AQUALABO

Smart water solutions

PHEHT & PHT

DIGITAL SENSOR
PHEHT: PH, REDOX & TEMPERATURE
AND PHT: PH & TEMPERATURE

DIGISENS RANGE

APPLICATIONS

Surface water monitoring, groundwater…

Urban wastewater treatment (inlet, aeration basin, outlet)

Industrial wastewater treatment

Deodorization channels

Water quality control Fish farming/aquaculture

ADVANTAGES

- Combination pH/Redox/Temp or pH/Temp sensor
- Range :
  - pH : 0,00 to 14,00 units
  - Redox : - 1000 to + 1000 mV
  - T°C : 0°C to + 50,00°C
- Digital Sensor : Modbus RS 485 / SDI-12
- Calibration data inside
- pH/ORP or pH Cartridge

DIGITAL TECHNOLOGY

The PHEHT and PHT sensors has been designed to perform under hard conditions rivers, seawater with conductivities of 50 mS/cm and to wastewater with conductivity higher than 200 mS/cm.

This sensor features a "long life" reference. The Plastogel® PONSEL technology increase the lifetime of the probe the need to refill.

This sensor has been designed also for handheld and in situ applications which have been the most difficult situations for a pH/ORP sensor in term of sensor resistance, quick time response, minimal flow dependence and low power consumption.

PONSEL
BY AQUALABO

DIGITAL COMMUNICATION / BUILT-IN TRANSMITTER

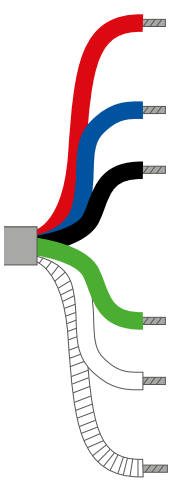
The "smart" pH/Redox/Temp sensor stores calibration and history data within the sensor. This allows you a "plug and play" system without re-calibration.

Thanks to the Universal **Modbus RS485** protocol, the PONSEL pH/Redox/T sensor can be connected to all devices commonly used (Datalogger, Controller, Automat, Remote System…).

TECHNICAL FEATURES

pH	
Measure principle	Combined electrode (pH/ref): special glass, Ag/AgCl ref. Gelled electrolyte (KCl)
Range	0 – 14 pH
Resolution	0,01 pH
Accuracy	+/- 0,1 pH
Redox	
Measure principle	Combined electrode (Redox/reference): Platinum tip, Ag/AgCl AgAgCl. Gelled reference (KCl)
Range	- 1000,0 to + 1000,0 mV
Resolution	0,1 mV ;
Accuracy	± 2 mV
Temperature	
Technology	NTC
Range	0,00 °C to + 50,00°C
Resolution	0,01 °C
Accuracy	± 0,5 °C
Response time	< 5 s
Storage temperature	0°C to + 60°C
Protection	IP 68
Interface	Modbus RS-485 / SDI-12 (option)
Power supply	5 to 12 volts
Power consumption	Standby: 15µA Average RS485 (1 measure/seconde) : 5.7 mA Average SDI12 (1 measure/seconde) : 9.5 mA Current pulse: 500 mA (1 ms)
Sensor	
Dimensions	Diameter: 27 mm ; Lenght: 171,5 mm
Weight	350 g (sensor + 3 m cable)
Material	PVC, DELRIN, special pH glass, platinum, polyamide
Pressure	5 bars
Cable	Coaxial armoured, Polyurethane, bare wire or Fisher connector
Protection	IP68

ELECTRICAL CONNECTIONS



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

CONNECT WIRES 3 AND 6 TOGETHER

- **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.**