



Badger Meter Europa

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## Turbine meters of the Vision series

For low viscous and non aggressive liquids



### Features

- Low cost
- Small size
- Easy and fast installation
- Maintenance free
- High operating pressure
- Installation in any position

### Description

The liquid turbine meters of the series Vision® are for the exact measuring of small quantities of liquids. The actual flow as well as the already passed flow can be measured.

The large number of pulses gives a good resolution. As the mass of the turbine are very small the response time is very short. It is not necessary to install a straight length of pipeline at the upstream side. The simple mechanical construction of the sensor Vision® guarantees a long lifespan without any loss of accuracy. Pressure pulses do not affect the measuring system.

### Measuring principle

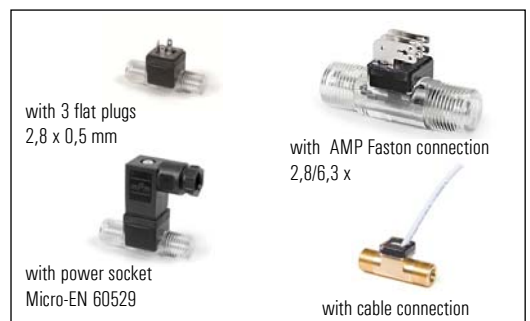
The rotor is turned by the fluid force in flowproportional way. A hall generator supplies pulses, which can be utilized for digital or analogue signal processing. The generated pulses are specified as the k-factor.

### Applications

For flow measurement of water, demineralized water, alkaline solutions, oils/salad oil, fuel/fuel consumption, fuel oil, beverage, water solutions, etc.

Special for washmachines, dish washers, coffee machines, laser cooling plants, solar solutions, bakery machines, steam cooking machines in large kitchen plants, dialysis equipment, CD cleaning, irrigation plants, etc.

### Connections





## Technical data

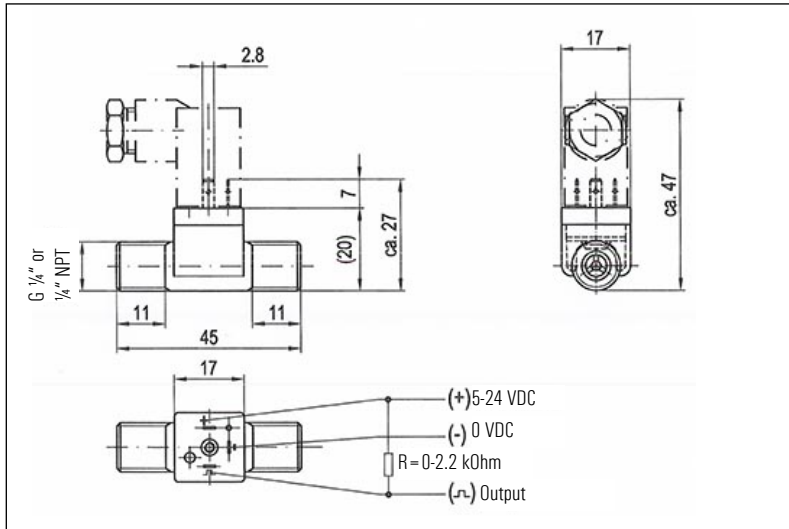
Type	1000 2F66	2006 2F66	2008 2F66	2006 4F44	2008 4F44	2008 4F22	2008 4F16,5	3012 4F17
Article n° (AMP-Faston)	167527	167516	167514	167515	167513	167525	167523	-
Article n° (with cable)	-	167526	167519	167518	167517	167522	167524	167628
Article n° (with coupler socket acc. EN 60529)	167527 167554	167532	167538	167533	167540	167536	167534	167611
Measuring rate l/min	0.1 - 2.5	0,5 - 5	0,50 - 7,5	1 - 10	1 - 15	1,5 - 25	2 - 35	5,0 - 65
K-factor PPL*	18.500; 22.000	6900	4700	3300	2200	1000	750	210
Size mm	5	6	8	6	8	8	8	12
Material	Trogamid	Grilamid TR55 (PA 12) Polyamid 12 / Trogamid						Trogamid
Material	-	Brass	-			Brass	-	-
Measuring rate l/min	-	2 - 8 l/min	-			3 - 25 l/min	-	-
K-factor PPL*	-	4200	-			1000	-	-
Viscosity range	0.8 - 16 mm <sup>2</sup> /sec (mpas)							
Accuracy	+/- 3% of value							
Repeatability	Better than 0.5%							
Temperature range (°C)	-20 up to +100							
Operating pressure	25 bar max							
Burst pressure	200 bar							~ 100 bar
Electrical connection **	<ul style="list-style-type: none"> <li>- AMP Faston 2.8/6.3 x 0.8 mm</li> <li>- Connection MICRO-EN 60529 or 3 flat plugs 2.8 x 0.5 mm (point plate)</li> <li>- Cable connection: round cable 3xAWG 24 with free cable end</li> </ul>							
Filter	20 to 40 micron recommended							
Power supply	Standard model without display: 5 - 24 VDC. Model with display: 2 - 5,5 VDC (battery powered)							
Current consumption	Standard model without display: ca. 8 mA. Model with display: Ca. 2,2 µA @ 2 V (battery powered)							
Output signal	Standard model without display: Pulses by open collector (NPN sinking). Model with display: Push-pull (battery powered)							
Output current	Standard model without display: max. 20 mA Model with display: max. 30 mA (battery powered)							
Pull-down resistor	1 - 2.2 kOhm							
Connections***	G ¼" NPT ¼"	G 3/8" NPT 3/8" and O-ring					G 3/4" NPT 3/4"	
* PPL = Pulses per liter ** Recommended starting torque approx. 6 Nm *** Other connections on demand								

