

Signet 4150 Turbidimeter



Features

- Simple and easy single unit installation with built-in pressure regulator
- Versions compliant with either U.S. EPA 180.1 for North and South America and Asia or ISO 7027 for Europe
- Time saving and efficiencies of cuvette technology simplifies calibration
- Spannable 4-20 mA output
- Two adjustable alarm relays
- Bright backlit display
- Convenient holder for In-line cuvette
- Easy access for wiring and maintenance
- Ultrasonic cleaning option ensures long and steady on-line measurement
- Inexpensive standards allow for multiple system calibrations

Applications

- Monitor Filter Performance
- Raw or Filtered Water
- Municipal Water Distribution
- Wastewater Reclamation and Tertiary Effluent
- Aquatic Life Support

Systems Overview

4150 Turbidimeter	
<ol style="list-style-type: none"> 1 - Mounting Bracket 2 - Power Supply and Wiring Terminals 3 - Operator Interface with Display 4 - Desiccant Access (not shown) 5 - In-line Glass Cuvette (with Ultrasonic option) 6 - Backpressure Valve 7 - Cuvette Holder 8 - Shutoff Clamp 9 - Tubing and Fittings 10 - Measuring Cell Chamber 	

Description

The Signet 4150 Turbidimeter system provides accurate and reliable compliant water quality monitoring for municipal and industrial applications.

The 4150 measures turbidity via a 90 degree light which reflects particles as they flow through a small volume, low flow glass cuvette. Air bubbles are eliminated from the cuvette by adjusting the backpressure valve on the outlet tube. The cuvette is located in a watertight dark chamber for continuously accurate on-line measurement. A replaceable desiccant pack provides a dry-stable environment to ensure reliable measurements.

Simple and fast calibration can be accomplished in under five minutes by placing the In-line glass cuvette from the measuring chamber into the

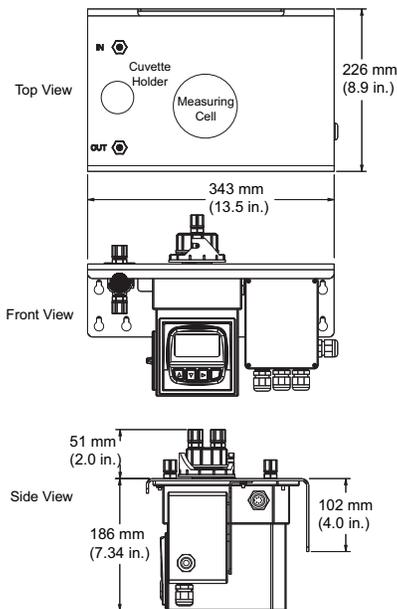
cuvette holder while still in service and the inlet and outlet tubing remains connected. The inexpensive calibration standard allows for dry and multiple system calibrations without mixing chemicals. After calibration, the unit is up and running with simple re-insertion of the glass cuvette back into the measuring chamber.

Additional features include a message indicator when the desiccant needs replacing and as an option, auto/ultrasonic cleaning of the glass In-line cuvette for longer runs between maintenance.

The 4150 is available in two measuring ranges. The 0 to 100 NTU/FNU version is for low range applications such as drinking water. The 0 to 1000 NTU/FNU range can be used for various applications including raw water and wastewater reclamation.



Dimensions



4150-0004

Glass cuvette with ultrasonic transducer

4150-0007

Glass cuvette without ultrasonic transducer (not shown)

Specifications

General

Flow Rate Range: 0.1 L/min to 1 L/min
[0.026 GPM to 0.26 GPM]

Measurement Range:
0 to 100.0 NTU/FNU or
0 to 1000.0 NTU/FNU

Accuracy:

- ±2% of reading or ±0.02 NTU/FNU below 40 NTU/FNU whichever is greater
- ±5% of reading above 40 NTU/FNU
- NTU = FNU = FTU

Mounting

- Horizontal plane, integral mounting bracket (with standard hole pattern)
- Use 4.75 mm (3/16") ID, 8 mm (5/16") OD flexible tubing for the water supply/outlet (customer supplied)

Resolution

up to 0.0001 NTU/FNU (below 10 NTU/FNU)

Display

Two-Line LCD w/backlight

Alarm Relays

120-240 VAC, 2A Form C Relay

Analog Signal w/Field Selectable Range

Active 4-20 mA, 600 Ω or RS485

Wetted Materials

- Tubing: Vinyl
- Measuring cuvette: Borosilicate Glass
- Glass washer seal: Silicone
- Pressure regulator: Polypropylene
- 316 stainless steel
- Delrin® by Dupont™
- Inlet tube: 316 stainless steel

Maximum Inlet Pressure

- Integral pressure regulator rated 1380 kPa (200 psig)

Maximum Outlet Pressure

- 100 kPa (15 psig)

Operating Temperature/Pressure

- 1 °C to 50 °C (34 °F to 122 °F)
- [5 to 15 psig] 35 to 105 kPa

Power Supply

100 – 240 VAC,
47 – 63 Hz, 80 VA

Insulation Rating

- Double Insulated
- Pollution Degree 2
- Overvoltage Category II

Altitude

2000 meters (6,561 ft) maximum

Relative Humidity

Maximum 95% RH non-condensing

Enclosure Rating

IP 66 /NEMA 4X

Environmental Conditions

Not recommended for outdoor use

Shipping Weight 2.5 kg 5.5 lb

Standards and Approvals

- CE
- Compliant to U.S. EPA 180.1
- Compliant to ISO 7027
- ETL Listed
- UL 61010-1 and CSA C22.2 No. 61010-1

Ordering Information

Part Number	
3-4150	Measurement Range and Self Cleaning Options
↓	-1 White Light, 0 to 1000 NTU/FNU, no self cleaning U.S. EPA 180.1
	-2 Infrared, 0 to 1000 NTU/FNU, no self cleaning ISO 7027
	-3 White Light, 0 to 100 NTU/FNU, with ultrasonic auto self cleaning U.S. EPA 180.1
	-4 Infrared, 0 to 100 NTU/FNU with ultrasonic auto self cleaning ISO 7027
	-5 White Light, 0 to 1000 NTU/FNU, with ultrasonic auto self cleaning U.S. EPA 180.1
	-6 Infrared, 0 to 1000 NTU/FNU with ultrasonic auto self cleaning ISO 7027
3-4150	-3 Example Part Number

Mfr. Part No.	Code	Mfr. Part No.	Code
3-4150-1	159 001 596	3-4150-4	159 001 599
3-4150-2	159 001 597	3-4150-5	159 001 600
3-4150-3	159 001 598	3-4150-6	159 001 601

Accessories and Replacement Parts

Mfr. Part No.	Code	Description
3822-4001	159 001 585	Calibration kit, turbidity, 100, 10 & 0.02 NTU/FNU
3822-4003	159 001 586	Calibration kit, turbidity, 1000, 10 & 0.02 NTU/FNU
3-4150.380	159 001 588	Replacement desiccant
3822-4002	159 001 591	Formazin stock kit
3822-4000	159 001 592	Formazin stock solution, 4000 NTU/FNU, 500 ml
4150-0007	159 001 602	Replacement cuvette set (3 glass cuvettes)
4150-0004	159 001 589	Replacement cuvette with ultrasonic transducer
3-4150.386	159 001 652	O-ring kit for cuvette

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