



Recorder



Flow



Pressure



Temp



Analyzer



Level

Datasheet

Turbidity Electrode

SUP-PTU-8010

Supmea[®]

Committed to process automation solutions

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Datasheet**Turbidity Electrode
SUP-PTU-8010**

The turbidity sensor is based on infrared scattered light technology, that is the infrared light emitted by the light source will scatter when passing through the sample under test, and the intensity of the scattered light is proportional to the turbidity value. The turbidity sensor is provided with a scattered light receiver in the direction of 90°, and the turbidity value is obtained by analyzing the intensity of the set of scattered light.

Applications

- online monitoring of turbidity of water inlet
- industrial production process
- wastewater treatment process
- online monitoring in sewage plant

Features

- High Precision Measurement
- Suitable for a wide range of water bodies
- Stable and reliable performance
- Non-explosion proof design
- easy operation
- Low maintenance costs

**Turbidity Electrode**

Principle

The PTU-8010 Turbidity Electrode operates based on the combined infrared absorption and scattering light method, following the ISO 7027 standard. It emits infrared light into the measured liquid. The light scatters and is absorbed due to the presence of suspended particles. By detecting and analyzing the changes in the light intensity, it accurately calculates the turbidity or sludge concentration, providing reliable measurement results with a precision of up to $\pm 5\%$.

Parameters	
Specification	Details
Measurement Range	0.01-3000 NTU
Measurement Accuracy	Less than $\pm 5\%$ of the measured reading or ± 0.5 NTU, whichever is greater
Repeatability	$\pm 3\%$
Resolution	0.01NTU, 0.1NTU, Depend on the measuring range
Pressure Range	≤ 0.4 Mpa
Main Material	Body: SUS316L; Cable: PUR
Power Supply	9~36VDC
Communication Protocol	MODBUS RS485
Storage Temperature	-15-50°C
Measuring Temperature	0-45°C (Non-freezing)
Weight	0.8KG
Protective Rate	IP68/NEMA6P;
Cable Length	Standard:10m, the maximum may be extended to 100m

Wiring

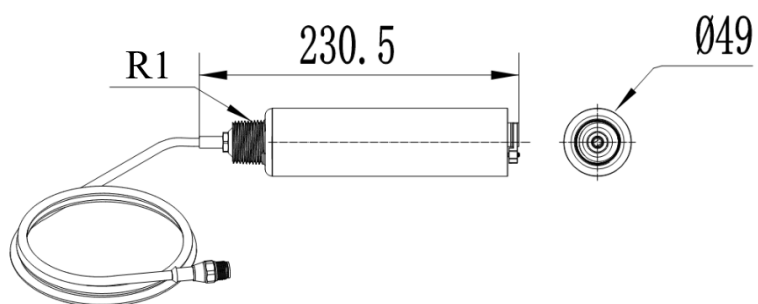
The sensor should be correctly connected by the following definition of wire core:

Table 2

Serial No.	1	2	3	4	5
Sensor Cable	Red/Brown	Black	Blue	White	Yellow + Green
Signal	+12VDC	AGND	RS485 A	RS485 B	GND/PE

Dimension

No automatic cleaning device:



With automatic cleaning device:

