

# Turbidity measuring device - Type TURBIMESS -



- **OUTPUT SIGNAL 4...20 mA, 3-WIRE**
- **RUGGED AND COMPACT CONSTRUCTION ACCORDING TO PROTECTION TYPE IP 67**
- **VARIVENT PROCESS CONNECTION FOR SIMPLE EQUIPMENT AND RETROFITTING**
- **TYPICAL APPLICATION AREAS: DAIRY PRODUCTS, ICE CREAM, LIQUID FOOD PRODUCTS, PHARMACEUTICAL LIQUIDS**

VERSION EXAMPLE: TURBIMESS with process connection according to DIN 11851

## DESCRIPTION

The **TURBIMESS** is an optical sensor for direct installation into process pipes. The sensor sends a light beam and measures the backscatter caused by solids and other particles in the medium. The resulting scattering of the light is registered with a highly sensitive infrared receiver and processed by a powerful microprocessor. The output corresponding to the degree of scattering is provided in the range of 4...20 mA. The TURBIMESS is completely housed in stainless steel.

The principle described above allows the TURBIMESS to determine the exact change from water to a product. This is its main application. The TURBIMESS can detect a product change when the products have a different content of solids. The fat content in products such as skim milk, low-fat or full milk can be monitored to determine the product quality.

The most common calibrations of the TURBIMESS contain data points for water, skim milk, low-fat and full milk. The signal for the highest fat content is standardised at 20 mA.

## TECHNICAL DATA

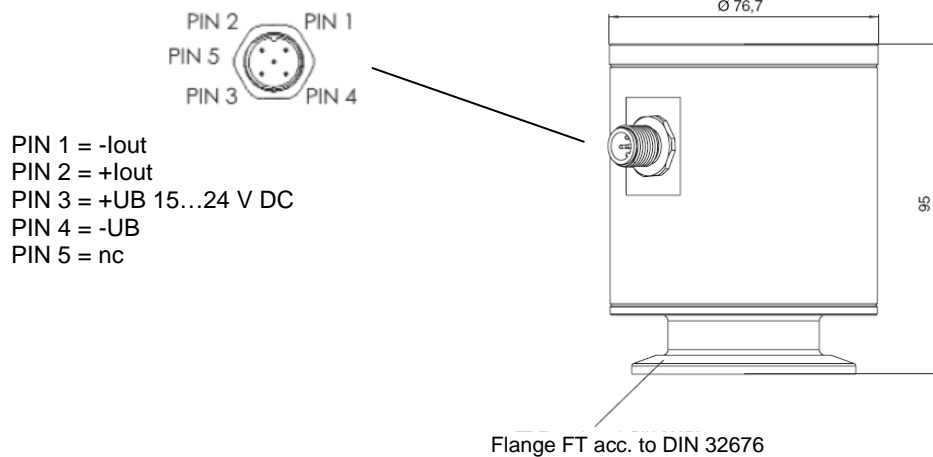
<b>General information</b>	
Device type	TURBIMESS
Application	turbidity measurement
Measuring principle	scattered infrared light
Measuring range	150...4000 NTU
<b>Output</b>	
Output signal	4...20 mA, 3-wire
<b>Measuring accuracy</b>	
Accuracy	± 0.2% of the final value
Repeatability:	± 0.1% of the final value
<b>Auxiliary energy</b>	
Power supply	15...24 V DC
Current consumption	35 mA
Rated input power	0.45 W
<b>Conditions for use</b>	
Process temperature range	0...100 °C, short-term up to 150 °C
Temperature fluctuations	resistant against sudden fluctuations of up to 50 °C
Temperature influence	0.9% of the maximum value of the measuring range
Process pressure	PN 13.5 bar max.
Protective class acc. to EN 60529	IP 67
<b>Design configuration</b>	
Materials	housing: 1.4404, 316L stainless steel lens: Sapphire with FDA-approved lens seal made of silicone caoutchouc
Process connection	Tri-Clamp ISO 2852, 2", 1.4404, 316L stainless steel DIN 11851dairy pipe screw joint DN 50 / DN 65, 1.4404, 316L stainless steel VARIVENT® flange DN 68, 1.4404, 316L stainless steel
Permits	3-A hygiene regulations
Weight	approx. 1.4 kg

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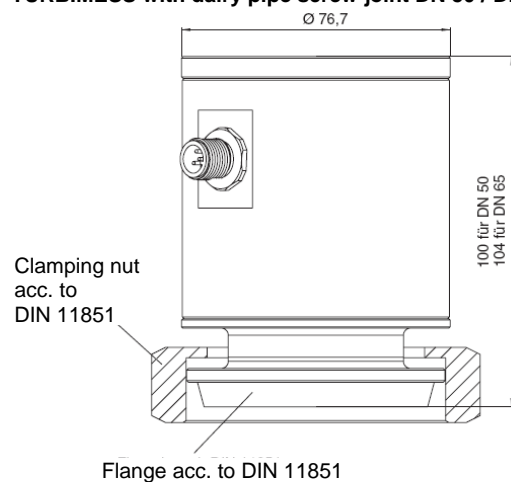
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## DIMENSIONAL DRAWINGS

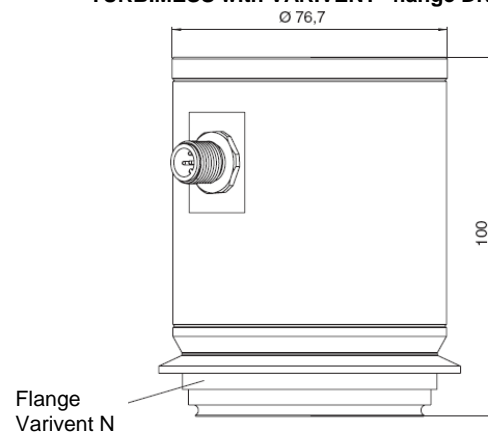
**TURBIMESS with Tri-Clamp connection 2"**



**TURBIMESS with dairy pipe screw joint DN 50 / DN 65**



**TURBIMESS with VARIVENT® flange DN 68**



## ORDER INFORMATION FOR TURBIMESS

### Process connection

C2	Tri-Clamp ISO 2852, 2"
M5	DIN 11851 dairy pipe screw joint DN 50, tapered connection with groove nut
M6	DIN 11851 dairy pipe screw joint DN 65, tapered connection with groove nut
V8	VARIVENT® flange DN 68
99	Other process connection



## OPTIONS / ACCESSORIES (please order separately)

### Accessories

(Order reference)

5-pin mating connector for electrical connection

**TMS/S5P**

Our equipment is currently being developed, therefore we reserve the right to make amendments.

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