

# AWQ-pH: Water Quality Sensing pH, Redox & Temperature

## Measurement Technology

The combined sensor AWQ-pH is based on a principle of measure of difference of potential between a reference electrode (Ag/AgCl) and an electrode of measure (Special pH glass for the measure of pH, and a ring of platinum for the ORP measurement). The returned measure is given for a temperature of 25°.

The AWQ-pH sensor has been designed to perform under hard conditions, featuring a “long life” reference. The technology increases the lifetime of the probe the need to refill. This sensor has been designed also for hand-held 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.

## Digital Communication

The “smart” pH/Redox/Temp sensor stores calibration and history data within the sensor. This allows you a “plug and play” system without recalibration. Thanks to the Universal Modbus RS485 protocol, the pH/Redox/T sensor can be connected to all devices commonly used (Datalogger, Controller, Automat, Remote System...).



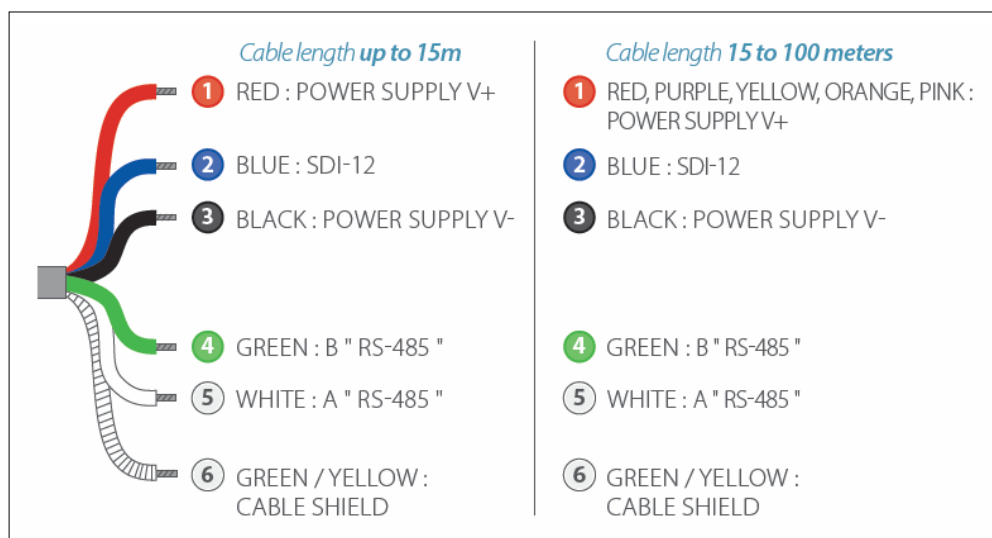
## Applications

- Industrial/municipal sewage treatment plants
- Wastewater management (nitrification and denitrification)
- Surface water monitoring
- Drinking water monitoring

## Advantages

- Combination pH/Redox/Temp sensor
- Digital Sensor: Modbus RS 485 / SDI-12
- Calibration data inside
- pH/ORP Cartridge

## Wiring Diagram



# AWQ-pH Specifications

<b>pH Measurement Principle</b>	Combined electrode (pH/ref): special glass, Ag/AgCl ref. Gelled electrolyte (KCl)
<b>Measurement Range</b>	0 – 14 pH
<b>Resolution (Accuracy)</b>	0.01 pH (+/- 0.1 pH)
<b>Redox Measurement Principle</b>	Combined electrode (Redox/reference): Platinum tip, Ag/AgCl AgAgCl. Gelled reference (KCl)
<b>Redox Measurement Range</b>	- 1000 to + 1000 mV
<b>Redox Resolution (Accuracy)</b>	0.1 mV ( $\pm$ 2 mV)
<b>Temperature Technology</b>	NTC
<b>Range</b>	0°C to +50°C
<b>Temp. Resolution (Accuracy)</b>	0.01 °C ( $\pm$ 0.5 °C)
<b>Response Time</b>	< 5s
<b>Sensor Storage Temperature</b>	0°C to + 60°C
<b>Power Requirements</b>	5 to 12 volts DC (for Cable 0-15m), 7-12 volts (for Cable >15m), Max. 13.2 V
<b>Current Draw (Power Consumption)</b>	Standby: 25 $\mu$ A Average RS485 (1 measurement/second): 3.9 mA Average SDI-12 (1 measurement/second): 6.8 mA Current pulse: 500 mA; Heating time: 100 mS Protection against the inversions of polarity
<b>Sensor Dimensions</b>	<b>Sensor Size:</b> Diameter: 27 / 21 mm; Length: 207 mm <b>Sensor Weight (Including 3 Meter Cable):</b> Approx. 350gms <b>IP Classification:</b> IP68 <b>Sensor Cable:</b> Standard: 3, 7 and 15 m (other length on request). 100 m Max. Up to 100 m with junction box.

## Sensor Dimensions As Outline

