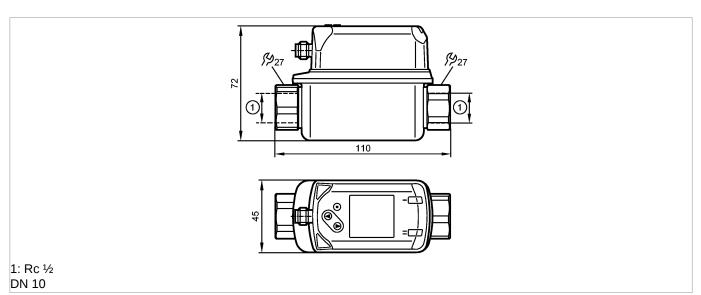
SVK12XXXIRKG/US-100 Flow sensors



 $C \in C_{LISTED}^{US} \otimes IO-Link$

Product characteristics

Vortex flow meter

DN 10

Process connection: Rc 1/2

Measuring range

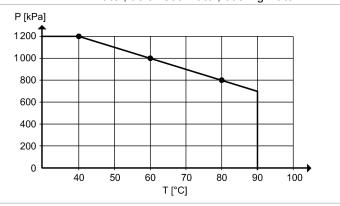
2...40 l/min

-10...90 °C

Application

Application	Liquids of the fluid group 2 according to the Pressure Equipment Directive (PED):
	Water deignised water cooling water

Pressure rating [bar]



Pressure rating	[bar]	12; (up to 40 °C)
Medium temperature	[°C]	-1090

Electrical data		
Electrical design		DC PNP/NPN
Operating voltage	[V]	1830 DC
Current consumption	[mA]	< 30
Insulation resistance	[ΜΩ]	> 100 (500 V DC)
Protection class		III
Reverse polarity protection	n	yes

Out	tpu	ıts
Out	tpu	ıt٤

Output function

OUT1: normally open / normally closed programmable or frequency or IO-Link OUT2: normally open / normally closed programmable or frequency



Accuracy

Reaction times

Power-on delay time

[K]

[s]

SVK12XXXIRKG/US-100



Flow sensors

Current rating	[mA]	100	
Voltage drop	[V]	2.5	
Short-circuit protection		yes	
Overload protection		yes	
Measuring / setting range		·	
Flow monitoring			
Measuring range		240 [l/min] 0.122.4 [m³/h]	
Display range		048 [l/min] 02.88 [m³/h]	
Resolution		0.2 [l/min] 0.01 [m³/h]	
Set point, SP		2.440 [l/min] 0.142.4 [m³/h]	
Reset point, rP		2.039.6 [l/min] 0.122.38 [m³/h]	
Frequency end point, FEP		840 [l/min] 0.482.4 [m³/h]	
in steps of		0.2 [l/min] 0.01 [m³/h]	
Frequency at the end point,	FrP [Hz]	1001000	
Measuring dynamics		1:20	
Temperature monitoring			
Measuring range	[°C]	-1090	
Display range	[°C]	-30110	
Resolution	[°C]	0.5	
Set point, SP	[°C]	-990	
Reset point, rP	[°C]	-1089	
Frequency start point, FSP	[°C]	-1070	
Frequency end point, FEP	[°C]	1090	
in steps of	[°C]	0.5	
Frequency at the end point, FrP [Hz]		1001000	
Accuracy / deviations			
Flow monitoring			
Accuracy		± 2 % MEW	
Repeatability		± 0.5 % MEW	
Pressure loss (dP) / flow rate	e (Q)	dP [mbar] DN10	
		450	
		400	
		350	
		300	
		250	
		200	
		150	
		100	
		50	
		0 5 10 15 20 25 30 35 40 Q [l/min]	
Temperature monitoring		()	

