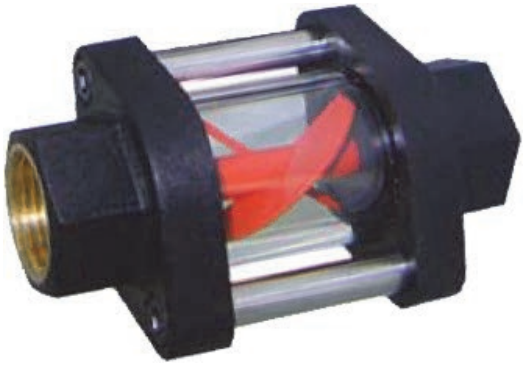
HV, RRF

Турбинные датчики и индикаторы потока

GHM MESSTECHNIK



Технические характеристики

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Самара (846)206-03-16
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Flow Indicator HV

- **Bidirectional**
- **360 ° visibility**

Characteristics

The flow indicator HV is used for the reliable display of transparent fluids. A signal-red turbine wheel rotates in a glass tube proportional to the flow, and in this way provides an indication of the flow rate present.

The devices provide 360 ° vision, and are built for a long working life, thanks to the design of the turbine's bearings.

Technical data

Nominal width	DN 8..25	
Process connection	female thread G 1/4..G 1	
Display range	0.6..50 l/min	for details see table "Ranges"
$Q_{max.}$	to 50 l/min	
Pressure resistance	PN 10 bar	
Medium temperature	-20..+100 °C	
Ambient temperature	-20..+70 °C	
Materials medium-contact	PA 66, CW614N, 1.4301, Sekurit glass, NBR	
Medium	water (oils have a tendency to a higher rotor start-up value)	
Weight	see table "Dimensions and weights"	
Installation location	as desired, except for inwards flow from above	

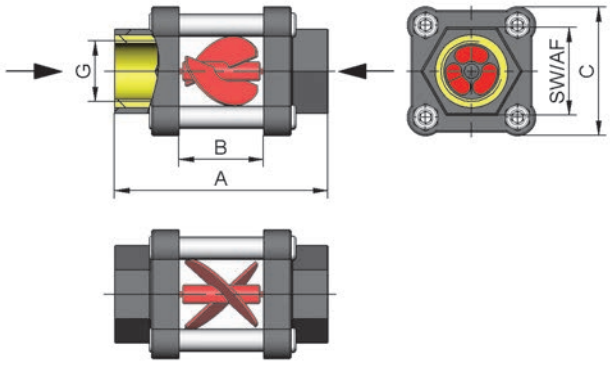
Ranges

G	Start-up quantity for turbine, l/min			$Q_{max.}$ re-commended	Types
	H_2O	40 mm²/s	41..150 mm²/s		
G 1/4	0.6	2.5	3.5	6	HV-008GM
G 3/8	1.2	3.0	4.0	10	HV-010GM
G 1/2				15	HV-015GM
G 3/4	2.1	3.7	5.0	30	HV-020GM
G 1				50	HV-025GM

Special ranges are available.

Dimensions and weights

G	Types	A	B	C	SW	Weight kg
G 1/4	HV-008GM	66	22	44	20	0.11
G 3/8	HV-010GM	92	36	60	28	0.18
G 1/2	HV-015GM					
G 3/4	HV-020GM	114	46	70	46	0.60
G 1	HV-025GM					



Ordering code

	1.	2.	3.
HV -		**G**	**M**

1.	**Nominal width**	
	008	DN 8 - G 1/4
	010	DN 10 - G 3/8
	015	DN 15 - G 1/2
	020	DN 20 - G 3/4
	025	DN 25 - G 1
2.	**Process connection**	
	G	female thread
3.	**Connection material**	
	M	brass

Flow Transmitter Lineflow RRF

- **High accuracy / repeatability at low costs**
- **Determination of low flow rates**
- **Independent of location**

Characteristics

With the RRF flow meter, an inline turbine is fitted in a plastic housing. A Hall sensor detects, contact-free, the rotation of the turbine, and outputs a frequency signal proportional to the flow.

