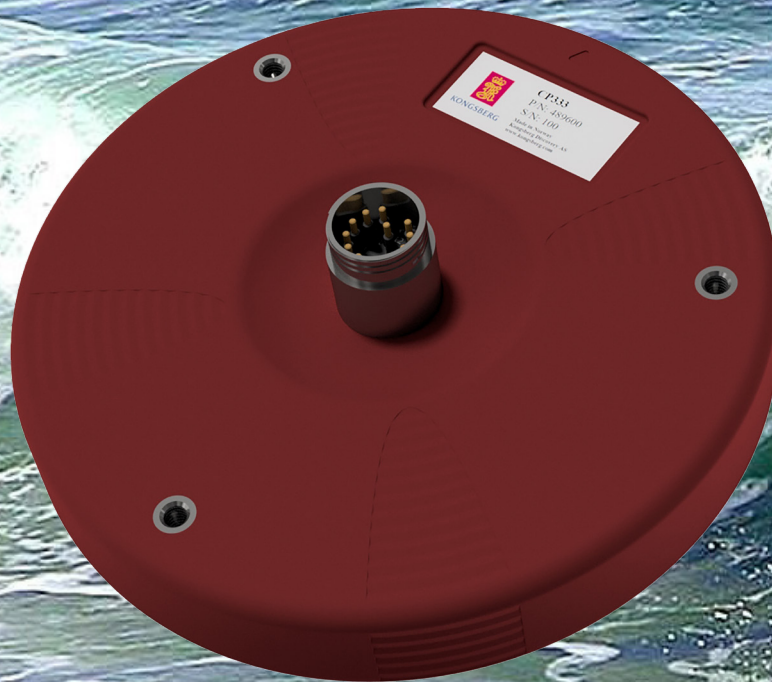


CP300



KONGSBERG



CP300 High-performance ADCP transducer

The CP300 is a compact and versatile ADCP transducer. The transducer has a 1500-meter depth rating and weighs only 2 kg when submerged in water. The composite elements inside the transducers are arranged in a Janus configuration, with four beams tilted 25 degrees. Like most Kongsberg transducers, the composite elements have high bandwidth, with the transducer specifications going from 270 to 445 kHz. This creates flexibility and opens the possibility to exploit the longest possible range at the lower end of the frequency band and the highest possible resolution at the highest end. The transducer can be operated in narrowband (CW) or broadband (FM) mode across the full frequency band.

The CP300 transducer is designed to fit on a great range of instrument platforms from large to smaller and even uncrewed vessels. Coupled with the WBT transceiver and the EK80 acquisition software, with input from a high-quality motion and GNSS system such as Seapath, the system provides high-resolution current profiles and platform velocity (DVL) with high accuracy and resolution in real-time. Fully integrated into the EK80 system, synchronization with other echo sounder transducers is optimized internally, and synchronization with other acoustic systems is possible through dedicated functionality in the EK80 software.

KEY FEATURES

- Wide operating frequency band
- High vertical resolution
- High ping-to-ping precision
- Depth rated to 1500 meters
- Excellent bottom-track capability
- Fully integrated in the EK80 system
- Easy to integrate with other Kongsberg products
- Built-in calibration and system test wizard

Order information

To order the CP300 transducer contact your local dealer or use our website:
www.kongsberg.com/cp300

Deliverables

- 110-0077788 CP300 Transducer

Optional items

- 110-0038572 20-meter cable
- **For hull mounting:**
 - For access from the rear: 110-0040267 Mounting ring CP300
 - For access from the front: 110-0042798 Welding ring for Mounting ring CP300 and 110-0041521 Mounting ring Screw mounted CP300

