LABOPLUS-RRH

FLOW TRANSMITTER
MIT IO-LINK

CHARACTERISTICS

The flow transmitters of the LABOPLUS-RRH series work with an paddlewheel that is set in rotation by the flowing medium. The speed of the rotor depends linearly on the flow rate. The PVDF rotor is equipped with magnets that are detected by a Hall sensor located outside the flow chamber and thus enable the speed to be measured.
The rotor has a break-proof 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 analog output and a switching output that can alternatively be used as a frequency output. It also has an IO-Link interface that allows digital communication with the sensor for configuration and reading out measured values.

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

OMNIPLUS-RRH	with display and two switching outputs
RRH	direct frequency output, not adjustable

SMART TECHNOLOGY
- IO-Link-Interface

EASY TO SET UP & QUICK TO INSTALL
- Run-in and run-out sections are not necessary
- Plug-in and rotatable connections

ACCURATE & RELIABLE
- Long operating thanks to high quality ceramic axle and special plastic bearing

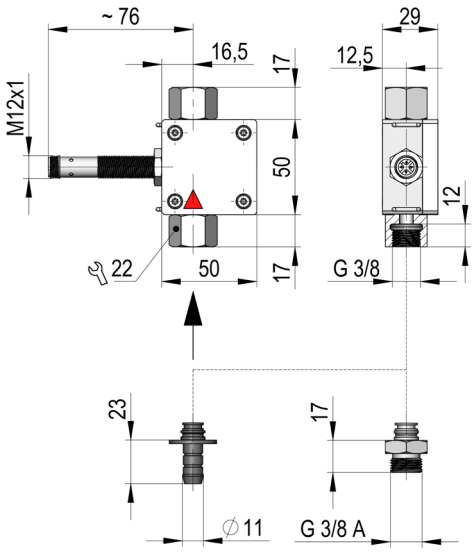
GREAT FLEXIBILITY
- Modular construction with various connection systems

Specifications

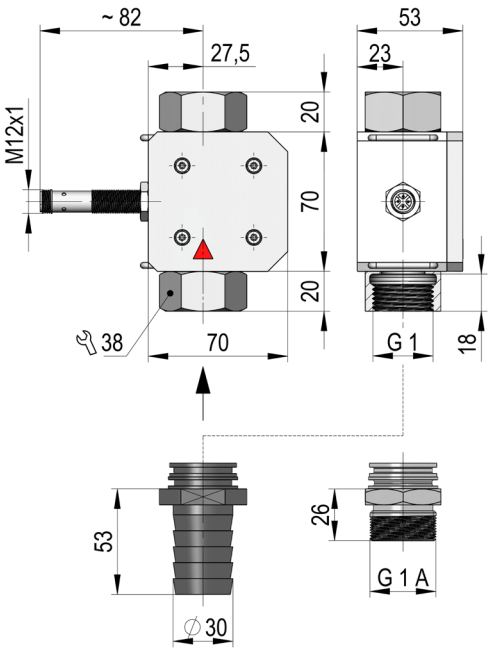
Meas. principle	Magnetic paddlewheel detection with Hall sensor	
Nominal size	DN 10 (LABOPLUS-RRH-010) DN 25 (LABOPLUS-RRH-025)	
Mechanical Connection	female thread G 3/8, G 1 male thread G 3/8 A, G 1 A hose nozzle Ø11, Ø30 (other threaded, crimped, and plug-in connections, connections with constant flow rate device or limiters available on request)	
Measuring ranges	0.1...100 l/min (see table „ranges“)	
Measurement uncertainty	±3 % of the measured value	
Media	Water or other low-viscosity liquids	
Pressure loss	max. 0.5 bar	
Pressure resistance	PN 100	
Media temperature	0...+70 °C	
Storage temperature	-20...+80 °C	
Materials wetted with media	Housing Rotor Bearing Axle Gasket	CW614N nickelled or 1.4305 PVDF with magnets, glued with epoxy resin Iglidur X Ceramics ZrO_2-TZP FKM
Supply voltage	18...30 V DC	
Current consumption	max. 200 mA	
IO-Link specification	IO-Link revision Bit rate Minimum cycle time SIO mode Port class Block parameterization Data storage	V1.1.3 COM2 (38400 Bit/s) 20 ms yes A yes yes
Analog output	Current: Voltage:	4...20 mA 0...20 mA 0...10 V 2...10 V 0...5 V 1...5 V 0.5...4.5 V
Switching outputs	Transistor outputs push-pull, parameterizable as NPN o.C. Short-circuit and reverse polarity resistant I_{out} = 100 mA max. Configurable on the device as • Limit switch • Frequency output • Pulse output • Signal output for preset counter	
Electr. connection	M12x1 circular connector, 4-pin	
Protection class	IP65 / IP67	
Conformity	CE	
Gewicht	LABOPLUS-RRH-010 LABOPLUS-RRH-025	appr. 0.69 kg appr. 1.95 kg

Dimensions

LABOPLUS-RRH-010 model series



LABOPLUS-RRH-025 model series



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Ranges

Type	Range l/min (H_2O)	Qmax l/min (H_2O)
LABOPLUS-RRH-010...020	0.1... 1.5	1.8
LABOPLUS-RRH-010...050	0.2... 10.0	12.0
LABOPLUS-RRH-010...070	0.4... 12.0	14.4
LABOPLUS-RRH-025...080	2.0... 30.0	36.0
LABOPLUS-RRH-025...120	3.0... 60.0	72.0
LABOPLUS-RRH-025...160	4.0...100.0	120.0

Order codes

	1.	2.	3.	4.	5.	6.	7.
LABOPLUS-RRH -							**05M**

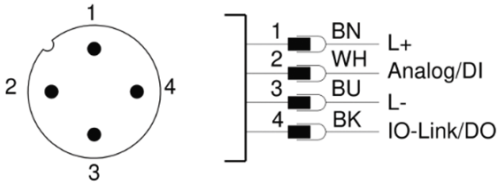
● = Standard ❍ = Option

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		●
	050		Ø 5		●
	070		Ø 7		●
	080		Ø 8	●	
	120		Ø12	●	
	160		Ø16	●	
6.	**Seal material**				
	V	●	FKM		
	E	❍	EPDM		
	N	❍	NBR		
7.	**Rotor**				
	05M	●	with 5 magnets		

Accessories

Cable with circular connector M12x1, 4-pin (not included)

Connection diagram



connector
M12 x 1

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