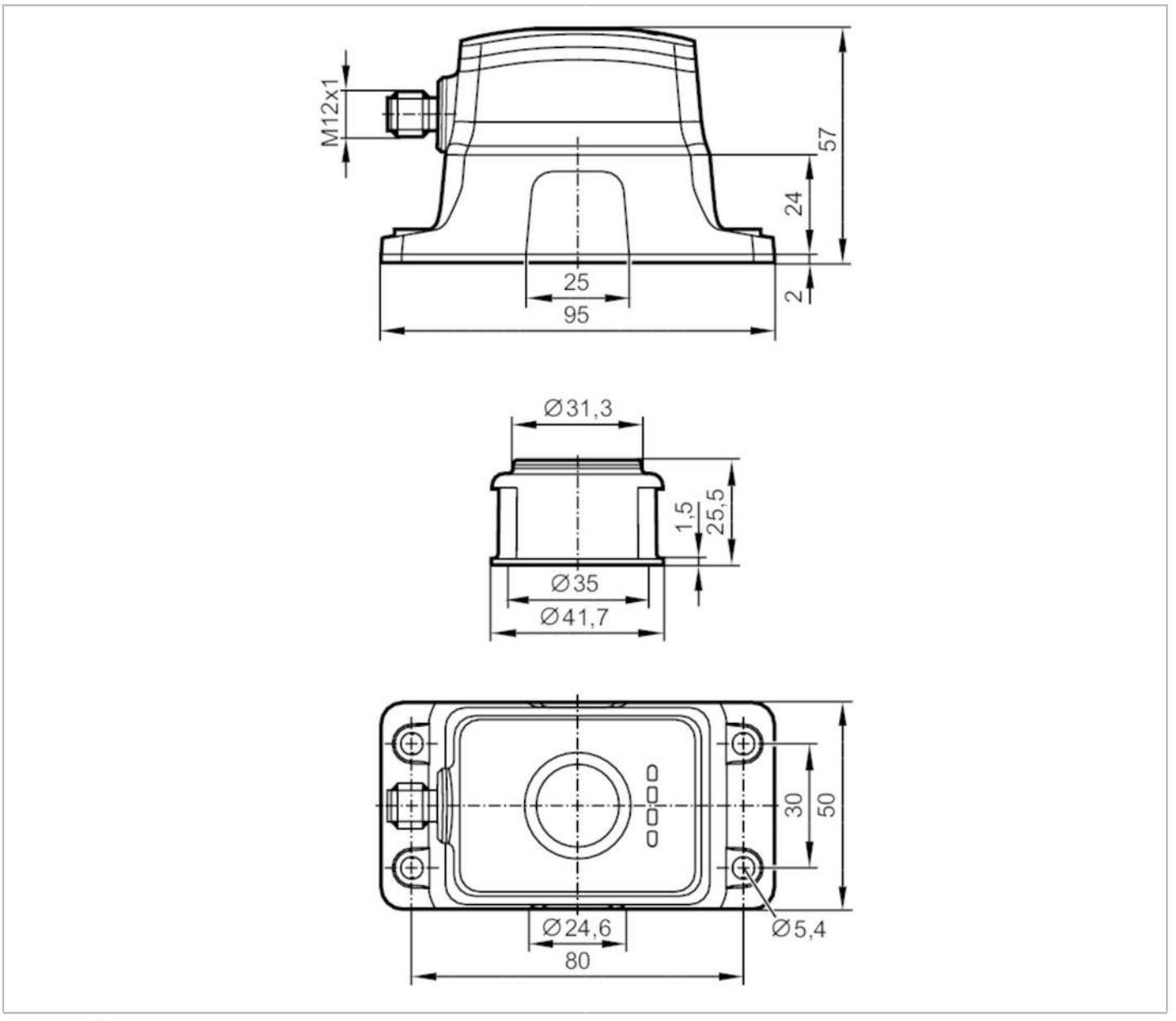
MVQ101

Position sensor for valve actuators

SVS BASIC IO-LINK



Product characteristics		
Communication interface		IO-Link
Housing		rectangular
Dimensions	[mm]	95 x 50 x 57
Switching outputs		
Electrical design		PNP
Output function		3 x normally open / normally closed; (selectable)
Application		
Operating principle		magnetic
Application		angle of rotation detection absolute
Electrical data		
Operating voltage	[V]	10...30 DC

