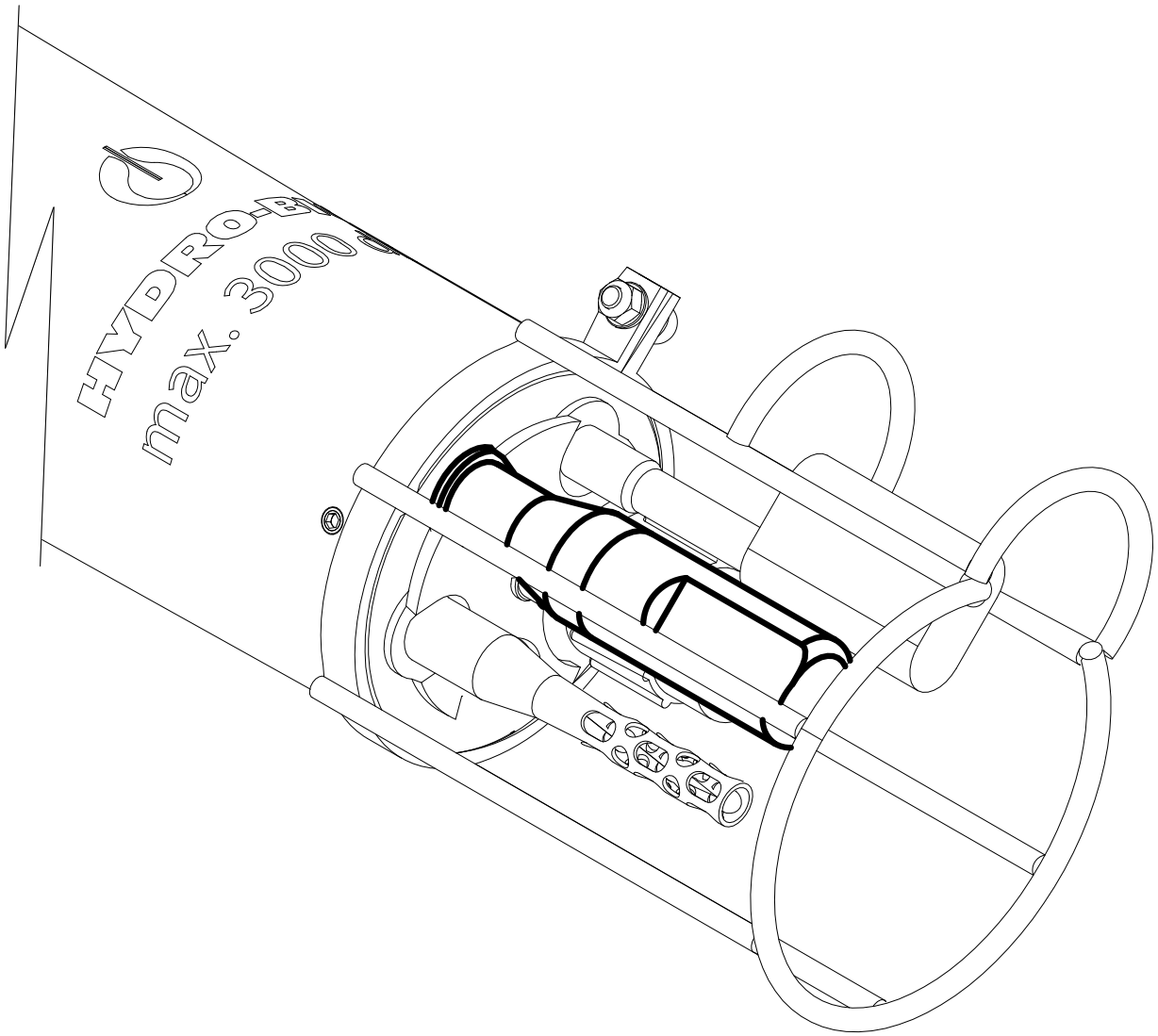


TURBIDITY SENSOR SEAPOINT

OPERATION MANUAL

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TERMINOLOGY

motor unit: pressure housing with electronics and motor

underwater unit: underwater device with mounted motor unit

probe housing: pressure housing with electronics (instruments without motor)

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SCOPE OF THIS MANUAL

This manual describes the sensor's integration into the HYDRO-BIOS underwater unit, as well as it's usage through the Command Unit and OceanLab. It also includes basic maintenance information. For more detailed information (e.g. on how to ensure accurate measurements, calibration procedures and calibration formulae) refer to the manufacturer user manual as well as the help text visible in the OceanLab controlling window for this sensor.

GENERAL DESCRIPTION

The TURBIDITY SENSOR is a sensor that measures turbidity by detecting scattered light from suspended particles in water. Its low power consumption, high sensitivity, wide dynamic range and 6000 meter depth capability allow this sensor to be used in most applications where turbidity or suspended particle concentrations are to be measured. It is constructed of rugged, corrosion resistant materials and surface mount electronics for durability and high reliability.

The four measuring ranges (25 FTU, 125 FTU, 500 FTU and 650 FTU) of the Turbidity Sensor can be manually selected by using the Command Unit or inside OceanLab. Additionally the user can activate the **AUTO-mode** selecting the ideal measuring range automatically.

The Turbidity Sensor requires the CT-Set with its built-in high performance Gen5 - electronics to power the Turbidity Sensor and to handle the measuring data.

The Turbidity Sensor is directly mounted to the back lid of the motor unit / probe housing.

STANDARD EQUIPMENT

1. 1 Turbidity sensor, mounted to the back lid of the motor unit / probe housing
2. 1 Operation manual

TECHNICAL DATA

Light source wavelength:	880 nm
Scatterance angles:	15 – 150 degrees
Selectable ranges:	25 FTU
	125 FTU
	500 FTU
	1250 FTU
Time constant:	100 msec.
Temperature coefficient:	< 0.05 % / ° C
Operating temperature:	0 … + 65° C
Operational depth:	6000 m
Power supply:	No extra power supply required
	(sensor is powered by the motor unit / probe housing).

DEPLOYMENT

The measuring ranges of the Turbidity Sensor can be selected by using the Command Unit or inside the **Controlling mode** of OceanLab. Choose one of the four ranges or automatic range selection from the list.

SERVICE AND MAINTENANCE

The best maintenance for the Turbidity Sensor is to handle it with care. Despite the fact that the complete sensor is a rugged instrument extreme shocks should be avoided. Apart from that there are only few instructions and maintenance rules to be observed ensuring a long life-span and precise measuring data.

After using rinse the complete instrument with fresh water especially clean the windows. Add mild detergent if necessary for window cleaning (avoid using organic solvents). If the windows becomes scratched, it may be polished using a cloth buffing wheel with polishing compound.

CALIBRATION

The four measuring ranges have to be calibrated individually. Thus during calibration it is most important to select the correct measuring range to be calibrated. **Never use the automatic range selection (AUTO) during the calibration process!**

To read calibration data and raw data of the Turbidity Sensor from the underwater unit and to transfer calibration data of the Turbidity Sensor to the underwater unit use the **Controlling mode** inside the software OceanLab.