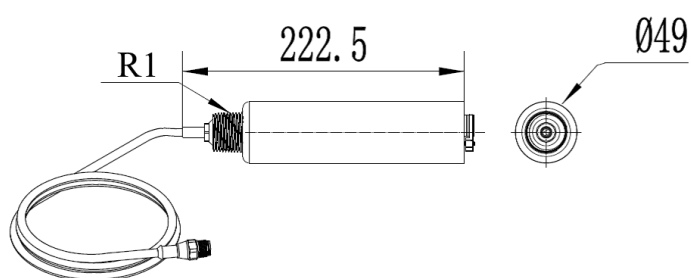


Fig. 1 Dimension Diagram of Turbidity Sensor

Installation

■ **Installation**

Quick Dismantling Pool Side Fixed Installation

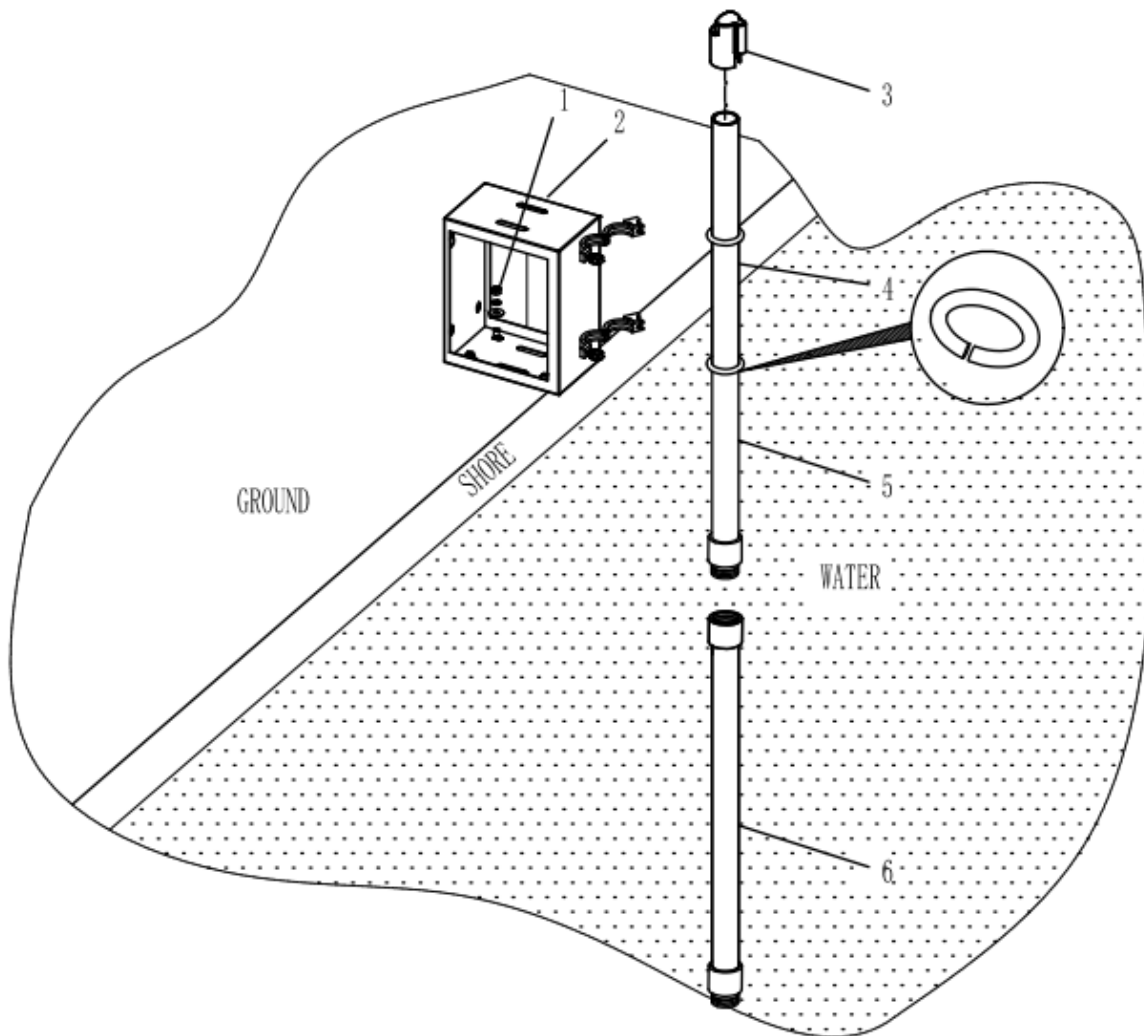
CBZJ-04

6	Mounting tube (External thread + internal thread (SUS304))	PCS	
5	Mounting tube (external thread at one end (SUS304))	1 PCS	
4	Rubber ring	3 PCS	
3	Installation blockage	1 PCS	
2	Mounting plate	1 PCS	
1	M8 expansion bolt	5 SETS	
num.	Part	Quantity	Comments