Overall performance

Nominal frequency: 333 kHz
Frequency range: 270 to 445 kHz

ADCP performance

Number of beams: 4
Beam direction: 25 degrees
Maximum source level for each beam: 222 dBuPa @ 100W
Max number of depth cells (receiving): Infinite (Sliding cell)
Pulse type: CW or FM
Cell size (transmitting): 0.5 m, 1 m, 2 m, 4 m, 8 m
Range FM (BB): 105 m
Range CW (NB): 120 m
Bottom track for every ping: no special mode needed
Bottom track Range: 220 m
Velocity Resolution: 0.1 cm/s
Current Velocity Range: ± 5 m/s
Vessel Velocity Range: 20 knots
Std. Dev. 4 m FM (BB): 5 cm/s
Std. Dev. 4 m CW (NB): 16 cm/s
Recommended sensor input: KM Binary (best performance); VTG, HDT, MRU (good performance)
Accuracy (typical): $\pm 1.0\%$, ± 0.5 cm/s

Installation requirements

CP300 transducer
Cable (Ordered separately)
WBT (Ordered separately)

Environmental requirements

Operational temperature: -5 to +50°C
Storage temperature: -20 to +60 °C

Output specifications

NetCDF
See the EK80 Interface Specification

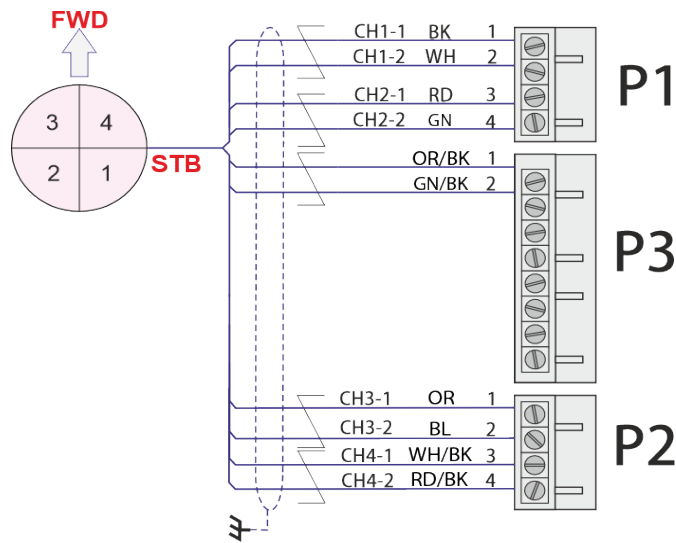
Interfaces

Internal sensor: Temperature
External sensors: Position, Attitude and Heading

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

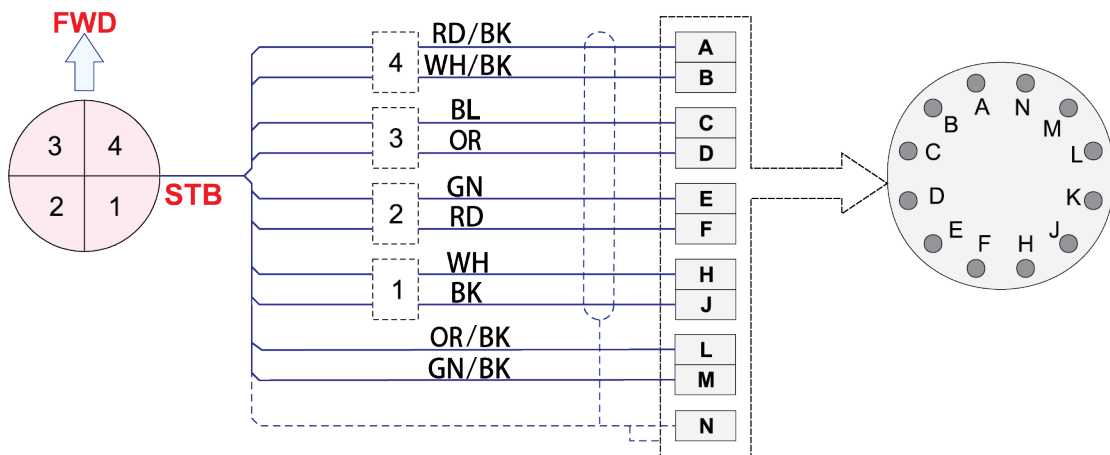
We are continuously working to improve the quality and performance of our products. Technical specifications may therefore be changed without prior notice.

