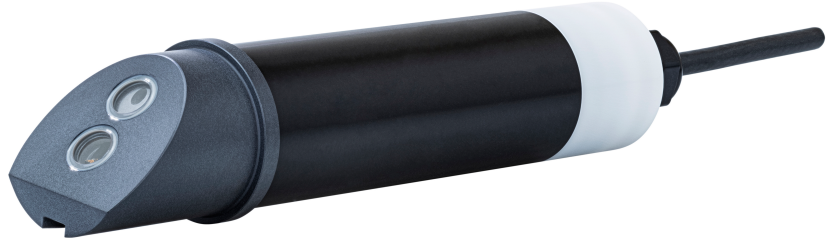




TTurb

81SXX00XX



The TTurb is a digital sensor for optical turbidity measurement using the 90° IR scattered light method. Depending on the sensor version, it can be used in pure water up to 100 FNU as well as in raw water, waste water and process water up to 1000 FNU. TTurb is available with different cable lengths (10 m, 2 m or 0.5 m) and in different versions.

As an immersion sensor, the TTurb can be used directly in the measured medium, but is also available in the FlowCell-optimized variant directly with a flow cell for bypass applications. It is also possible to obtain the TTurb directly as a set with the TTurbCAL dry standard. This standard is always directly matched to each individual device and thus enables precise functional tests to be carried out directly on site, without any reagents.

Advantages

- Without sampling and sample preparation
- Delay-free
- Without reagents
- Reliable concentration measurement
- Pulsed infrared scattered light method
- No mechanically moving parts
- Pre-processing in the sensor increases the sensitivity of the measurement

Applications

- Measuring turbidity in drinking water, process water, circulation water
- Measuring turbidity in drinking water treatment plants with low turbidity values
- Measuring turbidity in open waters
- Measurement of turbidity in the wash water of exhaust gas cleaning systems

Variants

| | |
|-------------------|--------------|
| TTurb-100 | 0 - 100 FNU |
| TTurb-400 | 0 - 400 FNU |
| TTurb-1000 | 0 - 1000 FNU |

Accessories

- Cable: Extension cable 0.3 m, 2 m, 10 m, 25 m
- Controller: TriBox3, TriBox mini
- Fittings: Flow cell
- Calibration standard: TTurbCAL



Technical specifications

| | |
|----------------------------------------------|----------------------------------------------------------------------|
| Measurement technology - Light source | LED |
| Measurement technology - detector | photodiode |
| Measuring principle | Nephelometry (90° scattered light method) |
| Parameters | Turbidity in FNU; mg/L; NTU; TSSeq |
| Standard applied | DIN EN ISO 7027-1:2016-11 |
| Measuring range | 0 - 100, 0 - 400, 0 - 1000 FNU |
| Measuring accuracy | ± (5 % + 0.5); max. ± 2 FNU |
| Detection limit | 0.5 FNU for TTurb-100 2 FNU for TTurb-400 2 FNU for TTurb-1000 |
| Measuring wavelength | 860 nm, FWHM 30 nm |
| Response time T100 | 6 s |
| Measuring interval | ≥ 3 s |

| | | | |
|---------------------------|-------------------------------|-----------------|---------------|
| Housing material | | PET / POM / NBR | |
| Dimensions (L x Ø) | with fixed cable | 182 x 36 mm | ~ 7.2" x 1.4" |
| | with SubConn connector | 209 x 36 mm | ~ 8.2" x 1.4" |
| Weight | | approx. 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 $\pm 10\%$ | |
| Connection | | 8-pin M12 plug | |
| Maintenance effort | | ≤ 0.5 h/month typical | |
| Calibration/maintenance interval | | 24 months, when using a TTurbCAL 4 - 5 years | |
| System compatibility | | Modbus RTU | |
| Warranty | | 1 year (EU&US: 2 years) on electrons; wearing parts are excluded from the warranty | |
| Max. Pressure | with fixed cable | 3 bar | 43.5 psi |
| | in flow cell | 1 bar, 2-4 L/min | 14.5 psi, 2-4 L/min |
| Protection type | | IP68 | NEMA 6P |
| Sample temperature | | 0...+40 °C | 32...104 °F |
| Ambient temperature | | 0...+40 °C | 32...104 °F |
| Storage temperature | | 0...+80 °C | 32...176 °F |
| Inflow velocity | | max. 0.1 m/s | |