

Signal converters SVE4

FESTO



- Signal range 0 ... 10 V, 0 ... 20 mA or for position sensors SMH-S1-HG...
- Switch output 2x PNP or 2x NPN
- Switching function freely programmable
- Direct mounting, on H-rail or via adapter plate

Remote control for sensors: Signal converters SVE4



Set up sensors here? How?

The answer: SVE4

Would you like to flexibly monitor your process using an analogue sensor? Up to now you needed a costly analogue input for the PLC. That is no longer the case thanks to the signal converter SVE4. This converts the analogue output signal from a sensor into switching points that can be taught in directly on the signal converter. This makes the signal converter SVE4 the ideal solution for applications where direct visual supervision of the process is required when setting switching points.

Faster installation

The signal converter is installed remotely from the sensor and supports a range of mounting options such as direct mounting or mounting via H-rail.

Easier commissioning

The integrated teach-in function means that the signal converter can be commissioned directly at the machine for maximum ease of installation.

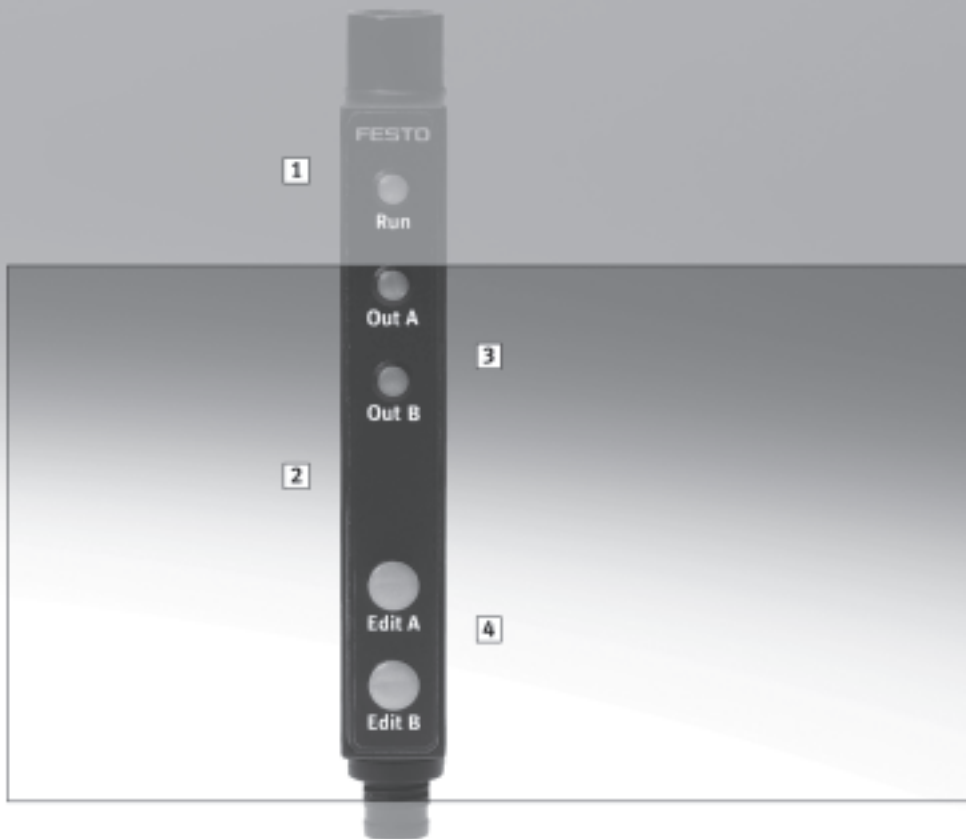
There is also no need to stop the system to set up the converter.

Increased flexibility

Two independent switch outputs are available as standard. Both can be configured as a threshold, hysteresis or window comparator.

Greater economy – guaranteed

The adjustable switch outputs do away with the need for a costly analogue input on the PLC and expensive programming.



- 1 Compact design saves space in the machine.

2 Simple and flexible mounting on H-rail or via through-hole.
- 3 2 LEDs ensure reliable and continuous monitoring of both switch outputs.

