

3S-TRB Turbidity / Suspended Solids Sensor

Compact online sensor for the determination of water turbidity from 0.01 to 4000 NTU

APPLICATION FIELDS

- Drinking water
- Industrial wastewater
- Process water
- Pollution monitoring of surface waters
- Ultrapure water production



ADVANTAGES/FEATURES

• Compact design, sturdy build

Great responsiveness in a small volume thanks to the Fast Loop sample reservoir included in the analyzer.

The stainless steel enclosure makes the analyzer resistant to corrosion even in the most harsh industrial conditions.

• Low operating costs

Minimum maintenance necessary: the probe has a fully automatic brush to keep the sensor window always clean.

• Wide measuring range, low detection limit

The 3S-TRB turbidity sensor is available in ranges up to 4000 NTU with a limit of detection of 0.1 NTU.

The low range version (0-10 NTU) is capable of an accuracy of 0.01 NTU.

• Measurement principle

The sensor is based on determination of suspended solids in water through light scattering measurements. The external probe is installed in a sample reservoir and measurements are taken on the circulating sample flow. The probe is available in two versions, high and low range.

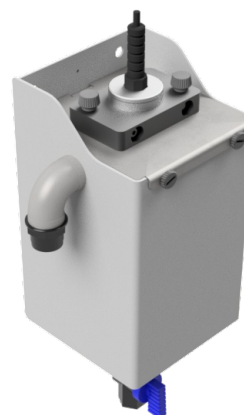
The low range version comes with a dedicated recirculating reservoir to minimize external interferences. The high range probe can be installed in the 3S recirculating vessel (not included, shown below), can be pipe-mounted or installed directly in the sample tank.



TECHNICAL SPECIFICATIONS

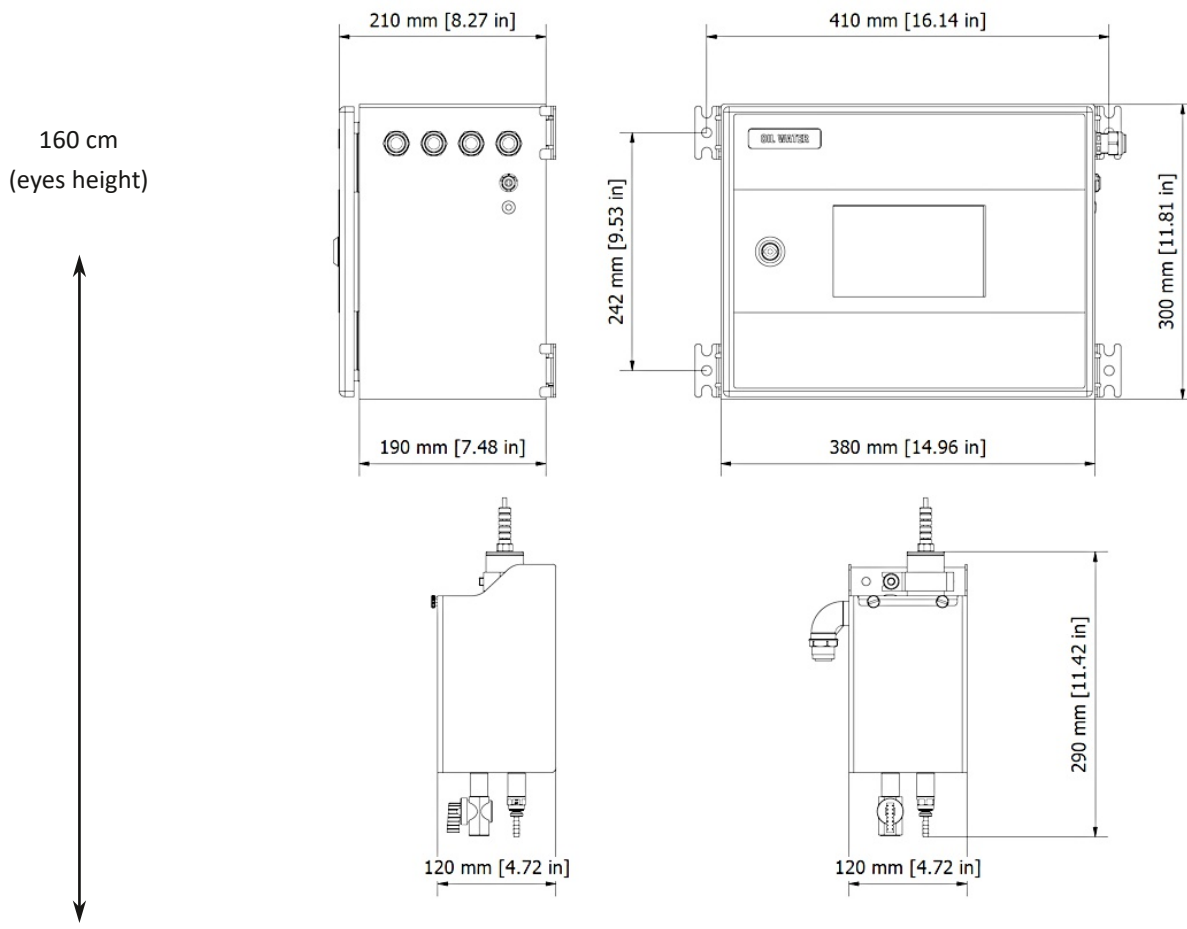
Measured parameters	Turbidity / Suspended Solids
Measuring principle	Light scattering, ISO 7027 method.
Measuring range	High range: 0 - 4000 NTU Low range: 0-10 NTU
Accuracy	High range: < 5% or 0.3 NTU High range: < 2% or 0.01 NTU
Limit of detection	High range: 0.1 NTU Low range: 0.01 NTU
Analysis Frequency	< 1 s
Sample	Pressure: pressure-free vessel (depth up to 60 m) Temperature: 5 - 50 °C (41 - 122 °F) Flow Rate: 80 to 500 mL/min Connection: 6 mm (¼-in.) Drain: pressure-free, atmospheric drain
Body Material	Titanium
Dimensions	Ø 36 mm, L 156 mm
Weight	Approx. 1 kg (2.2 lbs)
Power Supply	Voltage: 12 VDC Power consumption: max. 1 VA
Outputs	ModBUS RTU via RS485
Installation	With optional fast-loop reservoir (only included in the low range version), pipe-mounted (high range only)
Protection Grade	IP68

FAST LOOP RESERVOIR WITH PROBE



The 3S-TRB turbidity probe shown above is installed in the Fast Loop sample reservoir, protected from external light and easily accessible for cleaning and maintenance (the reservoir is compatible with all 3S probes, has to be purchased separately, product code A46U10035). The low range version comes with a dedicated vessel to allow precision measurement in the 0-10 NTU range.

TECHNICAL DRAWINGS (complete setup)



PRODUCT CODES

A46U10008	3S-TRB Turbidity sensor made of titanium
A46U10039	3S-TRB Turbidity sensor low range with probe holder
3S-PC1000	Probe controller with color touch screen
A46U10035	Stainless steel continuous flow D.36 sensor holder