miniCTD PROBE

The **miniCTD probe** is a small and lightweight, budget-priced system designed for in-situ acquisition of scientific data in oceanic, estuarine and fresh water environments.

ADM offers a selection of sensors to be adapted to the **miniCTD probe**.
Three sensors are attached to the bottom of the probe, a fourth sensor can be plugged into an additional connector at its top.
Available internal sensors are conductivity, temperature, pressure, oxygen, pH, redox and H_2S.
Possible external sensors are turbidity and fluorescence (e. g. chlorophyll a, Rhodamine, yellow substances).
Salinity, density and sound velocity are calculated values.

The measurement procedure is controlled by a built-in micro-processor and delivers data with a resolution of 16 bit.

Dimensions:
Overall length 270mm
Diameter 60mm
Diameter of the protection cage 85mm.

Material:
Titanium for the metallic parts, the protection cage is made of stainless steel.
The sensors are made of titanium, stainless steel and Delrin.

Connector:
Subconn MCBH4MSS

DATA TRANSMISSION

The **miniCTD probe** is a direct reading probe. It can be equipped with two data transmission modes:
- RS-232 via multi-core sea-cable to a PC
- RS-232 signals via single-core sea-cable connected to the ADM SMALL INTERFACE and a personal computer.

DATA PROCESSING

The software package **ADM-GOP** collects raw data from the probe and converts them to physical data using the standard procedures according to UNESCO FORMULAE.
The calculated data is displayed simultaneously in an alphanumeric and in a graphic window.

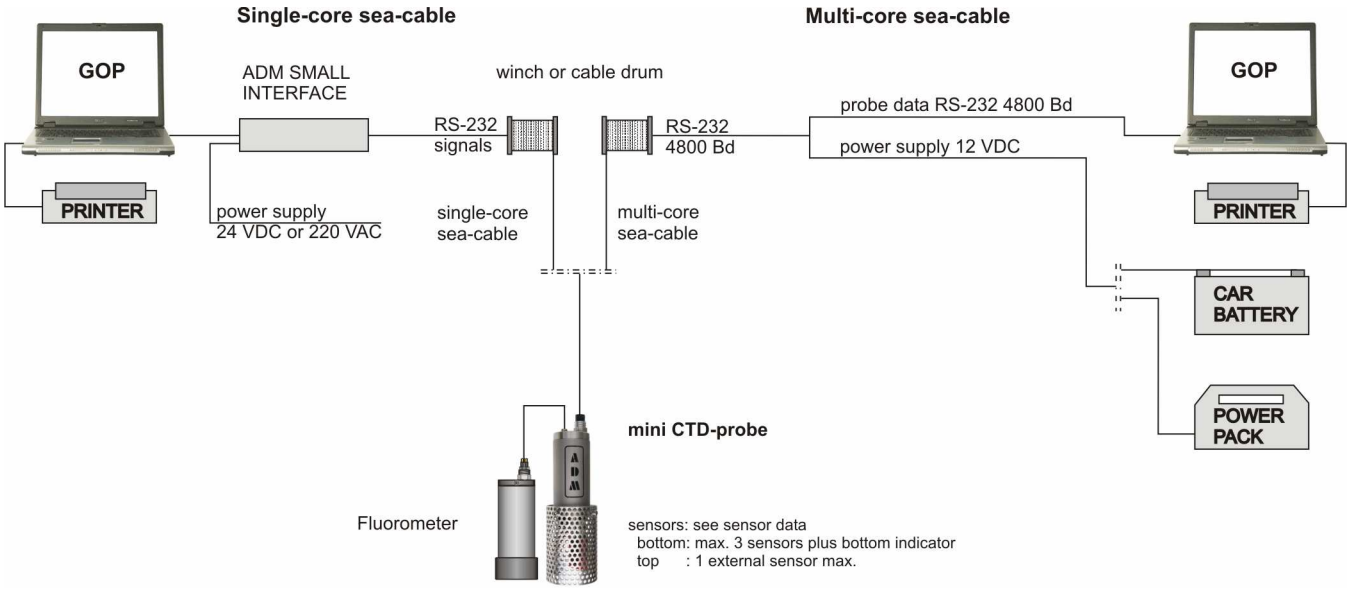
miniCTD PROBE SYSTEM

A complete **miniCTD probe system** consists of a **miniCTD probe** equipped with sensors, a winch or cable drum with multi-core sea-cable and a PC with software.

If a single-core sea-cable is used (recommended for cable lengths of more than 500m) the ADM SMALL INTERFACE is required for data conversion and power supply.

See next page for system overview

Examples for miniCTD probe system configuration



Data output from miniCTD probe: ADM raw data, ASCII, HEX

Sensor data

sensor	principle	measuring range	accuracy	resolution	response time
temperature	Pt 100	-2 ÷ 40 °C	± 0,003 °C	0,0005 °C	100 ms
pressure	piezo-resistive	0 ÷ 5, 50, 100, 500 dbar, optionally 1000 or 2000 dbar	± 0,1 % f.s.	0,0015 % f.s.	40 ms
conductivity	7-pole cell	0 ÷ 60 mS/cm or	± 0.006 mS/cm	1 µS/cm	10 ms
		0 ÷ 6 mS/cm	± 2 µS/cm	0,1 µS/cm	10 ms
oxygen I	amperometric	0 ÷ 150 % sat.	± 2 % sat.	0,02 % sat.	3 s (63 %) 10 s (95 %)
oxygen II (fast response)	galvanic	0 ÷ 200 % sat.	± 2 % sat.	0,02 % sat.	> 250 ms (100 %)
pH (max. 160 dbar)	potentiometry	4 ÷ 10 pH	± 0,02 pH	0,02 pH	< 10 s
Redox (max. 160 dbar)	potentiometry	± 2 V	± 2,0 mV	0,1 mV	< 10 s
H_2S	amperometric	3, 10 or 50 mg/l	< 3 % f.s.	0,001; 0,03; 0,1 mg/l	< 3 s (100 %)

Main features

- **Precise measurement**
- **Standard depth 500m**
- **Multi-channel probe**
- **16 bit resolution**
- **Low power consumption**
- **Baudrate 4800 bits/s**
- **2 data transmission modes**
- **ADM-GOP software included**
- **External sensors: analogue input 0 – 5 VDC**

Dimensions

Length overall : approx. 270mm

Diameter (tube) : approx. 60mm

Length (tube) : approx. 110mm

Weight in air : approx. 1kg

Your representative

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