

Turbidity Sensor - Turbimess NEO -



CIP / SIP
- safe -

APPLICATIONS

- PHASE SEPARATION, E.G. IN DAIRIES (MILK / CREAM / WHEY)
- MONITORING OF RESIDUE LOAD DURING CIP, E.G. IN THE PRE-RINSE WATER FOR PRODUCT RESIDUES
- RECOGNITION OF BREWER'S YEAST DURING THE „YEAST HARVEST“
- MONITORING OF FILTER BREAKTHROUGH

FEATURES

- FLUSH MOUNTED TURBIDITY SENSOR FOR MEDIA WITH HIGH TURBIDITY
- PHASE SEPARATION OF DIFFERENT FAT CONTENTS > 40 %
- HYGIENIC DESIGN, EHEDG-CERTIFIED
- CIP- / SIP-COMPATIBLE, UP TO 141°C FOR MAX. 2 HOURS
- MEDIA TEMPERATURES UP TO 100°C PERMANENT
- ANALOG OUTPUT 4...20 mA, 3-WIRE AND 1 SWITCHING OUTPUT
- HIGH ACCURACY AND REPRODUCIBILITY
- HYGIENIC PROCESS CONNECTIONS FOR THE FOOD & BEVERAGE INDUSTRY FOR INSTALLATION IN PIPES AS OF DN 40 (WITH VARIVENT TYPE N)

DESCRIPTION

Turbimess NEO is suitable for measuring the turbidity of media with high turbidity. It is an optical, hygienic sensor for direct installation in process lines. The sensor emits a light beam and measures reflected radiation arising from solids or particles, but also from fat droplets. The degree of backscattering is output as a loop current (4...20 mA). **Turbimess NEO** can determine the transition of water to product or also of product changes with different turbidity.

INFORMATION

The device is compatible with the previous model **Turbimess NG**, except it is a 3-wire device with an active loop current output. For maximum compatibility it can be supplemented by an isolating amplifier on request.