Connection to Phoenix connectors



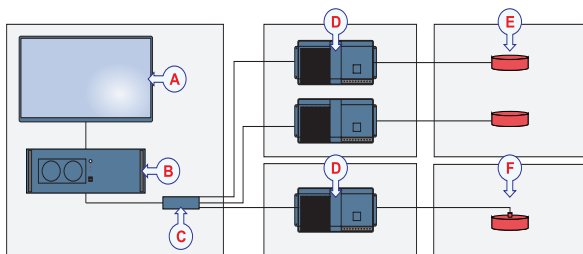
Transducer seen from above

Connections to Amphenol socket



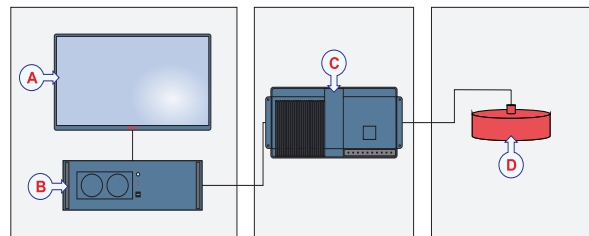
Transducer seen from above

Complete system with CP300 and split-beam transducers

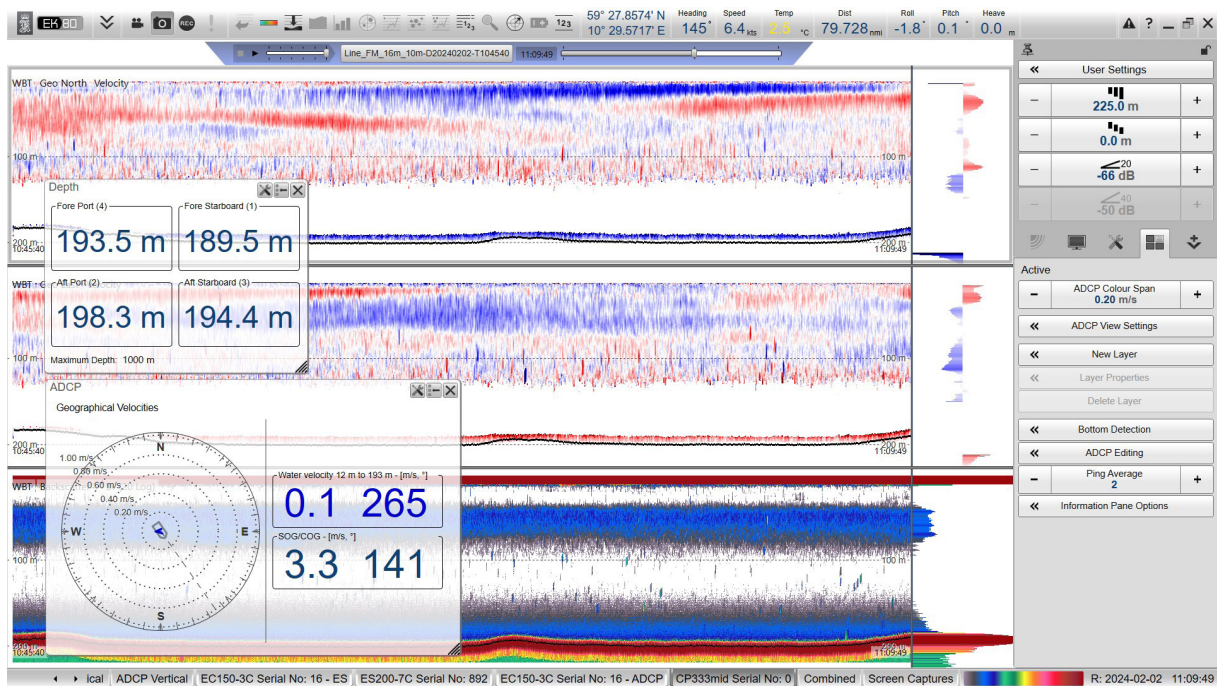


- A) Display
- B) Processing Unit
- C) Ethernet switch
- D) Wide Band Transceivers
- E) Split-beam transducers
- F) CP300 transducer

