

Dissolved oxygen monitor BAMOPHAR 451



- Dissolved oxygen measurement
- Scales:
0.01 to 50 mg/l or 0 to 500 %
- 1 Input for AQUAPLUS probe
- 2 Analogue outputs 0/4-20mA
- 4 Relay outputs (Thresholds and alarm)
- OPTION:
Extension terminal for 2nd measuring parameter

APPLICATIONS

BAMOPHAR 451 offers a reliable and accurate measurement of dissolved oxygen (DO) concentration in water treatment process:

- WWTP survey (e.g. aerated basin)
- Rivers and lakes
- Fish farming

DESCRIPTION

In association with the probe AQUAPLUS (data-sheet 451-01), BAMOPHAR 451 allows the user to continuously measure the oxygen content dissolved in the water. With this complete system, atmospheric pressure, temperature and water conductivity are taken into account to display a reliable and accurate measurement.

BAMOPHAR is equipped with a color touch screen for the display of a multilingual menu friendly and intuitive. The reading is easy for measurement, temperature and relay status. In order to facilitate its commissioning, a programming menu can simulate the measurement, acting on analogue outputs and thresholds.

The measured value of dissolved oxygen and temperature can be continuously transmitted through the 4-20 mA outputs.

A complete system includes:

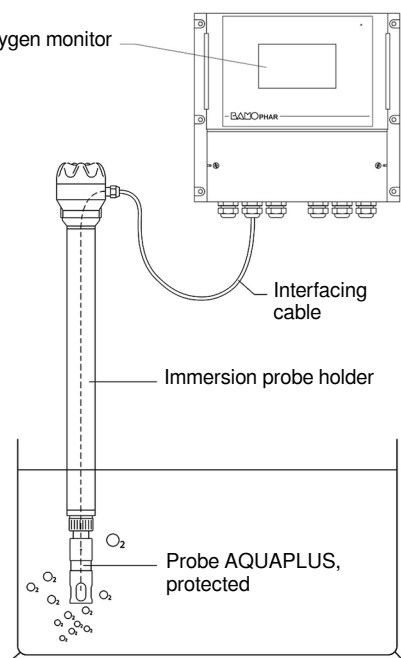
- 1 Monitor BAMOPHAR 451
- 1 probe AQUAPLUS (data-sheet 451-01)
- 1 Probe holder for immersion, PVC, Ø 50 mm
- 1 Cable to connect the holder to the monitor

BAMOPHAR 451 is extremely versatile by use of various parameters for control and regulation on thresholds, temperature correction and alarms.

An extension terminal (wall, panel or DIN rail mounting):

- Allows a second measuring parameter (pH, flow-rate, conductivity, etc.) (Data from this blind unit are displayed on the main unit)
- Connected to main unit with 4-wire shielded cable (Cable length between both devices: max. 500 m)

Dissolved oxygen monitor



Complete measuring system

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Dissolved oxygen monitor
BAMOPHAR 451

11-12-2019

D-451.03-EN-AD

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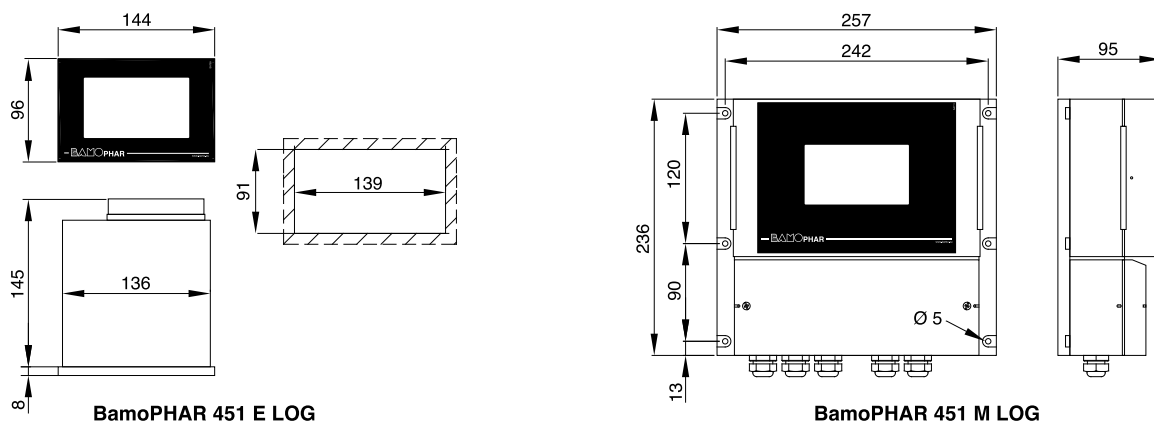
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TECHNICAL FEATURES

End-user interface	Color touch screen 4.3", resolution 480x272 pixels Display of measurements (D.O. concentration and temperature) and relay status Configuration - Keyword protected
Measuring scales	0 to 500 % or 0.01 to 50 mg/l
Accuracy	See details on data-sheet 451-01, AQUAPLUS probe
Sensor signal input	Screw terminals - digital signal
Relay outputs	4 contacts N.O., voltage free
Configurable thresholds	S1, independent threshold, to set up for measurement or temperature S2, independent threshold, to set up for measurement or temperature S3, independent threshold, to set up for measurement or temperature or an external function S4, threshold, to set up for alarming function, out of range, temperature sensor defect, or probe cleaning mode
Contact initial resistance	100 mΩ max. (voltage drop 6 V DC 1 A)
Switching power	831 VA AC / 3 A / 277 V AC 90 W / 3 A / 30 V DC
Switching capacity (min.)	100 mA, 5 V DC (variable according to switching frequency, environmental conditions, accuracy)
Impulse regulation	Cycle time setting from 0 to 9999 s, high and low proportional bandwidths, high and low dead zones
PID Regulation	Adjustable proportionality from 0 to 200%, Integrant and Derivative: 0 to 999 s
Calibration routine	Relay outputs inhibited; Analogue outputs on standby at latest values
Auto-cleaning menu	Settings of frequency and duration, relay outputs inhibited, analogue outputs on standby at latest values
Measurement output	0/4 - 20 mA (max. 600 Ω) proportional to measurement
Temperature output / PID	0/4-20 mA (max. 600 Ω), scaling 0...100 °C This temperature output is not available when PID regulation function is operating.
Program Testing	Simulation through the menu on measurement, temperature, PID and thresholds
Main power supply	230 V AC / 50-60 Hz (others on request) - Consumption 10 VA
Models	Panel mounting, 96x144 mm; screw terminals, Front IP65, rear IP40 Wall mounting, IP65, screw terminals, cable glands
Data Logger	Record of cycle average measurement (programmable) 150 000 records max. on memory card.

EC Conformity: The instrument meets the legal requirements of the current European Directives.

DIMENSIONS



CODE NUMBERS AND REFERENCES

Code	Reference	Description
451 500	BAMOPHAR 451 E LOG	Panel mounting 96x144 mm - LOGGER - Front IP 65; Rear IP 40
451 520	BAMOPHAR 451 M LOG	Wall mounting - LOGGER - IP 65, cable glands

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