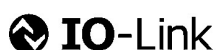


Product information

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.

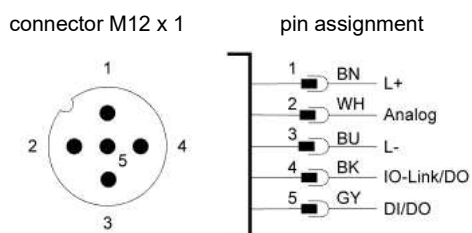
The PPS housing can be equipped with a transparent cover made of PSU, which allows a visual inspection of the paddle wheel.

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:

- LABOPLUS-RRI** without display, adjustable analog and frequency output, limit switch
- RRI** direct frequency output, not adjustable

Connection diagram



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-viscous 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	

OMNIPLUS-RRI

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		
OMNIPLUS-RRi-010T	○						-	Ø11		21		
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	

Technical drawing of the SENSECA 1000 pressure transmitter, showing front, side, and detail views with dimensions.

Front View (Left):

- Overall width: A
- Mounting flange diameter: $\varnothing 50$
- Flange thickness: 50
- Flange bore diameter: $\varnothing 35$
- Mounting thread: $M12 \times 1$
- Overall height: L
- Height to top of housing: $L1$
- Distance from mounting face to center of process connection: E
- Distance from mounting face to center of electrical connection: H

Side View (Right):

- Overall width: B
- Process connection diameter: C
- Height to top of housing: ~ 28
- Electrical connection thread: X
- Distance from mounting face to center of electrical connection: G

Detail Views (Bottom):

- Process Connection (Left):** Shows the threaded process connection with diameter D and height X .
- Electrical Connection (Right):** Shows the threaded electrical connection with diameter G and height X .

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

OMNIPLUS-RRI -

1.	2.	3.	4.	5.	6.	7.	8.
						10	

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

Cable with circular connector M12x1 (not included)