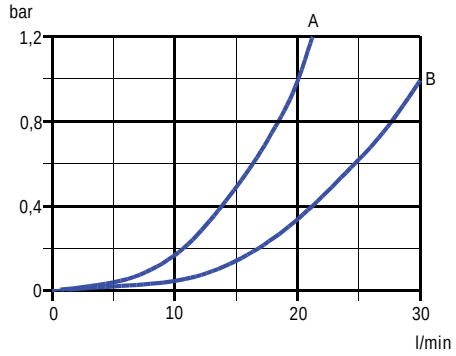
Technical data

Sensor	turbine fitted with magnets with Hall sensor	
Nominal width	DN 10	
Process connection	male thread G $^3/_8$ A	
Metering range	0.5..30 l/min, for details see table "Ranges and pressure loss"	
Measurement accuracy	±3 % of the measured value	
Repeatability	±0.5 % of full scale value	
Medium temperature	-20..+100 °C	
Ambient temperature	0..80 °C	
Pressure resistance	PN 14 bar	
Pressure loss	see table "Ranges and pressure loss"	
Supply voltage	5..24 V DC at 8 mA	
Frequency output	NPN open collector at 50 mA max. (1 to 2.2 K Ohm pull-up resistor required)	
Electrical connection	cable 1 m or open plug contact 2.8/6.3 x 0.8	
Materials	Housing	PA 12
	Turbine	PA 12
	Bearing	PTFE 15 % graphite
Ingress protection	Cable	IP60
	Plug contact	IP00
Weight	0.04 kg	
Conformity	CE	

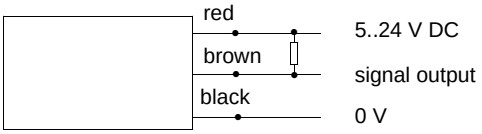
Ranges and pressure loss

Types RRF-010AN	Metering range l/min H_2O	Pulses/ litre	Frequency at Q_{max} Hz	Pressure loss code (see diagram)
005	0.5.. 5	6900	575	A
010	1.0..10	3300	550	A
015	1.0..15	2200	550	A
030	2.0..30	1000	500	B

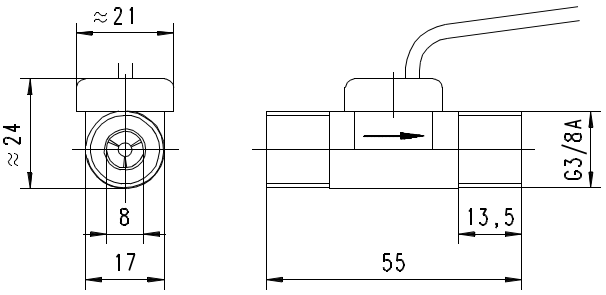
Pressure loss



Wiring



Dimensions



Handling and Operation

Installation

The turbine's direction of flow is marked by an arrow on the housing. Ideally, flow should be from bottom to top. In any case, prevent entrapment of air. Pressure surges when starting up can damage the turbine. The turbine should therefore first be flooded slowly, and only then should the nominal flow be applied. It should preferably be installed ahead of and not after valves in order to prevent the turbine from running empty.

The turbine is sealed into the pipework using Teflon tape or similar. It should be ensured that the thread is not damaged by tightening too strongly. Bending forces on the turbine caused by the pipework must be avoided under all circumstances.

Ordering code

	1.	2.	3.	4.	5.
RRF-	**010**	**A**	**N**		

❍=Option

1.	**Nominal width**		
	010		DN 10 - G $^{3}/_{8}$
2.	**Process connection**		
	A		male thread
3.	**Housing material**		
	N		nylon
4.	**Metering range**		
	005		0.5.. 5 l/min
	010		1.0..10 l/min
	015		1.0..15 l/min
	030		1.0..30 l/min
5.	**Electrical connection**		
	K		cable connection
	F	❍	open plug contact

Accessories

- OMNI-TA converter / counter for control panel installation
- Counter EEZ-904