



RK500-07 Turbidity Sensor



Overview

RK500-07 Turbidity Sensor is an instrument which uses optical principle to measure the degree of turbidity of water. Turbidity is caused by suspended particles in water. The suspended particles reflect the incident light. Usually, the scattered light in the direction of 90° is used as the test signal, so the unit tested is called NTU. This method is suitable for testing low to medium range, ranging from 0.01 to 4000FNU. According to EN27027 and ISO7027 standards, infrared light of 860 nm is used as light source, which cannot be disturbed by the chromaticity of samples.

Features

- On-line & real-time monitoring
- With temperature compensation
- High accuracy
- Easy operation and high reliability
- No external module, a whole design
- Sapphire measurement window

Applications

- Environmental protection
- Water quality monitoring
- Aquaculture
- Clean in place (CIP)
- Sewage treatment
- Industrial wastewater treatment

Technical Parameter



Type	A	B	C	D
Application	General freshwater environment	Mariculture, strongly corrosive sewage, complex scenes etc	Pipe installation	With cleaning brush, maintenance free
Self-cleaning	/	/	/	Yes
Main material	316L	titanium alloy	316L, UPVC	316L
Screw thread	Upper: NPT3/4, Lower: NPT3/4		/	NPT3/4
Accuracy	±1%FS			±2%FS
Resolution	0.01NTU(≤10NTU) , 0.1NTU(>10NTU)			0.1NTU
Power consumption	<0.2W			Cleaning brush start:<1.5W Cleaning brush stop:<0.2W



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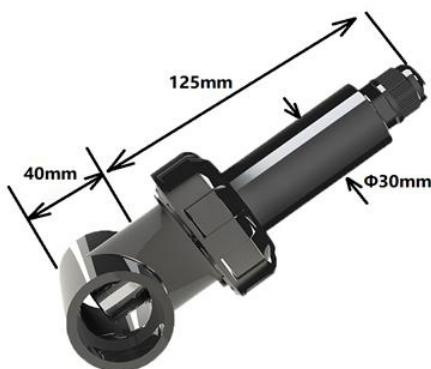
Technical Parameter

Type	A	B	C	D
Operating temperature	0-+60℃			-5-+60℃
Range	0-10NTU ,0-100NTU,0-1000NTU,0-4000NTU			
Supply	7-28VDC			
Output	4-20mA&RS485 at the same time			
Response time	1S			
Pressure resistance	0.8Mpa			
Ingress protection	IP68			
Storage	10-60℃@20%-90%RH			
Cable length	5m default			

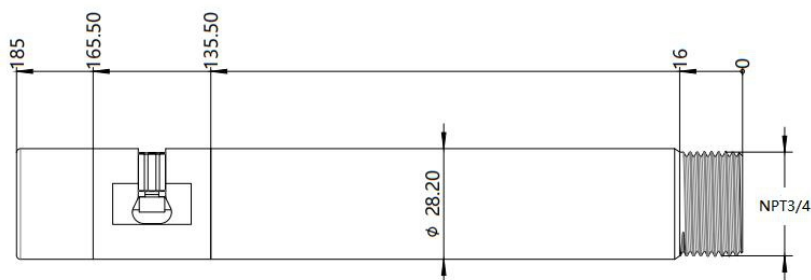
Dimensions



Type A/B



Use UPVC with an outer diameter of 32mm for docking
Type C

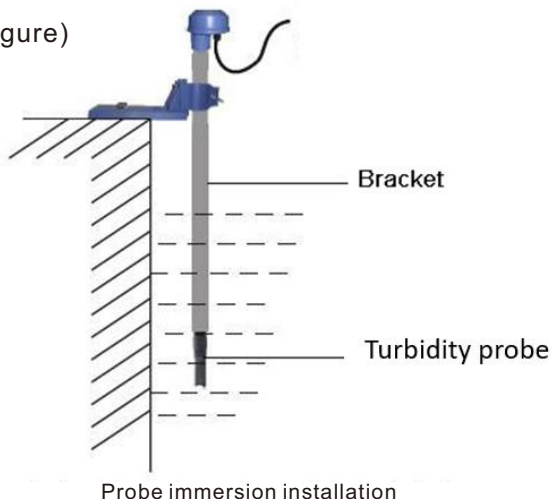
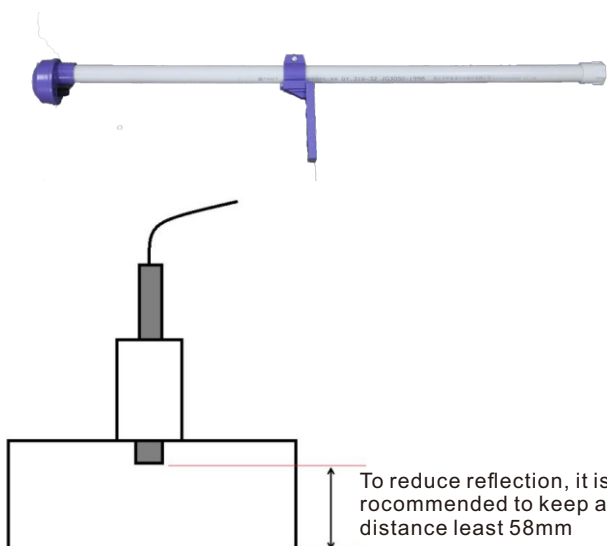


Type D with cleaning brush

Installation & Usage

- Put directly into the liquid
- Adopt submersible mounting bracket (show in the below figure)

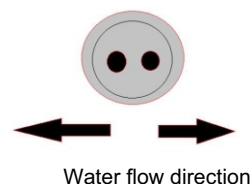
Mounting bracket (length=1m):



If the pipeline is made of reflective material, such as stainless steel, aligning the connection line of the two small holes with the direction of the pipeline will significantly improve accuracy.

Electrode maintenance: Keep the sensor's optical surface clean, and wipe it gently if necessary.

Caution: Avoid strong vibrations to prevent damage to the front transparent glass. Do not scrape it with hard objects.



Parameter Selection Table

Remark	Series	Type	Supply	Accessory	Cable Length	
RK	500-07					
		A				Type A
		B				Type B
		C				Type C
		D				Type D
			A			7-28VDC
			X			Other
				A		With mounting bracket
				N		Without mounting bracket
					5000	Unit(mm)
					...	Unit(mm)

Example: RK500-07AAN Type A, Supply:7-28VDC,Without mounting bracket,Cable length:5m.

Revision time	Reviser	Current Version	Remarks
20250417	Lee	V5.0	