

Product information

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.

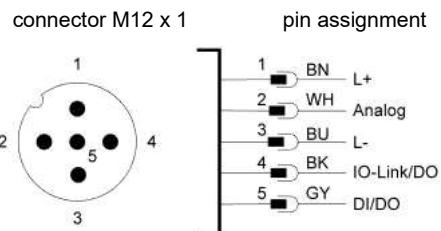
The integrated electronics have an LCD display as well as an analog output and two switching outputs and can be easily configured by the user. In addition, it has an IO-Link interface that allows digital communication with the sensor.

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

LABOPLUS-RRH without display, adjustable analog and frequency output, limit switch

RRH direct frequency output, not adjustable

Connection diagram



Specifications

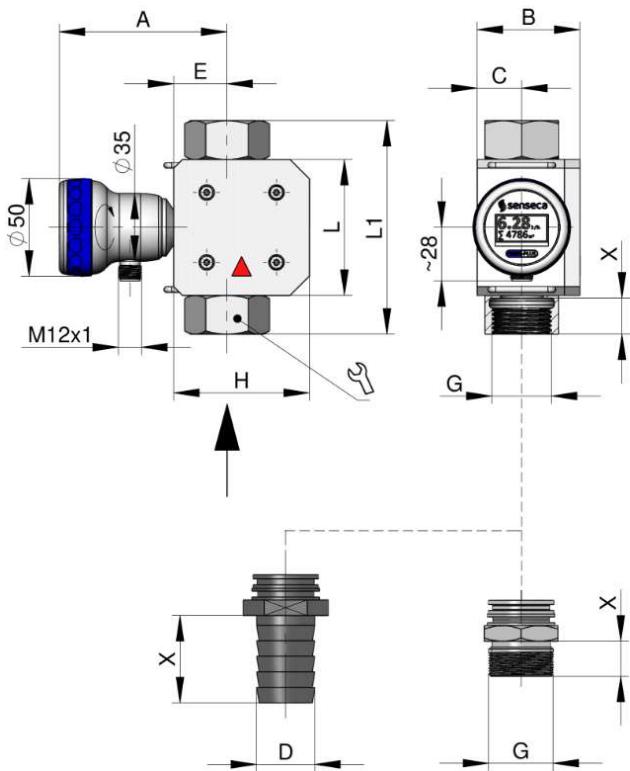
Measuring principle	Magnet-equipped impeller Detection with Hall sensor	
Nominal size	DN 10 (OMNIPLUS-RRH-010) DN 25 (OMNIPLUS-RRH-025)	
Connection type	Female thread G $\frac{3}{8}$, G 1 Male thread G $\frac{3}{8}$ A, G 1 A Hose nozzle Ø11, Ø30 (other threads, crimp and plug-in connections, connections with constants or limiters on request)	
Ranges	0.1...100 l/min (see table „Ranges“)	
Measurement uncertainty	$\pm 3\%$ 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 <ul style="list-style-type: none"> ● 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

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 3/8	-	22	12	84	appr. 0.69 kg
OMNIPLUS-RRH-010A						G 3/8 A	-		10		
OMNIPLUS-RRH-010T						-	Ø11		21	96	
OMNIPLUS-RRH-025G						G 1	-	38	20	110	
OMNIPLUS-RRH-025A	70	~ 86.5	53	23	27.5	G 1 A	-		18	122	appr. 1.95 kg
OMNIPLUS-RRH-025T						-	Ø30		45	176	

● = standard ○ = option



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

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

Accessories

Cable with circular connector M12x1 (not included)