

# TSS Portable Hand-held Turbidity, Suspended Solids, and Sludge Blanket Level Instrument

Turbidity, Suspended Solids, and Sludge Blanket Level

## Features and Benefits

### Three Parameters in One Instrument

The Hach TSS Portable Hand-held Turbidity, Suspended Solids, and Sludge Blanket Level Instrument's unique multi-beam alternating light method with infrared diode system gives it a broad measuring range for both turbidity and suspended solids in one portable handheld instrument.

### Multiple Calibration Curves for Convenience

It stores up to four different calibration curves for suspended solids and one for turbidity. There's no need for constant re-calibration for different locations or types of sludge.

### Easy Sludge Blanket Levels

The sludge blanket level can be measured by setting the units to mg/L, g/L or percent. Calibrate the instrument and then slowly lower the sensor into the clarifier. The suspended solids concentration will significantly increase as it reaches the sludge blanket level. Once the blanket level is reached, examine the sensor cable which is marked every meter to determine the sludge blanket level depth from the water surface.

### Air Bubble Compensation for Accuracy

The instrument software automatically compensates for air bubbles to prevent its influence on the measurement. Turbidity is pre-calibrated with a calibration curve stored in the instrument. For suspended solids, each of the calibration curves can be closely adjusted to the laboratory results because each calibration curve can use up to three points per curve plus a zero value.

### Durable Materials for Long Life

The probe is made of polished stainless steel with a scratch-resistant sapphire window to withstand harsh environments. Polished stainless steel helps keep particles from sticking to the surface of the probe. The internal memory stores up to 290 measuring values, including time, date, measurement, location, and homogeneity. Three operating modes are available—single, interval, or continuous.

### Rechargeable Battery Power

With rechargeable batteries, the Hach TSS Portable Hand-held Turbidity, Suspended Solids, and Sludge Blanket Level Instrument can provide up to one month of usage in typical measuring mode and up to four hours of continuous operation. Interval mode has automatic shut off between measurements for longer operation in the field. The battery status is always visible. The operating menu is user-friendly and is displayed on an easy-to-read LCD graphic display.



*The Hach TSS Portable Hand-held Turbidity, Suspended Solids, and Sludge Blanket Level Instrument is ideal for remote monitoring in municipal and industrial wastewater, drinking water, and river monitoring. This instrument can be used as an optimization tool for monitoring processes or as an easy way to calibrate or validate online sensors.*

## Specifications\*

### Measurement Principle

Combined multi-beam alternating light method with infrared diode system

**Turbidity:** 2-channel 90° scattered light measurement in accordance with DIN EN 27027/ISO 7027; additional measured value verification by six-channel multiple angle measurement

**Suspended Solids:** modified absorbance measurement, six-channel multiple angle measurement

### Range

**Turbidity:** 0.001 to 4000 NTU

**Suspended Solids:** 0.001 to 400 g/L (1 to 400,000 mg/L) (upper range depending on sample characteristics)

### Accuracy

**Turbidity:** less than 3% or  $\pm 0.02$  NTU, whichever is greater  
**Suspended Solids:** less than 4% or  $\pm 0.001$  g/L whichever is greater

### Resolution

**Turbidity:** 0.001 at 0 to 0.999 NTU; 0.01 at 1 to 9.99 NTU; 0.1 at 10 to 99.9 NTU; 1 at greater than 100 NTU

**Suspended Solids:** 0.001 at 0 to 0.999 g/L; 0.01 at 1 to 9.99 g/L; 0.1 at 10 to 99.9 g/L; 1 at greater than 100 g/L

### Units of Measure

**Turbidity:** NTU, FNU, EBC

**Suspended Solids:** ppm, mg/L, g/L, %

*Continued on next page.*

DW = drinking water WW = wastewater municipal PW = pure water / power  
IW = industrial water E = environmental C = collections FB = food and beverage



Be Right™

## Specifications\* continued

### Operating Modes

Single, interval, or continuous measurement

### Display

24 mm (0.95 in.) high LCD graphic display; UV treated; alphanumeric 4 lines of 16 characters each

### Operating Temperature

0 to 60°C (32 to 140°F)

### Operating Pressure

0 to 10 bar (0 to 145 psi)

### Relative Humidity

0 to 95% relative humidity

### Power Requirements

Meter: 6 rechargeable NiMH batteries (recommended 1.2 V/min. 1800 mAh) or 6 "AA" standard batteries  
Plug-in Charger: 115/230 Vac, 50/60 Hz

### Sensor Cable Length

10 m (32.8 ft.)

### Meter Enclosure Rating

IP55

### Probe Enclosure Rating

IP68

### Current Input

Approx. 60 mA

### Wetted Materials

Probe: stainless steel  
Sensor Window: sapphire

### Internal Data Memory

For up to 290 measured values

### Weight

Meter: 0.6 kg (1.2 lb.)  
Probe: 1.6 kg (3.5 lb.)

### Dimensions

Meter: 110 x 230 x 40 mm (4.3 x 9.1 x 1.6 in.)  
Probe: 290 x 40 mm (11.4 x 1.6 in.)  
Case: 320 x 450 x 110 mm (12.6 x 17.7 x 4.3 in.)

### Warranty

2 years

*\*Specifications subject to change without notice*

**At Hach, it's about learning from our customers and providing the right answers. It's more than ensuring the quality of water—it's about ensuring the quality of life. When it comes to the things that touch our lives...**

**Keep it pure.**

**Make it simple.**

**Be right.**

**For current price information, technical support, and ordering assistance, contact the Hach office or distributor serving your area.**

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## Ordering Information

**LXV322.99.00002** Complete TSS Portable Hand-held Turbidity, Suspended Solids, and Sludge Blanket Level System; includes meter, probe, rechargeable batteries, charger for rechargeable batteries with four plug adapters, manual, quick start guide and carrying case.

### Replacement Parts

**LXV320.99.00002** TSS Portable Hand-held Turbidity, Suspended Solids, and Sludge Blanket Level Meter only

**LXV321.99.00002** TSS Turbidity, Suspended Solids, and Sludge Blanket Level Probe only; with 10 m (32.8 ft.) cable and plug

**LZY607** Charger; for rechargeable batteries; includes 4 plug adapters (for Spain, United States, Great Britain, Hong Kong, Malaysia, Singapore, Australia, New Zealand, and China)

**LZY606** Battery Holder

**LZY604** Rechargeable NiMH Batteries; qty. 6

**LZY605** Hard-sided Instrument Carrying Case; with handle, empty

*TSS Portable Handheld System  
(order Prod. No. LXV322.99.00002)*



Lit. No. 2634

J8 Printed in U.S.A.

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