4 Simple teaching in of the independent switch outputs using two separate buttons.

Perfectly harmonised: the signal converter SVE4 and position transmitter SMAT. This senses the piston position of a pneumatic cylinder within a range of 50 mm – for maximum process reliability during bonding, joining and similar applications.



Signal converters SVE4

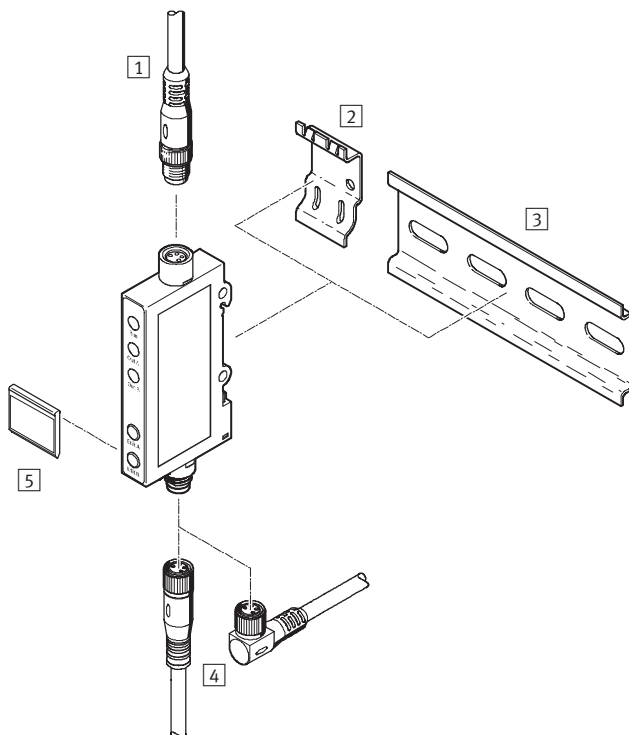
Product overview, type codes

Product overview						
Function	Signal range			Switch output		→ Page
	0 ... 10 V	0 ... 20 mA	Adapted for position sensors SMH-S1-HG	2x PNP	2x NPN	
Signal converter	■	–	–	■	–	4 / 8.2-14
	■	–	–	–	■	
	–	■	–	■	–	
	–	■	–	–	■	
	–	–	■	■	–	
	–	–	■	–	■	

Type codes						
<div> <div>SVE4</div> <div>–</div> <div>US</div> <div>–</div> <div>R</div> <div>–</div> <div>H</div> <div>–</div> <div>M8</div> <div>–</div> <div>2P</div> <div>–</div> <div>M8</div> </div>						
<div> <div>Type</div> <div>SVE4</div> <div>Signal converter</div> </div>						
<div> <div>Signal range</div> <div>US</div> <div>0 ... 10 V</div> <div>IS</div> <div>0 ... 20 mA</div> <div>HS</div> <div>Adapted for position sensors SMH-S1-HG</div> </div>						
<div> <div>Display and operation</div> <div>R</div> <div>Switching status display via LED, teach-in buttons</div> </div>						
<div> <div>Mounting</div> <div>H</div> <div>H-rail mounting</div> </div>						
<div> <div>Electrical connection (signal input)</div> <div>M8</div> <div>Socket M8x1, 4-pin</div> </div>						
<div> <div>Switch output</div> <div>2P</div> <div>2x PNP</div> <div>2N</div> <div>2x NPN</div> </div>						
<div> <div>Electrical connection (switch output)</div> <div>M8</div> <div>Plug M8x1, 4-pin</div> </div>						

Signal converters SVE4

Peripherals overview



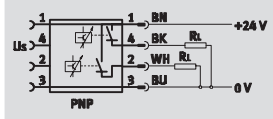
Accessories	→ Page
1 Connecting cable for signal input	4 / 8.2-16
2 Adapter plate SXE3-W	4 / 8.2-16
3 Mounting rail to DIN EN 60715	4 / 8.2-16
4 Connecting cable for switch output	4 / 8.2-16
5 Inscription label holder SXE3 (included in scope of delivery)	–

