

Product Information ITM-4

FOOD

4-Beam-Turbidity Meter ITM-4

Application / Specified Usage

- Turbidity measurement from 0 up to 5000 NTU resp. 0 up to 1250 EBC
- Filter monitoring
- Phase separation of low turbid media

Application Examples

- Process control of brewing processes
- Fresh water control in the beverage industry
- Water- / waste water control e.g. in dairys
- Quality control
- Separator monitoring

Hygienic Design / Process Connection

- CIP- / SIP-cleaning up to 130 °C
- Fitting completely made of stainless steel, optical block made of PEEK, glass panes made of sapphire glass (FDA-conform)
- Further process connections: dairy flange DIN11851, hygienic thread connection DIN11864-1 form A, Tri-Clamp, DIN flange

Features / Advantages

- Pollution of the glass panes will be compensated
- Compact device, no separate evaluation unit necessary
- Units NTU and EBC switchable (11 ranges per unit)
- 4 free selectable and externally switchable measurement ranges
- Smallest measurement range 0...5 NTU resp. 0...1 EBC
- Highest measurement range 0...5000 NTU resp. 0...1250 EBC
- Smallest pipe diameter DN 25
- Colour independent measurement principle (wave length 860 nm)
- Switching and analog output
- 3-A certificate with process connection Tri-Clamp and hygienic thread connection

Options / Accessories

- Electrical connection with M12 plug-in connector
- Preassembled cable for M12 plug-in connector

Measuring Principle of the 4-Beam-Turbidity Meter

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

An exact turbidity value is calculated from the four measured values of a measurement cycle. Since a transmitted light measurement is available as a reference for each 90° scattered light measurement, interference factors such as contamination of the optics or component ageing can automatically be compensated. Disturbing influences from the sporadic occurrence of solids and air bubbles are largely cancelled out due to the evaluation of multiple measurement cycles.

Authorizations



ITM-4 / GG65



Measurement Principle

