

## Type STS 03

modular @ analyse

### Turbidity Measuring Unit

#### Basic features

- ▶ Phase-Separation
- ▶ Quick product-change
- ▶ Reduced costs for waste water
- ▶ Filter-monitoring
- ▶ Colour-independent concentration measurement
- ▶ Extended measuring range
- ▶ Calibration ex factory 0...3AU
- ▶ Recalibration-capable with absorption-filter
- ▶ Measurements in absorption- /AU or Turbidity units(EBC, FAU, TEF, mg/l) or customised units (free adjustable)
- ▶ Additional customised calibration with up to 6 points
- ▶ Compact Design with integrated electronic and display for parameterisation
- ▶ Robust saphir-windows, CIP/SIP-suitable
- ▶ Hygienic Design, polymerfree-sealing system
- ▶ LED-light, stable and durable signal guaranteed
- ▶ Integrated digital- and analog-output
- ▶ Simple parameterization
- ▶ Process-monitoring and documentation



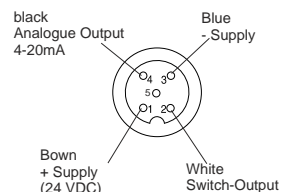
supported by



#### Optical Pathlength (OPL)



#### Pin Configuration



#### Technical features

- ▶ Measuring range 0...3AU, 0...3250EBC
- ▶ Wave length 880 nm
- ▶ Light source LED
- ▶ Optical pathlength 5
- ▶ Made of high grade steel 1.4404 (316L)
- ▶ Finish quality electropolished <0,37 µm Ra
- ▶ Window: Saphir
- ▶ Supply voltage 12...30VDC
- ▶ Output current 4...20mA
- ▶ Output PNP Normally Closed / Normally open, parametrisable / 200 mA max.
- ▶ Cable-Connection M12-plug, 5-pole
- ▶ Process-connection 1/2" elastomerfree sealing system
- ▶ Ambient-temperature -20...70°C  
Process-temperature 0...90 °C, 140 °C max. for 2 hours (SIP-cycle)
- ▶ Process-pressure 10 bar (150 psig) max. at 60 °C

#### Favoured fields of application are:

STS 03 is a measuring unit to measure the optical density of liquids, to control process-results continuously or to define changes securely. Especially suitable for separator-controlling, phase-separation, filter-monitoring and concentration measurement as well as quality control

#### ATTENTION!

At lower deviation of dew points water condensation is possible, that can destroy the sensor. At stress with change of temperatures, e. G. a cold water jet on the hot sensor, it can come to absorption of fluids in to the sensor. (Requirements cf. DIN EN 60068-2-14)  
At applications with dew point, temperature shock or thermal shock stresses we recommend to put in the enclosed silikagel-bag into the connecting head.

Optical systems should be switched off at higher temperatures e.g. 90°C because of the lifetime of the transmission diode. See Manual.

The tightness classification after IP68 does not mean that these parts are suitable for applications with lower deviation of dew point or temperature shock. (DIN 60068-2-14)

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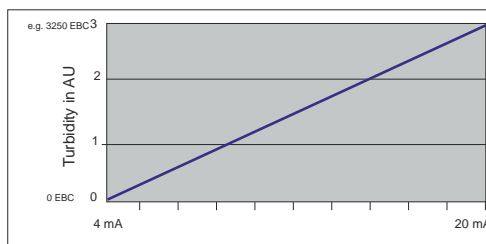
### Technical Facts

Supply Voltage:	12...30 VDC	Load: $\leq (U_b - 4V) / 20mA$ (max. 400Ohm at 12V, 1000 Ohm at 24V, 1300 Ohm at 30V)
Current demand:	ca. 80 mA (30V, Analog-Output= 22,5 mA)	Switch-Output: semiconductor-switching, PNP-switching
Power Input:	2,4 W max.	Switched Power: 200mA max., thermally protected against overload
Analog-Output:	4-20 mA	Protection class: IP 67 / 69K
Current limit:	3,5 mA min. 22,5 mA max., adjustable	
Torque:	10-20Nm	

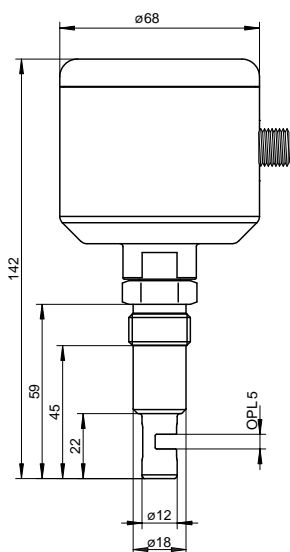
### Measuring Ranges

Based on Formazin there are the following dependencies:  
 1FNU = 1FAU = 1 NTU= 0,25 EBC = 2,05 mg/l  
 Our Measuring Range is:  
 OPL 5mm 0...3 AU, 0...6OD, 0...13000 FAU, 0...13000 TEF, 0...3250 EBC , 26,65g/l  
 Measuring principle:  
 Recommended for measurements > 10EBC / 40FAU  
 Smallest resolution 1EBC / 4FAU

### Typical Turbidity



### Dimensional Drawing



### Parameterisation + Documentation

The parameterisation is done with the integrated display.

For a parameterisation with PC both units are required. The **optional** PC-USB-Interface SMW-PA-M12, and Programming adapter ST-M12-M8 benötigt.

#### SMW-PA-M12

PC-USB-Interface incl. the Software for readout and parameterize

#### ST-M12-M8

Programming adapter M12 to M8

### Accessories: Reference-filter set for recalibration with traceability verification



### Order Code

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#### Optical Pathlength

Optical Pathlength 5 mm

#### Configuration Measuring-Range

Measuring range e.g. 0...3 AU / 0...3250 EBC etc. see technical facts

Special Constructions on request

#### Interface / Parameterization

4...20 mA

Special Constructions on request

#### Display / Control Unit

with integrated display

Special Constructions on request