

Turbidity Sensor TTurb

81SX00000 · 81SX00010



The TTurb is a digital sensor for optical turbidity measurements according to the 90° IR scattered light method. Depending on the sensor it can be used in pure water up to 100 FNU as well as in raw-, waste- and process waters up to 1000 FNU. TTurb is available with a 10 m or a 2 m fixed cable.

TTurb100	0...100 FNU
TTurb400	0...400 FNU
TTurb1000	0...1000 FNU

Benefits

- Reliable concentration measurements by optical methods
- Pulsed infrared scattered light procedure
- No mechanically moving parts
- Digital reading
- Preprocessing in the sensor increases measurement sensitivity

Applications

- Measurement of turbidity in drinking water, domestic water, circulating water
- Measurement of turbidity in drinking water treatment plants with low turbidity values

Accessories

- Cable: Extension cables of 0.3 m, 2 m, 10 m, 25 m
- Controller: TriBox3, TriBox Mini, HS100
- Fittings: FlowCell



Technical Specifications

Measurement technology	LED light source Photodiode detector	
Measurement principle	Nephelometry	
Parameters	Turbidity	
Measurement range	0...100, 0...400, 0...1000 FNU	
Measurement accuracy	± (5 % + 0.5) for TTurb1000 and TTurb100	
Detection limit	0.5 FNU for TTurb 100 2 FNU for TTurb 1000	
Measurement wavelength	860 nm, FWHM 30 nm	
Reaction time T100	6 s	
Measurement interval	3 s	
Housing material	PET / POM / NBR	
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)	
Power consumption	typically <0.9 W with network < 1.5 W	
Power supply	12...24 VDC (± 10 %)	
Connection	8-pin M12 plug	
Required supervision	≤ 0.5 h/month typically	
Calibration/ maintenance interval	24 months	
System compatibility	Modbus RTU	
Warranty	1 year (EU & US: 2 years) on electronics; wearing parts are excluded from the warranty	
Max. pressure	3 bar	~ 43.5 psig
Protection type	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	maximum 0.1 m/second	maximum ~ 0.33 fps

The sensor meets requirements of DIN EN ISO 7027-1:2016-11.