

## 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.

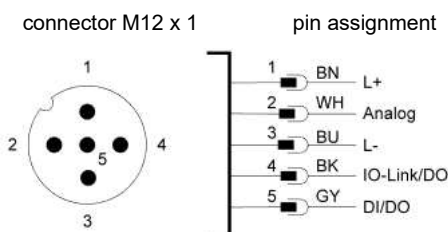
The housing is made of brass (nickel-plated) or alternatively stainless steel.

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:

- LABOPLUS-RRH** without display, adjustable analog and frequency output, limit switch  
**RRH** direct frequency output, not adjustable

## Connection diagram



## Specifications

<b>Measuring principle</b>	Magnet-equipped impeller Detection with Hall sensor
<b>Nominal size</b>	DN 10 (OMNIPLUS-RRH-010) DN 25 (OMNIPLUS-RRH-025)
<b>Connection type</b>	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)
<b>Ranges</b>	0.1...100 l/min (see table „Ranges“)
<b>Measurement uncertainty</b>	±3 % of reading
<b>Media</b>	Water or other low-viscosity liquids
<b>Pressure loss</b>	max. 0.5 bar
<b>Compressive strength</b>	PN 100 (RRH-025..M: PN 40)
<b>Media temperature</b>	0...+70 °C
<b>Storage temperature</b>	-20...+80 °C
<b>Materials wetted with media</b>	Housing CW614N nickel-plated or 1.4305 Impeller PVDF with magnets, epoxy resin Bearings Iglidur X Axle ceramics ZrO <sub>2</sub> -TZP Gaskets FKM optional: NBR, EPDM
<b>Supply voltage</b>	18...30 V DC
<b>Current consumption</b>	< 130 mA (SIO mode, unloaded outputs)
<b>IO-Link specification</b>	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
<b>Analog output</b>	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
<b>Switching outputs</b>	2 transistor outputs push-pull, parameterizable as NPN o.C. Short-circuit and reverse polarity resistant I <sub>out</sub> = 100 mA max per output  Configurable on the device as <ul style="list-style-type: none"> <li>• Limit switch</li> <li>• Frequency output</li> <li>• Pulse output</li> <li>• Signal output for preset counter</li> </ul>
<b>Display</b>	1.2" graphic LCD (transflective) 128 x 64 pixels backlight white, red on alarm message
<b>Electr. connection</b>	M12x1 circular connector, 5-pin
<b>Protection class</b>	IP65 / IP67
<b>Conformity</b>	CE

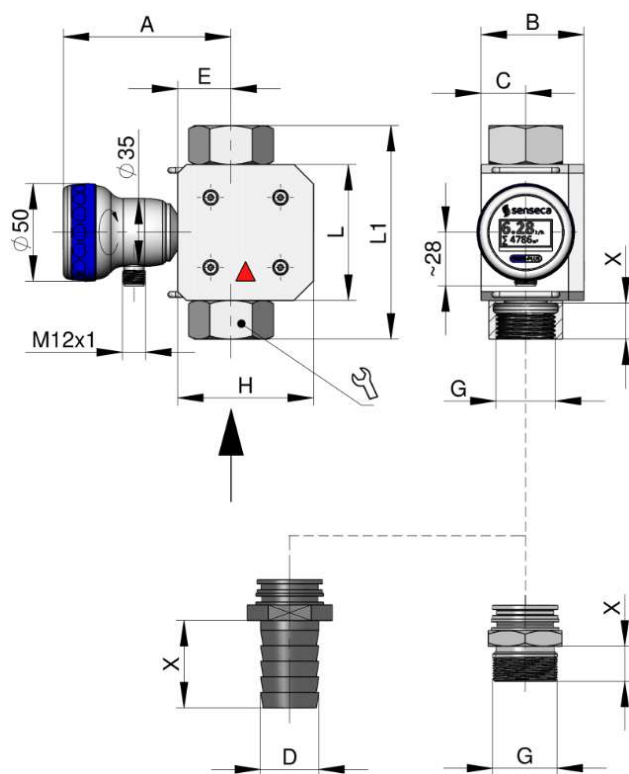
## Product information

## 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 3/8	-	22	12	84	appr. 0.69 kg
OMNIPLUS-RRH-010A	○						G 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

<b>1. Nominal size</b>	
010	● DN 10
025	● DN 25
<b>2. Mechanical connection</b>	
G	● Female thread
A	○ Male thread
T	○ Hose nozzle
<b>3. Connection material</b>	
M	● CW614N nickel-plated
K	● 1.4305
<b>4. Housing material</b>	
M	● CW614N
K	● 1.4305
<b>5. Inlet drilling</b>	
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 ●
<b>6. Gasket material</b>	
V	● FKM
E	○ EPDM
N	○ NBR
<b>7. Impeller</b>	
05M	● with 5 magnets

### Accessories

Cable with circular connector M12x1 (not included)

### Ranges

Type	Measurement range l/min (H <sub>2</sub> O)	Q <sub>max</sub> l/min (H <sub>2</sub> 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