

# SOMQUALITY-NTU, NTU-M, NTU-MAF

Turbidity probe



The measurement principle of the SOMQUALITY-NTU turbidity sensor is based on infrared light scatter at an angle of 90°. Thanks to the measurement at a wavelength of 880 nm and the wide detection range of 0 to 4'000 NTU, the sensor can be used in various water and wastewater treatment applications. Apart from turbidity, the SOMQUALITY-NTU also measures the medium temperature and the suspended solids content.

## Application

- Municipal waste water treatment
- Industrial effluent treatment
- Water quality monitoring
- Sea water monitoring, fish farming, aquarium
- Process monitoring

## Versions

Art	Version
21120	Turbidity probe with SDI-12, 15m cable, measurement range 0-4500mg/l
21099	High-end turbidity probe with multiple NTU ranges, auto-ranging capability, SDI-12, 20m cable
21100	High-end turbidity probe with multiple NTU ranges, auto-ranging capability, SDI-12, 20m cable and anti-fouling housing

## Scope of delivery

Item
SOMQUALITY-NTU Turbidity probe
Sensor support software

## Accessories

Art	Accessory
21150	USB to RS485 isolated converter cable
21121	Mechanical wiper for turbidity sensor (max. depth 30m)
21123	Mechanical wiper to integrate with turbidity sensor (max. depth 30m)

## Specifications

Turbidity	
Principle	IR-scatter at 90°
Measurement range	5 to 4000 NTU in 5 ranges: 5 - 50 NTU 5 - 200 NTU 5 - 1000 NTU 5 - 4000 NTU AUTOMATIC 0 - 4500 mg/L Calibration : Range 0 - 500 mg/L according toNF EN 872 Range >500 mg/L according toNF T 90 105 2
Resolution	0.01 - 1 NTU - mg/L
Accuracy	< 5% of the reading
Maximum refresh time	< 1 s
Temperature compensation	via CTN
Accuracy temperature	± 0.5 °C
Physical and environmental	
Power supply	5 to 12 VDC
Power consumption	Standby: 40 µA Average RS485 (1 measurement/s): 820 µA Average SDI-12 (1 measurement/s): 4.2 mA Current pulse: 500 mA
Output	Modbus RS-485 (standard) SDI-12 (optional)
Dimension	Ø27 mm x 170 mm
Weight	300 g (sensor + 3 m cable)
Material	PVC, DELRIN, Quartz, PMMA, Polyamide
Max. pressure	5 bar
IP classification	IP 68
Operation temperature	0-50 °C
Storage temperature	-10 °C to +60 °C

## Wiring

Wire color	Function	Comment
Red	Power supply V+	For cable length 15 ... 100 m connect the red, purple, yellow, orange and pink to V+
Blue	SDI-12	
Black	Power supply V-	
Green	RS-485 B	
White	RS-485 A	
Green/Yellow	Shield	

## SDI-12 output



**EXAMPLE** 3+23.167+6.3751+2.5933+2.5933+0.0000<CR><LF>

Value	Description
3	SDI-12 address
23.167	Temperature in °C
6.3751	Turbidity in NTU
2.5933	Turbidity in FNU
2.5933	Turbidity in mg/L
0.0000	Not used
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