sigrist
photometer

TurBiScat Ex PM 40

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

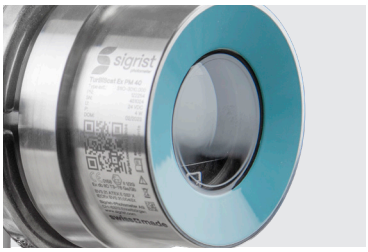
Industries

- Chemistry
- Petrochemistry
- Aircraft fuels

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 Ex PM 40 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:

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TurBiScat Ex PM 40 (FLANGE)

Technical data

Sensor

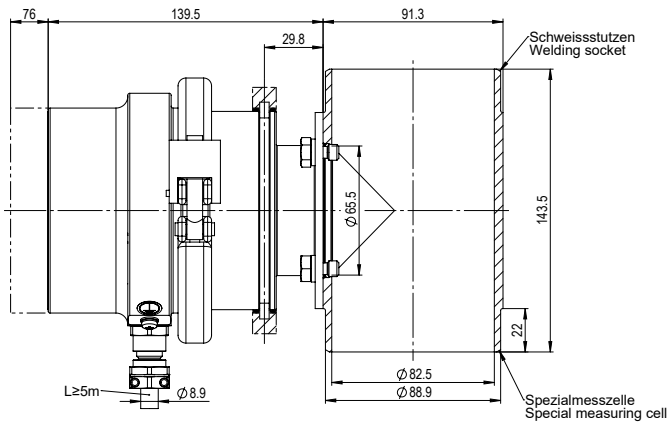
Measuring principle:	90° / 25° scattered light at 650 nm (optional colour measurement at 430 nm)
Conformities:	CE, ATEX, IECEx
Temperature class:	Ex-protection type/ Ex db IIC T3/T4/T5/T6 Ga/ Gb, temperature class depending on medium temperature:

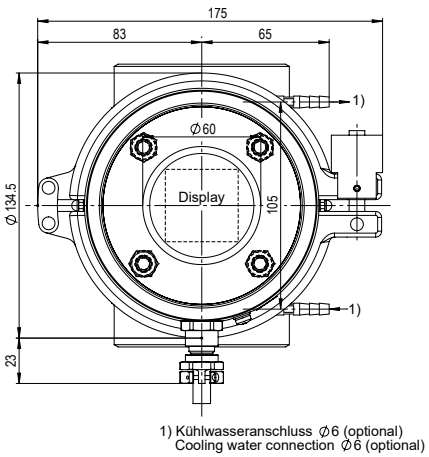
Medium temperature	Temperature class
−20 ... +80 °C	T6
−20 ... +95 °C	T5
−20 ... +130 °C	T4
−20 ... +180 °C	T3

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
Installation:	In-line housing
Material sensor head:	Hastelloy® C-22
Material housing:	Stainless Steel 1.4462/ 1.4404/Borosilicate glass
Windows:	Sapphire
Sample temperature:	−20 ... +180 °C, depending on the medium and ambient temperature, optional cooling is required.
Max. pressure:	2 MPa (20 bar)
Ambient temperature:	−20 ... +60 °C
Ambient humidity:	0 ... 100 % rel. humidity
Operation voltage:	24 VDC ± 10 %
Protection degree:	IP66

Operation

Display:	Colour graphic
Operation:	Proximity sensor or mobile device directly
WLAN module:	WLAN according to IEEE 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 accoridng to 10/100BaseT • POE according to 802.3af, class 0
EG_Profibus:	Profibus DP-V1 Slave
EG_Profinet:	Profinet IO Device, Conformance Class B
External control unit:	Optional (without ex-protection)





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