

TTurb

Turbidimeter

Nephelometric turbidity sensor



The TTurb probe is a digital sensor for optical turbidity measurement using the 90 ° scattered infrared light method. Depending on the version of the sensor, it can be used in potable water up to 100 FNU as well as in raw water, waste water and process water up to 1000 FNU. The TTurb probe is available with different cable lengths (10 m or 2 m).

The Tturb can be used directly immersed in the environment, but also mounted as a bypass thanks to its adapted passage cell. In addition, it is possible to obtain the TturbCAL with the sensor, which is a standard adapted specifically to each probe for an accurate functional test without reagent.

The operating status is indicated by an LED in the upper part of the sensor, allowing easy and visual identification of the correct functioning of the sensor.

Available versions:

TTurb 100	0... 100 FNU
TTurb 400	0... 400 FNU
TTurb 1 000	0... 1 000 FNU

Advantages

- 90 ° IR light scattering measurement as specified in DIN EN ISO 7027-1: 2016-11.
- Plug-and-play use
- Standard specific to each available sensor (to be ordered during production).
- Operating status LED on the sensor

Applications

- Measurement of turbidity in drinking water, entering and leaving treatment
- Turbidity measurement at the outlet of the treatment plant
- Surface water monitoring
- Control of pond water in aquaculture

Accessories

- Cable extensions of 0.3 m, 2 m, 10 m, 25 m
- Controller TriBox mini, TriBox 3
- FlowCell for Bypass installation
- TturbCAL standard



The TTurb digital probe works with TriBox Mini and TriBox 3 transmitters.

Once the probe is connected, the transmitter powers the sensor, receives and uses the data. The measurements are displayed on the screen, they are recorded and can be converted to the 4-20 mA analog signal.

Wifi or Ethernet communication via web browser.

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Technical specifications

Measuring technique	LED light source Photodiode detector	
Principle of measurement	Nephelometry	
Parameter	Turbidity	
Measuring range	0...100, 0...400, 0...1000 FNU	
Measurement accuracy	± (5 % + 0.5)	
Detection limit	0,5 FNU for TTurb 100 2 FNU for TTurb 1000	
Wavelength for measurement	860 nm, FWHM 30 nm	
T100 response time	6s	
Measurement interval	> 3s	
Housing material	POM	
Dimensions (L x Ø)	170 x 36 mm	~ 6.7" x 1.4"
Weight	0.3 kg	~ 0.7 lbs
Interface	Ethernet (TCP/IP) RS-485 (Modbus RTU)	
Consumed strength	Generally < 0,9 W With network <1.5 W	
Power supply	12...24 VCC (± 10 %)	
Connection	8-pin M12 plug	
Tracking time	≤ 0.5 h / month generally	
Maintenance interval	24 month	
System compatibility	Modbus RTU	
Warranty	24 months in the European Union wearing parts are not covered by the warranty	
Maximum pressure	with fixed cable flow cell	3 bar. ~ 43.5 psig 1 bar. , 2...4 L/min ~ 14.5 psig, 0.5 to 1 gpm
Protection types		IP68 NEMA 6P
Sample temperature		0...+40 °C ~ +32 °F... +104 °F
Ambient temperature		0...+40 °C ~ +32 °F... +104 °F
Storage temperature		0...+80 °C ~ +32 °F... +176 °F
Inflow velocity		Max. 0,1 m/seconde max. ~ 0.33 fps

The sensor corresponds to the measurement standard DIN EN ISO 7027-1: 2016-11

