



## TSS HT, Suspended Solids Inline Sensor without a Wiper

**Product #:** LXV325.99.30002  
**ZAR Price:** Contact Hach

### Measures on-line suspended solids in virtually all applications under the strictest regulatory conditions.

TSS sc probes can measure both online suspended solids and turbidity in one instrument. They cover the total measurement range from the finest turbidity to solids over a wide range. TSS HT sc measures online suspended solids in high temperature industrial process and wastewater applications. Withstands operating temperatures of 90°C. Connects directly to all Hach sc controllers for immediate use. Inline model may be mounted with a safety armature for use up to 6 bar.

#### Unique Multi-Beam Pulsed Infrared Light System

TSS sc probes have a double optical system with two pulsating infrared LEDs and four receivers. This combined multiple beam alternating light method with beam focusing facilitates accurate color independent measurement of turbidity from 0.001 to 4,000 FNU and suspended solids from 0.001 to 500 g/L.

#### Automatic Compensation for Air Bubbles and Temperature Swings for Accuracy

Special software enables the system to recognize gas bubbles or temperature swings for a more accurate suspended solids or turbidity measurement.

#### Standard Compliant and Precise - Ease of Calibration

The turbidity measurement complies with the standard DIN EN 27027 (ISO 7027). Calibration is not necessary. If the probe is used to measure the solids content, a one-point calibration suffices. For special applications, curves can be defined using several calibration points.

#### Withstands Difficult Conditions and Harsh Environments

Probes are made of highly polished stainless steel with a scratch resistant sapphire window. They are design to withstand harsh environments and keep particles from sticking to the surface.

#### High Temperature Probe Suitable for Temperatures of 90°C and Pressures up to 10 bar

TSS HT sc optics and electrical system are coated with special material to withstand operating temperatures of 90°C. Inline measurement does not require a flow-through cell or cooling lines.

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## Specifications

Accuracy:	Turbidity up to 1000 NTU:  < 5% of the measured value $\pm 0.01$ NTU
Ambient Temperature:	0 - 60 °C (briefly 80 °C)
Application:	High temperature
Automatic Wiper:	No
Cable Length:	10 m (optional extension cables available)
Calibration:	Turbidity (TRB): Factory calibrated  Solids (TS): To be calibrated by customer on site  Zero point: Permanently calibrated in the factory
Calibration Method:	Turbidity Formazin or Stablcal Standard (at 800 NTU). Requires a calibration kit.

	Suspended Solids Sample specific, based on gravimetric analysis with a correction factor procedure.
Controller Compatibility:	SC200, SC1000, SC4500. All controllers sold separately
Diameter:	40 mm
Flow:	Max. 3 m/s (the presence of air bubbles affects the measurement)
Includes:	Turbidity & Suspended Solids sensor, user manual
Installation style:	Ball Valve Insertion, High Temperature
Length:	332 mm
Maintenance Interval:	1 h/month
Material:	Optics Carrier and Sleeve: stainless steel 1.4460 / stainless steel 1.4571
Max Temperature:	90 °C
Max. cable length Sensor-to-Controller:	100 m
Measurement method:	Combined multiple beam alternating light method with infrared diode system and beam focusing
	<i>Turbidity</i> (TRB): 2-channel 90° scattered light measurement in accordance with DIN EN ISO 7027, wavelength = 860 nm
	<i>Solids</i> (TS): 90° and 120° scattered light measurement, wavelength = 860 nm
Measuring Principle:	Infrared Duo scattered light technique for color-independent turbidity measurement Turbidity in accordance with DIN EN 27027 / TS equivalent DIN 38414
Measuring range:	Turbidity (TRB): 0.001 - 9999 NTU
	Solids (TSS): 0.001 - 500 g/L
Model:	TSS HT sc
Mounting Configurations:	Insertion
Operating temperature range:	0 - 90 °C
Parameter:	Turbidity, Suspended Solids
Pressure Range:	< 10 bar or < 100 m
Repeatability:	TSS content: < 4 %
	Turbidity: < 3 %
Response time:	1 s < T90 < 300 s (adjustable)
Response Time T90:	1 - 300 s adjustable
Special Features:	Simple Inline installation
Special Notes:	Installation note:
	Distance sensor–wall
	> 50 cm (Turbidity)
	> 10 cm (TSS)
Warranty:	12 months
Weight:	approx. 1.6 kg
What's included?:	Turbidity & Suspended Solids sensor, user manual

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