

TurBiScat

In-line Process Turbidity Monitor



Applications

- Filtration monitoring in beverages such as beer, fruit juices, spirits
- Supervision of centrifuges, separators, whirlpools in the beverage industry
- Turbidity measurement in oils, sugar solutions, food
- Purity control in chemical and pharmaceutical processes

Advantages

- Sealless design, maintenance-free
- Extended sensor check function with fouling control
- Colour-compensated, 90° / 25° dual-angle measurement

- Optional colour measurement at 430 nm
- Quick adjustment with secondary standard
- Control unit with colour touch screen display
- Variable display of measuring data graphs, process performance
- Smooth system integration

Industries

- Beverage
- Food
- Chemical
- Pharmaceutical

Innovations with tangible benefits



Convincing Design

Combination of Hastelloy® and sapphire in a compact, sealless design with LED technology:

- Simple installation.
- Allows operation in practically all process applications.
- No need for regular maintenance.



Highest Precision, Large Measuring Span

Highest quality components and precise workmanship result in a high measuring span. An optional integrated colour measurement is available:

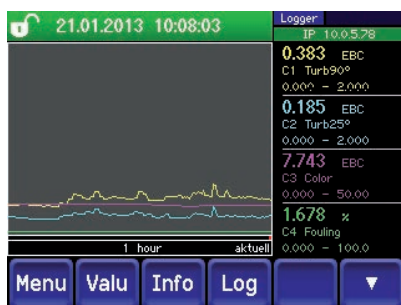
- One sensor type for numerous applications.
- Precise measurement of lowest up to very high turbidity values.
- Colour measurement in the same sensor for an attractive price.



Monitored Safety

Formazin is used in the factory to calibrate the TurBiScat after assembly. For QC purpose and possible recalibration, a secondary solid reference standard is available. The sensor has a built-in optical fouling control:

- Precise verification and recalibration without the use of Formazin.
- Information about the condition after CIP cleaning.



Intelligent Control System

The SICON control unit with state-of-the-art touch screen technology and colour display:

- Allows simple operation using intuitive menu.
- Values, graphs, alarm and status messages can be presented.
- An internal data logger allows recalling and displaying measured data from the last 32 days.

Details and technical data:



TurBiScat

Technical data

Sensor

| | |
|-------------------------------|--|
| Measuring principle: | 90° / 25° Scattered light |
| Wavelength turbidity: | LED 650 nm |
| Wavelength colour (optional): | LED 430 nm |
| Measuring span turbidity: | 0 ... 1'000 EBC 0 ... 4'000 NTU 0 ... 69,000 ASBC |
| Measuring ranges: | 8, freely programmable |
| Resolution: | 0.001 EBC / 0.07 ASBC |
| Measuring | span colour: 0 ... 50 EBC / 0 ... 25.4 SRM |
| Installation: | In-line housing Varivent® or compatible |
| Material sensor head: | Hastelloy® C-22® |
| Material housing: | Stainless Steel 304 / 1.4301 |
| Windows: | Sapphire |
| Sample temperature: | -10 ... +100 °C / +14 ... +212 °F +180 °C / +356 °F with cooling option |
| Cleaning: | CIP / SIP compatible up to +120 °C / +248 °F @ 2 h |
| Pressure: | 1 MPa (10 bar) / 145 psi in standard Varivent® housing Up to 4 MPa (40 bar) / 580 psi on request |
| Ambient temperature: | -10 ... +50 °C / +14 ... +122 °F |
| Ambient humidity: | 0 ... 100 % RH |
| Protection degree: | IP66 |

Control unit SICON

| | |
|-------------------------|--|
| Power supply: | 9 ... 30 VDC |
| Power consumption max.: | 8 W (with instrument) |
| Display: | 1/4 VGA, 3.5" |
| Operation: | Touchscreen |
| Ambient temperature: | -10 ... +50 °C / +14 ... +122 °F |
| Ambient humidity: | 0 ... 100 % RH |
| Protection degree: | IP66 |
| Outputs: | 4 × 0/4 ... 20 mA, galv. separated 7 × digital |

| | |
|----------------------------|---|
| Inputs: | 5 × digital, freely configurable |
| Digital interfaces: | Ethernet, microSD-card, Modbus TCP |
| Optional modules (max. 2): | Profibus DP, Modbus RTU, HART 4 × 0/4 ... 20 mA outputs, galv. separated 4 × 0/4 ... 20 mA inputs |

