

# Lovibond® Water Testing Tintometer® Group



## PTV 1000 with Flow Indicator & Profibus; IR light source

Next Generation of On-line Turbidity Measurement



- Smart Interface - Rethink the Controller
- Simplified and Streamlined Processes
- Innovative, Low Maintenance Design
- Unsurpassed Accuracy for low-level effluent measurement

Part Number: 6124613

### Process Simplified - A New Approach

Details matter. The development of the PTV Series considered every aspect of process turbidity workflow - from installation and setup; daily measurement and control; routine procedures such as calibration, verification and maintenance; to data collection and management.

### Smart User Interface - Rethink the Controller

We've replaced the need for a traditional controller with the familiar interface of a smart device. By utilizing a mobile device app, the user experience is enhanced by allowing quick and easy data viewing, calculation of statistics and access to operator instructions and useful tips.

### Designed to Save

Save time, money and water by using the PTV system. These instruments are optimised for drinking water applications with unsurpassed low range accuracy (below 1 NTU). It has a variety of features that help users save.

### Regulatory Compliant

The PTV Series has instruments that meet EPA and ISO regulatory requirements.

### Fluidics Manager

The Fluidics Manager is an additional accessory that streamlines sample flowing into and out of the instrument. This eliminates the need to install and maintain separate devices to control sample entering and exiting the sensor.

### Panel Mounting System

A Place for Everything. The Panel Mount is an additional accessory that aids in the installation of key instrument components and accessories.

### Two Ways to Interface

**Touchscreen Interface** - All PTV Series instruments are supplied with an integrated touchscreen. All measurement settings and routine functions such as calibration can be managed directly with the touchscreen without the need for additional devices.

**AquaLXP™ Interface** - The AquaLXP™ app is an enhanced version of the touchscreen. In addition to being able to perform all of the functions as the touchscreen, users have access to animated instructions of all procedures, advanced data analysis and statistics tools, complete maintenance and repair logs as well as the comfort of using a familiar device.

### Wet Standards - for Calibration & Verification

T-CAL Turbidity Standards from Lovibond® Tintometer® are primary standards that are US EPA and ISO compliant.

When you combine our T-CAL Turbidity Standards and our T-CALplus™ packaging, turbidity standards have never been easier to use.

## Industry

Municipalities

## Application

Drinking Water Treatment

## PTV 1000 with Flow Indicator & Profibus; IR light source

Turbidity is the key measurement parameter for determining drinking water quality.

To develop this instrument, Lovibond® Tintometer® assembled a team of globally recognized turbidity experts. We tasked them with creating a new process instrument that addresses all of the issues customers struggle with while using their current turbidity systems. These advancements, along with the addition of state-of-the-art communications and user interface make the PTV 1000 and PTV 2000 the next generation of process turbidimeters.

## Measuring Range

| Test Name | Measuring Range  |
|-----------|------------------|
| Turbidity | 0.0001 - 100 NTU |

## Technical Data

|  |  |
|--|--|
| <b>Optics</b>                            | Infrared light   |
| <b>Accuracy</b>                          | ± 2 % of reading from 0 to 10 NTU<br>± 4 % of reading between 10 to 100 NTU  |
| <b>Stray Light</b>                       | smaller 0.005 / 5 mNTU   |
| <b>Displayed Resolution</b>              | up to 0.0001 NTU (range dependent) or 5 digits displayed   |
| <b>Repeatability / Precision</b>         | better than 1% at 1 NTU  |
| <b>Initial Response</b>                  | 10 % change: 15 seconds @ max flow   |
| <b>Step Response</b>                     | (T-90), less than 240 seconds at 200 ml/min. at 1 NTU  |
| <b>Signal Averaging</b>                  | User Selectable: 1, 3, 6, 10, 30, 60, and 90 seconds, defaulted to 30 seconds  |
| <b>Sample Temperature</b>                | 0 - 50 °C max sample temperature: 70 °C  |
| <b>Sample Flow</b>                       | 30 to 500 ml/min, optimal flow: 50 to 80 ml/min  |
| <b>Sample Inlet Connection</b>           | 1/4-inch NPT female, 1/4-inch compression fitting tubing (included)  |
| <b>Sample Outlet (Drain) Connection</b>  | 3/8-inch NPT female, 3/8-inch hose barb tubing (included)  |
| <b>Power Requirements</b>                | 90 to 264 VAC, 50/60 Hz. Auto Select   |
| <b>Sample Inlet Tubing</b>               | 1/4-inch OD or 6 mm OD   |
| <b>Sample Outlet Tubing</b>              | 3/8-inch OD or 9 mm OD   |
| <b>Turbidimeter Body Drain</b>           | Quick connect with integrated check valve  |
| <b>Calibration</b>                       | One Point Calibration at 5.0 or 20 NTU with any regulatory approved formazin   |
| <b>Analog Output: Measurement Module</b> | 1 selectable 0 - 20 mA or 4 - 20 mA; output span programmable over any portion of the measurement range                                |
| <b>Analog Output: Junction Box</b>       | 1 selectable 0 - 20 mA or 4 - 20 mA; output span programmable over any portion of the measurement range                                |
| <b>Alarms</b>                            | Three set-point alarms, each equipped with an SPDT relay with unpowered contacts rated 5 A resistive load at 230 V, AC                 |
| <b>Digital protocol</b>                  | Profibus DP  |
| <b>Enclosure Type: Junction Box</b>      | Fiber reinforced polyester   |
| <b>Enclosure Rating: Junction Box</b>    | IP 66  |
| <b>Safety</b>                            | Listed by TÜV Rheinland to UL 61010A-1: Certified by TÜV Rheinland to CSAC22.2 No. 1010.1: CE Certified by TÜV Rheinland to EN 61010-1 |