## Pressure drop in bar for water

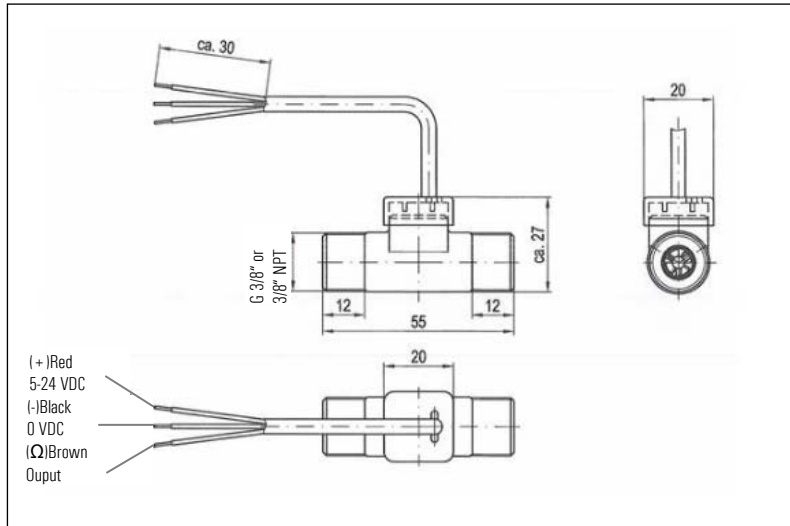
Type	1000 2F 66	2006 2F66	2008 2F66	2006 4F44	2008 4F44	2008 4F22	2008 4F16,5	3012 4F17
0,5 l / min	0.02	--	--	--	--	--	--	--
1 l / min	0.05	~ 0	~ 0	~ 0	~ 0	~ 0	~ 0	--
1,5 l / min	0.15	--	--	--	--	--	--	--
2 l / min	0.25 *	~ 0	~ 0	0.06	0.05	~ 0	~ 0	--
5 l / min	--	0.12	0.05	0.2	0.2	0.05	~ 0	0,00
10 l / min	--	0.4	0.2	0.7	0.4	0.17	~ 0.12	0,01
15 l / min	--	0.9	0.4	--	--	0.27	~ 0.25	0,02
20 l / min	--	1.3	0.7	--	--	0.48	~ 0.45	0,05
25 l / min	--	--	--	--	--	0.65	~ 0.60	0,07
30 l / min	--	--	--	--	--	--	~ 0.92	0,11
35 l / min	--	--	--	--	--	--	--	0,14
40 l / min	--	--	--	--	--	--	--	0,18
45 l / min	--	--	--	--	--	--	--	0,23
50 l / min	--	--	--	--	--	--	--	0,28
55 l / min	--	--	--	--	--	--	--	0,34
60 l / min	--	--	--	--	--	--	--	0,40
65 l / min	--	--	--	--	--	--	--	0,47

\* Value applies to 2.5 l/min

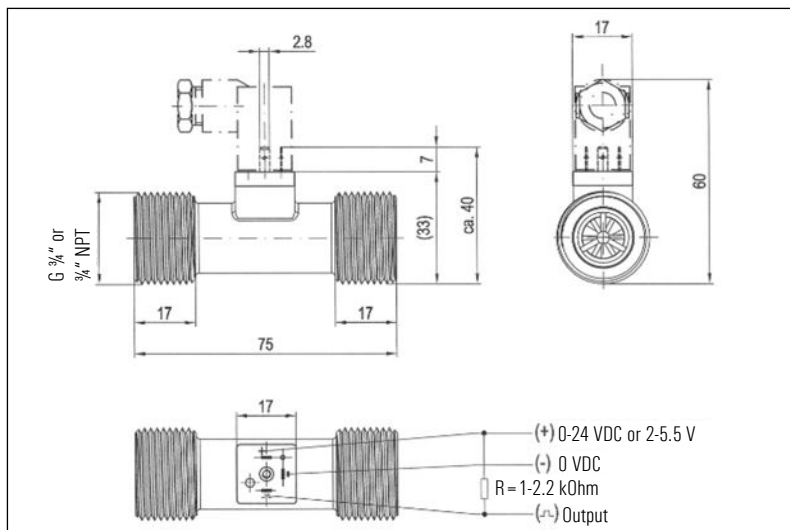
Dimensions (in mm)



Example Vision 1000 with DIN plug



Example Vision 2000 with cable



Example Vision 3000 with DIN plug