AQUALABO

Smart water solutions

C4E

CONDUCTIVITY/SALINITY DIGITAL TECHNOLOGY FOR OPTIMIZED MEASURES

ADVANTAGES +

- 4 electrodes (2 graphic, 2 platinum)
- Range 0 to 200 mS/cm
- Digital sensor / Modbus RS-485
- Robust and Watertight

APPLICATIONS

Urban wastewater treatment
Industrial effluent treatment
Surface water monitoring
Sea water
Drinking water

MOUNTING AT 4 ELECTRODES

The electrode works with a technology in 4 electrodes: an alternating current of constant-voltage is established between a primary's pair of electrodes in graphite. The secondary's electrodes in platinum allow of regulate the voltage imposed to primary's electrodes to reflect of the fouling. The voltage measured between the primary's electrodes is in function of the resistance of place and so, of the conductivity.

DIGITAL TECHNOLOGY

The "smart" Digital C4E sensor stores calibration and history data within the sensor. This allows you a "plug and play" system without re-calibration.

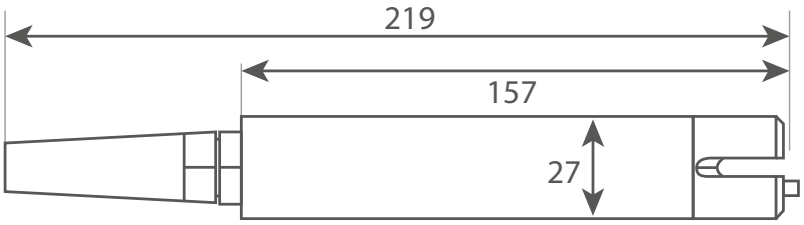
Thanks to the Universal Modbus RS485 protocol, the PONSEL Digital C4E can be connected to all devices commonly used (Datalogger, Controller, Automat, Remote System…).

PONSEL
BY AQUALABO

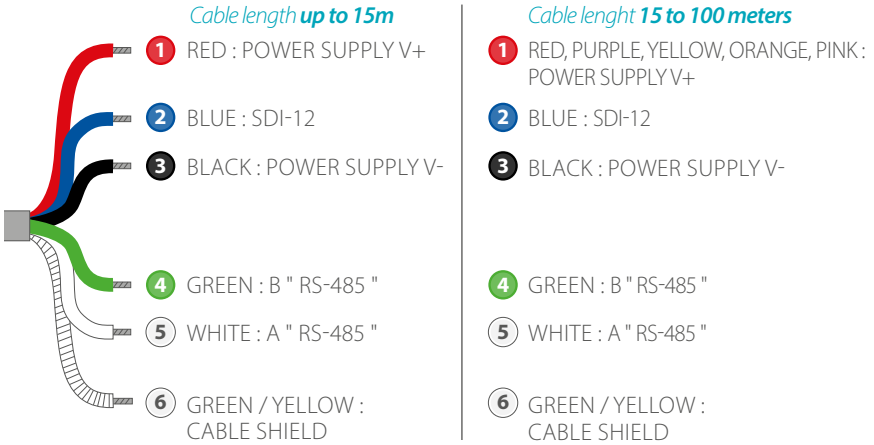
TECHNICAL CHARACTERISTICS

Measures	
Measure principle	Conductivity sensor with 4 electrodes (2 graphic, 2 platinum)
Measure ranges conductivity	0-200,0 µS/cm • 0 –2000 µS/cm • 0,00 –20,00 mS/cm • 0,0 –200,0 mS/cm
Resolution	0,01 to 1 according the range
Accuracy	+/- 1 % of the full range • Beyond 100 mS/cm use appropriate buffer solution
Measure range salinity	5-60 g/Kg
Measure range TDS -KCl	0-133 000 ppm
Response time	< 5 s
Working temperature	0°C to + 50°C
Temperature compensation	NTC
Stocking temperature	-10°C to + 60°C
Signal interface	Modbus RS-485 (standard) and SDI-12 (option)
Maximum refreshing time	Max < 1 s
Sensor power-supply	5 to 12 volts
Electric consumption	Standby : 25 µA • Average RS485 (1 measure/seconde) : 6,3 mA Average SDI12 (1 measure/seconde) : 9,2 mA • Current pulse : 500 mA
Sensor	
Dimensions	Diameter : 27 mm ; Lenght : 157 mm
Weight	300 g (sensor + cable 3 meters)
Material	PVC, DELRIN, stainless steel
Maximum pressure	5 bars
Connection	9 armoured connectors, polyurethane jacket, bare-wires or waterproof Fisher connector
Protection	IP68

DIMENSIONS



WIRING DIAGRAM



Cable length ***up to 15m***

1. RED : POWER SUPPLY V+
2. BLUE : SDI-12
3. BLACK : POWER SUPPLY V-
4. GREEN : B " RS-485 "
5. WHITE : A " RS-485 "
6. GREEN / YELLOW : CABLE SHIELD

Cable lenght ***15 to 100 meters***

1. RED, PURPLE, YELLOW, ORANGE, PINK : POWER SUPPLY V+
2. BLUE : SDI-12
3. BLACK : POWER SUPPLY V-
4. GREEN : B " RS-485 "
5. WHITE : A " RS-485 "
6. GREEN / YELLOW : CABLE SHIELD

- Never exceed a voltage of 10VDC (absolute maximum rating) on communication lines RS485, A or B, under penalty of irreversible destruction of the transceiver component RS 485.
- SDI-12: respect the voltage value described in the associated standard (nominal: 5 VDC)
- Always connect ground + shield first.