|                                 |  |
|---------------------------------|--|
| <b>Immunity</b>                 | CE certified by TÜV Rheinland to EN 61326 (Industrial Levels)  |
| <b>Emissions</b>                | Class A: EN 61326, CISPR 11, FCC Part 15, Canadian Interference-Causing Equipment Regulation ICES-003  |
| <b>Mounting Hardware</b>        | Turbidimeter Sensor - Slotted Mounting Bracket that can be affixed to any vertical surface or panel (Optional). Junction Box - Direct mounting to any vertical surface or panel (Optional) |
| <b>Method of Verification</b>   | Wet Standards or dry verification device   |
| <b>Limit of Determination</b>   | 0.0005 NTU   |
| <b>Limit of Detection</b>       | 0.005 NTU  |
| <b>Flow Indicator</b>           | yes  |
| <b>Portability</b>              | Process  |
| <b>Environmental Conditions</b> | 5 - 50 °C, rel. humidity 5 - 95 % (Non-condensing)   |
| <b>Protection Class</b>         | IP 65  |
| <b>Compliance</b>               | ISO 7027   |
| <b>Dimensions</b>               | 158.4 x 340.4 x 334.5 mm   |
| <b>Weight</b>                   | 5 kg   |

| Title  | Part Number |
|--|-------------|
| Assembly, Float  | 19806-054   |
| Assembly, Fluidics Manifold  | 19806-056   |
| Constant Head Height Regulator   | 19806-058   |
| Kit, Fittings & Tubing   | 19806-059   |
| T-CALplus Calibration Tube Assembly (Blue Tube)-                       | 19806-062   |
| Cleaning Tube Assembly (Black Tube)                                    | 19806-072   |
| Kit, Bubble trap cover Replacement (comes with O-ring)                 | 19806-077   |
| Kit, Beam dump Replacement (comes with O-ring), for PTV 1000, PTV 2000 | 19806-078   |
| Kit, Knob for bubble trap  | 19806-079   |
| Kit, Drain fitting   | 19806-080   |
| Kit, Drain cover   | 19806-081   |
| Mounting Cleat, for PTV 1000, PTV 2000                                 | 19806-082   |
| Kit, Flow body assembly, with Flow Meter                               | 19806-083   |
| Kit, Flow body assembly, without Flow Meter                            | 19806-084   |
| Kit, Illuminator Lens Sub Assembly                                     | 19806-085   |
| Kit, Installation Connectors   | 19806-086   |
| Rotometer, 25 to 100 mL/min  | 19806-087   |
| Panel, Instrument and Sample Management                                | 19806-088   |
| Brass mounting cup assembly  | 19806-106   |
| Dry Verification STD, High Range ( > 10 NTU)                           | 19806-110   |
| Dry Verification STD, Low Range ( < 10 NTU)                            | 19806-111   |
| Fuse, 1.6A, 250VAC   | 19806-206   |
| Illuminator O-ring   | 19806-407   |
| O-ring, for Beam Dump  | 19806-416   |
| Tubing, 1/4" OD, black, Polyethylene                                   | 19806-429   |
| O-ring, Rear Drain cover   | 19806-434   |
| Fitting, Quick Connect, Male   | 19806-436   |
| Lanyard Strap  | 19806-448   |
| Fitting, Quick Connect, Female   | 19806-449   |
| Plug for Conduit holes   | 19806-487   |
| Valve; 1/4" Tubing Quick Connect                                       | 19806-494   |
| Tablet Wall Mount  | 19806-521   |
| Strain Relief, 3/8" NPT  | 19806-527   |
| Tubing, 3/8" ID x 1/2" OD x 1/16" Wall, Clear PVC                      | 19806-531   |
| Seal, Bubble trap cover, -241 -  | 19806-554   |
| Insert, Measurement Module Holder, Instrument Panel                    | 19806-570   |
| Measurement Module, PTV 1000 IR  | 19806-700   |
| Measurement Module, PTV 1000 IR, with Bluetooth®                       | 19806-701   |

