SPS-pH Water Quality Sensor Datasheet

Product overview

The SPS-pH sensor uses a composite electrode that combines a glass indicator electrode and a reference electrode to measure the pH of water. The potential of the internal reference electrode in the glass electrode is constant regardless of the pH of the solution to be measured. When the glass bubble is immersed in the test solution with changing H+ concentration, the difference between the stable potential of the reference electrode and the potential generated by the glass ball will be read by the voltmeter and used as the measurement result.

The pH sensor supports RS485 output mode, and the transmitter module is miniaturized and integrated with pH electrode. pH sensor is widely used in drinking water, pipeline water, surface water and all kinds of wastewater.

Application

- Urban sewage
- Industrial wastewater
- Seawater, fishery, aquaculture
- Surface water
- Drinking water

Features

- Electrodynamic measurement, no pollution, friendly to the environment
- Fast measurement, the fastest measurement cycle is 1 second
- RS485 communication mode, can quickly connect the meter head, control the sensor
- IP68 protection grade, can be used in harsh environments
- Low power consumption, can be powered by battery, convenient for equipment deployment

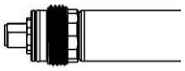
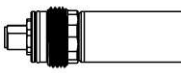
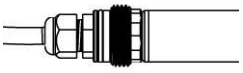
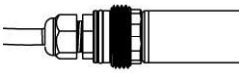
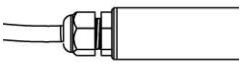
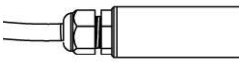
Specifications

Specifications are subject to change without notice.

Principle	Glass electrode method
Measuring range	0 - 14 pH
Resolution	0.01 pH
Accuracy	±0.1 pH
Repeatability	±0.1 pH
Dimensions	φ25×228 mm (Slightly different sizes for different interfaces)
Weight	0.63 kg
Power Requirements	DC +12 - +24 V
Installation method	Submerged, Flow-through
Pressure	<0.1 MPa
Operating temperature	2 - 50 °C (35.6 - 122 °F)
Storage temperature	2 - 50 °C (35.6 - 122 °F)
Measurement period	Minimum 1 s of seconds, adjustable
Sensor cable length	Cable straight out: 6 m (19.69 ft.), 5 pole aviation plugs: 2 m (6.56 ft.) Please contact us for other sizes
Communication method	Modbus RS485
Sampling requirements	Temperature: 2 - 50 °C (35.6 - 122 °F) Flow rate: 250 - 500 mL/min; Pressure: no more than 1bar, in water flow at 2 - 50 °C (35.6 - 122 °F)
Warranty period	One year

Product Selection

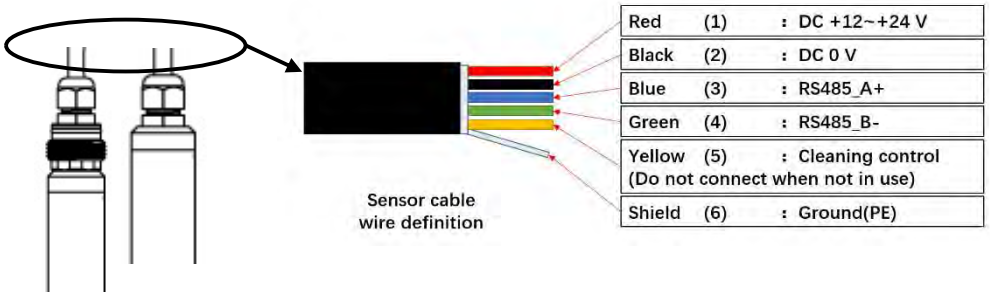
The sensors are available with different tail connections so that customers can choose according to their needs.

Model	Description	Application	IP rating	Pictures
SPS-pH-S01	5 pole aviation plug, cable: 2 m with waterproof connection thread	Surface water or drinking water	IP65	
SPS-pH-S02	5 pole aviation plug, cable: 2 m with waterproof connection thread	Sewage	IP65	
SPS-pH-S11	Cable straight out, cable: 6 m with waterproof connection thread	Surface water or drinking water	IP68	
SPS-pH-S12	Cable straight out, cable: 6 m with waterproof connection thread	Sewage	IP68	
SPS-pH-A01	5 pole aviation plug, cable: 2 m	Surface water or drinking water	IP65	
SPS-pH-A02	5 pole aviation plug, cable: 2 m	Sewage	IP65	
SPS-pH-A11	Cable straight out, cable: 6 m	Surface water or drinking water	IP68	
SPS-pH-A12	Cable straight out, cable: 6 m	Sewage	IP68	