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Current consumption	[mA]	< 40
Protection class		III
Reverse polarity protection		yes
Max. power-on delay time	[ms]	300

Outputs

Switching outputs		
Electrical design		PNP
Output function		3 x normally open / normally closed; (selectable)
Max. voltage drop switching output DC	[V]	2.5
Permanent current rating of switching output DC	[mA]	100
Short-circuit protection		yes
Overload protection		yes

Detection zone

Detection zone	[°]	360

Accuracy / deviations

Rotational angle detection		
Accuracy	[°]	± 1
Resolution	[°]	0.1
Temperature drift	[°/K]	0,02
Repeatability	[°]	0,1
Switch point indication		
Tolerance	[°]	0.1...15; (Factory setting: 10)
Hysteresis	[°]	0.1...5; (Factory setting: 3)

Interfaces

Communication interface		IO-Link
Transmission type		COM2 (38,4 kBaud)
IO-Link revision		1.1
SDCI standard		IEC 61131-9 CDV

Profiles

Function class	Designation
0x000A	Measuring Sensor
0x0030	BLOB transfer
0x4000	Identification and Diagnosis
0x8001	Multi-channel, two setpoint switching sensor
0x8004	Teach Channel

SIO mode		yes
Required master port type		A
Min. process cycle time	[ms]	4

Supported DeviceIDs

Type of operation	DeviceID
default	595

Operating conditions

Ambient temperature	[°C]	-25...70
Protection		IP 65; IP 67; (Target puck area dust-protected)

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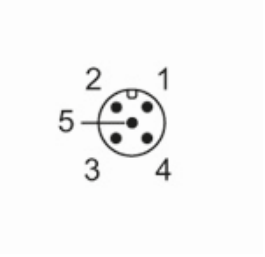
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Tests / approvals			
EMC		EN 61000-4-2	4 kV CD / 8 kV AD
		EN 61000-4-3	10 V/m
		EN 61000-4-4	2 kV
		EN 61000-4-6	10 V
		EN 55011	class B
Vibration resistance		EN 60068-2-6 Fc	1 mm (10...55 Hz) / 1 octave per minute in 3 axes
Shock resistance		EN 60068-2-27 Ea	30 g 11 ms half sine; 6 shocks each in every direction along the three coordinate axes
MTTF	[years]	410	
Embedded software included		yes	
UL approval		UL Approval no.	S001
Mechanical data			
Weight	[g]	175	
Housing		rectangular	
Dimensions	[mm]	95 x 50 x 57	
Materials		housing, target puck: PA; plug: stainless steel (316L / 1.4404)	
Tightening torque	[Nm]	target puck: 1,2; housing: 3,0; housing on plastic mounting plate: 0,9	
Displays / operating elements			
Display		operation	1 x LED, green
		switching status	3 x LED, white
		switching status	1 x LED, RGB
Accessories			
Items supplied		socket head screws: 4 x M5 x 16, stainless steel	
Remarks			
Pack quantity		1 pcs.	

Electrical connection - plug

Connector: 1 x M12; coding: A; Moulded body: stainless steel

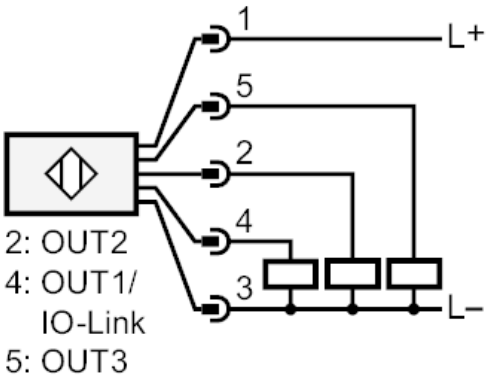


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Connection



1	L+
2	Out2
3	L-
4	Out1 IO-Link
5	Out3