SPS-M-SCx Multi-Parameter Water Quality Sensor Datasheet

Product overview

SPS-M-SCx sensor adopts optical principle and integrates multiple parameters into one, which can measure turbidity, TOC, and COD. Users can choose according to their needs. The turbidity sensor is equipped with automatic optical window cleaning function, which is maintenance-free for a long time for tap water application scenarios. In addition, with the MC-W-S meter controller and SPS-Server (SPS cloud service), users can realize on-site and remote data viewing.

Application

- Tap water factory water monitoring
- Water quality monitoring of tap water network
- Monitoring of secondary water supply of tap water

Advantage

- High precision and high reliability
  - Accuracy comparable to US Hash 1720E and TU5300
  - Pass CE/RoHS/vibration/high and low temperature test
- Self-cleaning and maintenance-free
  - 1-3 months secondary water supply sensor maintenance-free
  - 3 months factory water sensor maintenance-free
- Small size, high withstand voltage
  - 1/4 the volume of 1720E and TU5300
  - Withstand pressure up to 1MPa (10atm)
- All-in-one, multi-parameter
  - Highly integrated, can measure turbidity, organic matter

Specifications

Specification	Detail
Measurement method	Turbidity: Nephelometry with scattered light at a 90-degree angle to the incident light COD/TOC: Ultraviolet absorption spectroscopy
Dimensions(W×D×H)	150×82×175 mm (5.9×3.2×6.9 in)
Weight	1.6 kg
Power requirements	DC+12 V to +24 V
Power	<6 W
Protection class	IP68 (Measurement channel)
Mounting	Indoor on a wall
Operating temperature	2 to 50 °C (35.6 to 122 ℉)
Storage temperature	-10 to 50 °C (14 to 122 ℉)
Humidity	5% to 95% relative humidity, non-condensing
Sensor cable length	2m（6.56ft）,Please contact us for other sizes
Fittings	Sample inlet, and outlet: 6 mm. OD tubing (optional tubing adapter, ¼ in. to 6 mm)
Tubing requirements	Polyethylene, polyamide or polyurethane tubing. Calibrated ¼ in. OD, +0.03 or –0.1 mm (+0.001 or –0.004 in.)
Range	TUR：0-100NTU/FNU COD：0-50 mg/L (for KHP) TOC：0-20 mg/L (for KHP)
Limit of detection	TUR：0.0032 NTU (25 °C) COD：0.005 mg/L (25 °C) TOC：0.005 mg/L (25 °C)
Measurement period	10 s to 255 s adjustable
Accuracy	TUR：0-40 NTU: ±2% or ±0.015 NTU (the larger value) 40-100 NTU: ±2% COD：±2%F.S. or ±0.5 mg/L TOC：±2%F.S. or ±0.25 mg/L
Resolution (display)	TUR：0.001 NTU COD：0.001 mg/L TOC：0.001 mg/L
Sample requirements	Temperature:2-50 °C (35.6-122℉） Flow rate：200-500 mL/min Pressure：10 bar (145 psi) maximum compared to air, 2 to 50 °C (35.6 to 122 ℉) sample
Calibration options	Turbidity: multi-point calibration, supports up to 5 points calibration COD/TOC: Single point calibration
Warranty	1 year

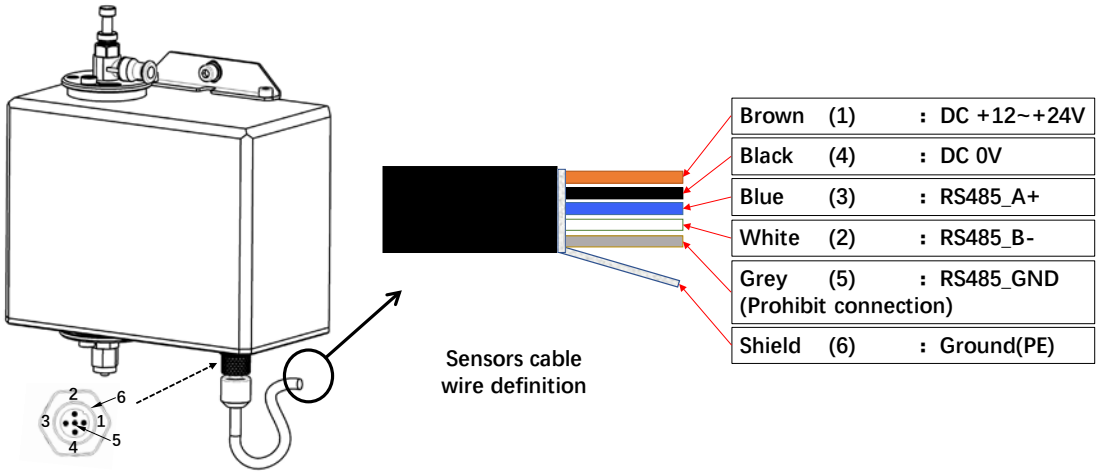
In no event will the manufacturer be liable for direct, indirect, special, incidental or consequential damages resulting from any defect or omission in this manual. The manufacturer reserves the right to make changes in this manual and the products it describes at any time, without notice or obligation.

