ifm electronic

The alternative: Vortex sensor instead of vane

TOP PRODUCT

Vortex inline volumetric flow sensors with user-friendly display

- ● **Integrated temperature measurement**

- ● **Electronically rotatable multi-colour display**

- ● **Rotatable G and R process connections as option**

- ● **Red/green colour change for process values adjustable**

- ● **Can be used for water with and without conductivity (deionised water)**

IO-Link

High-grade stainless steel

IP 65 IP 67

Rotatable connection

Turbulence as a measure for the flow

Behind a blunt body (or shedder) integrated in the measuring pipe, the flowing medium generates swirling vortices depending on the velocity. These vortices are detected by a piezoceramic sensor. If the cross-section is known, the number of the vortices allows to determine the flow rate.

This flow rate measurement principle, known as vortex (or vortex shedding) principle, is almost independent of pressure and temperature fluctuations of the medium. It allows a simple design and thus a low-cost production of sensors for flow rate measurement.

The current flow and temperature are output as standardised current signal (4...20 mA), as frequency signal, switching output or via IO-Link as option.

Monitoring the cooling circuits at a welding gun

Process sensors
Flow sensors / flow meters

ifm electronic

Measuring range [l/min]	Medium temperature [°C]	Response time T90 [s]	Nominal diameter [Ø]	Max. operating pressure [bar]	Process connection	Order no.
M12 connector · electrical design DC PNP / NPN · frequency · IO-Link						
1.0...20	-10...90	< 1	DN8	12	G 1/2	**SV4200**
1.0...20	-10...90	< 1	DN8	12	Rc 1/2	**SV4500**
2.0...40	-10...90	< 1	DN10	12	G 1/2	**SV5200**
2.0...40	-10...90	< 1	DN10	12	Rc 1/2	**SV5500**
5.0...100	-10...90	< 1	DN20	12	G 3/4	**SV7200**
5.0...100	-10...90	< 1	DN20	12	Rc 3/4	**SV7500**
M12 connector · electrical design DC 2 x analogue 4...20 mA						
1.0...20	-10...90	< 1	DN8	12	G 1/2	**SV4204**
1.0...20	-10...90	< 1	DN8	12	Rc 1/2	**SV4504**
2.0...40	-10...90	< 1	DN10	12	G 1/2	**SV5204**
2.0...40	-10...90	< 1	DN10	12	Rc 1/2	**SV5504**
5.0...100	-10...90	< 1	DN20	12	G 3/4	**SV7204**
5.0...100	-10...90	< 1	DN20	12	Rc 3/4	**SV7504**

Wiring diagram

1	BN	L+
2	WH	OUT2
4	BK	OUT1
3	BU	L−
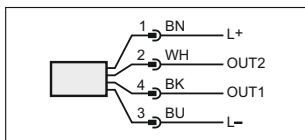
Connection technology

Type	Description	Order no.
	Socket, M12, 2 m black, PUR cable	**EVC001**
	Socket, M12, 5 m black, PUR cable	**EVC002**
	Socket, M12, 2 m orange, PVC cable	**EVT064**
	Socket, M12, 5 m orange, PVC cable	**EVT001**

Common technical data

Type SV4, SV5, SV7		
Operating voltage	[V]	18...30 DC
Current consumption	[mA]	typ. 25 (at 24 V)
Accuracy flow measurement		± (2 % MV + 2 % VMR)
Accuracy temperature monitoring		± 1 K
Protection rating, protection class		IP 65 / IP 67, III
Output 1 (for DC PNP / NPN version)		IO-Link, switching output or frequency output flow
Output 2 (for DC PNP / NPN version)		Switching output flow / temperature or frequency output flow / temperature

Accessories

Type	Description	Order no.
	Mounting plate	**E40249**
	Adjustment valve, G 1/2	**E40250**
	Adjustment valve, G 3/4	**E40251**
	IO-Link interface, current consumption from USB port	**E30396**

ifm – close to you!

For further technical details please visit: www.ifm.com