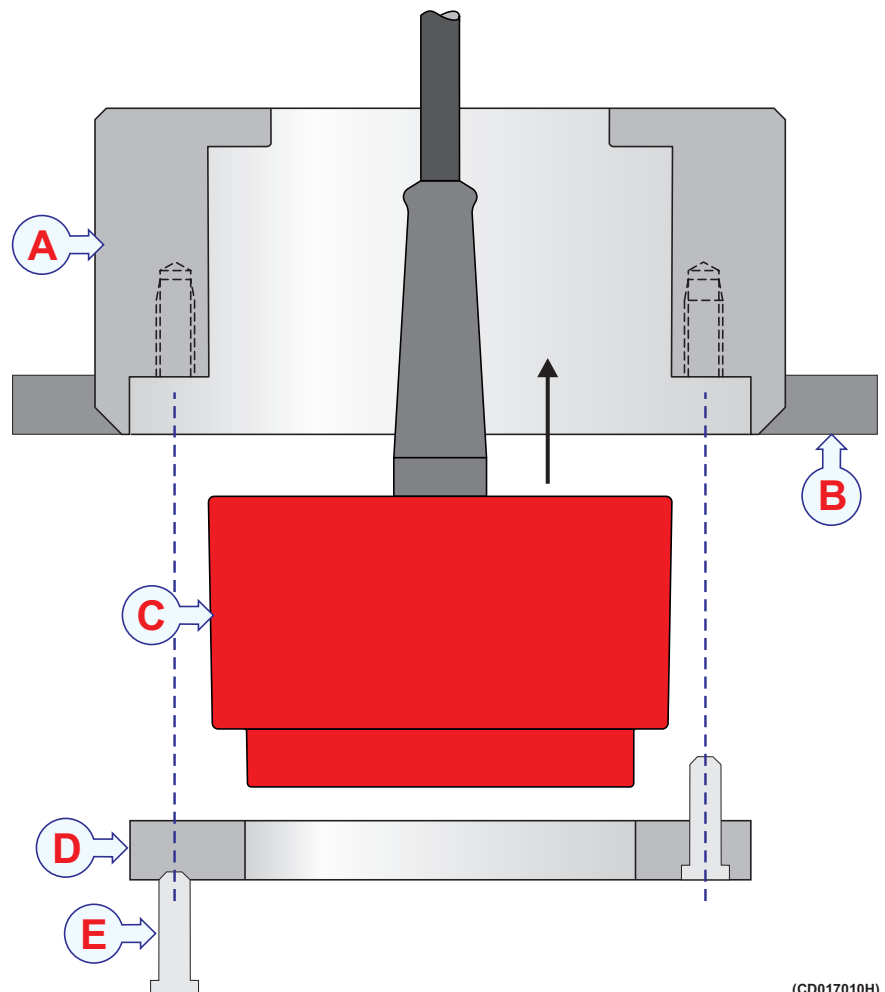
To secure the long life and accurate results, the transducer must be handled correctly.

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



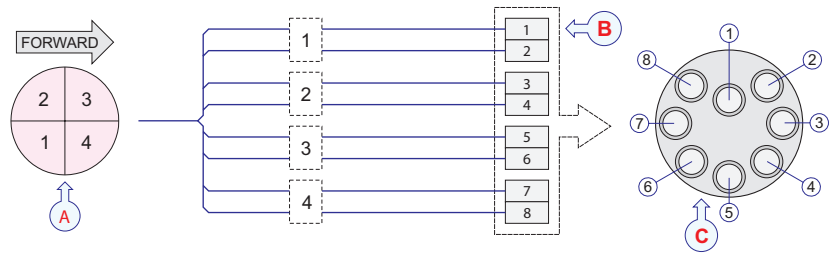
## Installation principle

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

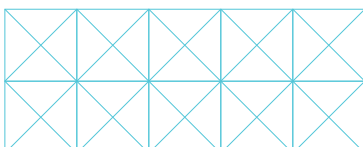
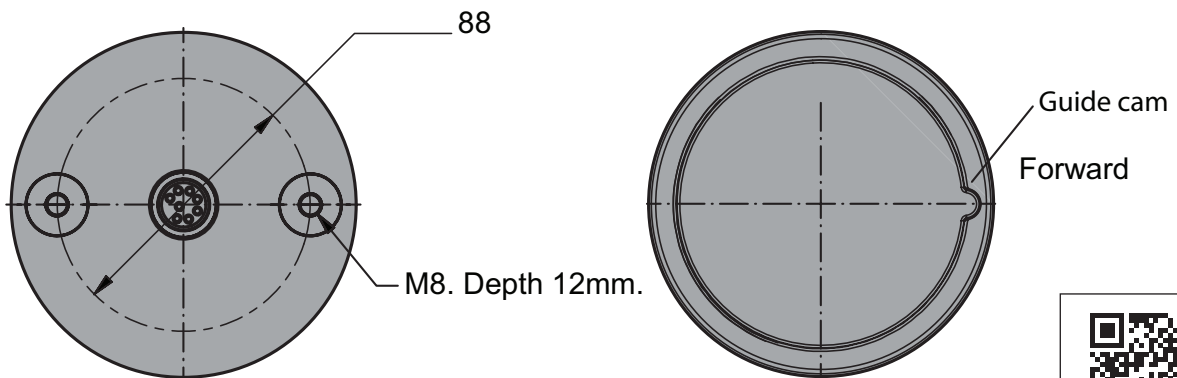
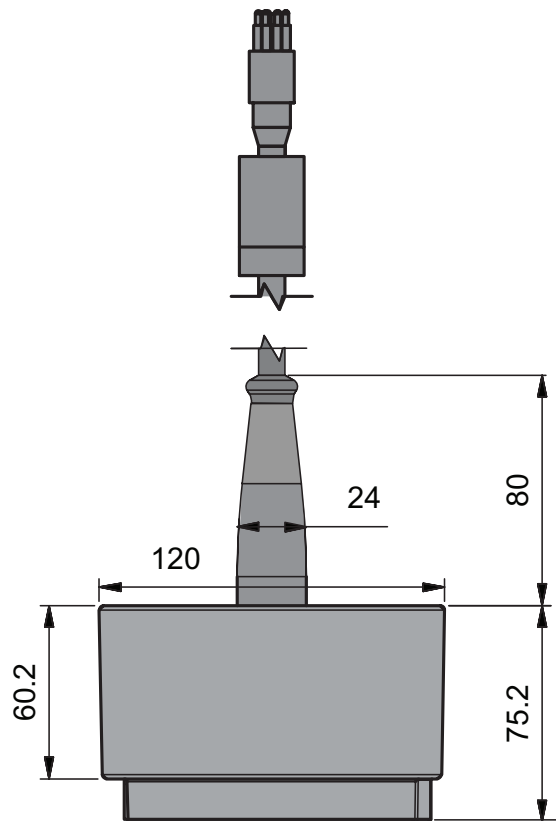
## Connections to MacArtney SubConn socket

The transducer connects to terminals 1 through 8 on a circular 8-pin Sub Conn socket. This socket is used for some versions of the WideBand Transceivers (WBT), WBT Mini and WBT Tube.

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



(CD0808\_003\_006)



KONGSBERG MARITIME  
SIMRAD  
Strandpromenaden 50  
P.O.Box 111  
kongsberg.com/simrad

Switchboard: +47 815 73 700  
Global support 24/7: +47 33 03 24 07  
E-mail sales: km.sales@km.kongsberg.com  
E-mail support:  
simrad.support@simrad.com  
km.support.science@km.kongsberg.com