



## **TurBiScat 2 Ex**

**Turbidimeter** 



#### Applications

- Filtration monitoring and control
- Turbidity in whisky (cold filtration)

#### **Advantages**

- Two-angle measurement with one measuring head
- Optional colour measurement at 430 nm
- Integrated measured value display and communication modules
- Simple operation through WLAN-capable devices
- Protection class Zone 1, Ex db IIC T3/T4/T5/T6 Ga/Gb
- Measuring range 0 ... 4'000 NTU
- Sealless design
- Easy installation on standard in-line enclosures

- Hygienic design
- Dual beam measurement to compensate for colour and window contamination
- Simple adjustment with calibration unit
- Sensor check function

#### Industries

- Beverage (Spirits as whisky, cognac, ...)
- For other industries see TurBiScat 2 Ex with flange connection

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### Innovations with tangible benefits

#### **Convincing Design**

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

- Simple installation
- Allows operation in practically all process applications
- Minimal maintenance and servicing work

#### 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

#### Integrated Operation and Communication

- Display for measured values and status
- Visualisation of measurement data over the last 7 days
- Proximity sensor for operation
- Configuration via WLAN and integrated web server
- Various communication modules

#### **Monitored Reliability**

Formazin is used in the factory to calibrate the TurBiScat 2 Ex after assembly. For QC purpose and possible recalibration, a secondary solid reference standard is available.

- Precise verification and recalibration without the use of Formazin.

The integrated sensor check periodically checks the function of the light receivers and amplifiers:

- Ensures reliable measurement

#### Main technical details Measuring principle:

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Conformities:CE, ATEX, IEWavelength turbidity:LED 650 nmWavelength colour (optional):LED 430 nmMeasuring span turbidity:0... 4'000 NTResolution:0.001 NTUMeasuring span colour:0... 200 E/mSample temperature:-20 ... +180 °C

Ambient temperature: Protection degree: 90° / 25° scattered light (optional colour measurement) CE, ATEX, IECEX LED 650 nm LED 430 nm 0 ... 4'000 NTU 0.001 NTU 0 ... 200 E/m -20 ... +180 °C, depending on the medium and ambient temperature, optional cooling is required. -20 ... +60 °C IP66



Full details and technical data:





# **TurBiScat 2 Ex**

**Technical data** 

Sensor Measuring principle:

Conformities:

Temperature class:

90° / 25° scattered light at 650 nm (optional colour measurement at 430 nm) CE, ATEX, IECEX Ex-protection type/ Ex db IIC T3/T4/T5/T6 Ga/ Gb, temperature class depending on medium temperature:

Medium temperature	Temperature class
-20 +80 °C	Т6
-20 +95 °C	Т5
-20 +130 °C	T4
-20 +180 °C	Т3

LED 650 nm

Wavelength turbidity: Wavelength colour (optional): LED 430 nm Measuring span turbidity: Measuring ranges: **Resolution:** Measuring span colour: Installation:

Material sensor head: Material housing:

Windows: Sample temperature:

Max. pressure: VARINLINE housing: Ambient temperature: Ambient humidity: Operating voltage: Protection degree:

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0 ... 4'000 NTU 8, freely programmable 0.001 NTU 0 ... 200 E/m In-line housing VARINLINE® or compatible Hastelloy® C-22 Stainless Steel 1.4462/ 1.4404/Borosilicate glass Sapphire -20 ... +180 °C, depending on the medium and ambient temperature, optional cooling is required. 2 MPa (20 bar) observe specifications -20 ... +60 °C 0 ... 100 % rel. humidity 24 VDC ± 10 % IP66

#### Display: Operation:

WLAN module: b/a/n Communication modules:

In preparation:

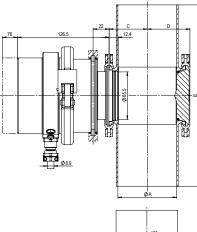
External control unit:

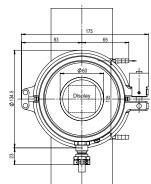
Colour graphic Proximity sensor or mobile device directly WLAN according to IEEE 802.11

6 configurable inputs/outputs

- outputs: 0/4 ... 20mA, digital
- inputs: digital
- Ethernet with POE:
- 10/100BaseT Ethernet with
- web server and Modbus-TCP
- Profibus DP
- Profinet IO

Optional (without ex-protection)







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