

# 10 Sensors



- + Proximity sensors specially adapted for use with Festo drives
- + Inductive sensors for detection and distance measurement of metal objects
- + Position sensors
- + Pressure switches and vacuum switches
- + Flow sensors for flow and quality inspection
- + Optical sensors for colour recognition, distance measurement and part recognition
- + Signal converters
- + Air gap sensors for end-position sensing and position control
- + Sensor boxes for the process industry
- + Electric limit switches

## Highlights



### SME/SMT-8

Proximity sensor

- + Short design
- + Variants suitable for use with energy chains and robots

Page 870



### SIES-8M

Proximity sensor

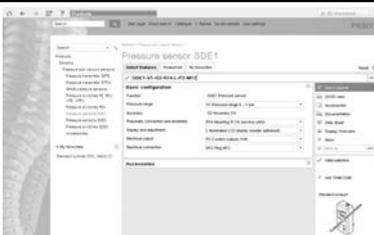
- + Suitable for position sensing for electric axes and grippers with T-slot

Page 904

## Table of contents

Product overview .....	858
Proximity sensor SME-8 .....	870
Proximity sensor SMT-8 .....	870
Proximity sensor SME-10 .....	886
Proximity sensor SMT-10 .....	886
Proximity sensor SIEN .....	897
Proximity sensor SIES-8M .....	904
Pressure sensor SPAU .....	909
Pressure sensor SDE1 .....	916
Pressure sensor SDE5 .....	922

## Software tool

Configurator		<p>Design a product with numerous features reliably and quickly with the help of the configurator.</p> <p>Select all the required product features step-by-step.</p> <p>The use of logic checks ensures that only correct configurations are available for selection.</p>	<p>The configurator is part of the electronic catalogue and is not available as a separate software program.</p>
Festo Design Tool 3D FDT 3D		<p>This Festo Design Tool 3D is a 3D product configurator for generating specific CAD product combinations from Festo. The configurator makes your search for the right accessory easier, more reliable and faster.</p> <p>You can then order the module that has been created with a single order item – either completely pre-assembled or as individual parts in a single box. As a result, your bill of materials is considerably shortened and downstream processes such as product ordering, order picking and assembly are significantly simplified.</p>	<p>All ordering options are available in the following countries: AT, BE, CH, CZ, DE, DK, ES, FI, FR, GB, HU, IE, IT, NL, NO, PL, RU, SE, SI, SK.</p> <p>This tool can be found</p> <ul style="list-style-type: none"> <li>• either in the electronic catalogue by clicking on the blue button "Engineering"</li> <li>• or on the DVD under Engineering Tools.</li> </ul>

## Proximity sensors, for T-slot

Type	 Proximity switch SDBT	 Proximity sensor SMT-8M-A	 Proximity sensor SME-8, SME-8M, SME-8-SL, SME-8-FM	 Proximity switch SMT-8F, SMT-8G, SMT-8-SL
Electrical connection	2-wire, 3-wire, 2-pin, 3-pin, cable, cable with plug, M12x1, rotatable thread	2-wire, 3-wire, 2-pin, 3-pin, cable, cable with plug, M8x1, M12x1, snap collar, rotatable thread	2-wire, 3-wire, 3-pin, cable, cable with plug, M8x1, snap collar, plug, rotatable thread, open end	2-wire, 3-wire, 3-pin, cable, cable with plug, M8x1, plug, rotatable thread, M8x1, plug
Operating voltage range DC	10 ... 30 V	5 ... 30 V	0 ... 230 V	10 ... 30 V
Switching element function	N/O contact	NAMUR, N/C contact, N/C contact or N/O contact switchable, N/O contact	N/O contact, N/C contact	NAMUR, N/O contact
Switching output	Non-contacting, 2-wire, NPN, PNP	NAMUR, non-contacting, 2-wire, NPN, PNP, PNP/NPN switchable	Contacting, bipolar, without LED function	PNP, NAMUR
Description	<ul style="list-style-type: none"> <li>• Measuring principle: magneto-resistive</li> <li>• Oil-resistant, welding field immune, resistant to welding spatter</li> <li>• Screw-clamped in slot, insertable from above</li> <li>• LED switching status display</li> <li>• Cable length 0.3 ... 5 m</li> </ul>	<ul style="list-style-type: none"> <li>• Measuring principle: magneto-resistive</li> <li>• Short design</li> <li>• Variant Ex2 for use in potentially explosive areas</li> <li>• Inserted in the slot from above, flush with the cylinder profile</li> <li>• LED switching status display</li> <li>• LED operating reserve indication</li> <li>• Cable length 0.1 ... 30 m</li> </ul>	<ul style="list-style-type: none"> <li>• Measuring principle: magnetic reed</li> <li>• SME-8-...-S6: heat-resistant design</li> <li>• Variants suitable for use with energy chains and robots</li> <li>• Screw-clamped or clamped in slot, insertable in the slot from above or lengthwise</li> <li>• LED switching status display</li> <li>• Cable length 0.3, 2.5, 5, 7.5, 0.2 ... 10 m</li> </ul>	<ul style="list-style-type: none"> <li>• Measuring principle: magneto-resistive</li> <li>• SMT-8-F: in accordance with the ATEX directive for explosive atmospheres</li> <li>• SMT-8-G: design ideally matched to gripper sensing</li> <li>• SMT-8-SL: sturdy thanks to long guides and plug directly at the sensor</li> <li>• Variants suitable for use with energy chains and robots</li> <li>• Insertable in the slot lengthwise or from above</li> <li>• LED switching status display</li> <li>• Cable length 0.3, 2.5 and 5 m</li> </ul>
→ Page/online	sdbt	870	870	smt-8