± 1

< 3



SVK12XXXIRKG/US-100 Flow sensors

Response time S	Flow monitoring			
Damping, dAP [s] 05	· ·	[e]	< 1 (dAP = 0)	
Temperature monitoring Response time [s] T09 = 6 Software / programming Programming options hysteresis / window function; NO / NC; output polarity; frequency output; on delay, off delay; damping; display unit Interfaces IO-Link Device Transfer type COM2 (38.4 kBaud) IO-Link revision 1.1 SDCI standard IEC 61131-9 IO-Link Device ID 488 d / 00 01 E8 h Smart Sensor: Process Data Variable; Device Identification, Device Diagnosis SIO mode yes Required master port class SIO mode yes Process data analogue 2 Process data laniary 2 Process data binary 2 Min. proces cycle time [ms] 3 Environment Ambient temperature [°C] 060, at max. 80 °C medium temperature (050 °C at max. 90 °C medium temperature Process In Profession Profess				
Response time [s] T09 = 6 Software / programming Programming options hysteresis / window function; NO / NC; output polarity; frequency output; on delay, off delay, damping, display unit Interfaces IO-Link Device Transfer type COM2 (38.4 kBaud) I		[၁]	05	
Programming options hysteresis / window function; NO / NC; output polarity; frequency output; on delay, off delay; damping; display unit Interfaces		[e]	T09 - 6	
Interfaces Int	·	[၁]	109 – 0	
Interfaces Interfaces Interfaces Interfaces Interfaces Interfaces Interfaces Including part Including part			hysteresis / window function; NO / NC; output polarity; frequency output; on delay,	
CO-Link Device Transfer type COM2 (38.4 kBaud) CO-Link revision 1.1				
Transfer type	Interfaces			
IO-Link revision	IO-Link Device			
SDCI standard	Transfer type		COM2 (38.4 kBaud)	
IO-Link Device ID	IO-Link revision		1.1	
Profiles Smart Sensor: Process Data Variable; Device Identification, Device Diagnosis SIO mode yes Required master port class A Process data analogue 2 Process data binary 2 Min. process cycle time [ms] 3 Environment Ambient temperature [°C] 060, at max. 80 °C medium temperature (050 °C at max. 90 °C medium temperature) Storage temperature [°C] -2080 Protection IP 65 / IP 67 Tests / approvals Pressure equipment directive EMC DIN EN 61000-6-2	SDCI standard		IEC 61131-9	
SIO mode	IO-Link Device ID		488 d / 00 01 E8 h	
Required master port class Process data analogue Process data binary Min. process cycle time [ms] Storage temperature Protection Tests / approvals Pressure equipment directive EMC DIN EN 61000-6-2 DIN EN 61000-6-3 Shock resistance DIN EN 60068-2-7 DIN EN 60068-2-7 DIN EN 60068-2-7 DIN EN 60068-2-6 With water 1050 Hz: 1 mm with water 502000 Hz: 2 g UL approval number Mechanical data Process connection Rec's Materials (wetted parts) Tightening torque [Nm] Weight [kg] DAMAGO C at max. 90 °C medium temperature (050 °C at max. 90 °C medium temperature) 1050 °C at max. 90 °C medium temperature (050 °C at max. 90 °C medium temperature) 1080 Process (080 At max. 80 °C medium temperature (050 °C at max. 90 °C medium temperature) In En 6100-6-2 DIN EN 61000-6-2 DIN	Profiles		Smart Sensor: Process Data Variable; Device Identification, Device Diagnosis	
Process data analogue Process data binary Min. process cycle time [ms] Ambient temperature [°C] Storage temperature [°C] Protection Tests / approvals Pressure equipment directive EMC DIN EN 61000-6-2 DIN EN 61000-6-2 DIN EN 60068-2-27 Shock resistance DIN EN 60068-2-27 Shock resistance DIN EN 60068-2-27 DIN EN 60068-2-27 DIN EN 60068-2-27 Shock resistance DIN EN 60068-2-6 With water 1050 Hz: 1 mm with water 502000 Hz: 2 g UL approval number Mechanical data Process connection Re ½ Materials (wetted parts) Housing materials Stainless steel (316L / 1.4404); PC; PBT+PC-GF 30; PPS; TPE-U Tightening torque [Nm] Weight [kg] Electrical connection M12 connector; gold-plated contacts	SIO mode		yes	
