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Product information

OMNIPLUS-RRH

Flow transmitter OMNIPLUS-RRH



- Long life due to high-quality ceramic axle and special plastic bearings
- No inlet and outlet sections required
- Modular design with different connection systems
- Connections can be plugged in and rotated

Characteristics

The flow transmitters of the OMNIPLUS-RRH series work with an impeller that is set in rotation by the flowing medium. The speed of rotation of the rotor depends linearly on the flow rate. The rotor made of PVDF is equipped with magnets, which are detected by a Hall sensor located outside the flow chamber and thus enable the measurement of the speed.

The rotor has a shatterproof ceramic axle that runs in durable special plastic bearings.

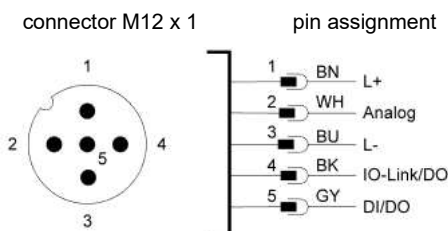
The housing is made of brass (nickel-plated) or alternatively stainless steel.

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-RRH without display, adjustable analog or frequency output
RRH direct frequency output, not adjustable

Connection diagram



Specifications

Measuring principle	Magnet-equipped impeller Detection with Hall sensor
Nominal size	DN 10 (OMNIPLUS-RRH-010) DN 25 (OMNIPLUS-RRH-025)
Connection type	Female thread G $\frac{3}{8}$, G 1 Male thread G $\frac{3}{8}$ A, G 1 A Hose nozzle Ø11, Ø30 (other threads, crimp and plug-in connections, connections with constants or limiters on request)
Ranges	0.1...100 l/min (see table „Ranges“)
Measurement uncertainty	±3 % of reading
Media	Water or other low-viscosity liquids
Pressure loss	max. 0.5 bar
Compressive strength	PN 100 (RRH-025..M: PN 40)
Media temperature	0...+70 °C
Storage temperature	-20...+80 °C
Materials wetted with media	Housing CW614N nickel-plated or 1.4305 Impeller PVDF with magnets, epoxy resin Bearings Iglidur X Axle ceramics ZrO ₂ -TZP Gaskets FKM optional: NBR, EPDM
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

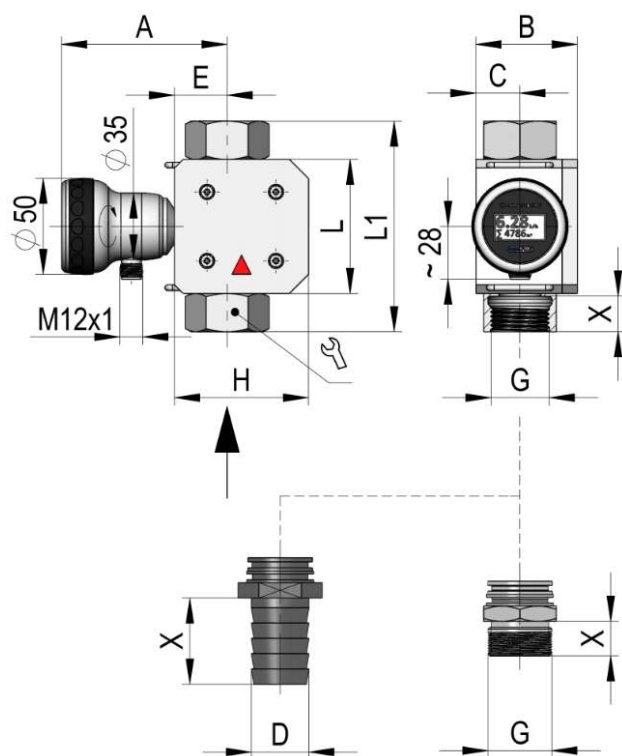
Product information

OMNIPLUS-RRH

Dimensions and weights

Type		H/L	A	B	C	E	G	D	SW	X	L1	Weight
OMNIPLUS-RRH-010G	●	50	~ 75	29	12.5	16.5	G $\frac{3}{8}$	-	22	12	84	appr. 0.69 kg
OMNIPLUS-RRH-010A	○						G $\frac{3}{8}$ A	-		10		
OMNIPLUS-RRH-010T	○						-	Ø11		21		
OMNIPLUS-RRH-025G	●	70	~ 86.5	53	23	27.5	G 1	-	38	20	110	appr. 1.95 kg
OMNIPLUS-RRH-025A	○						G 1 A	-		18		
OMNIPLUS-RRH-025T	○						-	Ø30		45		

● = standard ○ = option



Order codes

OMNIPLUS-RRH - 1. 2. 3. 4. 5. 6. 7. **05M**

● = standard ○ = option

1. Nominal size	
010	● DN 10
025	● DN 25
2. Mechanical connection	
G	● Female thread
A	○ Male thread
T	○ Hose nozzle
3. Connection material	
M	● CW614N nickel-plated
K	● 1.4305
4. Housing material	
M	● CW614N
K	● 1.4305
5. Inlet drilling	
020	Ø 2.0 mm ●
050	Ø 5.0 mm ●
070	Ø 7.0 mm ●
080	Ø 8.0 mm ●
120	Ø12.0 mm ●
160	Ø16.0 mm ●
6. Gasket material	
V	● FKM
E	○ EPDM
N	○ NBR
7. Impeller	
05M	● with 5 magnets

Ranges

Type	Measurement range l/min (H ₂ O)	Q _{max} l/min (H ₂ O)
OMNIPLUS-RRH-010...020	0.1... 1.5	1.8
OMNIPLUS-RRH-010...050	0.2... 10.0	12.0
OMNIPLUS-RRH-010...070	0.4... 12.0	14.4
OMNIPLUS-RRH-025...080	2.0... 30.0	36.0
OMNIPLUS-RRH-025...120	3.0... 60.0	72.0
OMNIPLUS-RRH-025...160	4.0... 100.0	120.0

Accessories

Cable with circular connector M12x1 (not included)