

## pH CONTROLLER CP-801

**CP-801** pH controller is designed to make measurements in pure water, ultra pure water and sewage. It is one of the devices of new generation controllers representing wide range of use. Designed to work in power stations, heat and power plants and water treatment stations.

It is a stationary device in housing resistant to humidity (IP-65).

High measurement accuracy and stability have been provided. The device has a large, graphic display, showing the pH and temperature readout and the status of each relay simultaneously. It is possible to choose among the displayed information. Apart from the basic data – pH and temperature – one of the following additional parameters may be chosen to be displayed: information about the relays' status or information about the last calibration date.



The device is easy to operate, has an English menu. It is equipped with a collective optical signalisation of working correctness and the progress of regulation process. Thanks to the modern electronic components the controller's memory has become fully independent from the power supply.

**CP-801** controller has automatic compensation system, which cooperates with **Pt-1000** temperature probe.

The device enables 1, 2 and 3-point calibration of the pH electrode with automatic detection of the standard solution value (4.00, 7.00, 9.00, or 4.00, 7.00, 10.00). It is possible to calibrate the meter without the need of disconnecting the outputs.

The controller is powered with standard 230 V voltage, which is galvanically isolated from the input clamps. It is possible to use different power supply voltage: 110/230/24 V AC, 12 – 24 V DC.

#### **Outputs:**

- relays (alarm or PID regulation);
- isolated digital: RS-485, MODBUS (ASCII and RTU);
- isolated current outputs: 0 ÷ 20 or 4 ÷ 20 mA.

In case of using the relays and exceeding the entered lower or upper limits, the proper relay is switched (the minimum and maximum alarm), otherwise the duty cycle coefficient or frequency is changed (for the PID regulator). The meter is equipped with real time clock with date.

It is possible to connect to the remote panel (keyboard with display), which enables to control the device from up to 1 km distance.

Possibility of the data radio transmission from the measuring head to the controller.

The pH electrode, which cooperates with the device, is placed in the head. In case of pH measurements in containers we recommend **GPZ-1** immersible head with **EPX-1t** electrode for sewage or **GXZ-1t** head with suitable pH electrode chosen depending on the type of the measured liquid. The signal is amplified by preamplifier placed in the head.

The pH measurement in pipeline is made with use of the following flow-through heads: **GPP-1** with **EPX-1t** electrode or **GXP-1t** flow-through head with appropriate electrode chosen depending on the measurement conditions. In case of steel pipeline we offer special equipment for the pH electrode which is mounted on the thread placed on the pipe and made according to our drawings.

If the pressure in the pipeline is higher than 6 bars, we recommend **GXP-1** head, which is side-built and provides lateral circulation and natural outflow of excess of liquid. In case of using flow-through heads the preamplifier is mounted next to the head.

There is a possibility of wireless data transmission from the head to the controller.

## TECHNICAL DATA

<b>Measured value</b>	pH, temperature
<b>pH range</b>	0 ÷ 14 pH
<b>Resolution</b>	0,01 pH 1 digit
<b>Accuracy ( 1 digit)</b>	0,02 pH*
<b>Input impedance</b>	>10 <sup>12</sup> Ω
<b>Temperature measuring range</b>	-50 ÷ 200 °C**
<b>Temperature compensation</b>	automatic
<b>Temperature compensation range</b>	-5 ÷ 130 °C
<b>Temperature accuracy</b>	0.2 °C *
<b>Sensor calibraton</b>	1,2 or 3 points
<b>The relays' parameters</b>	2A/250VAC/30VDC, PID controlling
<b>Measurement input</b>	isolated
<b>pH datalogger output</b>	isolated, 0 ÷ 20 mA or 4 ÷ 20 mA
<b>Temperature datalogger output</b>	isolated, 0 ÷ 20 mA or 4 ÷ 20 mA
<b>RS485 output</b>	isolated
<b>Maximal RS485 connection lenght</b>	1000 m
<b>Maximal cable length between preamplifier and controller</b>	200 m
<b>Maximal distance between sensor and preamplifier</b>	10 m
<b>Power</b>	240 V 50Hz, for a special order 170VAC÷250VAC, 24VDC/24 VAC
<b>Isolation class</b>	PN-83/T-06500
<b>Radioelectric interference</b>	N level
<b>Dimensions</b>	215 x 215 x 95 mm
<b>Weight of contoller / preamplifier</b>	1350 g / 120g
<b>Ambient temperature</b>	-20 ÷ 40 °C
<b>Atmospheric humidity / pressure</b>	Max. 80% / 80 ÷ 110 kPa
<b>Atmospheric aggressivity level</b>	N/2/AG-U/C

\* The accuracy of the meter only.

\*\*The temperature measurement range is limited to the temperature operating range of pH electrode.