## Proximity sensors, for T-slot

Type	 Proximity sensor CRSMT-8	 Proximity switch CRSMT-8M	 Proximity sensor SMEO-8E	 Proximity sensor SMT0-8E
Electrical connection	3-wire, 3-pin, rotatable thread, cable, cable with plug, M12x1, M8x1	3-wire, 3-pin, rotatable thread, cable, cable with plug, M12x1, M8x1	2-wire, 3-pin, cable, M8x1, M12x1, plug	3-wire, 3-pin, cable, M12x1, M8x1, plug
Operating voltage range DC	5 ... 30 V	5 ... 30 V	0 ... 250 V	10 ... 30 V
Switching element function	N/O contact	N/O contact	N/O contact	N/O contact
Switching output	PNP	PNP	Contacting, contacting bipolar, without LED function	NPN, PNP
Description	<ul style="list-style-type: none"> <li>Measuring principle: magneto-resistive</li> <li>Corrosion-resistant design</li> <li>Suitable for the food industry, resistant to acids and cooling lubricants</li> <li>Insertable in the slot lengthwise, flush with the cylinder profile</li> <li>LED switching status display</li> <li>Cable length 2.5, 5 m</li> </ul>	<ul style="list-style-type: none"> <li>Measuring principle: magneto-resistive</li> <li>Corrosion-resistant design</li> <li>Suitable for the food industry, resistant to acids, lye and cooling lubricants</li> <li>Inserted in the slot from above, flush with the cylinder profile</li> <li>LED switching status display</li> <li>Cable length 0.3, 5 and 10 m</li> </ul>	<ul style="list-style-type: none"> <li>Measuring principle: magnetic reed</li> <li>Sturdy sensor in block design</li> <li>Plug integrated in housing</li> <li>LED switching status display</li> <li>Cable length 2.5 m</li> </ul>	<ul style="list-style-type: none"> <li>Measuring principle: magneto-resistive</li> <li>Sturdy sensor in block design</li> <li>Plug integrated in housing</li> <li>LED switching status display</li> </ul>
→ Page/online	870	<a href="#">crsmt-8m</a>	<a href="#">smeo</a>	<a href="#">smt0</a>

## Proximity sensors, for T-slot

Type	 Proximity sensor SMTSO-8E	 Proximity sensor SMP0-8E
Electrical connection	3-pin, M12x1, plug	
Operating voltage range DC	10 ... 30 V	
Switching element function	N/O contact	
Switching output	NPN, PNP	
Description	<ul style="list-style-type: none"> <li>Measuring principle: magneto-inductive</li> <li>Welding field immune design</li> <li>Sturdy sensor in block design</li> <li>Plug integrated in housing</li> <li>LED switching status display</li> </ul>	<ul style="list-style-type: none"> <li>Measuring principle: magnetic</li> <li>Pneumatic proximity sensor</li> <li>Function: 3/2-way valve, normally closed</li> <li>Pneumatic connection via female thread M5</li> <li>Visual switching status indication</li> </ul>
→ Page/online	<a href="#">smtso</a>	<a href="#">smpo</a>