| Title   | Part Number |
|---|-------------|
| Pad, Application, Microfiber, w/pocket                                | 19806-803   |
| Rinse bottle, 500 ml  | 420056      |
| T-CAL <sup>plus</sup> ®-Standard, 0.30 NTU, Standard for Verification | 48010035    |
| T-CAL <sup>plus</sup> ®-Standard, 1.00 NTU, Standard for Verification | 48010135    |
| T-CAL <sup>plus</sup> ®-Standard, 5.00 NTU, Standard for Calibration  | 48010235    |
| T-CAL <sup>plus</sup> ®-Standard, 20 NTU, Standard for Calibration    | 48010335    |
| T-CAL®-Standard, 0,30 NTU, 500 ml                                     | 48011050    |
| T-CAL®-Standard, 1,00 NTU, 500 ml                                     | 48011150    |
| T-CAL®-Standard, 5,00 NTU, 500 ml                                     | 48012250    |
| T-CAL®-Standard, 20,00 NTU, 500 ml                                    | 48012350    |
| Cleaning Solution   | 54010435    |
| Detergent Solution  | 54011010    |
| Scale Remover   | 54013003    |

#### Tintometer GmbH

Lovibond® Water Testing  
Schleefstraße 8-12  
44287 Dortmund  
Tel.: +49 (0)231/94510-0  
sales@lovibond.com  
www.lovibond.com  
Germany

#### The Tintometer Limited

Lovibond House  
Sun Rise Way  
Amesbury, SP4 7GR  
Tel.: +44 (0)1980 664800  
sales@lovibond.uk  
www.lovibond.com  
UK

#### Tintometer China

9F, SOHO II C.  
No.9 Guanghualu,  
Chaoyang District,  
Beijing, 100020  
Customer Care China Tel.: 4009021628  
Tel.: +86 10 85251111 Ext. 330  
Fax: +86 10 85251001  
chinaoffice@tintometer.com  
www.lovibond.com  
China

#### Tintometer South East Asia

Unit B-3-12, BBT One Boulevard,  
Lebuh Nilam 2, Bandar Bukit Tinggi,  
Klang, 41200, Selangor D.E  
Tel.: +60 (0)3 3325 2285/6  
Fax: +60 (0)3 3325 2287  
lovibond.asia@tintometer.com  
www.lovibond.com  
Malaysia

#### Tintometer Brazil

Caixa Postal: 271  
CEP: 13201-970  
Jundiaí – SP  
Tel.: +55 (11) 3230-6410  
sales@lovibond.us  
www.lovibond.com.br  
Brazil

#### Tintometer Inc.

6456 Parkland Drive  
Sarasota, FL 34243  
Tel: 941.756.6410  
Fax: 941.727.9654  
sales@lovibond.us  
www.lovibond.us  
USA

#### Tintometer India Pvt. Ltd.

Door No: 7-2-C-14, 2<sup>nd</sup>, 3<sup>rd</sup> & 4<sup>th</sup> Floor  
Sanathnagar Industrial Estate,  
Hyderabad, 500018  
Telangana  
Tel: +91 (0) 40 23883300  
Toll Free: 1 800 599 3891/ 3892  
indiaoffice@lovibond.in  
www.lovibondwater.in  
India

#### Tintometer Spain

Postbox: 24047  
08080 Barcelona  
Tel.: +34 661 606 770  
sales@tintometer.es  
www.lovibond.com  
Spain

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