MARINA PACKAGE

MODUL 1 | WATER LEVEL + TEMPERATUR

Low Power Communication Module to transmit ocean data remotely

benefits

24/7 location accurate water level information.
Warn your berth tenants of critical water levels.
Provide local, real-time temperature data.

features

Water level sensor system based on ultrasonic measurements to detect the water level inside the marina.

Water temperature measurements within the marina at real-time intervals for precise temperature recording.

User-friendly digital interface that translates all measured data into useful information.

costs

approx. 800 € prototypes costs.
Installation via Pinck Yachttechnik, maintenance not required.

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MODUL 1 | WATER LEVEL + TEMPERATUR

Low Power Communication Module to transmit ocean data remotely

technics

- Parameters: water level (+- tba), temperature (+-0.5C), GPS, customizable for analogues sensors 0-3.3V.
- Installation: connected on deck/stern basket via strap
- Dimensions: 10 x 12 x 10cm (LxBxH)
  Water proofness: splash proof IP65
- Power supply: 12V DC / LiPo battery powered, charging by solar or mains via transformer (240 V).
  Power consumption: ~0.1Wh
- Data transfer: LoRaWAN

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MODUL 2 | AIR PROPERTIES

Compact, cost-effective and expandable solution to measure essential meteorological parameters.

benefits

24/7 location accurate atmosphere data.
Support your berth tenants with local weather and wind parameters.

features

Local and accurate meteorological parameters.

Provide local and accurate air temperature, barometic pressure, wind speed, wind direction and humidity (expandable) to berth holders.

User-friendly digital interface that translates all measured data into useful information.

costs

approx. 500 € prototype costs.
Maintenance: very low ~ once/year cleaning

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MODUL 2 | AIR PROPERTIES

Compact, cost-effective and expandable solution to measure essential meteorological parameters.

technics

- Parameters: wind speed, wind direction, air temperature, barometric pressure and humidity (expandable).
- Installation: on a mast or pole, or a place ensuring free streaming air flow.
- Dimensions: 28 x 11 x 11 cm.
  Water proofness: splash proof
- Power supply 12V DC, charging by solar or mains via transformer (240 V).
  Power consumption < 50 mA.
- Data transfer: LTE, LoraWan, CAN Bus, StarLink, (mail client).

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MODUL 3 | AIR QUALITY

Location-accurate air quality measurements based on trace gases, black carbon and aerosols.

benefits

24/7 location accurate air quality information. Inform and warn your berth holders of critical air quality.

features

Local and accurate atmospheric measurements based on trace gases, black carbon and aerosols. Individually customizable.

Provide local and accurate concentrations of health-relevant gases + particles. Show how clean and healthy the air in the marina is.

User-friendly digital interface that translates all measured data into useful information.

costs

approx. 2.500 € prototype costs.
Maintenance: 1x sensor calibration/year by SOOP, switching off at too high humidity/rain.

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MODUL 3 | AIR QUALITY

Location-accurate air quality measurements based on trace gases, black carbon and aerosols.

technics

- Parameters: trace gases (carbon dioxide, sulphur dioxide, nitrogen dioxide, carbon monoxide, ozone), black carbon and aerosols, customizable
- IInstallation: Internal/water-protected Teflon hose, which is attached at a high point on the mast or pole.
- Dimensions: 37 x 30 x 17 cm
  Water proofness: splash proof
- Power supply: 12 V DC, charging by solar or mains via transformer (240 V).
  Power consumption: 16 W
- Data transfer: 1 MB/day, LTE, LoraWan, (mail client)

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MODUL 4 | BIODIVERSITY

Location and accurate environmental DNA (eDNA) underwater sampling to detect rare or invasive species.

benefits

Local and accurate bidiversity information. Inform your berth holders and the local authorities of rare or invasive species.

features

Provide local and accurate information on biodiversity and inform the berth holders and the local authorities of important detections.

User-friendly digital interface that translates all measured data into useful information.

costs

approx. 500 € prototype costs + analysing costs
Maintenance: replace filters, deploy device underwater

MARINA PACKAGE

MODUL 4 | BIODIVERSITY

Location and accurate environmental DNA (eDNA) underwater sampling to detect rare or invasive species.

technics

- Parameters: environmental DNA (eDNA) via underwater sampling.
- Installation: deployed fixed underwater or one-stop sampling
- Dimensions: 14 x 15 cm
  Water proof till 55 m water depth.
- Power supply: 8 AA batteries
- Data transfer: samples are shipped or picked up by SOOP, Data are stored on SD-card.

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MODUL 5 | PLANKTON

Location accurate image informationen on marine plankton recorded by a modular camera system.

benefits

Local and accurate information on marine plankton. Support research in plankton variety and learn about local water quality.

features

Provide local and accurate information on biodiversity of marine plankton one of the most important indicators for the marine food chain.

User-friendly digital interface that translates all measured data into useful information.

costs

approx. 5.000 € prototype costs.
Maintenance: change of flow cell, calibration by SOOP.

MARINA PACKAGE

MODUL 5 | PLANKTON

Location and accurate environmental DNA (eDNA) underwater sampling to detect rare or invasive species.

technics

- Parameters: plankton images (25 – 2000 µm resolution).
- Installation: flow-through connection connected to pump and tubing.
- Dimensions: 25 x 20 x 12 cm
  Water proofness: splash proofed.
- Power supply: 12 V DC, charging by solar or mains via transformer (240 V).
  Power consumption: tba
- Data transfer: local storage on SSD-card, mail to or pick up at SOOP.