## Proximity sensors, for C-slot

Type	 Proximity sensor SME-10, SME-10M	 Proximity sensor SMT-10M, SMT-10G
Electrical connection	2-pin, 3-pin, 3-wire, cable, cable with plug, M12, M8x1, snap collar, plug, rotatable thread, open end	2-pin, 3-pin, 3-wire, cable, cable with plug, M12, M8x1, snap collar, rotatable thread, open end
Operating voltage range DC	0 ... 230 V	5 ... 30 V
Switching element function	N/O contact, N/C contact	NAMUR, N/O contact, N/C contact, N/C contact or N/O contact switchable
Switching output	Contacting, bipolar, without LED function	NAMUR, NPN, PNP, PNP/NPN switchable, non-contacting, 2-wire
Description	<ul style="list-style-type: none"> <li>Measuring principle: magnetic reed</li> <li>Clamped in C-slot, insertable in the slot from above or lengthwise</li> <li>LED switching status display</li> <li>Cable length: 0.3, 2.5 m</li> </ul>	<ul style="list-style-type: none"> <li>Measuring principle: magneto-resistive</li> <li>Clamped in C-slot, insertable in the slot from above or lengthwise</li> <li>LED switching status display</li> <li>Cable length 0.3, 2.5 m</li> </ul>
→ Page/online	886	886

## Proximity sensors, round design

			
Type	Proximity sensor SMEO-4	Proximity sensor CRSMEO-4	Proximity sensor SMTO-4
Electrical connection	2-wire, 3-wire, 3-pin, cable, M8x1, M12x1, plug	3-wire, cable	3-wire, 3-pin, cable, M8x1, M12x1, plug
Operating voltage range DC	0 ... 250 V	12 ... 30 V	10 ... 30 V
Switching element function	N/O contact	N/O contact	N/O contact
Switching output	Contacting, contacting bipolar, without LED function	Contacting, bipolar	NPN, PNP
Description	<ul style="list-style-type: none"> <li>Measuring principle: magnetic reed</li> <li>U-shaped housing</li> <li>LED switching status display</li> <li>Cable length 2.5, 5 m</li> </ul>	<ul style="list-style-type: none"> <li>Measuring principle: magnetic reed</li> <li>Corrosion-resistant design</li> <li>LED switching status display</li> <li>Cable length 2.5 m</li> </ul>	<ul style="list-style-type: none"> <li>Measuring principle: magneto-inductive</li> <li>U-shaped housing</li> <li>LED switching status display</li> <li>Cable length 2.5 m</li> </ul>
→ Page/online	<a href="#">smeo-4</a>	<a href="#">crsmeo-4</a>	<a href="#">smto-4</a>

## Proximity sensor, block design

				
Type	Proximity switch SME-1	Proximity sensor SMT-C1	Proximity sensor SMEO-1	Proximity sensor SMEO-2
Electrical connection	2-wire, 3-wire, 3-pin, cable, M8x1, plug	3-wire, 3-pin, cable, cable with plug, M8x1, M12x1, rotatable thread	2-wire, 3-wire, 3-pin, cable, M8x1, M12x1, plug	Connector socket to EN 175301-803 (DIN 43650)
Operating voltage range DC	0 ... 200 V	10 ... 30 V	0 ... 250 V	0 ... 200 V
Switching element function	N/O contact	N/O contact	N/O contact	N/O contact
Switching output	Contacting, bipolar	PNP	Contacting, contacting bipolar, without LED function	
Description	<ul style="list-style-type: none"> <li>Measuring principle: magneto-inductive</li> <li>For mounting kit</li> <li>With or without LED switching status indication</li> </ul>	<ul style="list-style-type: none"> <li>Measuring principle: magneto-inductive</li> <li>For Clean Design standard cylinder DSBF with mounting rail for sensors</li> <li>LED switching status display</li> </ul>	<ul style="list-style-type: none"> <li>Measuring principle: magnetic reed</li> <li>SMEO-1-S6: heat-resistant design</li> <li>With or without LED switching status indication</li> <li>Cable length 2.5, 5 m</li> </ul>	<ul style="list-style-type: none"> <li>Measuring principle: magneto-inductive</li> <li>For mounting kit</li> <li>With or without LED switching status indication</li> </ul>
→ Page/online	<a href="#">sme-1</a>	<a href="#">SMT-C1</a>	<a href="#">smeo-1</a>	<a href="#">smeo-2</a>

## Proximity sensors, block design

			
Type	Proximity sensor SMTO-1	Proximity sensor SMTSO-1	Proximity sensor SMPPO-1
Electrical connection	3-wire, 3-pin, cable, M8x1, plug	3-pin, M12x1, plug	
Operating voltage range DC	10 ... 30 V	10 ... 30 V	
Switching element function	N/O contact	N/O contact	
Switching output	NPN, PNP	PNP	
Description	<ul style="list-style-type: none"> <li>Measuring principle: magneto-resistive</li> <li>LED switching status display</li> <li>Cable length 2.5 m</li> </ul>	<ul style="list-style-type: none"> <li>Measuring principle: magneto-resistive</li> <li>Welding field immune design</li> <li>LED switching status display</li> </ul>	<ul style="list-style-type: none"> <li>Measuring principle: magnetic</li> <li>Pneumatic proximity sensor</li> <li>Function: 3/2-way valve, normally closed</li> <li>Pneumatic connection via barbed connector for tubing I.D. 3 mm</li> <li>Visual switching status indication</li> </ul>
→ Page/online	<a href="#">smto-1</a>	<a href="#">smsto-1</a>	<a href="#">smpo</a>

## Cylinder signal generator

Type	 Cylinder signal generator PPL
Standard nominal flow rate	48 l/min
Operating pressure	1 ... 8 bar
Pneumatic port	Barbed connector for 3 mm plastic tubing
Type of mounting	Hollow bolt G1/8, hollow bolt G1/4
Description	<ul style="list-style-type: none"> <li>For contactless pneumatic signal generation at the end of cylinder strokes</li> <li>Function: 3/2-way valve, normally closed</li> <li>Can be screwed directly into the supply port of the cylinder using a hollow bolt</li> </ul>
→ Page/online	<a href="#">ppl</a>

## Inductive sensors

Type	 Proximity sensor SIEA	 Proximity sensor SIED	 Proximity sensor SIEF	 Proximity sensor SIEH
Size	M8, M12, M18, M30	M12, M18, M30	40x40x65 mm, M8, M12, M18, M30	3 mm, M12, M18
Switching output		Non-contacting, 2-wire	NPN, PNP	NPN, PNP
Switching element function		N/O contact, N/C contact	Antivalent, N/O contact	N/O contact, N/C contact
Electrical connection	3-pin, 4-pin, M8x1, M12x1, plug	2-wire, 2-pin, cable, M12x1, plug	3-wire, 3-pin, 4-pin, Fixcon, cable, M8x1, M12x1, plug	3-wire, 3-pin, cable, cable with plug, M8x1, M12x1, plug
Operating voltage range DC	15 ... 30 V	10 ... 320 V	10 ... 65 V	10 ... 30 V
Description	<ul style="list-style-type: none"> <li>With analogue output</li> <li>Flush mounting</li> <li>Metric thread</li> </ul>	<ul style="list-style-type: none"> <li>With standard switching distance</li> <li>For DC and AC voltage</li> <li>Metric thread</li> <li>Flush or non-flush mounting</li> <li>LED switching status display</li> <li>Design with metal or polyamide housing</li> </ul>	<ul style="list-style-type: none"> <li>Reduction factor 1 for all metals</li> <li>Welding field immune</li> <li>Flush, partially flush or non-flush mounting</li> <li>LED switching status display</li> <li>Design with housing resistant to welding spatter</li> </ul>	<ul style="list-style-type: none"> <li>With increased switching distance</li> <li>Flush mounting</li> <li>Metric thread</li> <li>LED switching status display</li> <li>Design with stainless steel housing</li> </ul>
→ Page/online	<a href="#">siea</a>	<a href="#">sied</a>	<a href="#">sief</a>	<a href="#">sieh</a>

## Inductive sensors

Type	 Proximity sensor SIEN	 Proximity sensor SIES-Q	 Proximity sensor SIES-8M
Size	4 mm, 6,5 mm, M5x0,5, M8x1, M12, M12x1, M18, M18x1, M30, M30x1,5	12x26x40 mm, 15x20x30 mm, 40x40x120 mm, 5x5x25 mm, 8x8x40 mm	T-slot
Switching output	NPN, PNP	NPN, PNP	NPN, PNP
Switching element function	N/O contact, N/C contact	Antivalent, N/O contact, N/C contact	N/O contact, N/C contact
Electrical connection	3-wire, 3-pin, cable, M8x1, M12x1, plug	3-wire, 3-pin, cable, cable with plug, M8x1, screw terminal, plug, rotatable thread	3-wire, 3-pin, cable, cable with plug, M8x1, rotatable thread
Operating voltage range DC	10 ... 30 V	10 ... 30 V	10 ... 30 V
Description	<ul style="list-style-type: none"> <li>• With standard switching distance</li> <li>• For DC voltage</li> <li>• Round design</li> <li>• Metric thread</li> <li>• Flush or non-flush mounting</li> <li>• LED switching status display</li> <li>• Design with metal or polyamide housing</li> </ul>	<ul style="list-style-type: none"> <li>• Block design</li> <li>• Flush installation</li> <li>• LED switching status display</li> </ul>	<ul style="list-style-type: none"> <li>• Suitable for position sensing for electric axes and grippers with T-slot</li> <li>• Flush installation</li> <li>• Switching status indication with 2 LEDs for better visibility regardless of the direction from which it is approached</li> </ul>
→ Page/online	<b>897</b>	<a href="#">sies</a>	<b>904</b>

## Position sensors

Type	 Position sensor SRBS	 Position transmitter SDAT-MHS	 Position transmitter SMAT-8E
Design	Round	For T-slot	For T-slot
Position measuring range	>270°	0 ... 160 mm	48 ... 52 mm
Analogue output	50 mA	4 ... 20 mA	0 ... 10 V, 0 ... 20 mA
Electrical connection	4-pin, cable with plug, M8, rotatable thread	4-pin, cable with plug M8x1, rotatable thread	4-pin, M8x1, plug
Description	<ul style="list-style-type: none"> <li>• Used to detect rotation of the shaft on rotary drives DRVS and DSM</li> <li>• The sensor can be quickly assembled without having to manually search for switching points</li> <li>• Simple and reliable operation using just one push-button directly on the device</li> </ul>	<ul style="list-style-type: none"> <li>• Measuring principle: magnetic Hall</li> <li>• Insertable in the slot from above, secured with screw</li> <li>• Suitable for use with energy chain and robot lines</li> <li>• LED status displays</li> <li>• Cable length 0.3 m</li> </ul>	<ul style="list-style-type: none"> <li>• Measuring principle: magnetic Hall</li> <li>• Current and voltage signal at the analogue output</li> <li>• Insertable in the slot lengthwise</li> <li>• Suitable for use with energy chain and robot lines</li> <li>• LED status displays</li> <li>• Cable length 2.5 m, 5 m</li> </ul>
→ Page/online	<a href="#">smh-s1</a>	<a href="#">sdat</a>	<a href="#">smat-8e</a>

## Position sensors

		
Type	Position transmitter SMAT-8M	Position sensor SMH-S1
Design	For T-slot	For gripper
Position measuring range	0 ... 40 mm	
Analogue output	0 ... 10 V	
Electrical connection	4-pin, cable with plug M8x1, rotatable thread	4-pin, cable with plug, M8x1
Description	<ul style="list-style-type: none"> <li>Measuring principle: magnetic Hall</li> <li>Displacement-proportional analogue output signal</li> <li>Insertable in the slot from above, central clamping</li> <li>Suitable for use with energy chain and robot lines</li> <li>LED status displays</li> <li>Cable length 0.3 m</li> </ul>	<ul style="list-style-type: none"> <li>Measuring principle: magnetic Hall</li> <li>3 gripper positions can be detected using an evaluation unit</li> <li>Freely selectable switching points</li> </ul>
→ Page/online	<a href="#">smat-8m</a>	<a href="#">smh-s1</a>

## Position sensors

			
Type	Displacement encoder MME-MTS-TLF	Displacement encoder MLO-POT-TLF	Displacement encoder MLO-POT-LWG
Stroke	225 ... 2000 mm	225 ... 2000 mm	100 ... 750 mm
Measuring principle of displacement encoder	Digital	Analogue	Analogue
Output signal	CAN protocol type SPC-AIF	Analogue	Analogue
Displacement resolution	0 ... 0.01 mm	0.01 mm	0.01 mm
Description	<ul style="list-style-type: none"> <li>Measuring principle: magnetostrictive</li> <li>Contactless with absolute measurement</li> <li>High travel speed</li> <li>System product for servopneumatic positioning technology and Soft Stop</li> </ul>	<ul style="list-style-type: none"> <li>Conductive plastic potentiometer</li> <li>Absolute measurement with high resolution</li> <li>High travel speed and long service life</li> <li>Several mounting options on pneumatic linear drives DGPL</li> <li>Plug-in connections</li> </ul>	<ul style="list-style-type: none"> <li>Connecting rod potentiometer</li> <li>Absolute measurement with high resolution</li> <li>Long service life</li> <li>High protection class</li> <li>Plug-in connections</li> </ul>
→ Page/online	<a href="#">mme</a>	<a href="#">mlo</a>	<a href="#">mlo</a>

