

CTD115

Multiparameter Online Probe



Sea & Sun
Technology

Main features:

- depth range up to 500 m
- easy handling
- non-corrosive titanium housing
- max. 16 channels
- up to 11 sensors on the bottom cap
- data acquisition software for various versions of Microsoft Windows
- calculations according to UNESCO formulae

sensors: max. 11
on the bottom cap

standard sensors:

- Conductivity (C)
- Temperature (T)
- Pressure (D)

additional sensors:

- Oxygen
- Turbidity
- pH (also H₂S resistant)
- Redox (ORP) also H₂S resistant
- Fluorometer
- Light irradiance (PAR)
- Currentmeter (with compass)
- Altimeter
- Transmissometer





The CTD115 is a high quality, high accuracy online multiparameter probe with max. 11 sensors of the bottom cap for oceanographic and limnological measurement of physical, chemical and optical parameters for depth up to 500 m.

The multiparameter probe CTD115 is designed for many different applications. In the limnic field it is used for controlling and monitoring dams, lakes and rivers plus ground water monitoring. In the oceanographic application it is used for profiling and monitoring stations. The probe is able to carry all necessary oceanographic parameters needed for scientific work and governmental tasks.

The probe can be equipped with maximum nine sensors mounted on the bottom cap. Those 9 channels can be extended to max. 16 channels when combined with external sensors.

Software:

The supplied Standard Data Acquisition Software package "SST-SDA" includes the handling of the logging process and the display of online data with a shared graphic user interface.

Equipment

1. Winch
2. FSK-Interface
3. Cable

The "SST-SDA" calculates the physical values from the raw values supplied by the probe and the associated calibration coefficients. Salinity, density, sound velocity and depth will be calculated by using the UNESCO formulae.

The "SST-SDA" is a part of our shipment.

Interface:

RS-232 port can be used with multi-conductor cable up to several hundred metres long. The user can operate the probe easily from small boats and ships. The serial data will be applied directly to the serial port of a PC.

Power has to be provided externally e.g. by a 12V battery or a regulated power supply.

FSK transmission is used mainly on single-conductor cables. Data is modulated on the power supply rail for a long distance data transmission. FSK operation requires a special power supply interface with a demodulator unit that converts the FSK data into RS-232 or USB 2.0 format.

Electrical specifications:

- Supply voltage: 10...30V DC
- Power consumption: approx. 0.5 W (sensor-dependent)
- Serial port: RS-232 (optional FSK)
- Data sampling rate: 5 CTD sets/s
- Connector: SUBCONN MCBH4M Ti

Mechanical specifications:

Materials:

Housing: titanium, grade 2
Connector: titanium, neoprene

Dimensions and weights:

Length (housing):
- 410 mm
Length (overall, with connector):
- approx. 680 mm
Diameter (housing): 115 mm
Weight (in air): approx. 9 kg

PC requirements:

- Operating system: Microsoft Windows (all versions)
- Interface: USB or RS-232

All calculations correspond to the current UNESCO formulae.

We would be pleased to make an offer according to your requests and requirements.

Ordering:

30500016 CTD115

sensors and equipment available on request



Standard sensors:

Sensor	Principle	Range	Accuracy	Resolution	Response time
Pressure (depth)	piezo resistive	5, 10, 20, 50 bar	up to 0.05 % full scale in the range of -5...35°C	0.002 % full scale	150 ms
Temperature	Pt 100 4 pole	-2 – 36 °C -2 – 60 °C	± 0.002 °C ± 0.005 °C	0.0005 °C 0.0005 °C	150 ms 150 ms
Conductivity	7-pole-cell	0 – 1 mS/cm 0 – 6 mS/cm 0 – 10 mS/cm 0 – 70 mS/cm	± 0.002 mS/cm	0.0005 mS/cm	150 ms
		0 – 200 mS/cm 0 – 300 mS/cm	± 0.010 mS/cm	0.005 mS/cm	150 ms

Additional sensors:

Sensor	Principle	Range	Accuracy	Resolution	Response time
pH (standard or H ₂ S resistant)	combined electrode	4 – 10 pH 0 – 14 pH	± 0.02 pH	0.0002 pH	1 s
Redox (standard or H ₂ S resistant)	combined electrode	± 2 Volt	± 20 mV	1.0 mV	1 s
Oxygen (SST-DO)	optical	0 – 250 % sat. 0 – 20 mg/l	± 2 % sat. ± 2 % sat.	0.01 % sat. 0.01 % sat.	2 s
Oxygen*	clark electrode	0 – 250 %	± 3 % sat.	0.1 % sat.	3 s (63 %) 10 s (90 %)
Fast Oxygen	clark electrode	0 – 150 %	± 2 % sat.	0.1 % sat.	200 s (90%)
Turbidity	90 ° back-scatterance	0 – 25 FTU 0 – 125 FTU 0 – 500 FTU 0 – 4000 FTU **		0.1 FTU / NTU	100 ms
Light irradiance (PAR)	spherical quantum sensor	400 – 700 nm			10 ms
Currentmeter with compass	inductive	± 2.00 m/sec			
Fluorometer	CDOM / FDOM, Chlorophyll A, Fluorescein Dye, Oil-Crude, Oil-Fine, Optical Brighteners, Phycocyanin, Phycoerythrin, PTSA Dye, Rhodamine Dye, Tryptophan				

* max. depth 100 m

** output is non-linear above 1250 FTU

CTD115

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- CTD115
- Instruction manual
- RS-232 to USB converter
- Configuration cable
- Software
- Shackle

Delivery

The CTD115 will be delivered in a compact, robust and water resistant transport case

Distributor:



edaphic scientific
environmental research & monitoring equipment



Sea & Sun Technology GmbH
Arndtstrasse 9-13
24610 Trappenkamp Germany
+49 4323 91 09 13
+49 4323 91 09 15
sales@sea-sun-tech.com
www.sea-sun-tech.com