Process data binary	Required master port class		А	
Min. process cycle time [ms] 3 Environment Ambient temperature [°C] 060, at max. 80 °C medium temperature (050 °C at max. 90 °C medium temperature) Storage temperature [°C] -2080 Protection IP 65 / IP 67 Tests / approvals Pressure equipment directive Sound engineering practice EMC DIN EN 61000-6-2	Process data analogue		2	
Environment Ambient temperature [°C] 060, at max. 80 °C medium temperature (050 °C at max. 90 °C medium temperature) Storage temperature [°C] -2080 Protection IP 65 / IP 67 Tests / approvals Pressure equipment directive Sound engineering practice EMC DIN EN 61000-6-2	Process data binary		2	
Ambient temperature [°C] 060, at max. 80 °C medium temperature (050 °C at max. 90 °C medium temperature) Storage temperature [°C] -2080 Protection IP 65 / IP 67 Tests / approvals Pressure equipment directive sound engineering practice EMC DIN EN 61000-6-2	Min. process cycle time	[ms]	3	
temperature Storage temperature C -2080	Environment			
Protection IP 65 / IP 67 Tests / approvals Pressure equipment directive Sound engineering practice EMC DIN EN 61000-6-2 DIN EN 61000-6-3 Shock resistance DIN EN 60068-2-27 5 g (11 ms) Vibration resistance with water 1050 Hz: 1 mm with water 502000 Hz: 2 g UL approval number I001 Mechanical data Process connection Rc ½ Materials (wetted parts) stainless steel (316L / 1.4404); ETFE; PA 6T; PPS; FKM Housing materials stainless steel (316L / 1.4404); PC; PBT+PC-GF 30; PPS; TPE-U Tightening torque [Nm] 30 Weight [kg] 0.432 Electrical connection M12 connector; gold-plated contacts	Ambient temperature	[°C]		
Pressure equipment directive EMC DIN EN 61000-6-2 DIN EN 61000-6-3 Shock resistance DIN EN 60068-2-7 Shock resistance DIN EN 60068-2-7 Shock resistance DIN EN 60068-2-7 With water 1050 Hz: 1 mm with water 502000 Hz: 2 g UL approval number Mechanical data Process connection Rc ½ Materials (wetted parts) Stainless steel (316L / 1.4404); ETFE; PA 6T; PPS; FKM Housing materials Stainless steel (316L / 1.4404); PC; PBT+PC-GF 30; PPS; TPE-U Tightening torque [Nm] Weight [kg] 0.432 Electrical connection M12 connector; gold-plated contacts	Storage temperature	[°C]	-2080	
Pressure equipment directive EMC DIN EN 61000-6-2 DIN EN 61000-6-3 Shock resistance DIN EN 60068-2-27 5 g (11 ms) Vibration resistance With water 1050 Hz: 1 mm with water 502000 Hz: 2 g UL approval number I001 Mechanical data Process connection Rc ½ Materials (wetted parts) Housing materials Tightening torque [Nm] Weight [kg] DIN EN 60068-2-7 5 g (11 ms) With water 1050 Hz: 1 mm with water 502000 Hz: 2 g UL approval rumber I001 Rc ½ Stainless steel (316L / 1.4404); ETFE; PA 6T; PPS; FKM Stainless steel (316L / 1.4404); PC; PBT+PC-GF 30; PPS; TPE-U Tightening torque [Nm] Weight [kg] 0.432 Electrical connection M12 connector; gold-plated contacts	Protection		IP 65 / IP 67	
Pressure equipment directive EMC DIN EN 61000-6-2 DIN EN 61000-6-3 Shock resistance DIN EN 60068-2-27 5 g (11 ms) Vibration resistance With water 1050 Hz: 1 mm with water 502000 Hz: 2 g UL approval number I001 Mechanical data Process connection Rc ½ Materials (wetted parts) Housing materials Tightening torque [Nm] Weight [kg] DIN EN 60068-2-7 5 g (11 ms) With water 1050 Hz: 1 mm with water 502000 Hz: 2 g UL approval rumber I001 Rc ½ Stainless steel (316L / 1.4404); ETFE; PA 6T; PPS; FKM Stainless steel (316L / 1.4404); PC; PBT+PC-GF 30; PPS; TPE-U Tightening torque [Nm] Weight [kg] 0.432 Electrical connection M12 connector; gold-plated contacts	Tests / approvals			
