Right Angle Scattered Light Turbidimeter

TB750G

TB750G
Right Angle Scattered Light Turbidimeter

to realize highly reliable measurement
VigilantPlant excels at bringing out the best in your plant and your people - keeping them fully aware, well informed, and ready to face the next challenge. **Turbidimeter TB750G** is a core building block of Yokogawa’s VigilantPlant solutions that promise to bring operational excellence to visionary plants.

**Yokogawa Next Generation Turbidimeter TB750G**

Since their sales began in 1959, Yokogawa’s turbidimeters have been continuously developed and improved using various measurement principles suited for various applications. With its many achievements, Yokogawa has earned its customers’ confidence.

Developed based on years of experience and applications in process fields, the TB750G Turbidity Measuring System using right angle light scattering method provides highly reliable measurement and improved maintainability which improve upon what previous models could offer. A wide range of options are available to meet users’ various needs.

**FEATURES**

- **Easy-to-clean cell**
- **Bubble trap structure cell**
- **Ultrasonic cleaning**
  - Ultrasonic transducer and oscillator for ultrasonic cleaning (Optional)
- **In-line connection available**
  - Detector can be also connected for in-line analysis
- **Highly reliable measurement with excellent linearity and repeatability**
  - Linearity: ±2% of reading or ±0.01 NTU, whichever is greater
  - Repeatability: ±1% of reading or ±0.002 NTU, whichever is greater
- **User configurable measuring range**
  - Measuring range: 0-0.2 NTU to 0-100 NTU
- **A wide range of measurement conditions**
  - Low flow rate: 0.05 to 20 l/min
  - High pressure: 500 kPa maximum
  - Temperature: 0 to 50 °C
- **Others**
  - Measuring range switching (2 or 3 ranges)
  - Enhanced self-diagnostic function as standard
  - Light source failure, input element failure, calibration failure, various circuit failures, etc.
  - 2 analog outputs, 3 relay contact outputs, and 1 digital output
  - Various head tanks to accommodate application requirements (Optional)
  - Compact, lightweight converter and detector
**SPECIFICATIONS**

**Measurement**
- Turbidity of finished water and water used in general processes

**Display range**
- 0.000 to 100.0 NTU

**Output signal**
- Analog output 1: 4 to 20 mA DC, isolated
- Analog output 2: 4 to 20 mA DC or 0 to 20 mA DC selectable, isolated

**Load resistance**
- 550 Ω max.

**Mounting conditions**
- Temperature: 0 to 50 °C
- Maximum range: 0 to 100 NTU
- Minimum span: 20% or more of upper limit of the range or 0.2 NTU, whichever is greater

**Sample water**
- Flow rate: 0.05 to 20 l/min
- Pressure: 500 kPa max.

**Power consumption**
- Converter+Detector: 50 VA max.

**Power supply**
- 100 to 240 VAC -15%/+10%, 50/60 Hz

**Ambient humidity**
- 5 to 95%RH (non-condensing)

**Ambient temperature**
- -5 to 50 °C

**Range contact output**
- 3 relay contact outputs

**Serial communication**
- RS-422 or RS-232C, isolated

**Output signal**
- Analog output 1: 4 to 20 mA DC, isolated
- Analog output 2: 4 to 20 mA DC or 0 to 20 mA DC selectable, isolated

**Contact output**
- 3 relay contact outputs

**Ambient temperature**
- 5 to 50 °C (Sample and tap water may need protection against freezing)

**Ambient humidity**
- 5 to 95%RH (non-condensing)

**Power supply**
- 100 to 240 VAC -15%/+10%, 50/60 Hz

**Mounting**
- Pipe, wall, rack or panel mounting

**Mounting hardware**
- Always –NN

**Ultrasonic oscillator**
- (for power)

**Power cable inlet**
- *

**Cable gland**
- DIN Pg13.5

**Mounting node**
- Always –NN

**Detector**
- Power cable inlet
- Ultrasonic transducer (power)
- Ultrasonic transducer (isolated)
- Head tank
- Stainless steel tag plate
- Transducer for ultrasonic cleaning

**TB750G Right Angle Scattered Light Turbidimeter**

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**Turbidity standard and measuring range**
- -NTU
- Formazine, 0-0.2 NTU to 0-100 NTU

**Application**
- -GT

**Output**
- -NI
- 4 to 20 mA DC, RS-422

**Sampling system**
- -NN
- Without sampling system

**Sampling system material and mounting**
- -NN

**Serial communication**
- RS-422 or RS-232C, isolated

**Contact output**
- 3 relay contact outputs

**Ambient temperature**
- 5 to 50 °C

**Mounting conditions**
- Temperature: 0 to 20 °C (Sample and tap water may need protection against freezing)

**Mounting hardware**
- Always –NN

**Sample water**
- Flow rate: 0.05 to 20 l/min
- Pressure: 500 kPa max., Temperature: 0 to 50 °C

**Output range**
- Configurable within the measuring range

**Measuring range**
- 0.000 to 100.0 NTU

**Measurement Turbidity of finished water**
- Formazine, 0-0.2 NTU to 0-100 NTU

**Performance**
- whichever is greater

**Linearity:**
- ±0.002 NTU, ±0.01 NTU, ±0.02 NTU

**Sampling system**
- Always –NN

**Component codes**

**TB750G**

- 4-M6 screws
- 144

**Dedicated cable**
- 1/2/3m

**Converter*Detector**
- 4 to 20 mA DC, RS-422

**Power cable inlet**
- *

**Cable gland**
- DIN Pg13.5

**Mounting terminal**
- DIN Pg13.5

**Contact plate**
- DIN Pg13.5

**Ultrasonic transducer**
- Ultrasonic transducer (isolated)

**Head tank**
- Pressurized head tank for low turbidity (recommended for 2.0 NTU or less)

**Tag plate**
- Stainless steel tag plate

**Special painting**
- Epoxy painting

**Epoxy painting**
- Always –NN

**Option**
- Detector process connection
- Mounting hardware
- Ultrasonic oscillator (for power)
- Rack or wall mounting hardware (SUS)
- Panel mounting hardware (SUS)
- Mounting hardware for Model 8562 or Model TB500G replacement (SUS)

**Conduit adapter**
- AFTG
- /ANSI 1/2NPT

**Head tank**
- /ID1

**Tag plate**
- /STC

**Special painting**
- /X1

**Ultrasonic transducer**
- /US

**Mounting node**
- Always –NN

**Right angle scattered light turbidimeter**

**Noteworthy**
- When ultrasonic cleaning is continuously used after the Model 8562 Turbidity Transmitter has been replaced with the TB750G Turbidimeter, this “US” option must be specified.