



Recorder



Flow



Pressure



Temp



Analyzer



Level

Datasheet

Smart Turbidity Sensor

SUP-PTU-8011

isurki
Instrumentación y control

Gabiria 2, 1-P 20305 Irún (Spain)
isurki@isurki.com
www.isurki.com

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Datasheet

Turbidity Electrode SUP-PTU8011

The turbidity sensor is based on the combined infrared absorption scattering method. The infrared light emitted by the light source is scattered by the turbidity in the sample, and finally converted into an electrical signal by the photodetector. After analog and digital signal processing, the turbidity value of the sample is obtained.

It can be widely used for turbidity monitoring in sewage treatment plants, water treatment plants, water stations, surface water, industrial and other fields.

Applications

- Wastewater
- Tap water
- Water Station
- Surface water
- Industry water
- Environmental monitoring



Features

- Measure range: 0.01~4000NTU
- Accuracy: Less than $\pm 2\%$ or ± 0.1 NTU of the measured value (Take the maximum)
- Pressure range: ≤ 0.4 MPa
- Working temperature: 0~45°C (No ice)
- RS485 communication

Turbidity Electrode

Principle

The turbidity sensor is based on the combined infrared absorption scattering method. The infrared light emitted by the light source is scattered by the turbidity in the sample, and finally converted into an electrical signal by the photodetector. After analog and digital signal processing, the turbidity value of the sample is obtained.

Parameters	
Measurement Range	(0.01~4000)NTU
Accuracy	Less than $\pm 2\%$ of the measured value, or ± 0.1 NTU, whichever is greater
Repeatability	$\pm 2\%$
Resolution	(0.01~0.1)NTU, Depending on different ranges
Pressure Range	≤ 0.4 Mpa
Velocity of Flow	≤ 2.5 m/s、8.2ft/s
Main Materials of Sensors	Fuselage: SUS316L/Titanium Alloy/PVC; Upper and Lower Covers: POM, Cable: PUR
Power Supply	DC power: 12VDC
Communication Output	RS485 Output, MODBUS-RTU Communication Protocol
Working Environment	(0~45)°C (No condensation)
Weight	1.65kg
Level of Protection	IP68/NEMA6P
Cable Length	Standard 10 meter cable, extendable up to 100 meters

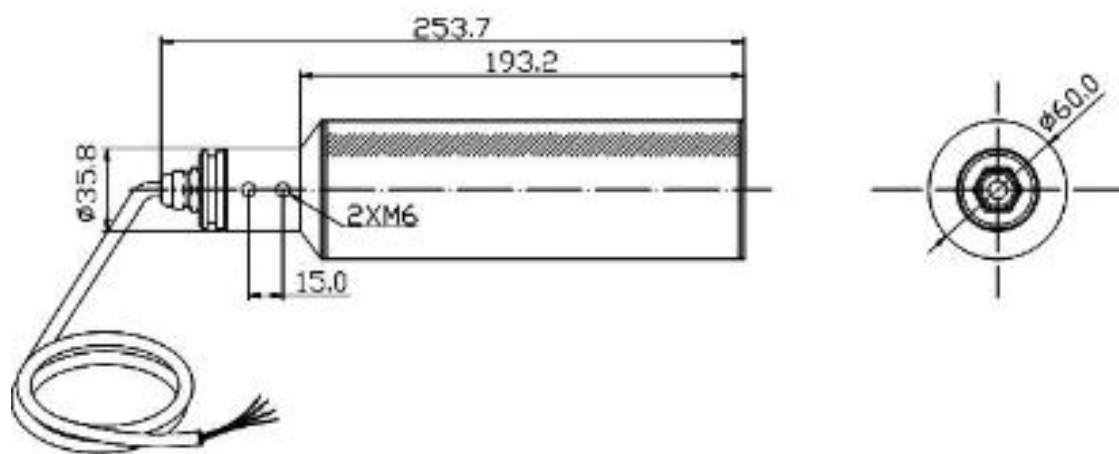
Wiring

Sensors are correctly connected according to the following wire core definitions:

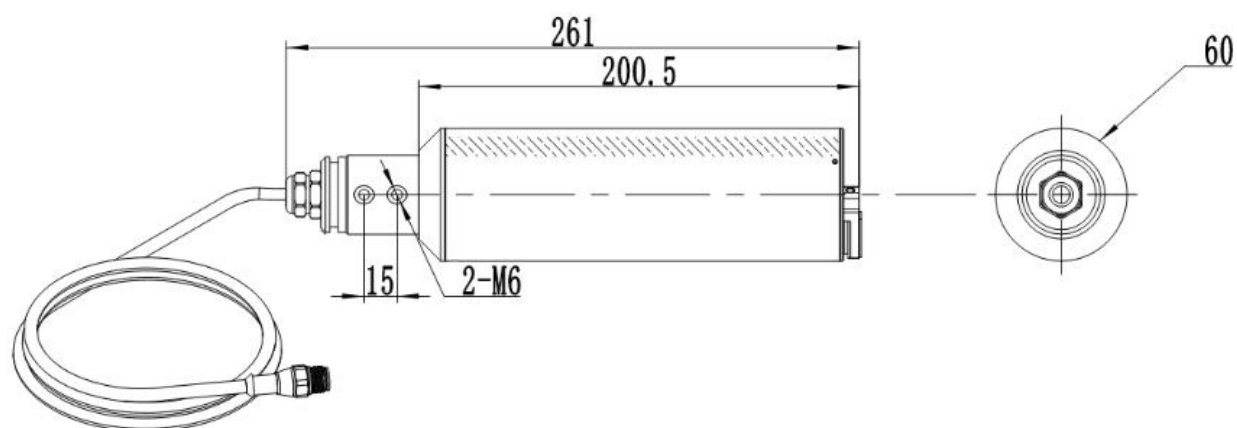
Core Number	1	2	3	4	5
Sensor Wires	Brown	Black	Blue	White	Yellow&Green
Signal	+12VDC	AGND	RS485 A	RS485 B	Ground Wire

Dimension

The size of the turbidity sensor is shown in the following figure.



Dimensional Drawing without Scraper Sensor



Dimensional Drawing of Scraper Sensor

Installation

■ Installation

Installation of Sensors

Quick Detachable Pool Edge Fixed Installation

CBZJ-03

12	Cross Bolt M6*12
11	Sensor Adapter (dual hole to R5/4)
10	H8 Flange Nut
9	Large Flat Cushion M8
8	Spring Washer M8
7	Flat Cushion M8
6	Pipe Clamp
5	Pipe Clamp
4	Installation Pipe (outer diameter $\varnothing$ 38MM)
3	Install components to block the cold
2	Installation Board
1	N8 Expansion Bolt
Number	Accessory

