

## pH/ORP Transmitter / Controller PHT20

- ◆ Operates with standard pH/ORP electrodes
- ◆ High input impedance – over  $10^{13} \Omega$
- ◆ Relay alarm / control output
- ◆ Analog retransmission output isolated from input
- ◆ Pt100, Pt1000 or NTC 1k temperature compensation
- ◆ Fully programmable

PHT20 is a reliable pH/ORP transmitter, enclosed in a small housing for DIN-rail mounting or in box mounting. PHT20 converts the high impedance voltage output of pH or REDOX (ORP) probes into standard current or voltage signal that can be safely sent over longer distances. The transmitter provides the necessary for the normal pH/ORP probe's operation and has an additional Pt100, Pt1000 or NTC 1k input for automatic temperature compensation. The transmitter provides linear current or voltage output and can also be equipped with a relay alarm/control output. All device parameters (preset conductance ranges, analog output range and direction, relay set point, hysteresis, and direction, temperature compensation parameters, etc.) are user-programmable via the RS232 interface. Thanks to its wide measurement range, flexibility, programmability, and reliability, the PHT20 transmitter is very suitable for water treatment and processing applications in the food, pharmaceutical, and many other industries.



### Technical specifications

#### Input

<b>Input type</b>	Standard pH/ORP electrodes
<b>Measurement range</b>	pH - 0...14pH ORP - -2000...+2000 mV
<b>Temperature input</b>	Pt100, Pt1000, NTC 1k
<b>Temperature compensation</b>	0.0...100 °C

#### Accuracy

<b>Total measurement error</b>	± 0.3% from span (incl. non-linearity)
<b>Temperature drift</b>	0.06% from span for 1 °C

#### Analog output

<b>Output signal</b>	0(4)...20 mA, 0(2)...10 V, reversible
<b>Resolution</b>	0.025%
<b>Current load</b>	max. 750 $\Omega$ at 20 mA
<b>Voltage load</b>	max. 2 k $\Omega$ at 10 V
<b>Isolation from input</b>	1500 VAC for 1 min

#### Relay output

<b>MOS gate</b>	0.1A/60V, optically isolated
<b>Output function</b>	ON/OFF, alarms
<b>Set point</b>	configurable via interface
<b>Isolation from input</b>	1500 VAC for 1 min

(1) Ordered separately (see 'Accessories')

#### Interface

<b>Interface type</b>	RS232 (TTL), requiring special cable (1)
<b>Interface cable type (1)</b>	K2, K2U, K12U

#### Power supply

<b>Supply voltage</b>	10...30 VDC
<b>Consumption</b>	max. 60 mA
<b>Isolation from input</b>	1500 VAC for 1 min

#### Operating conditions

<b>Ambient temperature</b>	-10...65 °C
<b>Operating humidity</b>	0...85 %RH, non-condensing
<b>Storage temperature</b>	-20...85 °C

#### Design and materials

<b>Case material</b>	plastic	plastic
<b>Mounting</b>	on DIN rail	free mounting
<b>Wiring</b>	screw terminals	screw terminals
<b>Dimensions</b>	23x90x58 mm	80x80x60 mm
<b>Weight</b>	max.100 g	max.200 g
<b>Protection class</b>	IP20	IP65

### Ordering code PHT20 –G0.G5.G6.G6.G9.G11

Code	Feature or option	Code values
<b>G0</b>	Case	<b>C</b> – for rail, <b>Y</b> – box 80x80 mm
<b>G5</b>	Relay output	<b>X</b> - none (2), <b>M</b> - isolated MOS gate, <b>Z</b> - other (specify!)
<b>G6</b>	Input	pH/ORP: <b>DN</b> - pH, <b>DO</b> - ORP, <b>A</b> - programable Temperature: <b>X</b> - none, <b>BD</b> - Pt100, <b>BG</b> - Pt1000, <b>BN</b> – NTC 1k, <b>A</b> - programable
<b>G9</b>	Serial interface	<b>X</b> - none, <b>A</b> – RS232 (TTL)
<b>G11</b>	Analog output	<b>X</b> - none (2), <b>E</b> - 0...20 mA, <b>F</b> - 4...20 mA, <b>K</b> - 0...10 V, <b>L</b> - 2...10 V, <b>A</b> - programable

(2) At least one output must be ordered!