Device selection

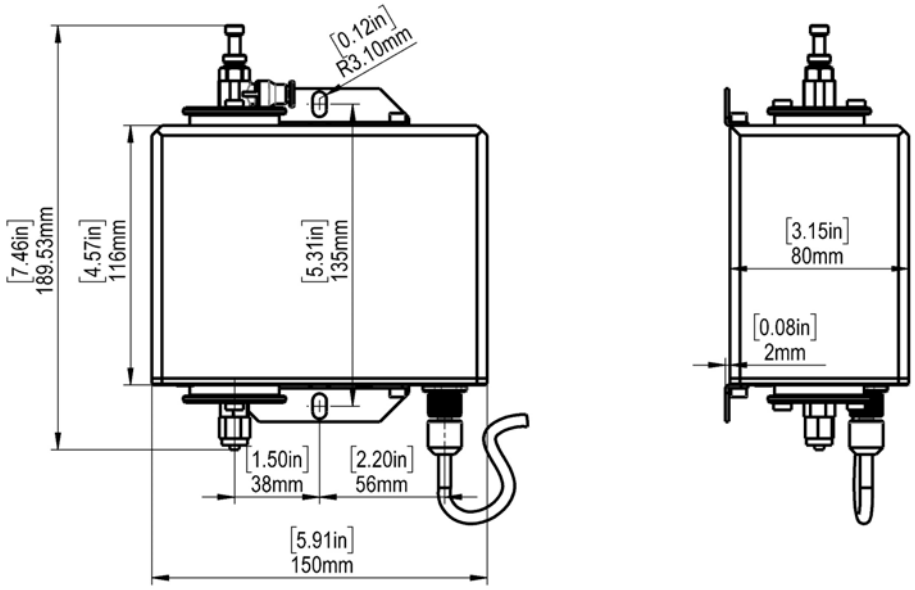
Model No.	Parameters
SPS-M-SC2	Turbidity, TOC
SPS-M-SC3	Turbidity, COD
SPS-M-SC5	Turbidity, TOC, COD

Interface definition

The SPS-M-SC5 sensor's electrical connection uses a 5-wire and shield interface design, the tail connection uses aviation connector equipped with shielded cable (standard 2m shielded cable).

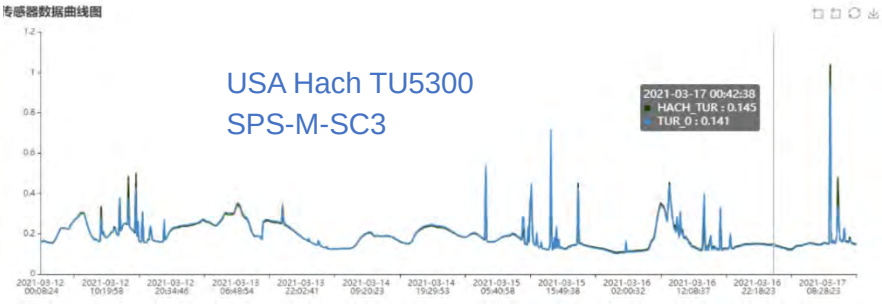


Sensors dimensions



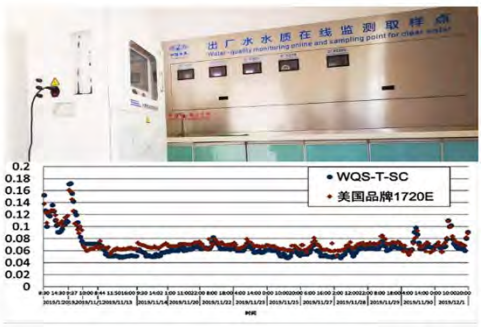
Applications

Comparative test



Factory water inspection

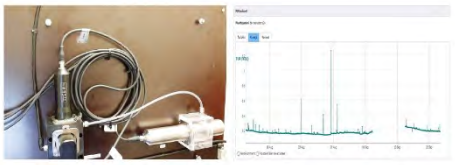
Product comparison test: US/UK company
Long-term reliability test: 3 months



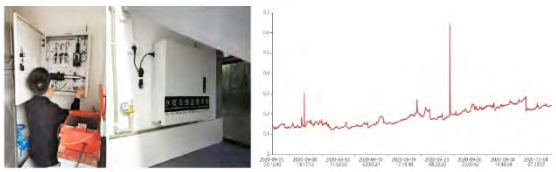
Product Comparison Test:USA
Long-term reliability test: 3 months

Secondary water supply monitoring

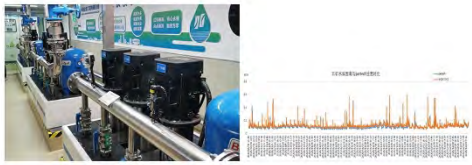
Product comparison test: US/UK company
Long-term reliability test: 3 months



Overseas Finnish Projects
Long-term reliability test: 3 months



Product Comparison Test: USA
Long-term reliability test: 3 months



Product comparison test: UK company
Long-term reliability test: 3 months