Quick Dismantling Pool Edge Installation Diagram

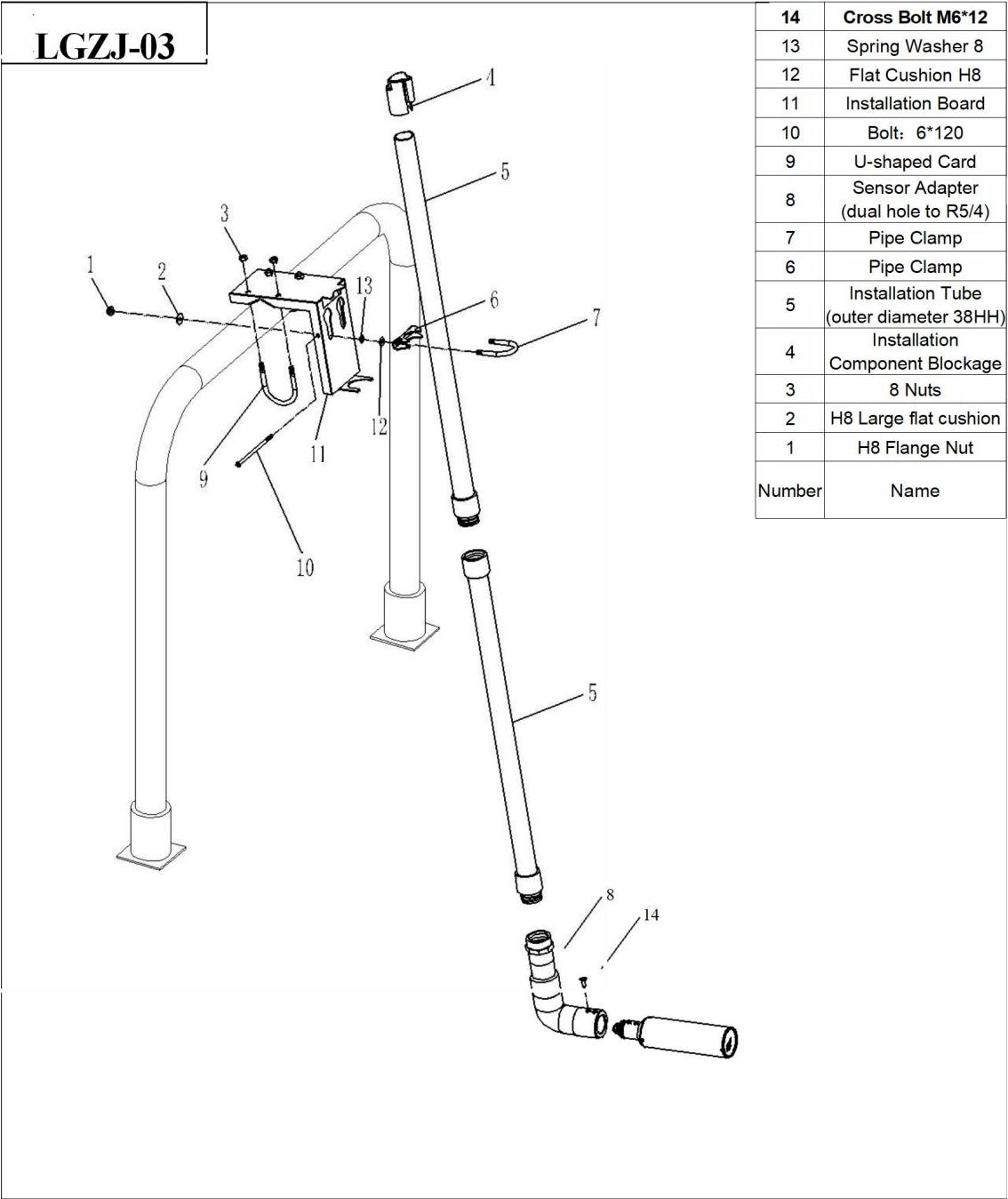
Classic Fixed Installation by the Pool Edge

CBJD-03

8	Cross Bolt M6 * 12
7	Sensor Adapter (dual hole to R5/4)
6	M8 Flange Nut
5	H8 Hexagon Socket Screw
4	Installation Pipe (outer diameter $\varnothing$ 38MM)
3	Install components to block the cold
2	Install Pipe Clamp ($\varnothing$ 40)
1	Expansion Screws
Number	Accessory

Classic Pool Side Installation Diagram

Fixed Installation with Railing



Schematic Diagram of Railing Installation

Ordering code

SUP-PTU-8011 -ZH-0-A-B-10-ZY-M3							Description
SUP-PTU-8011	-	-	-	-	-	-	
Measurement Range	ZH						0-4000NTU
Electrode Scraper		0					No
		1					Yes
Output			A				RS485
Power Supply				B			12VDC
					10		10m
					20		20m
					30		30m
					XX		Others
Cable Connector						ZY	Cable Connector
						HK	Aviation Plug
Housing Material						M3	316LSS
						T1	Ti