Basic system with CP300



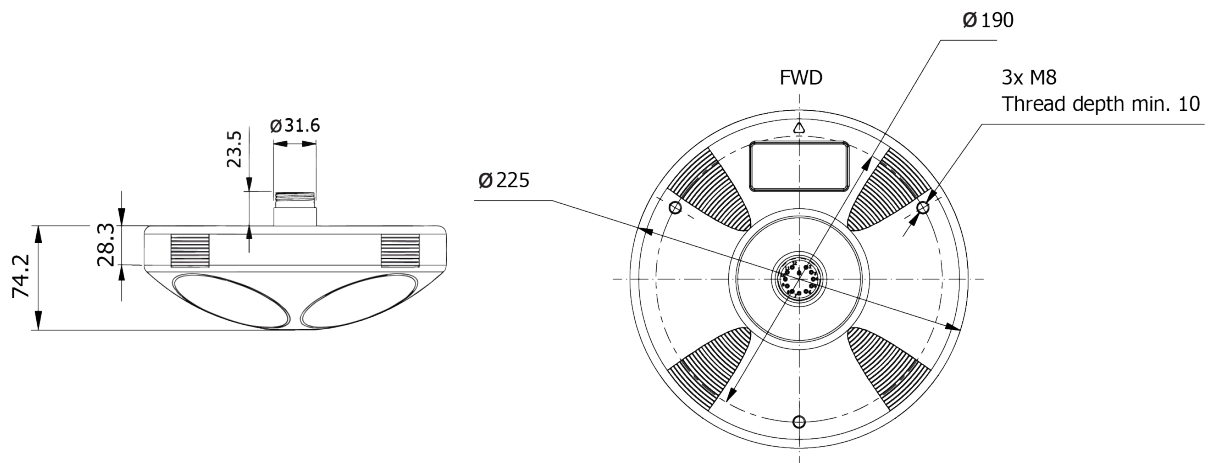
- A) Display
- B) Processing Unit
- C) Wide Band Transceiver
- D) CP300 transducer



Screen capture from EK80. High-resolution speed profiles are shown over time, and real-time water speed and speed over ground are calculated continuously.

