

**Product Information**

**Sensors and Instrumentation**

**Flow Transmitter  
 RT-...AK**



- High precision
- No magnetic components in the flow space
- High pressure resistance

**Characteristics**

A turbine acts as the primary sensor; its rotational speed is proportional to the flow rate. The rotational speed is detected by means of a biased Hall sensors, i.e. there are no magnets in the flow space.

**Technical data**

<b>Sensor</b>	biased Hall sensor	
<b>Nominal width</b>	DN 15..50	
<b>Process connection</b>	male thread G 1/2 A...G 2 A	
<b>Metering ranges</b>	1.8..1133 l/min for details, see table "Ranges"	
<b>Measurement accuracy</b>	±1 % of full scale value in the specified metering range, including linearity and repeatability	
<b>Medium temperature</b>	-20..+85 °C optionally -20..+150 °C (for 8 bar min.)	
<b>Ambient temperature</b>	-20..+70 °C	
<b>Storage temperature</b>	-20..+80 °C	
<b>Materials medium-contact</b>	Housing	stainless steel 315
	Turbine	stainless steel 430
	Bearing	tungsten carbide
<b>Material electronics housing</b>	CW614N nickelled	
<b>Max. particle size</b>	0.5 mm	
<b>Pressure loss</b>	0.3 bar at Q <sub>max</sub> .	
<b>Pressure resistance</b>	PN 250 bar	
<b>Supply voltage</b>	10..30 V DC	
<b>Signal output</b>	transistor output "push-pull" (resistant to short circuits and polarity reversal) I <sub>out</sub> = 100 mA max.	
<b>Current consumption</b>	20 mA without load	
<b>Max. load current</b>	100 mA	

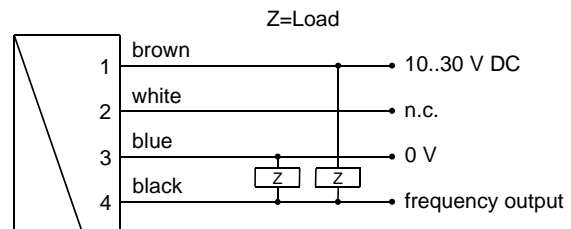
<b>Electrical connection</b>	for round plug connector M12x1, 4-pole
<b>Ingress protection</b>	IP 67
<b>Weight</b>	see table "Dimensions"
<b>Conformity</b>	CE

**Ranges**

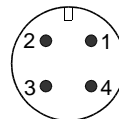
Types	Metering range (1..5 mm <sup>2</sup> /s)		Pulses / litre ±10 %
	l/min	m <sup>3</sup> /h	
RT-015AK001.	1.8.. 18	0.11.. 1.1	2900
RT-020AK002.	3.7.. 37	0.22.. 2.2	1700
RT-020AK004.	6.7.. 67	0.40.. 4.0	1100
RT-020AK008.	13.3.. 133	0.80.. 8.0	400
RT-025AK016.	26.7.. 267	1.60.. 16.0	190
RT-040AK034.	56.7.. 567	3.40.. 34.0	60
RT-050AK068.	113.3..1133	6.80.. 68.0	24

**Wiring**

Push-pull output, can be connected to PNP or NPN inputs.



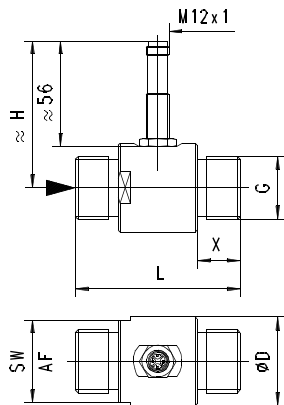
Connection example: PNP NPN



**Product Information**

**Sensors and Instrumentation**

**Dimensions**



DN	G	ØD	SW / AF	H	L	X	Range m³/h at 1-5 mm² /s	Weight kg
15	1/2	38	35	71	64	19	0.11 – 1.1	0.30
20	3/4	38	35	72	64	19	0.22 – 2.2	0.40
20	3/4	38	35	72	64	19	0.40 – 4.0	0.40
20	3/4	40	38	75	83	22	0.80 – 8.0	0.40
25	1	47	44	78	88	23	1.60 – 16.0	0.60
40	1 1/2	60	52	84	114	28	3.40 – 34.0	1.40
50	2	70	64	89	132	29	6.80 – 68.0	1.90

**Handling and Operation**

**Installation**

As with all flow meters, if possible the turbine should be installed ahead of a valve (on the pressure side). Good degassing should be ensured. 10 x D calming sections are recommended before and after the turbine in order to maintain the specified accuracies. The turbine should be filled with fluid at all times. The electronics housing does not project into the flow space.

**Ordering code**

1. 2. 3. 4. 5. 6.  
RT-

○=Option

<b>1. Nominal width</b>									
015	DN 15 - G 1/2 A								
020	DN 20 - G 3/4 A								
025	DN 25 - G 1 A								
040	DN 40 - G 1 1/2 A								
050	DN 50 - G 2 A								
<b>2. Mechanical connection</b>									
A	male thread								
<b>3. Housing material</b>									
K	stainless steel								
<b>4. Metering range</b>									
001	0.11.. 1.1 m³/h								●
002	0.22.. 2.2 m³/h								●
004	0.40.. 4.0 m³/h								●
008	0.80.. 8.0 m³/h								●
016	1.60..16.0 m³/h								●
034	3.40..34.0 m³/h								●
068	6.80..68.0 m³/h								●
<b>5. Signal output</b>									
T	electronics								
<b>6. Option</b>									
H	○ high temperature model								

**Options**

- Flanged model,
- max. temperature 150 °C
- DN 80-300 PN 16
- model for air / gas
- range from 0.05 m³/h

**Accessories**

- Cable/round plug connector (KB...) see additional information "Accessories"
- Counter EEZ-904
- OMNI-TA