

Series 2001:

Current Meters and Multi-parameter probes

Broad spectrum of applications

Series 2001 are compact smart instruments for oceanography, port treatment, water sciences, environmental monitoring, fishing farms, underwater technologies, offshore industry, and other areas of application.

Thanks to modular hard- and software they are used for

- Current and flow measurements
- Directional sea-state measurements
- Measurement of chemical and optical parameters

The probes are applicable for mobile use as well as for long-term deployments.

Variable sensor equipment

Various sensors (selection is overleaf), among others our inductive current sensor (same as in ISM-2000/ ISM-2001), are available. Most sensors can be replaced by the customer; Third-party sensors are adaptable.

Memory and serial output

A real-time clock and a memory of 256k byte are integrated. The latter is expandable to more than 1 GB by CompactFlash memory cards.

In addition, the measured values can also be sent continuously via the serial interface (direct reading).

Communication is based on an ASCII protocol. Therefore, operation, data transfer, and integration into other equipment are straightforward.

Internal and / or external supply

Devices with only external power supply as well as those with integrated accumulator or inline battery package are available. The latter allow fully autonomous measurements.

Main item of the device series is a dual-processor machine, which overcomes the opposite demands for extremely low energy consume in measuring pauses and high computer power in the activated state. Therefore, also battery powered probes can be used for long-term deployments.

Practice-oriented connecting technique

Different interface options in addition to the standard RS232 connection are available. Read out of data and set-up of the devices can be done via these serial interfaces. Devices of the series 2000 and 2001 are addressable and can jointly action at one cable with a RS485 bus.

The connectors are wetly plug-able. In this way, the probes are also suitable for fixed underwater installations which are maintained by divers.

Flexible software:

Firmware can be loaded into the devices via serial interface. The broad spectrum from autonomous long-term deployments with demands for energy saving techniques up to fast measuring instruments with high internal computing power (e.g. directional sea-state probes) is covered this way.



Variants:

Compact - externally supplied probe for 1+4 or 1+5 sensors, internal orientation system (2-component magnetometer or 3-component magnetometer with 2-axis inclination sensor; option), memory, cable interface;

1000 m depth rated; deep sea versions and battery packs are optional.

Midi - probe with internal battery pack and big sensor flange for 1 + 8 sensors (up to 60 m depth)

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Specifications

Dimensions of the Electronics cylinder:	compact: Ø 90 mm x L 200 mm optionally longer midi: Ø 128 mm x L 240 mm
Housing materials:	Sea-water resistant brass Polyoximethylene (POM) High-grade steel (1.4571)
Deployment depth:	compact: 1000 m (optionally deeper) midi: 60 m
Power supply:	external 10 .. 30 Vdc in-line pack (compact) 25 C-cells, internal (midi) 7 D-cells alkaline
Memory:	256K SRAM, 256K Flash CompactFlash cards (up to 1 GB)
Clock:	Hardware (real-time clock)
Communication:	ASCII protocol; RS 232, RS 422, RS 485 full duplex / semi duplex
Sensor interfaces:	analog voltage inputs, counting inputs, serial interfaces; specific interfaces (e.g. temperature/ con- ductivity); different types are pos- sible, also isolated
Switching outputs:	MOSFET

Sensors

See the corresponding data sheets for details. For most measurement parameters, several sensor models are available for different requirements.

Internal:	compass, inclinometer
At the flange:	via S2001 fitting system; compact 1 + 4 (5), midi 1 + 8
External:	via fitting system and cable
Measurement Parameters:	conductivity, temperature, pressure, current pH-value, redox potential (ORP) dissolved oxygen turbidity, fluorescence

Other sensors can be adapted on customers demand.

Accessory

Broad spectrum: device mounts, cable (-drums), protective caps, flow-through caps (active/passive), repair parts, calibrating accessory, software, communication systems, board units (Term2001).

Mobile use

Rugged suitcase with probe, board unit Term2001, and cable



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