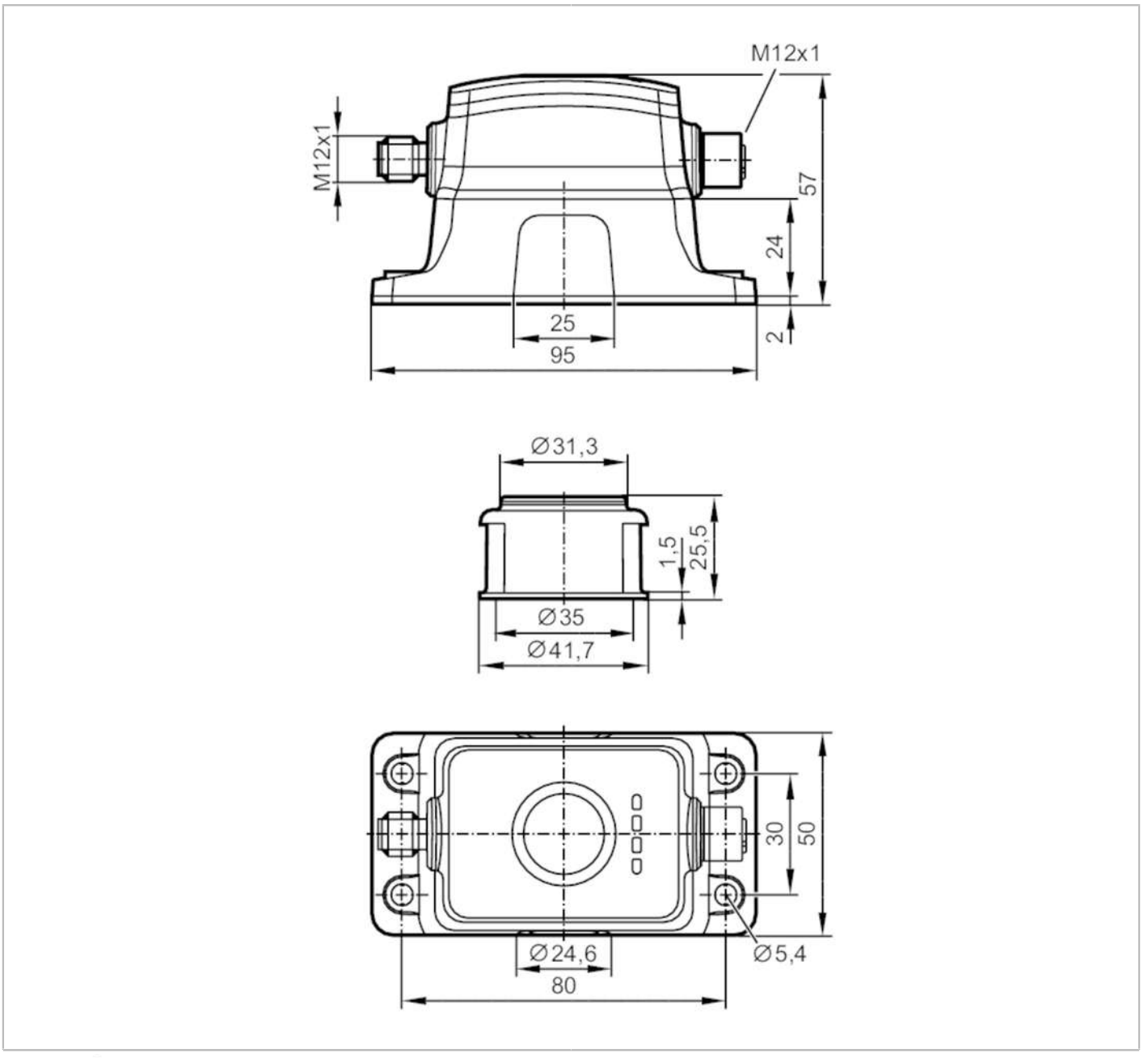
MVQ201

Position sensor for valve actuators

SVS SOLENOID OUT



Product characteristics		
Communication interface		IO-Link
Housing		rectangular
Dimensions	[mm]	95 x 50 x 57
Switching outputs		
Electrical design		PNP
Output function		2 x normally open / normally closed; (selectable)
Solenoid valve connection (SV1 / SV2)		
Output function		2 x normally open