Signal converters SVE4

Technical data

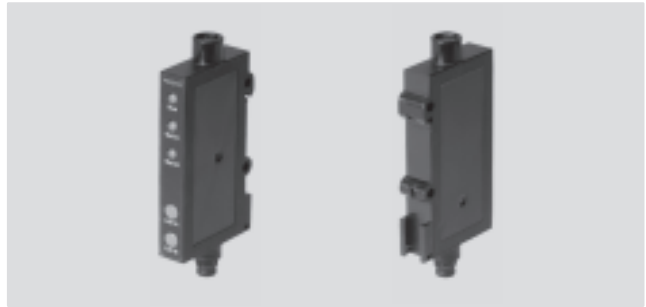
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Function



e.g. with switch output 2x PNP and signal range 0 ... 10 V

- Switching function freely programmable
- Mounting via H-rail or adapter plate



General technical data			
Type	SVE4-US	SVE4-IS	SVE4-HS
Signal range	0 ... 10 ±0.3 V	0 ... 20 ±0.6 mA	Adapted for position sensors SMH-S1-HG
Setting options	Teach-in		
Product weight [g]	19		

Electrical data	
Switch output	2x PNP 2x NPN
Switching element function	N/O or N/C
Switching function	Freely programmable
Operating voltage range [V DC]	10 ... 30
Electrical connection	Input: Socket M8x1, 4-pin, to EN 60947-5-2 Output: Plug M8x1, 4-pin, to EN 60947-5-2
Protection against short circuit	Pulsed
Protection against overloading	Yes
Protection class	IP65

Materials	
Housing	Acrylic butadiene styrene
Note on materials	Free of copper and PTFE

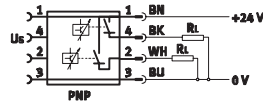
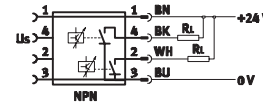
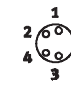
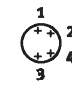
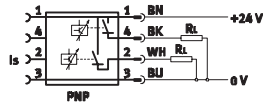
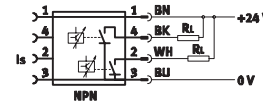
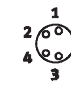
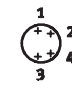
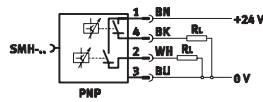
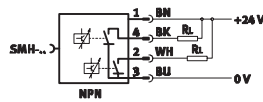
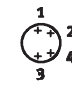
Operating and environmental conditions	
Ambient temperature [°C]	−20 ... +70
Corrosion resistance class CRC ¹⁾	2
CE symbol (see conformity declaration)	In accordance with EU EMC directive
Certification	C-Tick

1) Corrosion resistance class 2 to Festo standard 940 070
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Signal converters SVE4

Technical data

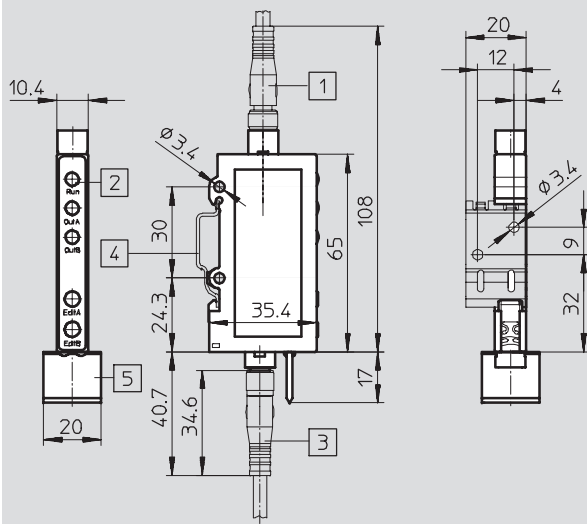
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Signal range 0 ... 10 V ¹⁾			
Switch output 2x PNP	Switch output 2x NPN	Pin allocation for input	Pin allocation for output
 <p>PNP</p>	 <p>NPN</p>	 <p>1 = +24 V (for transmitter) 2 = n.c. 3 = 0 V (for transmitter) 4 = Input 0 ... 10 V</p>	 <p>1 = +24 V 2 = Out B 3 = 0 V 4 = Out A</p>
Signal range 0 ... 20 mA ¹⁾			
Switch output 2x PNP	Switch output 2x NPN	Pin allocation for input	Pin allocation for output
 <p>PNP</p>	 <p>NPN</p>	 <p>1 = +24 V (for transmitter) 2 = Input 0 ... 20 mA 3 = 0 V (for transmitter) 4 = n.c.</p>	 <p>1 = +24 V 2 = Out B 3 = 0 V 4 = Out A</p>
Signal range adapted for position sensors SMH-S1-HG... ¹⁾			
Switch output 2x PNP	Switch output 2x NPN	Pin allocation for input	Pin allocation for output
 <p>PNP</p>	 <p>NPN</p>	<p>Adapted for position sensors SMH-S1-HG</p>	 <p>1 = +24 V 2 = Out B 3 = 0 V 4 = Out A</p>

