

TU5 SERIES TURBIDIMETERS

Applications

- Drinking water
- Power
- Beverage
- Pharmaceutical



The next standard in the evolution of turbidity

Only the new TU5 Series Lab & Process Turbidimeters with 360° x 90° Detection deliver unprecedented confidence that a change in your reading is a change in your water.

Groundbreaking 360° x 90° Detection Technology

The TU5 Series employs a unique optical design that sees more of your sample than any other turbidimeter, delivering the best low level precision and sensitivity while minimising variability from test to test.

Matching lab and online results

For the first time you will be able to remove the uncertainty of which measurement to trust, thanks to identical 360° x 90° Detection Technology in both instruments.

Everything about turbidity – faster

The TU5 Series dramatically reduces the time needed to get a turbidity measurement you can rely on, with 98% less online sample surface area to clean, sealed vials for calibration, and the elimination of the need for indexing and silicone oil in the lab. Not to mention, a smaller online sample volume means you will detect events almost immediately.

No surprises

Prognosis monitors your TU5 Series online instrument, proactively alerting you to maintenance needs before your measurement becomes questionable. And a Hach Service Agreement protects your investment and helps ensure that you stay in compliance and on budget.

Technical Data*

TU5200

Light source	Class 2 laser product, with embedded 650 nm (EPA) or 850 nm (ISO), max. 1.0 mW Class 2 laser source (complies with IEC/EN 60825-1 and to 21 CFR 1040.10 in accordance with Laser Notice No. 50)
Measuring range	EPA: 0 to 700 NTU / FNU / TE/F / FTU 0 to 100 mg/L 0 to 175 EBC ISO: 0 to 1000 NTU / FNU / TE/F / FTU 0 to 100 mg/L 0 to 250 EBC
Accuracy	±2 % of reading plus 0.01 NTU from 0 to 40 NTU; ±10 % of reading from 40 to 1000 NTU based on Formazin primary standard (at 25 °C)
Resolution	0.0001 NTU / FNU / TE/F / FTU / EBC / mg/L
Repeatability	<40 NTU: Better than 1% of reading or ±0.002 NTU on Formazin at 25 °C (77 °F), whichever is greater >40 NTU: Better than 3.5% of reading on Formazin at 25 °C (77 °F)
Stray light	<10 mNTU
Units	NTU, FNU, TE/F, FTU, EBC; mg/L if calibrated with Degrees calibration curve
Operating temperature range	10 to 40 °C
Operating humidity	80% at 30 °C (non condensing)
Sample temperature	4 to 70 °C
Storage conditions	-30 to 60 °C
Power requirements (Voltage)	100 - 240 V AC
Power requirements (Hz)	50/60 Hz
Certifications	CE compliant US FDA accession number: 1420493-000 EPA version, 1420492-000 ISO version Complies with IEC/EN 60825-1 and to 21 CFR 1040.10 in accordance with Laser Notice No. 50 Australian RCM Marking
Dimensions (H x W x D)	195 mm x 409 mm x 278 mm
Weight	2.4 kg
Warranty	2 years