Turbidity Sensor

- Turbimess NEO -

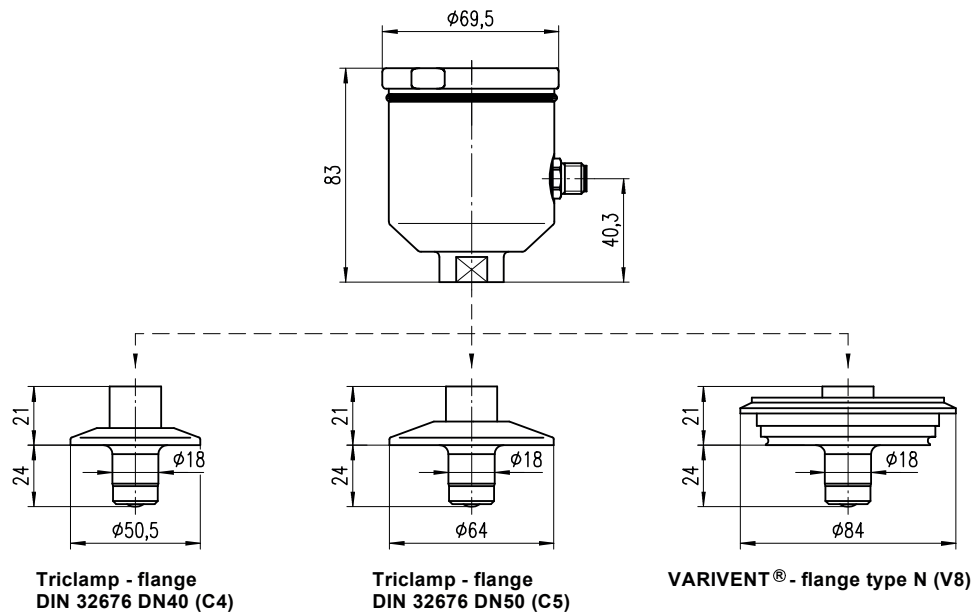


TECHNICAL DATA

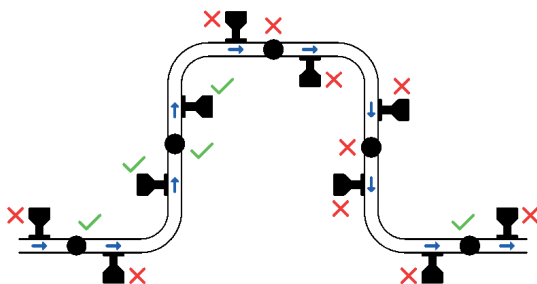
General details	
Device type	Turbimess NEO
Measuring principle	Backscattering sensor in compact design
Input	
Measuring range	0...100 % Turbidity or 0...4.000 NTU*
Maximum process pressure	20 bar
Output	
Output signal	4...20 mA, active, 3-wire
Signal range	3.8...20.5 mA as per Namur NE043
Fault signal	22 mA
Switched output	1, NO (normally open) or NC (normally closed), max. 150 mA
Measuring	
Accuracy	$\pm \leq 1.5$ % from measurement value
Reproducibility	$< \pm 1$ % FS
Setting time after input leap	≤ 3 s
Activation time	< 2 s (The device will carry out a self-test)
Conditions of use	
Installation position / calibration position	Optimum installation position is in risers (ascending pipes) or, if not possible, sideways in pipes (to avoid product residues and incorrect measurements due to gas bubbles); device must not be installed in downpipes (descending pipes).
Medium temperature	-10...+100°C / up to 141°C for max. 2 hours Measurement will be suspended for device temperatures > 100 °C.
Ambient / storage temperature	-10...+70°C
Protection class acc. to EN 60529	IP 69
Electromagnetic compatibility	acc. to DIN EN 61000 and DIN EN 61326-1
Construction	
Electrical connection	Round plug-in connector M12x1, 5-pin
Process connection	- Clamp connection acc. to DIN 32676, DN 40 or DN 50 - Varivent flange Type N (d 68)
Materials	- Housing seal: NBR - Process connection / connection adapter: Stainless steel 1.4435 (AISI 316Ti) - Wetted lens: Sapphire glass
Surface roughness	Ra $< 0,8$ μ m
Weight	approx. 1.5 kg
Power Supply	
Power supply	24 V DC, current ~ 30 mA
Accessories	
Certificates	EG Declaration of Conformity Conformity acc. to Regulation (EC) 1935/2004 Acceptance test certificate 2.2 in acc. with EN 10204 for wetted parts, EHEDG certificate
Inspection	
We recommend inspecting the device regularly in accordance with maintenance schedules. The turbidity values can be verified using reference normals (see accessories).	

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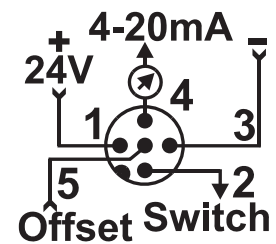
TECHNICAL DRAWINGS Turbimess NEO (Dimensions in mm)



