

Magneto-inductive flow meter with measurement of filling degree Flow-Level-Meter, type 6826-xx

- Magneto-inductive flow meter with measurement of filling degree designed for the Ultrasampler sampling system
- Precision measurement device for the continuous determination of the flow rate of electro-conductive liquids.
- High measurement precision due to independent measurement of flow rate.



Description

This Flow Level Meter is a precision measurement device for the continuous determination of the flow rate of electro-conductive liquids.

To achieve a high measurement precision, it combines two different measurement principles.

The Flow Level Meter is designed for being used in milk collection trucks as a functional unit of the Ultrasampler.

The values measured by the Flow Level Meter are used by the Ultrasampler to calculate the sample volume for controlling the milk sampling.

Operating principle

In the Flow Level Meter, two different measurement principles are effective independently of each other. A magneto-inductive flow meter measures the flow speed of the conductive liquid, a filling degree sensor measures the filling degree in the measuring tube.

Mounting

The central measuring element of the Flow Level Meter is a stainless steel measuring tube placed in the magnetic field of a two coils. A compact mounting of the electronic module, the terminal box and the measuring tube with coils guarantees small dimensions and a high mounting and service friendliness.

Properties

- The application of the Flow Level Meter in combination with the other components of the Ultrasampler system entails a high precision of the sampling.
- The application of mechanicless sensors for measuring the flow rate of liquids, without any movable sensor organs, reduces the susceptibility to damage. There is no mechanical wear.
- The measurement system also works if there are solid particles in the liquid.
- The Flow Level Meter is available for the following nominal widths:
 - for pipes with NW 50
 - for pipes with NW 65
 - for pipes with NW 76

Characteristics

- High measurement precision due to independent measurements of flow rate and filling degree
- Analog electrical output signals of the magneto-inductive flow sensor and the filling degree sensor.
- μ P-controlled function monitoring of the magneto-inductive flow sensor.
- Mounting either flat or edge-wise, depending on the respective version
- Connection to milk pipes with nominal widths NW 50, 65 and 76.

Technical data	
Device-specific data	
Liquid to be measured	milk
Medium temperature	0 °C ... +100 °C
Pressure	max. 10 bar
Electrical data	
Auxiliary energy (voltage, current)	24 V DC ± 10 % max. 6 W
<i>Volume flow rate</i>	
NW 50	max. 500 l/min
NW 65	max. 1000 l/min
NW 76	max. 1400 l/min
Flow direction	In accordance with direction given on the metal type plate (+ direction)
Sensors	Magneto-inductive flow sensor with µP-controlled function monitoring; measurement of filling degree via conductivity sensor
<i>Electrical outputs</i>	
Magneto-inductive flow meter	analog output 4 ... 20 mA
Filling level sensor	analog output approx. 0,3 ... 2,3 V
Electrical connection	5 m connection cable via PG-11 feed and internal terminals, open cable ends
Ambient conditions	
Operating temperature	-10 °C ... +50 °C
Maximum cleaning temperature	100 °C
Cleaning type	CIP cleaning
Climatic class	IWA in accordance with DIN 40040
Mechanical data	
Dimensions	250 x 180 x 110 mm
Weight	approx. 50 N (= 5 kg)
<i>Pipe connections</i>	
NW 50	Connecting flange, connection via sealing ring and clamp in accordance with DIN 32676 NW 50
NW 65	Connecting flange, connection via sealing ring and clamp in accordance with ISO 2852 NW 2,5"
NW 76	Connecting flange, connection via sealing ring and clamp in accordance with ISO 2852 NW 3"
Layout	Red plastic casing PPO Noryle with stainless steel measuring tube Stainless steel measuring tube, teflon-coated
Mounting	Measuring tube only horizontal, with upstream smoothing section > 3 x NW
Dimensions	

Ordering details	
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Designation	Order number
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Horizontal mounting (flat):	
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Flow Level Meter 2", type 6826-10	U950 17 682610
Flow Level Meter 2,5", type 6826-20	U950 17 682620
Flow Level Meter 3", type 6826-30	302063

Mounting position


Vertical mounting (edgewise):	
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Flow Level Meter 2" 90°, type 6826-11	U950 17 682611
Flow Level Meter 2,5" 90°, type 6826-21	U950 17 682621
Flow Level Meter 3" 90°, type 6826-31	304782

Mounting position


Note: Please mind flow direction (arrow on type plate) !

Accessories:	
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Sealing ring for clamp 2"	U495077
Clamp foldable 2"	U495080
Sealing ring for clamp 2,5"	U495059
Clamp foldable 2,5"	U495056
Sealing ring for clamp 3"	U495031
Clamp foldable 3"	U495065