TB500 Series Online Turbidimeters

Online Meters for Continuously Measuring Turbidity

Description

The TB500 Series Online Turbidimeters are specifically designed for the continuous measurement of turbidity in filtered water, raw water, final wastewater effluent, and many industrial applications. Three models are available: the TB502, which provides reliable and economical turbidity monitoring with a range of 0 to 1,000 NTUs; and the TB503 and TB504 models, which feature an EPA accepted ultrasonic cleaning system that keeps the optical chamber clean in raw and finished water applications. With its 0 to 100 NTU range, the TB503 is suitable primarily for clean, finished water applications. The TB504 has a versatile range of 0 to 1,000 NTUs.

Choice of Light Sources

We offer the TB500 tubidimeters in two different light source versions to meet the needs of different measuring standards. The White Light (WL) versions are recommended for use in reporting results under US EPA (US standard) jurisdiction. These versions use an advanced krypton-filled white light technology that has a lamp life expectancy up to 7 years. The Infared (IR) versions feature a long life

infrared light source, which is recommended for use in reporting results under ISO 7027 (European standard) jurisdiction. Infrared light is also recommended for monitoring final wastewater effluent and industrial solutions where color is present in the sample stream.

Easy Calibration

You can calibrate the TB500 series meters with primary standards using sealed glass cuvettes, in a method similar to laboratory procedures. This dry method of calibration is fast and clean, and the sealed primary standards are reusable. An on-screen menu guides you through the calibration procedure quickly and easily: simply place the cuvette into the measuring chamber and verify the reading– just like a laboratory meter.

Advanced Design

The TB500's advanced optical design provides consistent readings. The optical chamber has been designed to eliminate air in the sample while simultaneously creating a vortex cleaning action throughout the chamber. The low-volume sample chamber (30 ml) reduces calibration costs and provides quick response times.

Features

- Meets USEPA method 180.1 and ISO 7027
- Range of 0 - 1000 NTU
- Simple, one-piece design
- Ultrasonic auto cleaning system, EPA accepted
- Easy to clean and calibrate
- Convenient reusable primary calibration standards

Specifications

Range	0 to 1000 NTU
Measurement Principle	Nephelometry (90 degrees)
Accuracy	2% of reading or ± 0.02 below 40 NTU, 5% of reading above 40 NTU
Resolution	0.0001 selectable
Response Time	Adjustable (5 to 500 seconds) (0 to 1000 NTU)
Input Pressure	1 to 200 psi (built in regulator set at 15 psi)
Standard Outputs	4-20 mA galvanic isolated or RS-485
RS-485 Protocols	Modbus
Light Source	White Light: 7 year life Infrared Light (850nm LED): 10 year life
User Alarms	2 high/low alarms
Alarm Contacts	Form C 250 VAC 2A
Display	Multiline Custom Backlight LCD
Built-In Diagnostics	Yes
Storage Temperature	-4°F to 140°F (-20°C to 60°C)
Operating Temperature	32° to 122°F (0° to 50°C)
Wetted Surfaces	Nylon, Borosilicate Glass, Silicon, Polypropylene, Stainless Steel
Enclosure	Designed to meet NEMA 4X, IP66
Outdoor Installation	32°F to 122°F (0°C to 50°C)
Certifications	USEPA, ISO 7027, CE Approved, ETL Listed to UL 3111-1 and ETL Certified to CSA 22.2 No. 1010-1-92
Shipping Weight	5.5 lbs (2.5 kg)
Dimensions	14 x 12 x 12" (35 x 30 x 30 cm)

Ordering & Options

Turbidimeters

Order No.	Range (NTU)	Light	Method	Autoclean
TB502-WL	0 to 1,000	White	USEPA	No
TB502-IR	0 to 1,000	Infrared	ISO 7027	No
TB504-WL	0 to 1,000	White	USEPA	Yes
TB504-IR	0 to 1,000	Infrared	ISO 7027	Yes

Calibration Kits

Order No.	Description
TB500-CAL	Primary Calibration Kit for TB502 & 504

Replacement Parts

Order No.	Description
TB502-CUV	Flow Thru Cuvette for TB502
TB500-UCUV	Flow Thru Cuvette for TB503 & 504
TB500-DR	Desiccant Refill, all models
CS100	4-20 mA Current Signal Splitter

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