

SCM 31x

Transmitter pH and ORP/conductivity/DO

Highlights

- Converting pH and redox signal in 4-20mA (SCM 311)
- Converting conductivity signal in 4-20mA (SCM 312)
- Converting DO signal in 4-20mA (SCM 313)
- Span and offset calibration
- Temperature compensation
- Galvanic input/output isolation



Description

SCM 311/312/313 is industrial measurement converter who has current signal 4-20mA as his output signal, equivalent to voltage of pH and ORP/conductivity/ DO input signal. Transducer has a galvanic input/output isolation, wide range power supply, high input impedance, has a span and offset calibration feature, and manual or automatic compensation. Housing is water-resistant and plastic for wall and panel mounting, it's dimensions are 115x90x56mm with IP65 protection. Device calibration is performed using alphanumeric LCD display with 16 characters in two rows and four buttons keyboard. Galvanic input/output isolation excludes the possibility of interferences from different kinds of earth connection. This is particularly important feature, since two different earth connections can differ for couple of hundreds of Volts.

Application

SCM 311/312/313 pH and ORP/conductivity/DO transmitter is used for assertive measurement of pH and redox/conductivity/DO in following systems:

- Waste water management systems,
- Production process automatization (e.g. in chemical and food industry), and
- Remote tracking of river and lakes pollution

Technical specification

pH input (SCM 311)	Galvanic pH probe: - combined - two-probe system Resolution 0.01pH Accuracy 0.02pH
ORP input (SCM 311)	Standard platinum probe Resolution 1mV Accuracy ± 2 mV
Conductivity input (SCM 312)	Standard conductivity probe Resolution 0.01 μ S Accuracy 0.02 μ S
DO input (SCM 313)	Galvanic probe for DO Resolution 0.1% Accuracy 0.1%
Input resistivity	Higher than 1012 Ω
Temperature input	internal sensor, 100 Ω RTD, 1000 Ω RTD, manual input Resolution 1 $^{\circ}$ C Accuracy ± 1 $^{\circ}$ C
Transmitter voltage	13V nominal
Measuring range	SCM 311: 0.00 to 14.00 pH 0 to 1500mV (ORP) SCM 312: 0.00 to 20.00mS 0.000 to 2.000mS 0.0 to 200.0 μ S 0.00 to 20.00 μ S SCM 313: 0-100% saturation Temperature range: -20 to 110 $^{\circ}$ C
Measuring cycle	0.4s
A/D converter	SAR 12-bits
Current output	4-20mA, alarm value 3.5mA/20.5mA Resolution 0.005mA Accuracy ± 0.05 mA
Working temperature	-10 $^{\circ}$ C to 50 $^{\circ}$ C
Humidity	5 to 95%, without condensing
Display	LCD 8 digits 9mm

Power supply	From the loop (4-20mA), loop voltage 13 to 32Vdc
Dimensions	90mm (H) x 115mm (W) x 56mm (D)
Assembly	Screw plug, max 2.5mm ²
Weight	cca 500g

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