



# AFT-M3

## MODULAR SENSOR PLATFORM FOR MARINE RESEARCH & OPERATIONS

The UNDERSEE M3 is a modular sensor platform designed to simplify flow-through and FerryBox projects composed by three modules: Control, Sensing, and Hydraulic.

The Hydraulic module pumps water to the sensors and enables the selection of 2 inputs: clean or monitoring water.

The Sensing module holds sensor chambers designed to eliminate air bubbles and can be easily disconnected for maintenance.

The Control module is responsible to control pump and valves, data logging the sensors and send data via MQTT to a user configured server. It also allows user to configure the monitoring and cleaning cycles, monitoring frequency and real time data visualization.

MODULAR

WATER  
CONDITIONING

PORTABLE

## Measurements Specifications

Sensors	Technology	Units	Range	Resolution	Accuracy
Conductivity	Conductive 4-electrode	mS/cm	0 - 200	2	±1%
pH	Differential	pH units	0 - 14	0.01	±0.01
ORP	Differential	mV	+/- 1500	1	±5
Dissolved Oxygen	Luminescence quenching	mg/L	0 - 22.5	0.4 ± 0.009 9 ± 0.04	±0.4mg/L
Chlorophyll-a	3-in-1 fluorometer	µg/L	0 - 100	0.01	±max(0.03, 3%)
Turbidity		FTU	0 - 100	0.01	±max(0.03, 3%)
Phycocerythrin		µg/L	0 - 100	0.01	±max(0.03, 3%)

### Data Transmission

Measurement interval: ≥1min

Output Communication: Wi-fi

Input communication: RS-485  
RTU modbus

Internal Storage: 32Gb

MQTT for server communication

Weight: 12Kg

Dimensions (L x W x H):

322mm x 336mm X 340mm

Materials:

HDPE Case

PVC Sensor chambers

SS 316L Bolts

### User Interface

Programing the monitoring and cleaning cycles;

Program up to 20 tasks, each containing up to 20 Jobs;

Timestamp from:

- Internal clock;
- Internet;
- GPS;

Data visualization;

Data download;