INSTALLATION of Turbimess NEO

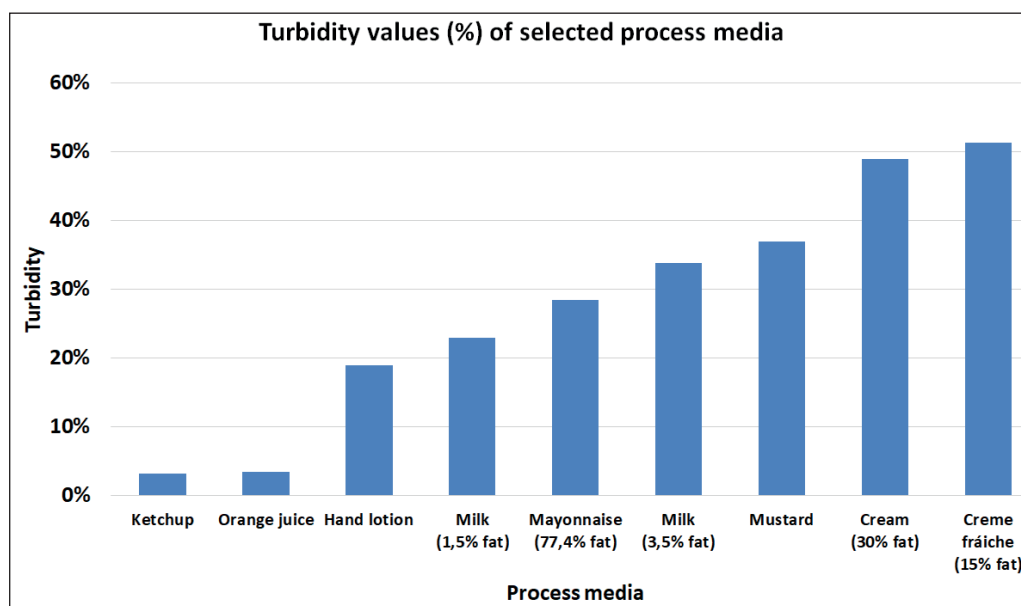


CONNECTION DIAGRAM



The overview shows both favourable transmitter installation positions and those that should be avoided. Installation sideways in pipes should be favoured. The device can be installed in any position in risers.

TYPICAL MEASUREMENTS



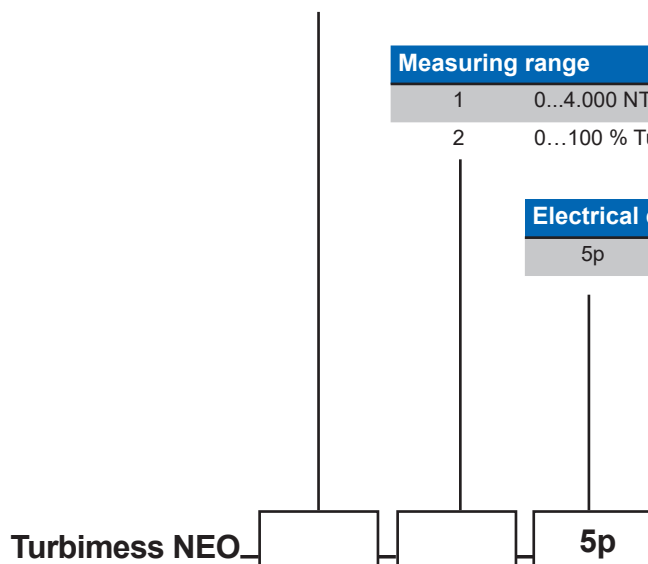
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ORDERING INFORMATION for Turbimess NEO

Process connection	
C4	Tri-Clamp DN 40 (DIN 32676), EHEDG EL class 1 **
C5	Tri-Clamp DN 50 (DIN 32676), EHEDG EL class 1 **
V8	Varivent flange Type N (d 68), EHEDG EL class 1

Measuring range	
1	0...4.000 NTU
2	0...100 % Turbidity

Electrical connection	
5p	Round plug-in connector M12x1, 5-pin



ORDERING INFORMATION Accessories and spare parts for Turbimess NEO

Accessories and spare parts (please order separately)

Z-TNEO_Ref_xx_yy_zz	Reference normals for inspection of Turbimess NEO. Up to three parts may be combined. Available values for the turbidity are 10 %, 20 % and 50 %.
Z-Zeugnis_WZ22	Surface certificate EN 10204-2.2
Z-Zeugnis_M01	Material certificate EN 10204-3.1

** EHEDG certification only valid in conjunction with Tri-Clamp seals from Combifit International B.V., Netherland

Please observe the permissible nominal pressure of the process connection selected.
All specifications and certifications specified are only guaranteed when Hengesbach original components are used.
Our devices are subject to constant development; subject to technical modification.