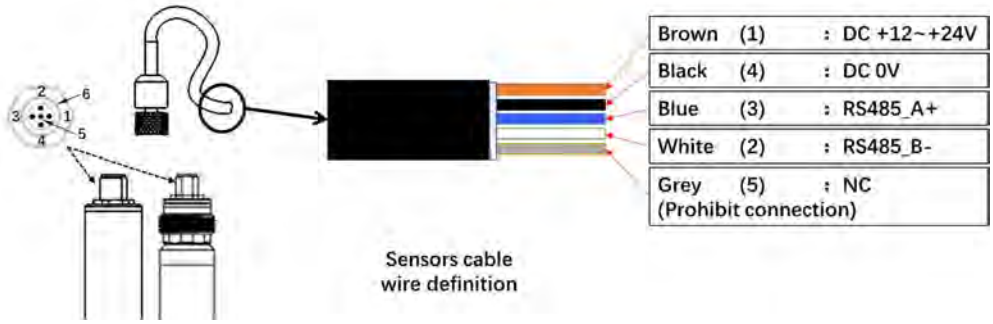
Interface definition

There are two types of wiring for the sensors, direct out and 5 pole aviation plugs. The two use different cables and have different wiring definitions, see diagram below.

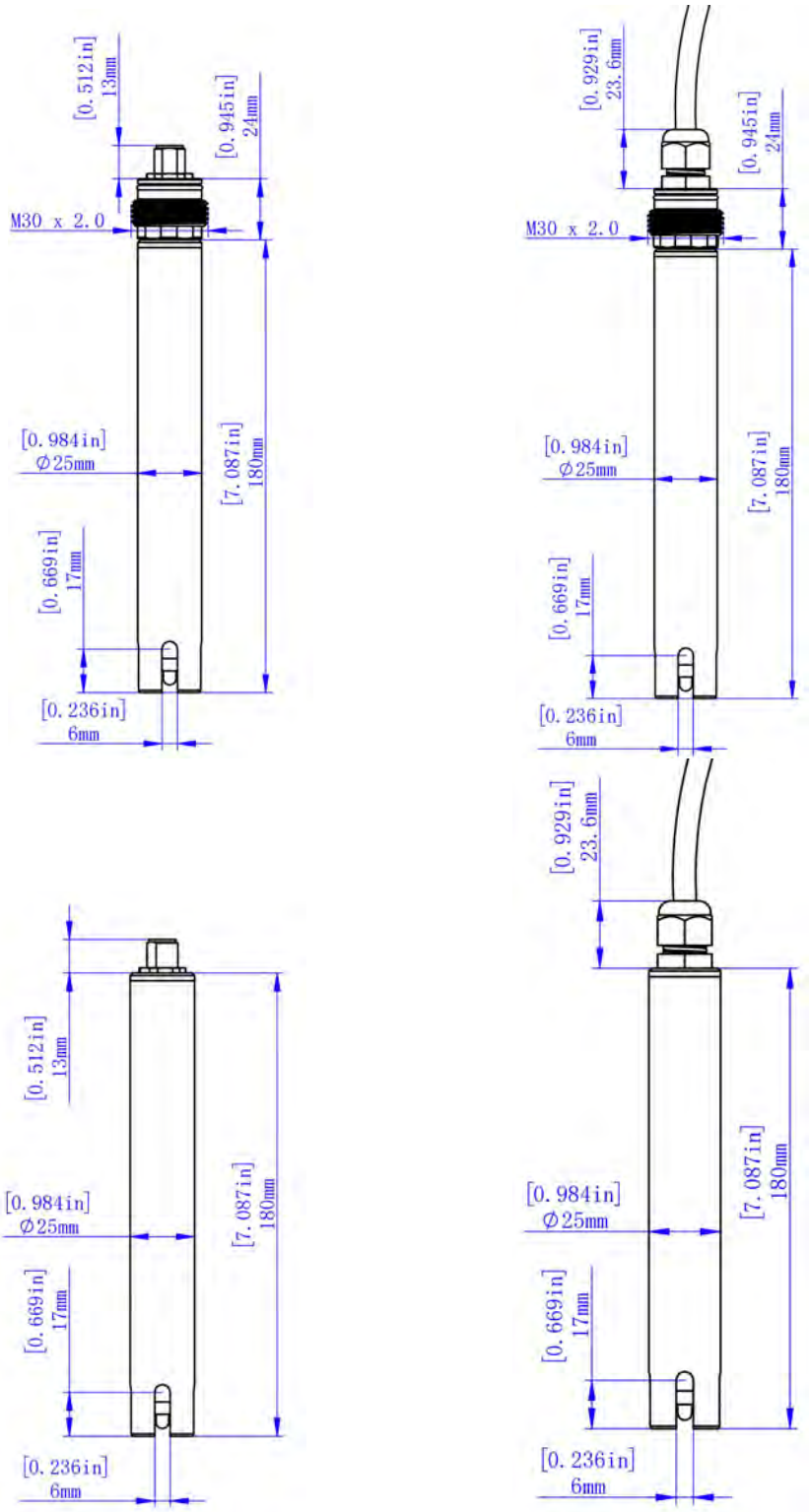
Cable straight out.



5 pole aviation plugs



Dimensions


[0.512in]
13mm
[0.945in]
24mm
M30 x 2.0
[0.984in]
Ø25mm
[7.087in]
180mm
[0.669in]
17mm
[0.236in]
6mm
[0.929in]
23.6mm