

Product information

OMNIPLUS-RT

**Flow transmitter
OMNIPLUS-RT**



- Turbine flow measurement for low-viscosity media
- High compressive strength PN250
- No magnets in the flow chamber
- Measurement uncertainty 1 % F.S.

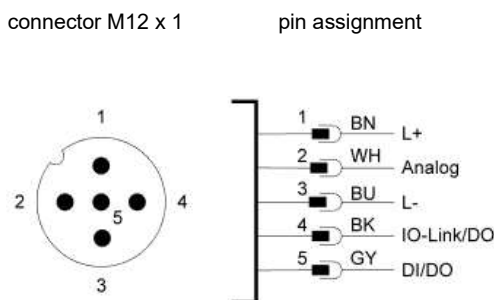
Characteristics

The flow transmitters of the OMNIPLUS-RT series work with a turbine that is driven by the flowing medium. The speed of the rotor depends linearly on the flow rate and is detected by a biased Hall sensor located outside the flow chamber. The integrated electronics have an LCD display as well as an analog output and two switching outputs and can be easily configured by the user. In addition, it has an IO-Link interface that allows digital communication with the sensor.

In addition to the version presented here, other versions are available:

- LABO-RT** without display, adjustable analog or frequency output
- RT** direct frequency output, not adjustable

Connection diagram



Specifications

Measuring principle	Turbine flow meter with biased Hall sensor	
Nominal size	DN15...DN50	
Ranges	1.8...1133 l/min see table "Ranges and dimensions"	
Measurement uncertainty	±1 % of the final value in the specified measuring range including linearity and repeatability	
Media	Wasser oder andere niedrigviskose Flüssigkeiten	
Particle size	max. 0.5 mm	
Pressure loss	Max. 0.9 bar at Q _{max}	
Compressive strength	PN 250	
Media temperature	-20...+85 °C	
Ambient temp.	-20...+70 °C	
Storage temperature	-20...+80 °C	
Materials wetted with media	Housing	AISI 316
	Turbine	AISI 430
	Bearing	Tungsten carbide
Supply voltage	18...30 V DC	
Current consumption	< 130 mA (SIO mode, unloaded outputs)	
IO-Link specification	IO-Link revision	V1.1
	Bit rate	COM2 (38400 bit/s)
	Minimum cycle time	20 ms
	SIO mode	yes
	Port class	A compatible
	Block parameterization	yes
	Data storage	yes
Analog output	Current:	4...20 mA 0...20 mA
	Voltage:	0...10 V 2...10 V 0...5 V 1...5 V 0.5...4.5 V
Switching outputs	2 transistor outputs push-pull, parameterizable as NPN o.C. Short-circuit and reverse polarity resistant I _{out} = 100 mA max per output	
	Configurable on the device as	
	• Limit switch	
	• Frequency output	
	• Pulse output	
	• Signal output for preset counter	
Display	1.2" graphic LCD (transflective) 128 x 64 pixels backlight white, red on alarm message	
Electr. connection	M12x1 circular connector, 5-pin	
Protection class	IP65 / IP67	
Conformity	CE	

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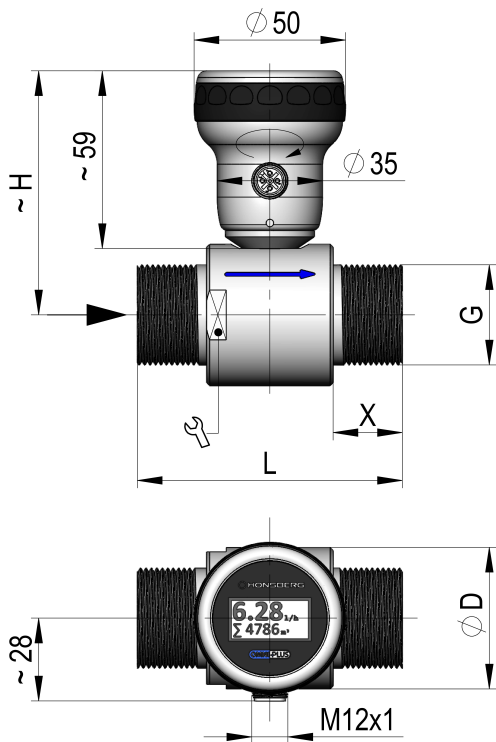
Ranges, dimensions and weights

Type	Range (1...5 mm²/s)		DN	G	ØD mm	SW mm	H mm	L mm	X mm	Weight kg
	l/min	m³/h								
OMNIPLUS-RT-015AK001	1.8... 18	0.11... 1.1	15	G ½ _B	38	35	74	64	19	0.5
OMNIPLUS-RT-020AK002	3.7... 37	0.22... 2.2	20	G ¾ _B			75			0.6
OMNIPLUS-RT-020AK004	6.7... 67	0.40... 4.0		G ¾ _B						
OMNIPLUS-RT-020AK008	13.3... 133	0.80... 8.0		G ¾ _B	40	38	78	83	22	
OMNIPLUS-RT-025AK016	26.7... 267	1.60...16.0	25	G 1 _B	47	44	81	88	23	0.8
OMNIPLUS-RT-040AK034	56.7... 567	3.40...34.0	40	G 1½ _B	60	52	87	114	28	1.6
OMNIPLUS-RT-050AK068	113.3...1133	6.80...68.0	50	G 2 _B	70	64	92	132	29	2.1

Order codes

OMNIPLUS-RT - 1. 2. 3. 4.

● = standard ○ = option



1. Nominal size	
015	DN 15
020	DN 20
025	DN 25
040	DN 40
050	DN 50
2. Mechanical connection	
A	Male thread
3. Housing material	
K	Stainless steel
4. Measurement range	
001	0.11... 1.1 m³/h
002	0.22... 2.2 m³/h
004	0.40... 4.0 m³/h
008	0.80... 8.0 m³/h
016	1.60...16.0 m³/h
034	3.40...34.0 m³/h
068	6.80...68.0 m³/h

Accessories

Cable with circular connector M12x1 (not included)