TU5300 sc / TU5400 sc

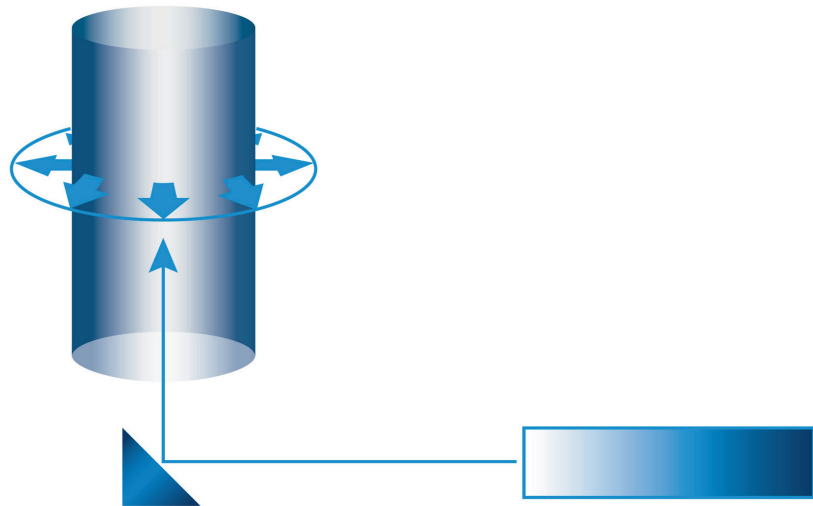
Light source	Class 2 laser product, with embedded 650 nm (EPA) or 850 nm (ISO), max. 1.0 mW Class 2 laser source (complies with IEC/EN 60825-1 and to 21 CFR 1040.10 in accordance with Laser Notice No. 50)
Measuring range	EPA: 0 to 700 NTU / FNU / TE/F / FTU 0 to 175 EBC ISO: 0 to 1000 NTU / FNU / TE/F / FTU 0 to 250 EBC
Accuracy	±2% of reading plus 0.01 NTU from 0 to 40 NTU ±10% of reading from 40 to 1000 NTU based on Formazin primary standard
Resolution	0.0001 NTU / FNU / TE/F / FTU / EBC
Repeatability	TU5300 sc: Better than 1% of reading or ±0.002 NTU on Formazin at 25 °C, whichever is greater TU5400 sc: Better than 1% of reading or ±0.0006 NTU on Formazin at 25 °C, whichever is greater
Stray light	<10 mNTU
Units	NTU, FNU, TE/F, FTU, EBC
Signal average time	5 to 90 seconds (default: 30 seconds)
Response time	T90<30 seconds at 100 mL/min
Sample temperature	2 to 60 °C
Sample pressure	6 bar maximum, compared to air at sample temperature range from 2 to 40 °C
Flow rate	100 to 1000 mL/min; optimal flow rate: 200 to 500 mL/min
Operating temperature range	0 to 50 °C
Operating humidity	Relative humidity: 5 to 95% at different temperatures, non-condensing
Storage conditions	-40 to 60 °C
Certifications	CE compliant US FDA accession number: 1420493-000 EPA version, 1420492-000 ISO version Complies with IEC/EN 60825-1 and to 21 CFR 1040.10 in accordance with Laser Notice No. 50 Australian RCM Marking
Dimensions (H x W x D)	249 mm x 268 mm x 190 mm
Weight	2.7 kg (5.0 kg with all accessories)
Warranty	2 years

*Subject to change without notice.

Principle of Operation

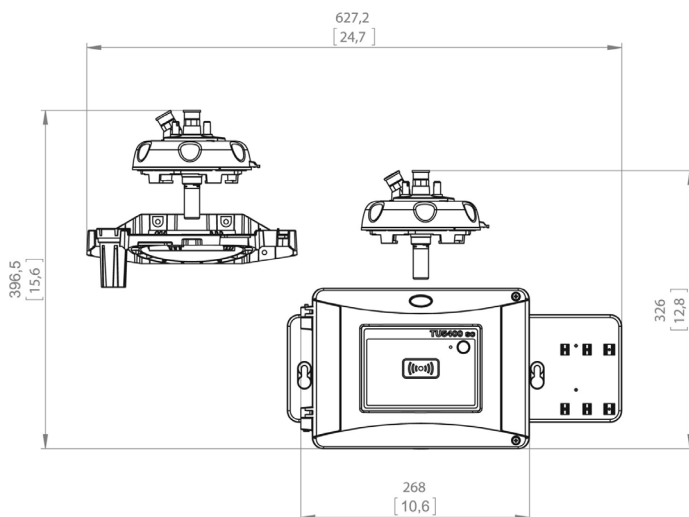
The TU5 Series turbidimeters measure turbidity by directing a laser into a sample to scatter off suspended particles. The light that is scattered at a 90° angle from the incident beam is reflected through a conical mirror in a 360° ring around the sample before it is captured by a detector.

The amount of light scattered is proportional to the turbidity of the sample. If the turbidity of the sample is negligible, little light will be scattered and detected by the photocell and the turbidity reading will be low. High turbidity, on the other hand, will cause a high level of light scattering and result in a high reading.