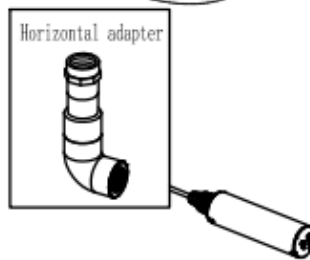
Note: The vertical adapter and the horizontal adapter are sensor accessories, so the mounting part is not equipped with the adapter

Quick Dismantling Pool Side Installation Sketch Map (wall space)

CBZJ-04



6	Mounting tube {External thread + internal thread (SUS304)}	PCS	
5	Mounting tube {external thread at one end (SUS304)}	1 PCS	
4	Rubber ring	3 PCS	
3	Installation blockage	1 PCS	
2	Mounting plate	1 PCS	
1	M8 expansion bolt	5 SETS	
num.	Part	Quantity	Comments

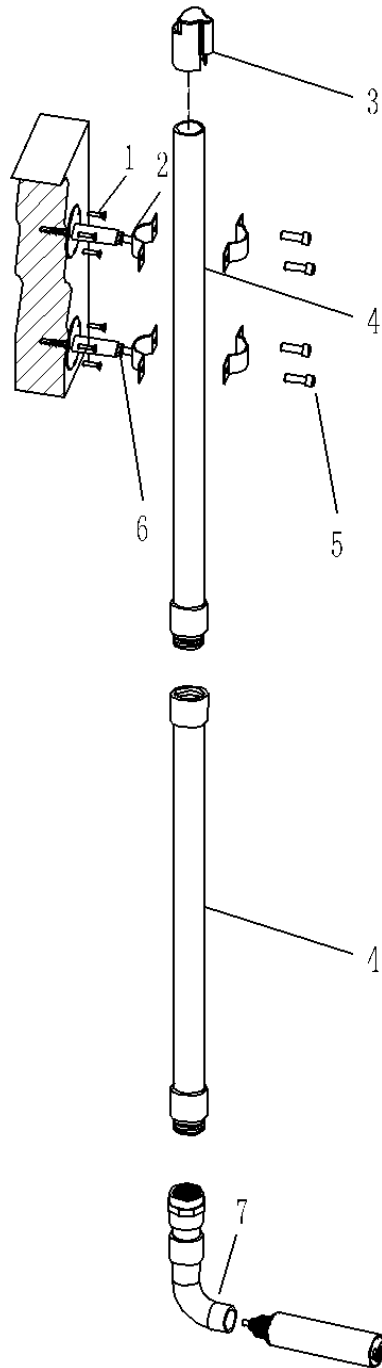


Note: The vertical adapter and the horizontal adapter are sensor accessories, so the mounting part is not equipped with the adapter

Quick Dismantling Pool Side Installation Sketch Map (ground)