Shock resistance DIN EN 61000-6-3 DIN EN 61000-6-3 DIN EN 60068-2-27 5 g (11 ms) With water 1050 Hz: 1 mm with water 502000 Hz: 2 g UL approval number IO01 Mechanical data Process connection Rc ½ Materials (wetted parts) Housing materials Stainless steel (316L / 1.4404); ETFE; PA 6T; PPS; FKM Housing materials Tightening torque [Nm] Weight [kg] 0.432 Electrical connection M12 connector; gold-plated contacts			sound engineering practice	
Shock resistance DIN EN 60068-2-27 5 g (11 ms) With water 1050 Hz: 1 mm with water 502000 Hz: 2 g UL approval number IO01 Mechanical data Process connection Rc ½ Materials (wetted parts) Housing materials Stainless steel (316L / 1.4404); ETFE; PA 6T; PPS; FKM stainless steel (316L / 1.4404); PC; PBT+PC-GF 30; PPS; TPE-U Tightening torque [Nm] Weight [kg] 0.432 Electrical connection Connection M12 connector; gold-plated contacts	EMC		DIN EN 61000-6-2	
Vibration resistance DIN EN 60068-2-6 with water 1050 Hz: 1 mm with water 502000 Hz: 2 g UL approval number IO01 Mechanical data Process connection Rc ½ Materials (wetted parts) Housing materials stainless steel (316L / 1.4404); ETFE; PA 6T; PPS; FKM stainless steel (316L / 1.4404); PC; PBT+PC-GF 30; PPS; TPE-U Tightening torque [Nm] Weight [kg] 0.432 Electrical connection Connection M12 connector; gold-plated contacts			DIN EN 61000-6-3	
DIN EN 60068-2-6 with water 502000 Hz: 2 g UL approval number 1001 Mechanical data	Shock resistance		DIN EN 60068-2-27 5 g (11 ms)	
Mechanical dataProcess connectionRc ½Materials (wetted parts)stainless steel (316L / 1.4404); ETFE; PA 6T; PPS; FKMHousing materialsstainless steel (316L / 1.4404); PC; PBT+PC-GF 30; PPS; TPE-UTightening torque[Nm]30Weight[kg]0.432Electrical connectionM12 connector; gold-plated contacts	Vibration resistance			
Mechanical dataProcess connectionRc ½Materials (wetted parts)stainless steel (316L / 1.4404); ETFE; PA 6T; PPS; FKMHousing materialsstainless steel (316L / 1.4404); PC; PBT+PC-GF 30; PPS; TPE-UTightening torque[Nm]30Weight[kg]0.432Electrical connectionM12 connector; gold-plated contacts	UL approval number		1001	
Materials (wetted parts)stainless steel (316L / 1.4404); ETFE; PA 6T; PPS; FKMHousing materialsstainless steel (316L / 1.4404); PC; PBT+PC-GF 30; PPS; TPE-UTightening torque[Nm]30Weight[kg]0.432Electrical connectionM12 connector; gold-plated contacts	Mechanical data			
Materials (wetted parts)stainless steel (316L / 1.4404); ETFE; PA 6T; PPS; FKMHousing materialsstainless steel (316L / 1.4404); PC; PBT+PC-GF 30; PPS; TPE-UTightening torque[Nm]30Weight[kg]0.432Electrical connectionM12 connector; gold-plated contacts			Rc ½	
Housing materials Tightening torque [Nm] Weight [kg] Stainless steel (316L / 1.4404); PC; PBT+PC-GF 30; PPS; TPE-U 30 Under the stainless steel (316L / 1.4404); PC; PBT+PC-GF 30; PPS; TPE-U 30 Magnetials O.432 Electrical connection M12 connector; gold-plated contacts	Materials (wetted parts)		stainless steel (316L / 1.4404); ETFE; PA 6T; PPS; FKM	
Tightening torque [Nm] 30 Weight [kg] 0.432 Electrical connection Connection M12 connector; gold-plated contacts				
Weight [kg] 0.432 Electrical connection Connection M12 connector; gold-plated contacts	-	[Nm]		
Electrical connection Connection M12 connector; gold-plated contacts				
Connection M12 connector; gold-plated contacts		. 31		
			M12 connector; gold-plated contacts	
	Wiring		, , , , , , , , , , , , , , , , , , , ,	

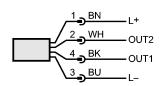
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SVK12XXXIRKG/US-100 Flow sensors

Core colors
BK black
BN brown
BU blue
WH white





OUT1: Flow monitoring

- Switching output
- Frequency output
- IO-Link

OUT2: flow monitoring and temperature monitoring

- Switching output
- Frequency output

Colours to DIN EN 60947-5-2

Remarks		
Remarks		MW = measured value MEW = final value of the measuring range
Pack quantity	[piece]	1

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