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Application		
Operating principle		magnetic
Application		angle of rotation detection absolute; actuator control
Electrical data		
Operating voltage	[V]	10...30 DC
Current consumption	[mA]	< 40
Protection class		III
Reverse polarity protection		yes
Max. power-on delay time	[ms]	300
Inputs / outputs		
Number of inputs and outputs		Number of digital inputs: 1; Number of digital outputs: 2
Inputs		
Number of digital inputs		1
Outputs		
Number of digital outputs		2
Switching outputs		
Electrical design		PNP
Output function		2 x normally open / normally closed; (selectable)
Max. voltage drop switching output DC	[V]	2.5
Max. current load per output	[mA]	100
Short-circuit protection		yes
Overload protection		yes
Solenoid valve connection (SV1 / SV2)		
Output function		2 x normally open
Max. current load per output	[mA]	200
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)

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IO-Link revision		1.1	
SDCI standard		IEC 61131-9 CDV	
Profiles		**Function class**	**Designation**
		0x0030	BLOB transfer
		0x4000	Identification and Diagnosis
		0x8001	Multi-channel, two setpoint switching sensor
		0x8004	Teach Channel
		0x800A	Measurement Data Channel (standard resolution)
SIO mode		yes	
Required master port type		A	
Min. process cycle time	[ms]	4	
Supported DeviceIDs		**Type of operation**	**DeviceID**
		default	1190
Operating conditions			
Ambient temperature	[°C]	-25...70	
Protection		IP 65; IP 67; (Target puck area dust-protected)	
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]	363	
Embedded software included		yes	
UL approval		UL Approval no.	S002
Mechanical data			
Weight	[g]	192	
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: 1,5	
Displays / operating elements			
Display		operation	1 x LED, green
		switching status	2 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.	

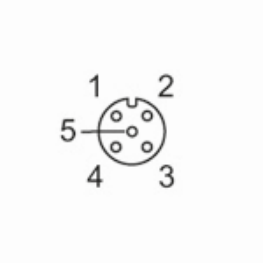
MVQ201

Position sensor for valve actuators

SVS SOLENOID OUT

Electrical connection - solenoid valve

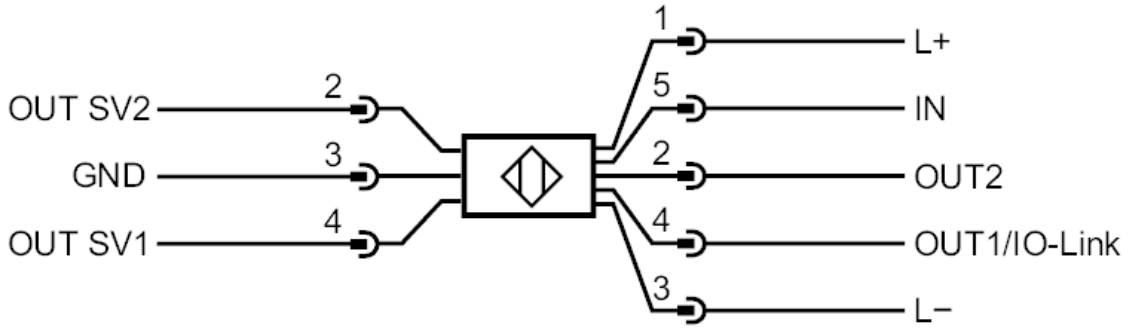
Connector: 1 x M12; coding: A; Moulded body: stainless steel



2	Out SV2
3	GND
4	Out SV1

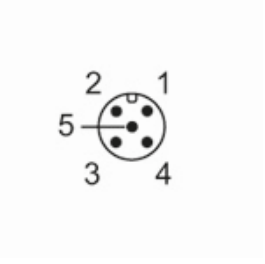
Electrical connection

Connection



Electrical connection - Process connection

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



1	Ub
2	Out2
3	GND
4	Out1 IO-Link
5	In1

Other data

Inputs

Operating mode	12 V	24 V
switching level high	6...30 V	15...30 V
switching level low	0...2 V	0...5 V