



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: $-10 ... +100 \,^{\circ}\text{C}$ / $+14 ... +212 \,^{\circ}\text{F}$

+180 °C / +356 °F with cooling option

Protection degree: IP66







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 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 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

Pressure:

Material sensor head:

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

0 ... 100 % RH Ambient humidity:

Protection degree: **IP66**

4 × 0/4 ... 20 mA, galv. **Outputs:**

> separated 7 × digital

Inputs:

Digital interfaces:

5 × digital, freely configurable Ethernet, microSD-card,

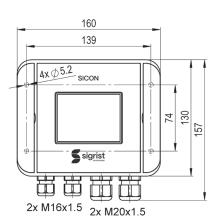
Modbus TCP

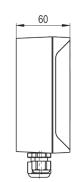
Optional modules (max. 2): Profibus DP, Modbus RTU,

Profinet

 $4 \times 0/4 \dots 20$ mA outputs,

galv. separated 4 × 0/4 ... 20 mA inputs





100 114 Ø 100.5 M12x1



Authorised Distributor:

