

Conductivity Transmitter / Controller PHC20

- ◆ Operates with 2-electrode contacting cells
- ◆ 0.1...100000 µS/cm measurement range
- ◆ Relay alarm / control output
- ◆ Analog retransmission output isolated from input
- ◆ Pt100, Pt1000 or NTC 1k temperature compensation
- ◆ Fully programmable

PHC20 is a reliable conductivity transmitter, enclosed in a small housing for DIN-rail mounting or in box mounting, especially designed for clear, industrial, and sea water applications. It is compatible with COMECO's conductivity probes series CSK as well as other 2-electrode contacting conductivity cells within conductance range from 0.1 µS to 100 mS/cm, 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 PHC20 transmitter is very suitable for water treatment and processing applications in the food, pharmaceutical, and many other industries.



Technical specifications

Input

Input type	2-electrode contacting cell
Measurement range	0.1 µS to 100 mS
Selectable ranges	0.008 ...25 mS/cm
Temperature input	Pt100, Pt1000, NTC 1k
Temperature compensation	0.0...10.0 %/°C, selectable TDS

Accuracy

Total measurement error	± 2% from span (incl. non-linearity)
Temperature drift	0.06% from span for 1 °C

Analog output

Output signal	0(4)...20 mA, 0(2)...10 V, reversible
Resolution	0.025%
Current load	max. 750 Ω at 20 mA
Voltage load	max. 2 kΩ at 10 V
Isolation from input	1500 VAC for 1 min

Relay output

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

⁽¹⁾ Ordered separately (see 'Accessories')

Interface

Interface type	RS232 (TTL), requiring special cable ⁽¹⁾
Interface cable type ⁽¹⁾	K2, K2U, K12U

Power supply

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

Operating conditions

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

Design and materials

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

Ordering code PHC20 –G0.G5.G6.G9.G11

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

⁽²⁾ At least one output must be ordered!