

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 (MEBAK/EBC-conform)
- Optional colour measurement in the same sensor for an attractive price (MEBAK/EBC/ASBC-conform)



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

Main technical details

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
Resolution:	0.001 EBC / 0.07 ASBC
Measuring span colour:	0 ... 50 EBC / 0 ... 25.4 SRM
Sample temperature:	-10 ... +100 °C / +14 ... +212 °F +180 °C / +356 °F with cooling option
Protection degree:	IP66

Full 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, Profinet 4 × 0/4 ... 20 mA outputs, galv. separated 4 × 0/4 ... 20 mA inputs