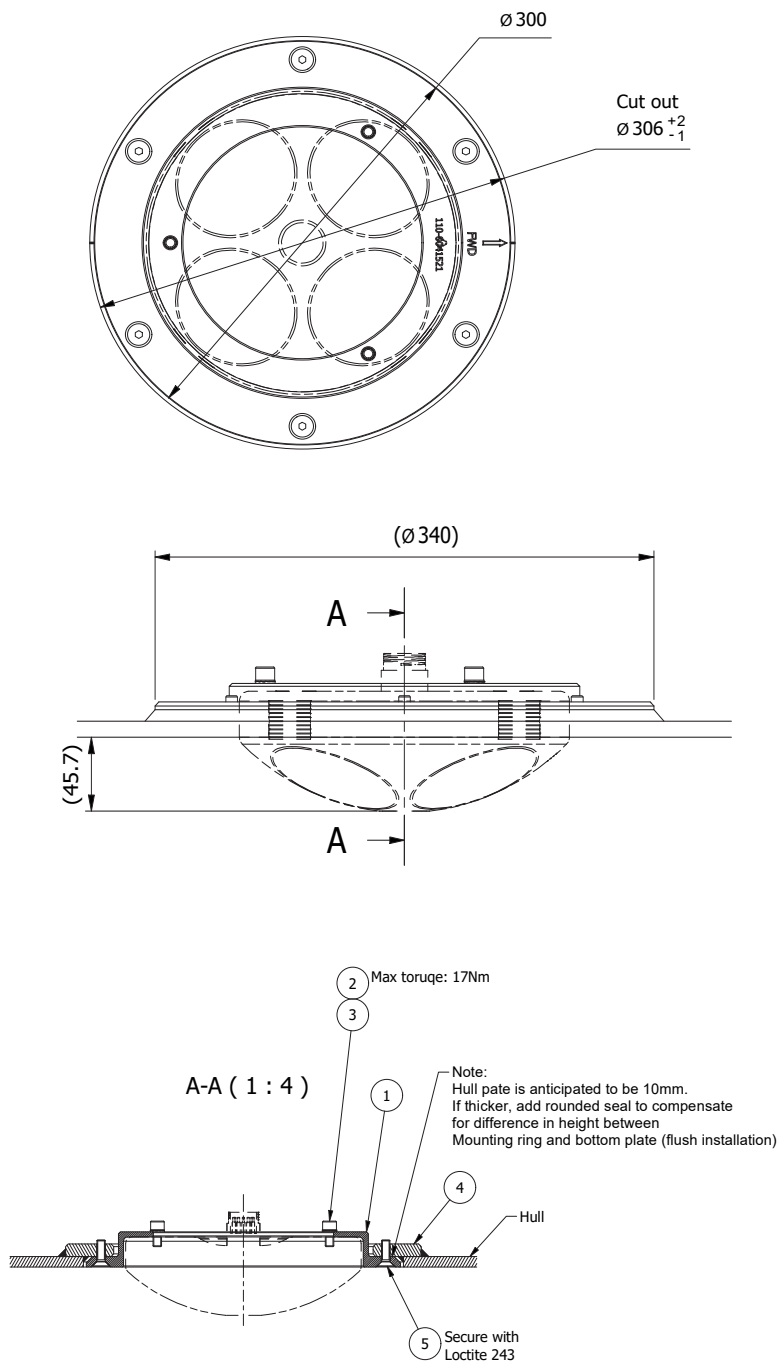
Weight and outline dimensions

All measurements are in mm. The drawings are not to scale.



SubConn FCR2012M DxHxW: 31.6×23.5×31.6 mm
 Transducer Height 1: 28.3 mm
 Transducer Height 2: 74.2 mm
 Diameter 1: $\varnothing 225$
 Diameter 2: $\varnothing 190$
 Threaded insert: 3x M8 (Thread depth min. 10)
 Weight: 4.0 kg
 Weight in water: 2.0 kg

Installation principles: Hull mounting



See drawing 110-0043130 for information on how to mount the CP300

Kongsberg Discovery
 P.O. Box 111
 N-3183 Horten, Norway
www.kongsberg.com/discovery
 Switchboard: +47 815 73 700
 Global support 24/7: +47 33 03 24 07
support.science@kd.kongsberg.com
 Sales: kd.sales@kd.kongsberg.com

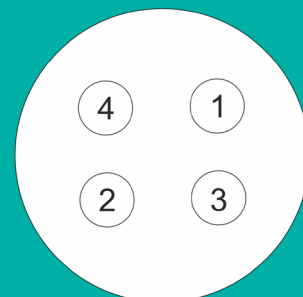


Rules for transducer handling

To secure the long life and accurate results, the transducer must be handled correctly. A transducer must always be handled like a delicate item. Please observe these transducer handling rules to prevent damaging the transducer:

- Do not activate the transducer unless it is fully submerged and there is enough water for the acoustic energy to disperse.
- 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.

FWD



The CP300 transducer measures ADCP velocities in 4 different beams (image: seen from above).