

SIGNUX COA05

Water quality — RS485 · 4-20 mA



DESCRIPTION

Digital conductivity probe with the electronics inside and five cell constants, from $k = 0.01$ to $k = 30$, covering everything from ultrapure water to 300 mS/cm. RS485 and 4-20 mA outputs, automatic temperature compensation and a replaceable sensing element. PPS body, IP68, up to 6 bar.

FEATURES

- The cell rules: Five constants, from $k = 0.01$ to $k = 30$. Chosen when ordering, and it sets the range: ultrapure water and brine are not measured with the same probe.
- It works on its own: The electronics are inside. It connects straight to the PLC, the computer or the gateway over RS485, or to any 4-20 mA input. No separate transmitter.
- The electrode is replaceable: You renew the part that wears out, not the whole device. Calibration and settings are done over the bus, in place.
- Up to 6 bar: Submersible, IP68 and up to 6 bar, with G 3/4" threads at both ends: it measures inside the line, not in a beaker.

AT A GLANCE

Measures	Conductivity · Temperature
Output	RS485 · 4-20 mA
Protection	IP68
Operating	0 to +60 °C

GENERAL

Measured parameters	Conductivity · Temperature	
Output	RS485 · 4-20 mA	
Pipe connection	G 3/4"	At both ends

CONDUCTIVITY

Range	0-20 µS/cm	With cell constant k = 0.01
	0-200 µS/cm	With k = 0.1
	0-2000 µS/cm	With k = 1
	0-20 mS/cm	With k = 10
	0-300 mS/cm	With k = 30
Accuracy	±2 % FS	
Resolution	.01 µS/cm	Depending on the cell constant
	.1 µS/cm	
	1 µS/cm	
	.01 mS/cm	
	.1 mS/cm	
Temperature compensation	0-60 °C	Automatic, NTC 10K (PT1000 on request)
Correction	Three-point	Zero, slope and compensation, over RS485
Input resistance	≥ 1 × 10 ¹² Ω	

OUTPUT AND POWER

Output interface	RS485 · 4-20 mA	At 5 V, RS485 only
Protocol	Modbus RTU	Function codes 03, 06 and 16. 9600 baud and address 1 by default
Analogue output load	< 750 Ω	
Power supply	5 / 12 / 24 VDC	
Configuration	Over RS485	Address, baud rate, calibration, 4-20 mA range, factory reset
Settings retention	> 10 years	Without power

CONSTRUCTION

Protection rating	IP68	
Operating temperature	0 to +60 °C	
Pressure range	0-6 bar	
Material	PPS	
Dimensions	350 × 45 mm	
Cable length	5 m	Other lengths on request
Weight	.33 kg	
Sensing element	Replaceable	

PART NUMBERS

PART NUMBER	MEASUREMENT RANGE	POWER
SX-COA05-001-R	k = 0.01 · 0-20 µS/cm	5 V DC · RS485
SX-COA05-001-A	k = 0.01 · 0-20 µS/cm	12-24 V DC · RS485 + 4-20 mA
SX-COA05-01-R	k = 0.1 · 0-200 µS/cm	5 V DC · RS485
SX-COA05-01-A	k = 0.1 · 0-200 µS/cm	12-24 V DC · RS485 + 4-20 mA
SX-COA05-1-R	k = 1 · 0-2000 µS/cm	5 V DC · RS485
SX-COA05-1-A	k = 1 · 0-2000 µS/cm	12-24 V DC · RS485 + 4-20 mA

PART NUMBER	MEASUREMENT RANGE	POWER
SX-COA05-10-R	k = 10 · 0-20 mS/cm	5 V DC · RS485
SX-COA05-10-A	k = 10 · 0-20 mS/cm	12-24 V DC · RS485 + 4-20 mA
SX-COA05-30-R	k = 30 · 0-300 mS/cm	5 V DC · RS485
SX-COA05-30-A	k = 30 · 0-300 mS/cm	12-24 V DC · RS485 + 4-20 mA