1) Core colours indicated apply when using plug sockets with cable NEBU-M8 or SIM-M8

Dimensions

Download CAD data → www.festo.com/en/engineering



- 1 Plug M8x1 to EN 60947-5-2
- 2 LED display
- 3 Socket M8x1 to EN 60947-5-2
- 4 Adapter plate for wall mounting
- 5 Inscription label holder

Ordering data			Switch output		Part No.	Type
Signal range			2x PNP	2x NPN		
0 ... 10 V	0 ... 20 mA	Adapted for position sensors SMH-S1-HG				
■	—	—	■	—	544 217	SVE4-US-R-HM8-2P-M8
■	—	—	—	■	544 220	SVE4-US-R-HM8-2N-M8
—	■	—	■	—	544 218	SVE4-IS-R-HM8-2P-M8
—	■	—	—	■	544 221	SVE4-IS-R-HM8-2N-M8
—	—	■	■	—	544 216	SVE4-HS-R-HM8-2P-M8
—	—	■	—	■	544 219	SVE4-HS-R-HM8-2N-M8

Signal converters SVE4

Accessories

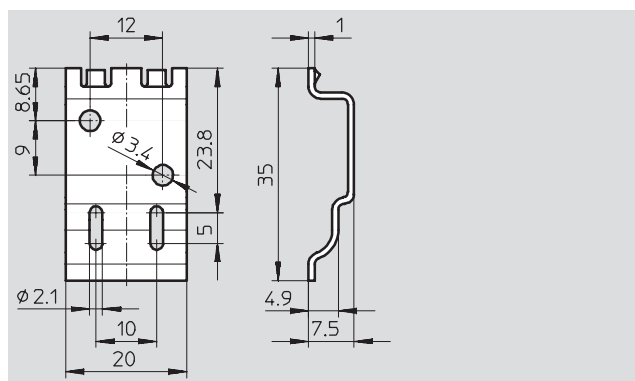
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Adapter plate SXE3-W


for wall or surface mounting



Material:

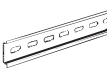
Steel



Ordering data				Part No.	Type
Adapter plate				540 214	SXE3-W

Ordering data – Connecting cable M8x1 for signal input						Technical data ➔ 4 / 8.3-14	
	Assembly	Connection	Switch output		Cable length [m]	Part No.	Type
			PNP	NPN			
Straight socket							
	Union nut M8x1	4-pin	■	■	2	175 714	KSMH-1-M8-2-M8
					0.1 ... 25		

Ordering data – Connecting cable M8x1 for switch output						Technical data ➔ 4 / 8.3-14	
	Assembly	Connection	Switch output		Cable length [m]	Part No.	Type
			PNP	NPN			
Straight socket							
	Union nut M8x1	4-pin	■	■	2.5	541 342	NEBU-M8G4-K-2.5-LE4
					5	541 343	NEBU-M8G4-K-5-LE4
Angled socket							
	Union nut M8x1	4-pin	■	■	2.5	541 344	NEBU-M8W4-K-2.5-LE4
					5	541 345	NEBU-M8W4-K-5-LE4

Ordering data – Mounting rail to DIN EN 60715				Technical data → www.festo.com	
	Length			Part No.	Type
	2 m			35 430	NRH-35-2000