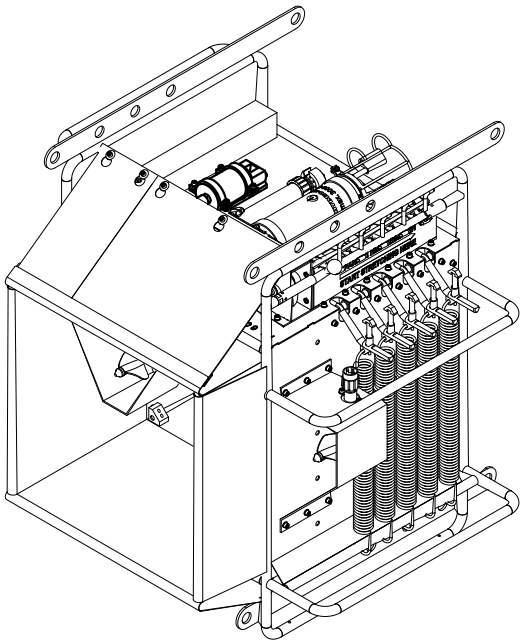
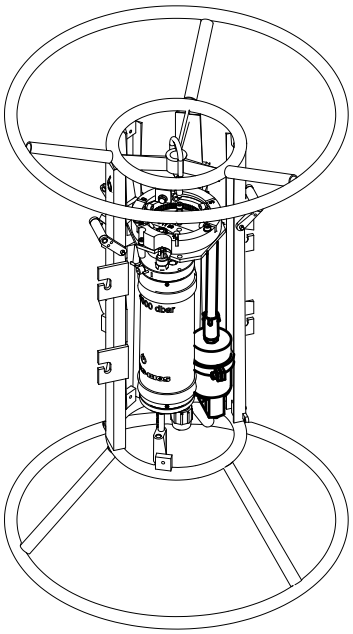
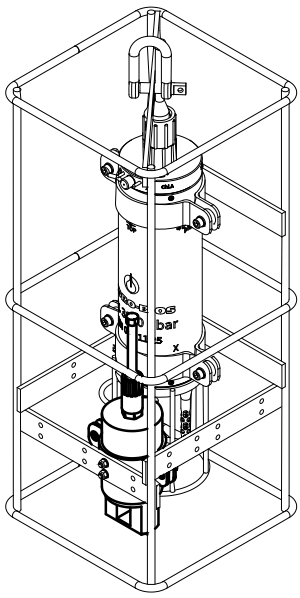






CHLOROPHYLL FLUOROMETER SEAPOINT

OPERATION MANUAL

Product ID 450 577

Edition 12/25

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NOTICE



Please read this manual carefully before operating or performing maintenance on the instrument. Pay special attention to all danger, warning and caution statements. Failure to do so could result in serious injury and/or damage to the instrument. Keep manual available at all times.

LAYOUT AND MEANING OF WARNINGS

All safety instructions found in this operation manual are composed in accordance with the following pattern (signal words):

DANGER

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to personal injury.
NOTICE may also indicate a situation which, if not avoided, may cause damage to equipment.

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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)

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 CHLOROPHYLL FLUOROMETER SEAPOINT is a high-performance, low power instrument for in-situ measurements of chlorophyll a. Its low power consumption, high sensitivity, wide dynamic range and 6000 meter depth capability provide the power and flexibility to measure chlorophyll a in a wide variety of conditions. It is constructed of rugged, corrosion-free materials, surface mount electronics, solid-state lamps and detector for excellent durability and high reliability.

The four measuring ranges (5 µg/l, 15 µg/l, 50 µg/l, 150 µg/l) of the Fluorometer 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 Fluorometer requires the CT-Set with its built-in high performance Gen5 - electronics to power the Fluorometer NT and to handle the measuring data.

ATTACHMENT POSITION

MultiNet:

The Fluorometer is mounted to the top side of the MultiNet beside the motor unit, the connection is made by a supplied cable with underwater connectors.

Multi Water Sampler / Multi Parameter Probe:

The Fluorometer is mounted inside the protective cage, the connection to the motor unit / probe housing is made by a supplied cable with underwater connectors.

STANDARD EQUIPMENT

1. 1 Chlorophyll Fluorometer Seapoint
2. 1 Mounting rack / clamp incl. screws and washers
3. 1 Connecting cable to the motor unit / probe housing
4. 1 Underwater connector SUBCONN, mounted to the back lid of the motor unit / probe housing
5. 1 Dummy connector SUBCONN with locking sleeve
6. 1 Operation manual

TECHNICAL DATA

Excitation wavelength:	470 nm peak
Emission wavelength:	685 nm peak
Sensing volume:	340 mm^3
Selectable ranges:	5 µg/l
	15 µg/l
	50 µg/l
	150 µg/l
Minimum detectable level:	0.02 µg/l
Time constant:	100 msec.
Temperature coefficient:	< 0.2 % / ° 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).

ATTACHMENT

At the instrument the Fluorometer has to be operated in the open sensing volume configuration with the end plate mounted to the Fluorometer.

MultiNet:

The Fluorometer has to be mounted to the mounting rack (located on top side of the MultiNet) with its connector pointing towards the mouth of the MultiNet. While mounting make sure that the end plate of the Fluorometer is in horizontal position to achieve the highest water flow rate through the sensing volume.

Multi Water Sampler / Multi Parameter Probe:

The Fluorometer has to be mounted to the mounting clamp (located inside the protective cage) with its connector pointing upwards.

DEPLOYMENT

Establish the connection from Fluorometer to motor unit / probe housing by using the supplied connecting cable.

Slightly grease the contacts of all underwater connectors with pin lubricant.

NOTICE

In no case must the underwater unit be submerged without the appropriate cable connections resp. dummy connectors attached!

The measuring data of the Fluorometer is processed within the Command Unit and OceanLab.

The measuring ranges of the Fluorometer 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 Fluorometer 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 Fluorometer from the motor unit / probe housing and to transfer calibration data of the Fluorometer to the motor unit / probe housing use the **Controlling mode** inside the software OceanLab.