Type STS 15

modular @ analyse

Basic Features

- NIR backscatter sensor
- For safe phase separation
- For faster product changes
- For reduced wastewater costs
- Filter monitoring
- Color-independent concentration measurement
- Compact design with integrated Electronics and display for parameterization
- Resistant sapphire lens
- Hygienic design, CIP / SIP-compatible
- Color graphic display
- LED light source, LED life > 100,000 hours
- Integrated digital and analog output
- Simple parameterization

Technical Features

- Measuring range 0-100% turbidity or HRU High Resolution (0...100%)
- light source LED
- wavelength 850 nm
- Material process tangenting: stainless steel 1.4435 (316L)
- Surface quality electropolished <0.37 µm Ra
- Sapphire optic
- Supply voltage 24 V DC
- Output current 4 ... 20mA
- Output PNP 24 V, NC / NO parameterizable / max. 150 mA
- Input contact zero position (Offset)
- Electrical connection M12 plug, 5-pole
- Process connection G1 / 2 "elastomer-free sealing system / polymer sealing
- Ambient temperature -10 ... 70 ° C
- Process temperature 0 ... 90 ºC, (during measurement),141 ºC maximum for 2 hours (SIP cycle)
- process pressure max. 20 bar (290 psig) at 90 ° C

Pin assignment M12 plug 5-pin

Pin	Colour	Designation
1	brown	DC + (24 V DC)
2	white	Switch. Output (DOut Level)
3	blue	DC - (GND)
4	black	Analog output (4-20 mA)
5	grey	Adjustment (Cal.Offset)

Examples modular process connections

BP 15 (HPC-Sleeve No. 2)

TP15

HP15

See data sheet process connections
modular @ process

Favoured Fields of applications are:

STS is a sensor used to monitor the optical density of liquids in order to monitor process results or view changes safely. Especially suitable for phase separation, filter monitoring and concentration measurements.

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.

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

Stand 08/2021

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Technical Facts

Supply voltage: 12 ... 36 VDC
Current consumption: approx. 80 mA (at 24 VDC and, analog output = 22.5 mA)
Power consumption: max. 1,73W / 36VDC
Analog output: 4-20 mA
Current limit: min. 3.5 mA
max. 22.5 mA, adjustable
Tightening torque: 10 Nm

Burden: <=(Ub-3V)/20mA (max. 450 ohms at 12V, 1050 ohms at 24V, 1650 ohms at 36V
Teach input: digital input, +24 VDC, approx. 1.6mA input current
Switching output: Semiconductor switching, PNP sw.
Switching capacity: max. 150mA, thermally against Overload protected
Protection class: IP69K

Measuring Range

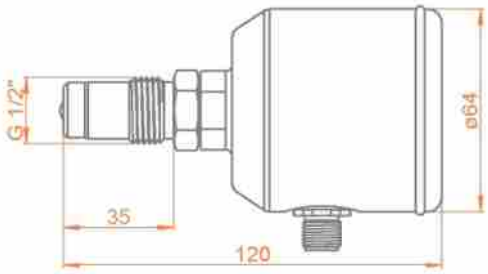
Measuring range 0 - 100% HRU, 0 - 100% Turbidity (für very high turbidity)
Resolution: 0,01%
Accuracy: ± 1,5%
Reproducibility: ≤ 1% vom Endwert

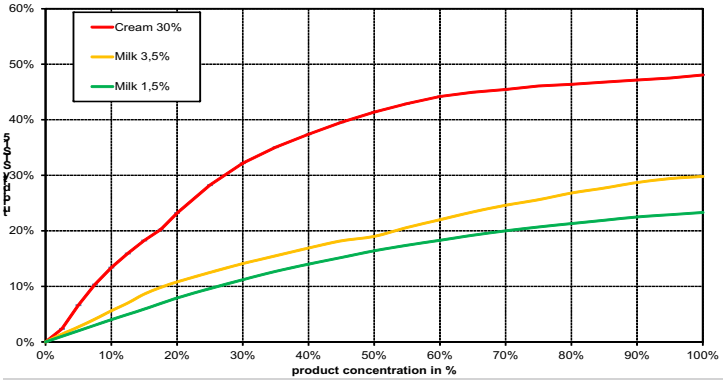
The following recommended measuring range applies to formazine: from approx. 700 EBC..6.000 EBC or 2.800 FAU..24.000 FAU

Measurement Optics

sapphire lens

Dimensional Drawing





Accessories

Reference Normal RFS-T15
for measurement control and verification in the Field

(For more information, see the section Process + accessories)

Order Code

STS 15- [ ] - [ ] - [ ] - [ ]

Process Connection				
G1/2" with hygienic sealing cone, metallic sealing (stainless steel)	PM			
G1/2" with EPDM seal for connections with metallic sealing cone	PE			
G1/2" with FKM (Viton) seal for connections with metallic sealing cone	PV			
G1/2" with FFKM (Kalrez) gasket for connections with metallic sealing cone	PK			
Configuration Measuring Range				
Meas. Range "HRU" High Resolution Unit 0…100% Turbidity		1		
Special Version on demand		K		
Interface / Parameterization				
analogue 0/4…20 mA; Connection plug M12 5-pol			A	
Special Version on demand			K	
Display / Control Unit				
with integrated Display				1
Special Version on demand				X

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