Classic Pool Side Fixed Installation

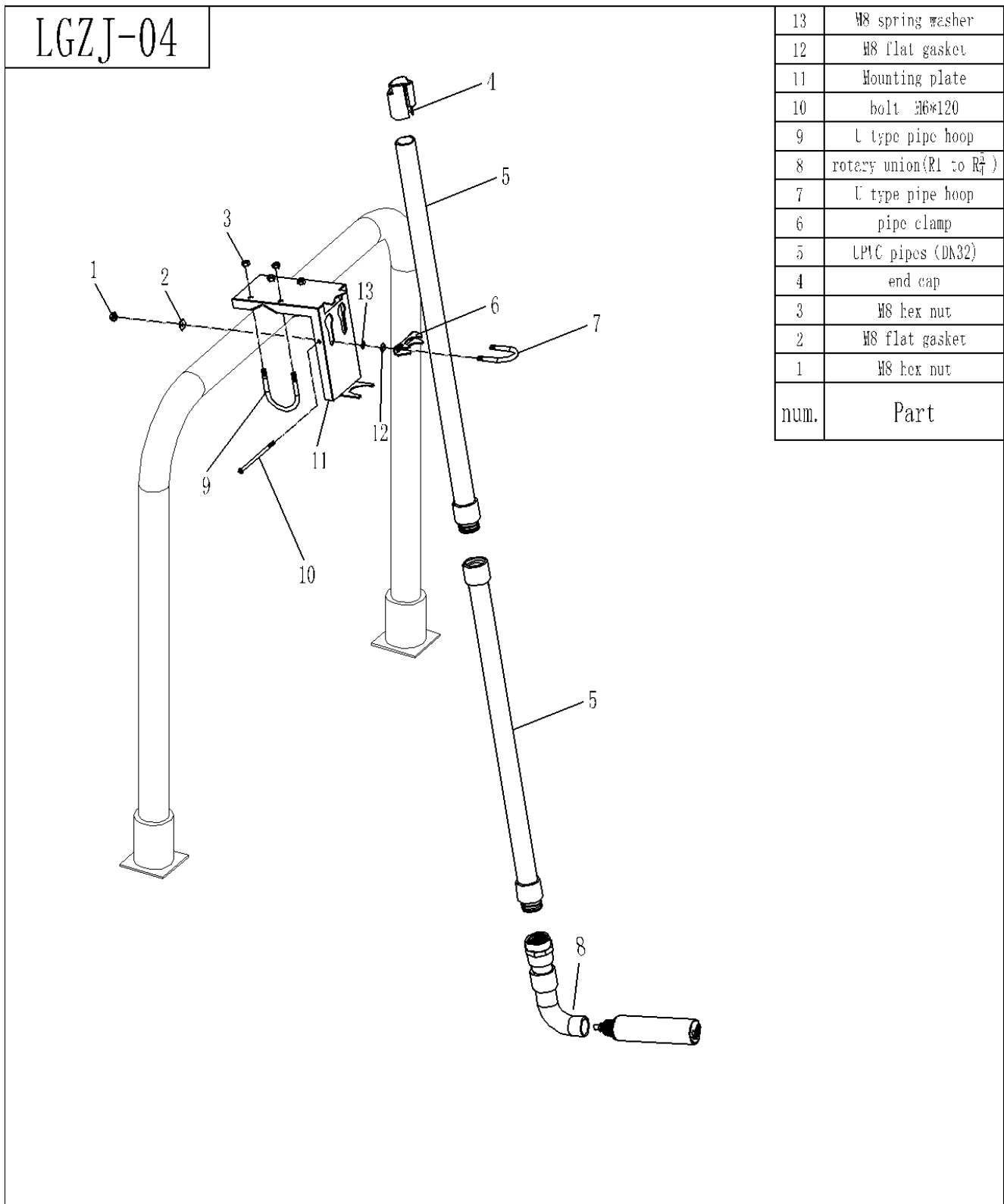
CBJD-04



7	rotary union(R1 to R $\frac{3}{4}$)
6	M8 hex nut
5	bolt M8*16
4	UPVC pipes (DN32)
3	end cap
2	pipe hoop (ϕ 10)
1	M4 expansion bolt
num.	Part

Classic Pool Side Fixed Installation Sketch Map

Railing Fixed Installation



Railing Fixed Installation Sketch Map

Ordering code

SUP-PTU-8010 -ZG-0-A-B-10-ZY-M3							Description
SUP-PTU-8010	-	-	-	-	-	-	
Measurement Range	ZG						0-3000NTU
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
							T1
							316LSS
							Titanium