Monitoring and control of disinfection process
BAMOPHAR 194

Panel mount version

Wall mount version

- **Color touch screen**
- **Input for 1 sensor 4-20 mA or 0-2 V**
- **Different scales for different sensors:**
  Free & total chlorine, chlorine dioxide
  Ozone, hydrogen peroxide, peracetic acid
- **1 Input for Pt100 sensor**
- **2 Outputs 0/4-20mA (ppm or g/l and °C)**
- **4 relays (Thresholds, alarm and/ or regulation)**
- **OPTIONS :**
  RS 422/ J-BUS + LOGGER
  Extension terminal for 2nd measuring parameter

APPLICATIONS

BAMOPHAR 194 is designed for measurement and regulation of disinfectants (free chlorine, total chlorine, chlorine dioxide, ozone, hydrogen peroxide, peracetic acid) in process of water and industrial applications.

EXAMPLES :
- Industrial water
- Drinkable water
- Swimming pools
- Hot sanitary water
- CIP (clean in place)

DESCRIPTION

BAMOPHAR 194 is equipped with a color touch screen for multilingual display of a user-friendly and intuitive menu.
It provides an easy reading of the measurement, temperature and status of thresholds.
It displays the menu for setting the analog output, thresholds and operating mode.
To facilitate commissioning, a programming menu is used to simulate the measurement, acting analogue outputs and P.I.D, as well as thresholds.

Analogue output reflects the measurement and may be scaled all along the range.
Temperature analogue output is available as a 4-20 mA signal.

BAMOPHAR 194 offers high flexibility on use through configurations of parameters for regulation, thresholds, temperature compensation 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)
- RS422 and Data Logger of main unit are shared between both units

Panel version plus Extension unit

INTERNATIONAL

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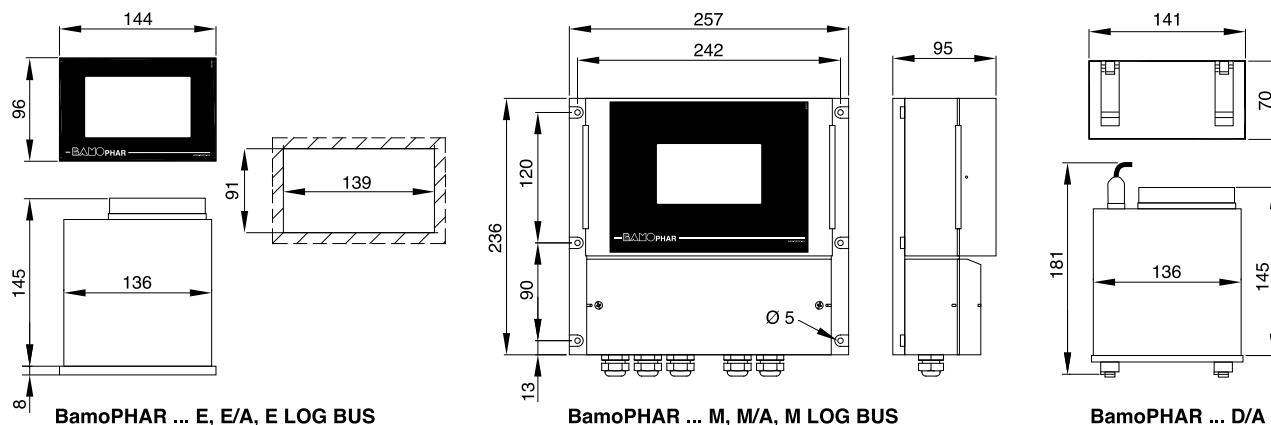
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TECHNICAL FEATURES

End-user interface	Color touch screen 4.3'', resolution 480x272 pixels Display of measurements, menus, temperature, relay status Configuration - Keyword protected
Measuring scale	Configuration according to sensor type (from 0.001 to 9999 ppm or g/l)
Accuracy	Report to sensor own features
Sensor signal input	For amperometric sensors, 4-20 mA 2 wire technique or 0-2 V 4 wire technique
Temperature compensation	Amperometric sensors supplies a temperature compensated signal Through an integrated temperature sensor Pt 100 Ω, 3-wire. Manual mode on BAMOPHAR when Pt100 sensor is not available
Relay outputs	4 contacts N.O., voltage free
Configurable thresholds	2 Thresholds, independent,, to set up for measurement or temperature 1 Threshold to set up for external contact, or measurement, or temperature 1 threshold, to set up for alarming function (too long injection, temperature sensor defect)
Contact, initial resistance	100 mΩ max. (voltage drop 6 V DC 1 A)
Switching power	831 VA AC / 3A / 277 V AC ; 90W / 3A / 30 V DC
Switching capacity (min.)	100 mA, 5 V DC (variable according to switching frequency, environmental conditions, accuracy)
Mechanical lifetime (min.)	5×10^6 operations (180 op./min)
Electrical lifetime (min.)	2×10^5 (at 20 op./min) for 3 A 125 V AC, 3 A 30 V DC - 10^5 (estimated load) for 3 A 125 V AC
On/Off Regulation	Adjustable cycle time 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
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
Program Testing	Simulation through the menu on measurement, temperature, PID and relays output
Main power supply	230 V AC / 50-60 Hz (others on request) - Consumption 10 VA
Models	Panel mounting, 96x144 mm, Front IP65 - Rear IP40 Wall mounting, IP65, cable glands

OPTION (RS422 + Logger)

Interface	RS422 output, J-BUS link - Binary slave mode - 2400 to 9600 bauds
Data Logger	Record of cycle average measurement 150 000 records max. on memory card.

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DIMENSIONS

BamoPHAR ... E, E/A, E LOG BUS

BamoPHAR ... M, M/A, M LOG BUS

BamoPHAR ... D/A

CODE NUMBERS AND REFERENCES

Code	Reference	Description
194 025	BAMOPHAR 194 E	Panel mounting 96x144 mm - Front IP 65; Rear IP 40
194 026	BAMOPHAR 194 E/A	Panel mounting 96x144 m- Extension, blind monitor - IP40
194 027	BAMOPHAR 194 D/A	Rail mounting - Extension, blind monitor - IP 40
194 032	BAMOPHAR 194 E LOG BUS	Panel mounting 96x144 m - RS422 + LOGGER - Front IP 65; Rear IP 40
194 030	BAMOPHAR 194 M	Wall mounting, IP 65, cable glands
194 031	BAMOPHAR 194 M/A	Wall mounting, IP 65, cable glands - Extension, blind monitor
194 033	BAMOPHAR 194 M LOG BUS	Wall mounting, IP 65, RS 422 + LOGGER; cable glands

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