

TurBiScat 2 Ex

Turbidimeter with Flange Connection







Applications

- Turbidity measurement in phase separation processes
- Turbidity in oil industry
- Measurement of dispersed oil traces
- Water and particle determination in paraffin

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
- Complies with Namur NE61
- 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

- Chemistry
- Petrochemistry
- Aircraft fuels

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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.
- 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: 90° / 25° scattered light (optional colour

measurement)
Conformities: CE, ATEX, IECEX
Wavelength turbidity: LED 650 nm
Wavelength colour (optional): LED 430 nm
Measuring span turbidity: 0 ... 4'000 NTU
Resolution: 0.001 NTU
Measuring span colour: 0 ... 200 E/m

Sample temperature: -20 ... +180 °C, depending on the medium

and ambient temperature, optional cooling

is required.

Ambient temperature: -20 ... +60 °C

Protection degree: IP66



Full details and

technical data:



TurBiScat 2 Ex (FLAGE)

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 | T6 |
| -20 +95 °C | T5 |
| -20 +130 °C | T4 |
| -20 +180 °C | Т3 |

Wavelength turbidity: Wavelength colour (optional): Measuring span turbidity: Measuring ranges: Resolution: Measuring span colour: Installation:

Material sensor head: Material housing:

Windows:

Sample temperature:

LED 650 nm LED 430 nm 0 ... 4'000 NTU 8, freely programmable 0.001 NTU

0 ... 200 E/m In-line housing Hastelloy® C-22 Stainless Steel 1.4462/ 1.4404/Borosilicate glass

Sapphire

-20 ... +180 °C, depending on the medium and

Max. pressure: Ambient temperature: Ambient humidity: Operation voltage: Protection degree:

Operation

Display: Operation:

Proximity sensor or mobile WLAN module:

device directly WLAN according to IEEE

ambient temperature,

0 ... 100 % rel. humidity

optional cooling is

2 MPa (20 bar)

24 VDC ± 10 %

Colour graphic

-20 ... +60 °C

required.

IP66

802.11 b/g/n

Standard Interface (IO): 6 configurable inputs and outputs

Max. 2 digital inputs: 5 ... 28 VDC · Max. 4 digital outputs: High-Side Switch max. 20 mA

Max. 4 current outputs: 0/4 ... 20 mA, max. 700 Ω Modbus RTU

Power over Ethernet:

Ethernet LAN connection with Power over Ethernet (PoE) · Ethernet accoriding to

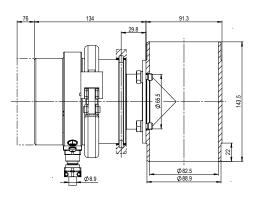
10/100BaseT

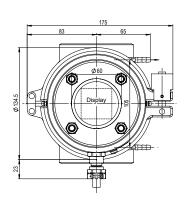
· POE according to 802.3af, class 0 Profibus DP-V1 Slave EG_Profibus:

Profinet IO Device, Conformance

Class B

External control unit: Optional (without ex-protection)





EG_Profinet:

C€ KK