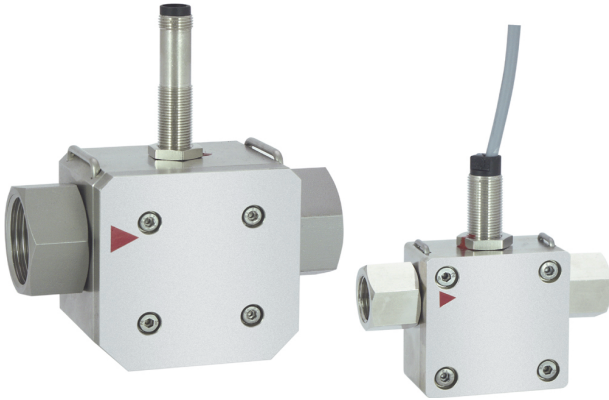


## Flow Transmitter RRH



- Uncomplicated measurement of flow rates
- Metal housing with Hall sensor
- Working pressure up to 100 bar
- Long working life thanks to high quality ceramic axis and special plastic bearing
- Run-in and run-out sections are not necessary.
- Modular construction with various connection systems
- Plug-in and rotatable connections
- Output signal PNP or NPN
- Intrinsically safe behaviour
- Optionally, non-return valve, filter, constant flow rate device in the connections

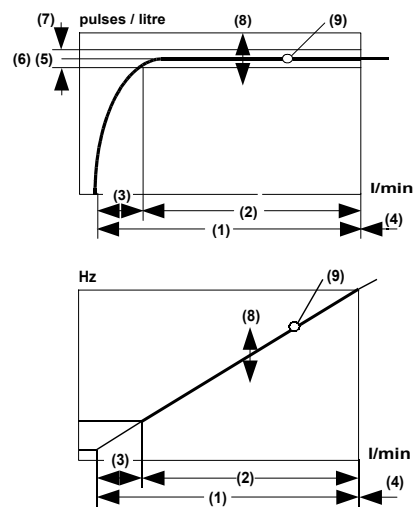
### Characteristics

The flow meter consists of a spinner which is rotated by the flowing medium. The rotor's rotational speed is proportional to the flow volume per unit time. The rotor is fitted with magnets. A Hall sensor records the rotational speed, which is proportional to the flow rate.

### Technical data

<b>Sensor</b>	hall element	
<b>Nominal width</b>	DN 10 (RRH-010) DN 25 (RRH-025)	
<b>Mechanical Connection</b>	female thread G 3/8, G 1 male thread G 3/8 A, G 1 A hose nozzle Ø11, Ø30 (other threaded, crimped, and plug-in connections, connections with constant flow rate device or limiters available on request)	
<b>Pressure resistance</b>	PN 100 bar	
<b>Metering ranges</b>	see table "Ranges"	
<b>Medium temperature</b>	0..100 °C	
<b>Materials medium-contact</b>	Housing	CW614N nickelled or 1.4305
	Rotor	PVDF with magnets, glued with epoxy resin
	Bearing	Iglidur X
	Axis	ceramic ZrO <sub>2</sub> -TZP
	Seal	FKM

<b>Materials non-medium-contact</b>	PVC cable 1.4305, 1.4301, CW614N nickelled	
<b>Current consumption</b>	30 mA	
<b>Output current</b>	max. 100 mA	
<b>Electrical connection</b>	cable 2 m or for Round plug connector M12x1, 4-pole	
<b>Resistant to short circuits</b>	yes	
<b>Reversal polarity protected</b>	yes	
<b>Ingress protection</b>	IP 67	
<b>Weight</b>	RRH-010	approx. 0.6 kg
	RRH-025	approx. 1.9 kg
<b>Conformity</b>	CE	



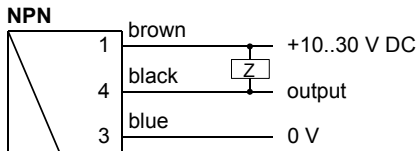
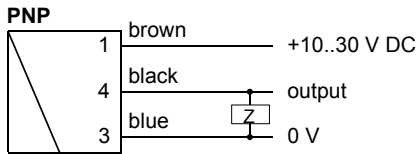
- (1) Complete metering range
- (2) Specific metering range
- (3) Start-up range
- (4) Extended operating range, increased wear,  $D_p > 0.5$  bar
- (5) Pulses / litre (details on label)
- (6) Average pulses / litre
- (7) Tolerance  $\pm 3$  % of the measured value
- (8) Scatter  $\pm 10$  % of the pulses / litre value (5) in the batch
- (9) Reproducibility ( $\pm 1$  % of the full scale value) is the repeat accuracy of a frequency, relative to l/min
- (10) Max. frequency, related to the relevant metering range up to approx. 0.5 bar pressure drop across the flow meter

