

PPM-TZD1A

Turbidity Transmitter for Liquid Cooling Systems

Product Features

- Real-time online monitoring
- Integrated design without external modules required
- Low cost, economical and high performance
- Long service life, easy operation and high reliability
- IP68 waterproof rating
- Four isolation circuits to resist complex field interferences
- Excellent repeatability
- Immune to light reflection from stainless steel pipelines
- The electrode is equipped with high-quality low-noise cables, supporting signal transmission over 20 meters



Product Specifications

Measurement range: 0–10 NTU, 0–100 NTU, 0–4000.0 NTU (customizable ranges)

Accuracy: $\pm 2\%$

Resolution: 0.01 NTU

Stability: ≤ 1 NTU/24 h

Turbidity is a core indicator to measure the cleanliness of cooling liquid, and its value directly reflects the content of suspended impurities in the coolant.

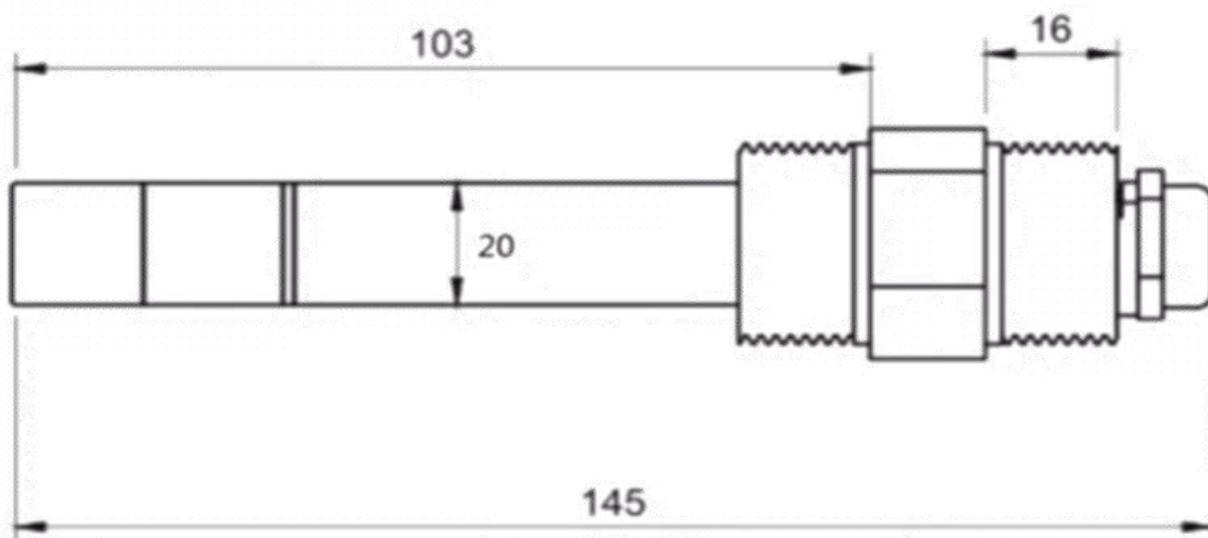
The PPM-TZD1A liquid cooling turbidity sensor adopts the optical transmission measurement principle. The transmitter emits light of a specific wavelength, and the receiver captures the transmitted light passing through the tested coolant. When suspended impurities exist in the coolant, light will be scattered and absorbed, reducing the light intensity received by the receiver. By measuring the attenuation of light intensity, the sensor can accurately calculate the turbidity value of the coolant.

Benefiting from its exclusive measurement principle and technical advantages, the sensor can accurately capture tiny turbidity changes of coolant without being affected by stainless steel pipeline reflection. It provides real-time and reliable data support for the safe operation of liquid cooling systems, serving as an indispensable "cleanliness monitor" for the liquid cooling industry.

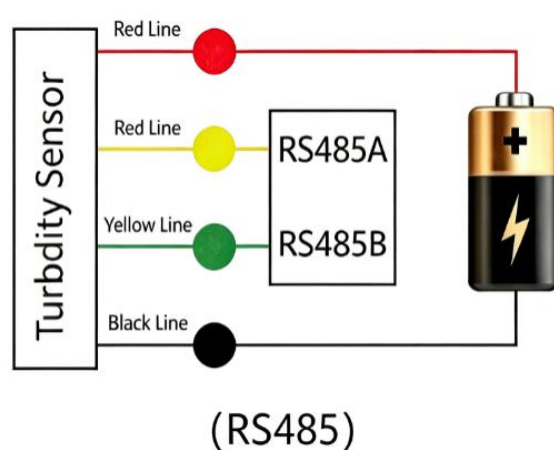
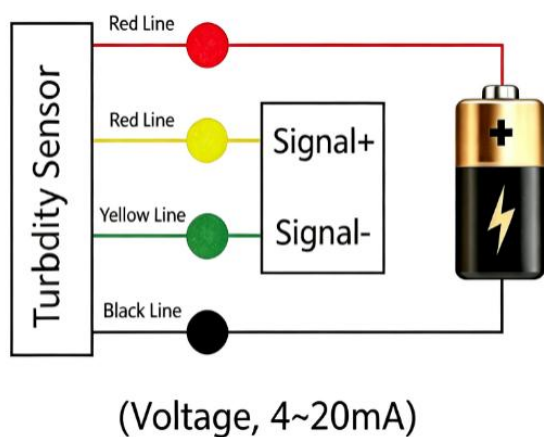


Parameter	Technical Index
Main Material	316L Stainless Steel
Measuring Principle	90° Infrared Scattering Method (ISO 7027 Standard)
Applicable Medium	Deionized Water, PG25, EG25
Measuring Range	0–10 NTU, 0–100 NTU (0–4000.0 NTU customizable)
Seal Ring Material	EPDM / FKM
Process Connection	G1/4 or NPT3/4; other threads customizable
Sealing Type	End-face Sealing
Cable Outlet	Direct cable outlet; customized outlets available
Accuracy	$\pm 2\%$ FS or ± 1.8 NTU (0–100 NTU range)
Resolution	0.01 NTU / 0.1 NTU
Power Consumption	<0.5 W
Operating Temperature	0 ~ +60 °C
Temperature Compensation	Automatic temperature compensation
Power Supply	7–30 VDC
Signal Output	4–20 mA & RS485
Response Time	1 s
Max Working Pressure	<0.4 MPa (4 Bar)
Protection Class	IP68
Storage Condition	-20 ~ +60 °C, 20%–90% RH
Standard Cable Length	5 m; customized lengths supported
Stability	≤ 1 NTU per 24 hours

Overall Dimension Drawing



Usage method



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