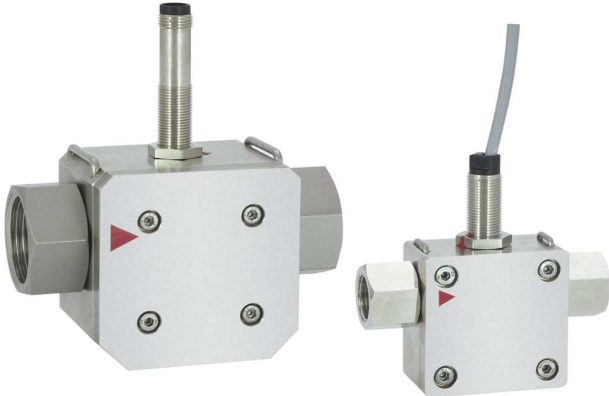


Product Information

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

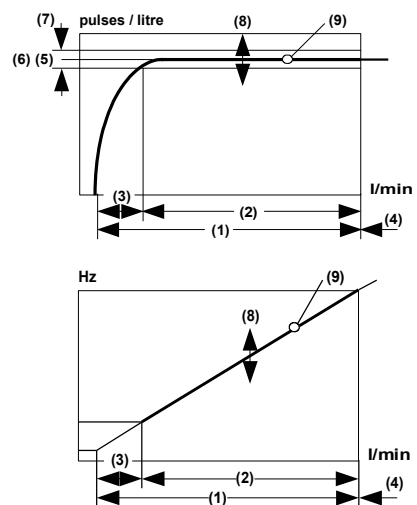
Characteristics

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

| | | |
|------------------------------|---|---|
| Sensor | hall element | |
| Nominal width | DN 10 (RRH-010) DN 25 (RRH-025) | |
| Mechanical Connection | 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) | |
| Compressive strength | PN 100 (RRH-025..M: PN 40) | |
| Metering ranges | see table "Ranges" | |
| Medium temperature | 0..100 °C | |
| Materials (wetted) | Housing | CW614N nickelled or 1.4305 |
| | Rotor | PVDF with magnets, glued with epoxy resin |
| | Bearing | Iglidur X |
| | Axis | ceramic ZrO ₂ -TZP |
| | Seal | FKM |

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



- (1) Complete metering range
- (2) Specific metering range
- (3) Start-up range
- (4) Extended operating range, increased wear, Dp > 0.5 bar
- (5) Pulses / litre (details on label)
- (6) Average pulses / litre
- (7) Tolerance ±3 % of the measured value
- (8) Scatter ±10 % of the pulses / litre value (5) in the batch
- (9) Reproducibility (±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

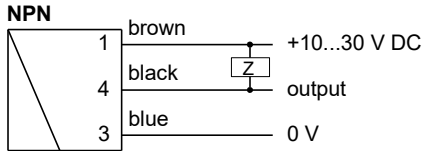
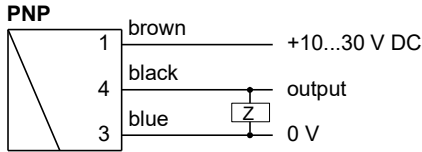
Ranges

| Types | Q _{max} l/min H ₂ O | Metering range | | | Pulses/ litre | Frequency Hz EW |
|-----------|---|------------------------|------------|-----------|------------------|-----------------------|
| | | (1) | (2) | (3) | | |
| RRH- | | l/min H ₂ O | | | (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 |

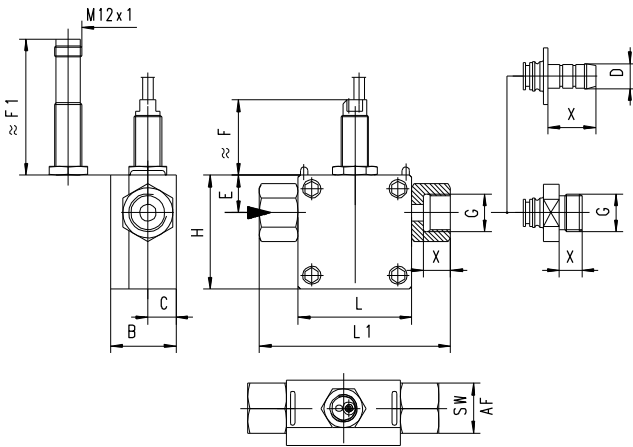
The measured values were determined using a standing sensor in a horizontal flow of water at 25 °C.

Product Information

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 | | | | | | | | | |
| G 1 | 25 | RRH-025G | 70 | 110 | 53 | 23.0 | 27.5 | 28 | 55 | 18 | 38 |
| | | RRH-025A | | | | | | | | | |

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 |
| Ø30 | 25 | RRH-025T | 70 | 176 | 53 | 23.0 | 27.5 | 28 | 55 | 45 |

Custom specific connectors on request

Handling and operation

Installation

The flow meter 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 =

| | |
|----------------------------------|--|
| 1. Nominal width | |
| 010 | DN 10 |
| 025 | DN 25 |
| 2. Mechanical connection | |
| G | female thread |
| A | male thread |
| T | hose nozzle |
| 3. Connection material | |
| M | CW614N nickelled |
| K | 1.4305 |
| 4. Housing material | |
| M | CW614N |
| K | 1.4305 |
| 5. Inwards flow drilling | |
| 020 | Ø 2.0 |
| 050 | Ø 5.0 |
| 070 | Ø 7.0 |
| 080 | Ø 8.0 |
| 120 | Ø12.0 |
| 160 | Ø16.0 |
| 6. Seal material | |
| V | FKM |
| E | ○ EPDM |
| N | ○ NBR |
| K | ○ Kemraz |
| 7. Rotor | |
| 05 | with 5 magnets |
| 02 | ○ with 2 magnets |
| 8. Rotor material | |
| V | PVDF |
| 9. Signal output | |
| T | Push-Pull |
| 10. Electrical connection | |
| K | 2 m cable |
| S | ○ for round plug connector M12x1, 4-pole |

Options

- Transparent cover DN 10
- Air or gas model

Accessories

- Cable (KPU04)
- Mechanical connection pieces with non-return valve, filter, constant flow device or customer-specific requirements available on request