

4-Beam-Turbidity Meter ITM-4

Application / Specified Usage

- Turbidity measurement from 0 up to 1000 NTU (e.g. 0 up to 1000 FNU)
- Filter monitoring
- Flow separation of low turbid media

Application Examples

- Process control of beverage processing
- Drinking water control in the beverage industry
- Water / waste water control (e.g. in dairies)
- Quality control
- Separation monitoring

Hygienic Design / Process Connection

- CEP / 3AP cleaning up to 130 °C
- Filtering completely made of stainless steel, optional/flush made of PEEK, glass parts made of sapphire glass (FDA certified)
- Further process connections: Side Flange (100/150 mm), top/flange thread connection (100 & 150 mm), 1/4" Flange, 100 Range

Features / Advantages

- Protection of the glass parts will be compensated
- Compact design, low suspension, maintenance and necessary
- Side/100 and 150 mm holders (100 ranges per unit)
- 4 beam ultraviolet and infraredly wavelength measurement ranges
- Scattering measurement range 0...1000 FNU, 0...1000 FNU
- Highly measurement range 0...1000 NTU (e.g. 0...1000 FNU)
- Stainless pipe diameter 100 mm
- Colour independent measurement principle (beam length 100 mm)
- Self-cleaning and emptying system
- 1/4" connection with plastic connection for 1/4" Flange and hygienic thread connection

Options / Accessories

- Electrical connection with PFA plug in connector
- Process/flush made for PFA plug in connector

Measuring Principle of the 4-Beam Turbidity Meter

The ITM-4 measures turbidity using the 4-beam scattering light method. The transmitter contains four infrared emitters and two infrared receivers arranged at right angles to each other. To determine the turbidity value, the emitters are alternately activated. When emitter 1 is active, receiver 1 detects the transmitted light and receiver 2 detects the light scattered at 90°. When emitter 2 is active, the situation is reversed.

An absorbability value is calculated from the four measured values of measurement cycles. Since a compensated light measurement is available as a reference for each 90° scattered light measurement, non-linear factors such as compensation of the optics or component ageing can automatically be compensated. Disturbing influences from the generally "inconsistent" of solids and air bubbles are largely cancelled out due to the calculation of multiple measurement cycles.

Authorizations



ITM-4 FOOD



Measurement Principle

