

## Product information

# Flow transmitter OMNIPLUS-RRI



## IO-Link

- 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.

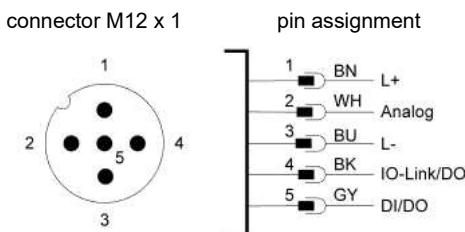
The PPS housing can be equipped with a transparent cover made of PSU, which allows a visual inspection of the paddle wheel.

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

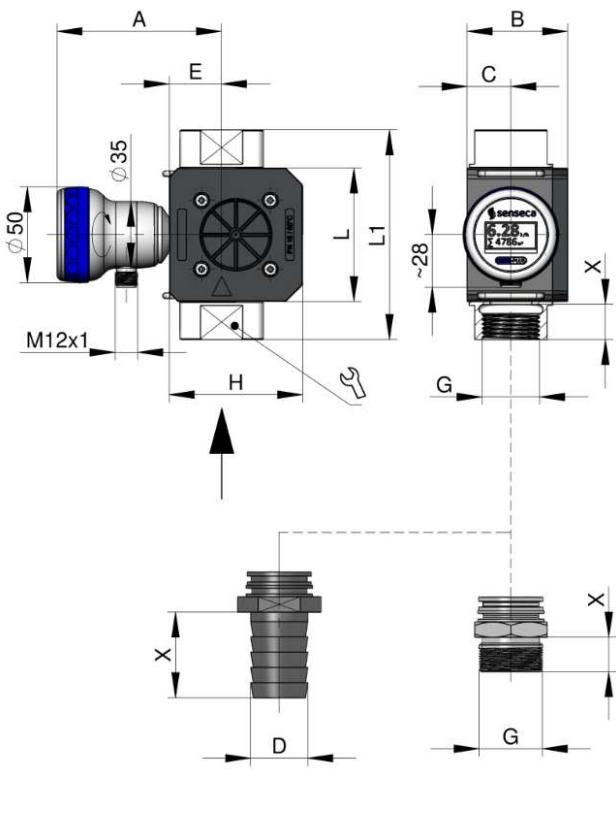
<b>Measuring principle</b>	Impeller with metal clips Detection with inductive sensor	
<b>Nominal size</b>	DN 10 (OMNIPLUS-RRI-010) DN 25 (OMNIPLUS-RRI-025)	
<b>Connection type</b>	Female thread G $\frac{3}{8}$ , G 1 Male thread G $\frac{3}{8}$ A, G 1 A Hose nozzle Ø11, Ø30 (other threads, crimp and plug-in connections, connections with constants or limiters on request)	
<b>Ranges</b>	0.1...100 l/min (see table „Ranges“)	
<b>Measurement uncertainty</b>	±3 % of reading	
<b>Media</b>	Water or other low-viscous liquids	
<b>Pressure loss</b>	max. 0.5 bar	
<b>Compressive strength</b>	PN 16	
<b>Media temperature</b>	0...+60 °C	
<b>Storage temperature</b>	-20...+80 °C	
<b>Werkstoffe medienberührt</b>	Housing Impeller Clips Bearings Axe Gaskets	PPS (40 % GF) optional PVDF, PSU PVDF 1.4310 (opt.: titanium) Iglidur X ceramics ZrO <sub>2</sub> -TZP FKM optional: NBR, EPDM
<b>Supply voltage</b>	18...30 V DC	
<b>Current consumption</b>	< 130 mA (SIO mode, unloaded outputs)	
<b>IO-Link specification</b>	IO-Link revision Bit rate Minimum cycle time SIO mode Port class Block parameterization Data storage	V1.1 COM2 (38400 bit/s) 20 ms yes A compatible yes yes
<b>Analog output</b>	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
<b>Switching outputs</b>	2 transistor outputs push-pull, parameterizable as NPN o.C. Short-circuit and reverse polarity resistant Iout = 100 mA max per output	
<b>Display</b>	Configurable on the device as <ul style="list-style-type: none"> <li>• Limit switch</li> <li>• Frequency output</li> <li>• Pulse output</li> <li>• Signal output for preset counter</li> </ul>	
<b>Electr. connection</b>	1.2" graphic LCD (transflective) 128 x 64 pixels backlight white, red on alarm message	
<b>Protection class</b>	IP65 / IP67	
<b>Conformity</b>	CE	

## Product information

### 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 $\frac{3}{8}$	-	22	12	84	appr. 0.25 kg
OMNIPLUS-RRI-010A						G $\frac{3}{8}$ A	-		10		
OMNIPLUS-RRI-010T						-	Ø11		21	96	
OMNIPLUS-RRI-025G		~ 86.5	53	23	27.5	G 1	-	38	20	110	
OMNIPLUS-RRI-025A						G 1 A	-		18	122	
OMNIPLUS-RRI-025T						-	Ø30		45	176	

● = standard ○ = option



### Ranges

Type	Measurement range l/min (H <sub>2</sub> O)	Q <sub>max</sub> l/min (H <sub>2</sub> 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

### Order codes

OMNIPLUS-RRI -                 **10**  

● = standard ○ = option

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

### Accessories

Cable with circular connector M12x1 (not included)