### Ranges

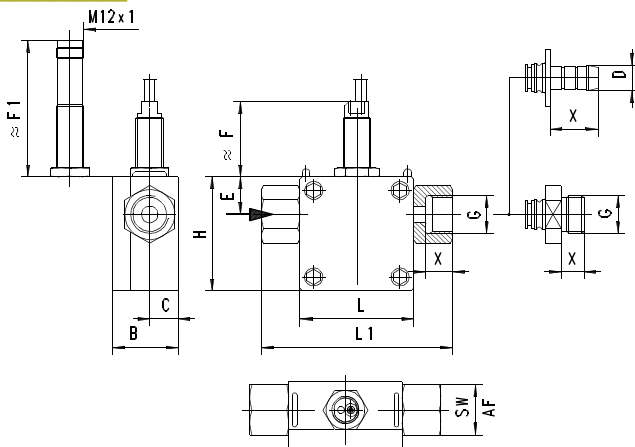
Types	Q <sub>max</sub>	Metering range			Pulses / litre	frequency
		l/min H <sub>2</sub> O				
RRH-	l/min H <sub>2</sub> O	(1)	(2)	(3)	(6)	(10)
010...020	1.8	0.1.. 1.5	0.5.. 1.5	0.1..0.5	4955	124
010...050	12.0	0.2..10.0	2.0.. 10	0.2..2.0	1632	272
010...070	14.4	0.4..12.0	2.0.. 12	0.4..2.0	860	172
025...080	36.0	2.0..30.0	3.0.. 30	2.0..3.0	544	272
025...120	72.0	3.0..60.0	5.0.. 60	3.0..5.0	295	295
025...160	120.0	4.0.. 100	6.0..100	4.0..6.0	126	210

The measured values were determined using a standing sensor in a horizontal flow of water at 25 °C.

## Wiring



## Dimensions



### Threaded connection

G	DN	Types	H/L	L1	B	C	E	F	F1	X	SW
G 3/8	10	RRH-010G	50	84	29	12.5	16.5	33	60	12	22
		RRH-010A								14	
G 1	25	RRH-025G	70	110	53	23.0	27.5	28	55	18	38
		RRH-025A		122							

NPT threads on request

### Hose nozzle connection

D	DN	Types	H/L	L1	B	C	E	F	F1	X
Ø 11	10	RRH-010T	50	96	29	12.5	16.5	33	60	21
Ø 30	25	RRH-025T	70	176	53	23.0	27.5	28	55	45

Custom specific connectors on request

## Handling and operation

### Installation

The Rotatron device is installed in the pipework with the aid of the rotatable adapter pieces. If necessary, the adapters can be removed from the body of the housing after the stainless steel clips have been removed from the housing. Before reinstalling, it should be ensured that both the adapter with the O-ring and the sealing surface in the body are clean and undamaged. The adapters should be fitted carefully in the housing (it is best to turn them), so that the O-ring is not damaged.

With this flow sensor, there is no need for run-in and run-out sections. However, it should be ensured that the flow sensor is at all times filled with medium. Any preferred installation position is possible, but the best possible venting position should be chosen (rotor axis horizontal, flow horizontal or from bottom to top).

Air bubbles affect the measurement results. For filling processes, the valve should be installed behind the sensor. A running up time of approx. 0.5 seconds and a running down time of approx. 3 seconds should be noted.

## Ordering code

RRH-  1.  2.  3.  4.  5.  6.  7.  8.  9.  10.

Option = ○

<b>1. Nominal width</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 nickelled
K	1.4305
<b>4. Housing material</b>	
M	CW614N
K	1.4305
<b>5. Inwards flow drilling</b>	
020	Ø 2.0
050	Ø 5.0
070	Ø 7.0
080	Ø 8.0
120	Ø 12.0
160	Ø 16.0
<b>6. Seal material</b>	
V	FKM
E	○ EPDM
N	○ NBR
K	○ Kemraz
<b>7. Rotor</b>	
05	with 5 magnets
02	○ with 2 magnets
<b>8. Rotor material</b>	
V	PVDF
<b>9. Signal output</b>	
P	PNP
N	NPN
<b>10. Electrical connection</b>	
K	2 m cable
S	○ for round plug connector M12x1, 4-pole

### Options

- Transparent cover DN 10
- Air or gas model

### Accessories

- Cable/round plug connector (KB...) see additional information "Accessories"
- Evaluation electronics OMNI-TA
- Mechanical connection pieces with non-return valve, filter, constant flow device or customer-specific requirements available on request