

Product information

OMNIPLUS-RRI

Flow transmitter OMNIPLUS-RRI



- 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-RRI 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 PVDF rotor is equipped with stainless steel clips (optionally titanium), which are detected by an inductive sensor located outside the flow chamber and thus enable the speed to be measured.

The rotor has a shatterproof ceramic axle that runs in durable special plastic bearings.

The housing is made of PPS or, alternatively, PVDF if there are special requirements for chemical resistance.

The PPS housing can be equipped with a transparent cover made of PSU, which allows a visual inspection of the paddle wheel.

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.

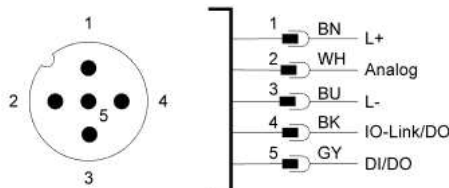
In addition to the version presented here, other versions are available:

LABO-RRI	without display, adjustable analog or frequency output
RRI	direct frequency output, not adjustable

Connection diagram

connector M12 x 1

pin assignment



Specifications

Measuring principle	Impeller with metal clips Detection with inductive sensor	
Nominal size	DN 10 (OMNIPLUS-RRI-010) DN 25 (OMNIPLUS-RRI-025)	
Connection type	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)	
Ranges	0.1...100 l/min (see table „Ranges“)	
Measurement uncertainty	±3 % of reading	
Media	Water or other low-viscosity liquids	
Pressure loss	max. 0.5 bar	
Compressive strength	PN 16	
Media temperature	0...+60 °C	
Storage temperature	-20...+80 °C	
Werkstoffe medienberührt	Housing	PPS (40 % GF) optional PVDF, PSU
	Impeller	PVDF
	Clips	1.4310 (opt.: titanium)
	Bearings	Iglidur X
	Axle	ceramics ZrO ₂ -TZP
	Gaskets	FKM optional: NBR, EPDM
Supply voltage	18...30 V DC	
Current consumption	< 130 mA (SIO mode, unloaded outputs)	
IO-Link specification	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
Analog output	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
Switching outputs	2 transistor outputs push-pull, parameterizable as NPN o.C. Short-circuit and reverse polarity resistant I _{out} = 100 mA max per output	
	Configurable on the device as	
	• Limit switch • Frequency output • Pulse output • Signal output for preset counter	
Display	1.2" graphic LCD (transflective) 128 x 64 pixels backlight white, red on alarm message	
Electr. connection	M12x1 circular connector, 5-pin	
Protection class	IP65 / IP67	
Conformity	CE	

Product information

OMNIPLUS-RRi

Dimensions and weights

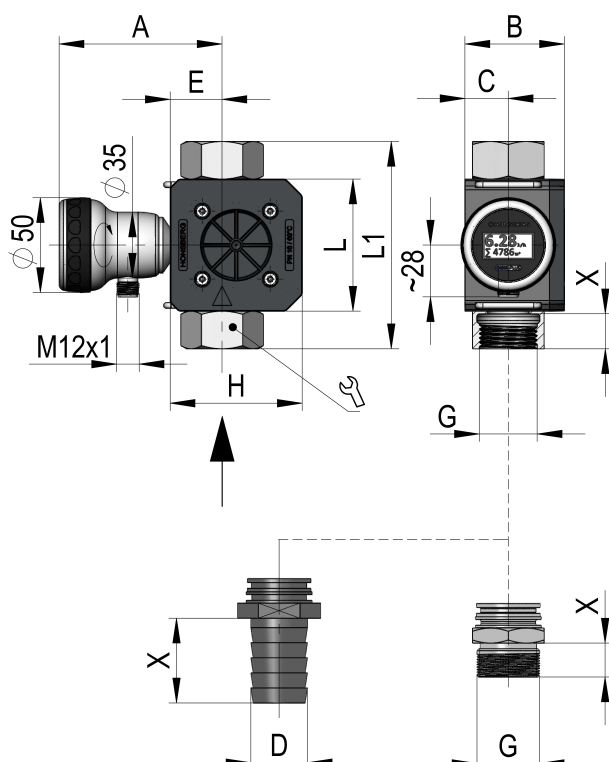
Type		H/L	A	B	C	E	G	D	SW	X	L1	Weight
OMNIPLUS-RRi-010G	●	50	~ 75.5	29	12.5	16.5	G 3/8	-	22	12	84	appr. 0.25 kg
OMNIPLUS-RRi-010A	○						G 3/8 A	-		10	84	
OMNIPLUS-RRi-010T	○						-	Ø11		21	96	
OMNIPLUS-RRi-025G	●	70	~ 86.5	53	23	27.5	G 1	-	38	20	110	appr. 0.51 kg
OMNIPLUS-RRi-025A	○						G 1 A	-		18	122	
OMNIPLUS-RRi-025T	○						-	Ø30		45	176	

● = standard ○ = option

Order codes

OMNIPLUS-RRi - 1. 2. 3. 4. 5. 6. 7. 8.
10

● = standard ○ = option



Ranges

Type	Measurement range l/min (H ₂ O)	Q _{max} l/min (H ₂ O)
OMNIPLUS-RRi-010...020	0.1... 1.5	1.8
OMNIPLUS-RRi-010...050	0.2... 10.0	12.0
OMNIPLUS-RRi-010...070	0.4... 12.0	14.4
OMNIPLUS-RRi-025...080	2.0... 30.0	36.0
OMNIPLUS-RRi-025...120	3.0... 60.0	72.0
OMNIPLUS-RRi-025...160	4.0...100.0	120.0

1. Nominal size	
010	● DN 10
025	● DN 25
2. Mechanical connection	
G	● Female thread
A	○ Male thread
T	○ Hose nozzle
3. Connection material	
V	● PVDF
M	○ CW614N nickel-plated
K	○ 1.4305
4. Housing material	
Q	● PPS
V	○ PVDF
A	○ PPS with transparent cover PSU
5. Inlet drilling	
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 ●
6. Gasket material	
V	● FKM
E	○ EPDM
N	○ NBR
7. Impeller	
10	with 10 clips
8. Clip material	
K	● 1.4310
T	○ titanium

Accessories

Cable with circular connector M12x1 (not included)