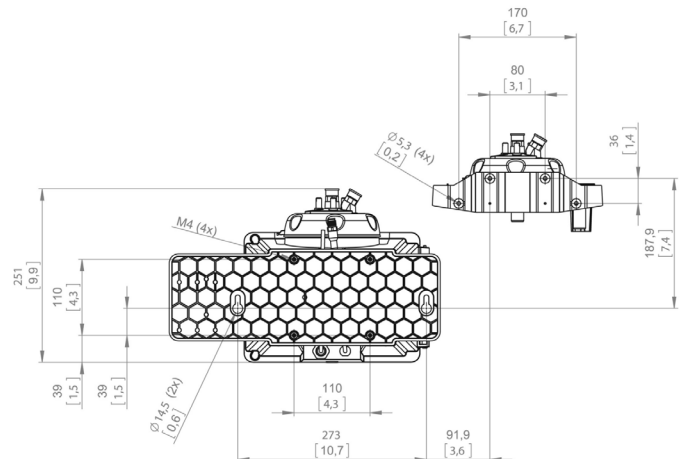


Dimensions

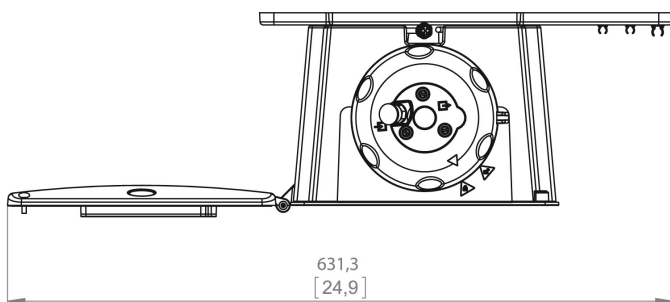
TU5300 sc and TU5400 sc front view



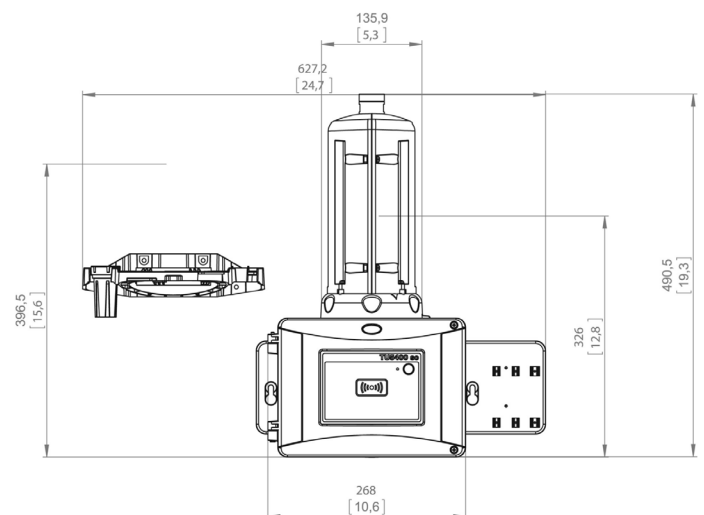
TU5300 sc and TU5400 sc rear view



TU5300 sc and TU5400 sc top view



TU5300 sc and TU5400 sc with automatic cleaning module



Order Information

TU5200 Benchtop Laser Turbidimeters

LPV442.99.01022 TU5200 Benchtop Laser Turbidimeter with System Check, ISO Version

LPV442.99.03022 TU5200 Benchtop Laser Turbidimeter with System Check and RFID, ISO Version

TU5300 sc/TU5400 sc Online Laser Turbidimeters

LXV445.99.10122 TU5300 sc Low Range Laser Turbidimeter, ISO Version

LXV445.99.10222 TU5400 sc Ultra-High Precision Low Range Laser Turbidimeter, ISO version

LXV445.99.53122 TU5300 sc with flow sensor, automatic cleaning, RFID, and system check, ISO version

LXV445.99.53222 TU5400 sc with flow sensor, automatic cleaning, RFID, and system check, ISO version

Please note: Other turbidimeter configurations are available and RFID may not be available in all areas.

Please contact your local Hach representative.

Calibration and Verification

LZY835 Stablcal calibration set with RFID

LZY898 Stablcal calibration set without RFID

LZY901 Glass rod secondary turbidity standard <0.1 NTU/FNU

LZY834 Replacement vial for TU5300 sc and TU5400 sc

LZV946 Sample vials for TU5200

TU5 Series Accessories

LQV159.99.00002 Automatic cleaning module for TU5300 sc and TU5400 sc

LQV160.99.00002 Flow sensor for TU5300 sc and TU5400 sc

LZY876 Desiccant cartridge for TU5300 sc and TU5400 sc

LZY907.98.00002 Maintenance kit for TU5300 sc and TU5400 sc

LQV157.99.40002 SIP10 sipper unit for TU5200

LZY903 Manual vial wiper for TU5200, TU5300 sc, and TU5400 sc

Service Packages

Start-Up:

Commissioning, Instruction and Training of your operating personnel to ensure you get the best performance from your instrumentation from the first day you use it.

Service Agreement:

Hach offers a wide range of service agreements that can be tailored to you to help maximise your measurement reliability and instrument uptime.

Contact us to get a service offering designed for you.