## Pressure and vacuum sensors

Type	 Pressure sensor SPAE	 Pressure sensor SPAU	 Pressure sensor SPAW	 Pressure switch SPBA
<b>Pressure measuring range</b>	-1 ... 10 bar	-1 ... 16 bar	-1 ... 100 bar	-1 ... 10 bar
<b>Switching element function</b>	N/O contact, switchable, N/C contact	N/C or N/O contact, switchable	Switchable	Antivalent, changeover switch
<b>Pneumatic connection</b>	Flange, QS-3, QS-4, push-in sleeve QS-4, push-in sleeve QS-6	G1/8, M5, M7, NPT1/8-27, QS-4, QS-5/32, QS-6, R1/4, R1/8	Male thread G1/2, female thread G1/4	G1/8
<b>Electrical connection</b>	3-wire, cable, open end	4-pin, M12x1, M8x1, plug, to EN 60947-5-2, round design	Plug, to EN 60947-5-2, M12x1, 4-pin, 5-pin, round design	Plug, to EN 60947-5-2, M12x1, 4-pin, round
<b>Display type</b>	Yellow LED	LED, illuminated LCD	4-character alphanumeric, LED display	
<b>Description</b>	<ul style="list-style-type: none"> <li>Electronic pressure sensor with piezoresistive pressure measuring cell, integrated signal processing, numeric pressure indicator in percent, operating key and a switching output, PNP/NPN switchable</li> <li>Display of minimum and maximum readings</li> <li>All entered parameters can be transferred to other SPAEs (replication function)</li> </ul>	<ul style="list-style-type: none"> <li>For monitoring compressed air and non-corrosive gases</li> <li>With and without display</li> <li>Transfer of the pressure value as switch signal, analogue signal or via IO-Link to the connected control system</li> </ul>	<ul style="list-style-type: none"> <li>Highly robust</li> <li>For liquid and gaseous media</li> <li>Quick and easy setting of the switching outputs using three pushbuttons</li> <li>Optimum legibility of the display in any mounting position</li> </ul>	<ul style="list-style-type: none"> <li>Pressure sensor with permanently set switching point</li> <li>For solenoid valve VSVA</li> <li>Mounting: screw-in</li> </ul>
<b>→ Page/online</b>	<a href="#">spae</a>	<a href="#">910</a>	<a href="#">spaw</a>	<a href="#">spba</a>

## Pressure and vacuum sensors

Type	 Pressure transmitter SPTe	 Pressure transmitter SPTW	 Pressure sensor SPAB	 Pressure switch, vacuum switch PEV, VPEV
<b>Pressure measuring range</b>	-1 ... 10 bar	-1 ... 10 bar	-1 ... 10 bar	-1 ... 10 bar
<b>Switching element function</b>			Switchable	Changeover contact
<b>Pneumatic connection</b>	Flange, QS3, QS4, push-in sleeve QS4, push-in sleeve QS6	G1/4	Male thread G1/8, male thread NPT1/8-27, male thread R1/8, female thread M5	G1/8, G1/4, M5
<b>Electrical connection</b>	3-wire, cable, open end	4-pin, M12x1, plug, to EN 60947-5-2, round design	4-wire, 4-pin, cable, M8x1, plug, to EN 60947-5-2, round design, square design	4-pin, type A, M8x1, M12x1, screw ter- minal, plug, to DIN 43650, to EN 60947-5-2, round design, square design
<b>Display type</b>			Illuminated LCD, multi-colour	
<b>Description</b>	<ul style="list-style-type: none"> <li>Piezoresistive pressure sensor</li> <li>Measured variable: relative pressure</li> <li>Cable length 2.5 m</li> </ul>	<ul style="list-style-type: none"> <li>Sensor versions: piezoresistive pressure sensor or metal thin-film pressure sensor</li> <li>Measured variable: relative pressure</li> </ul>	<ul style="list-style-type: none"> <li>Relative pressure measurement</li> <li>Switching output PNP, NPN and analogue output</li> <li>Two-part, multi-coloured display</li> <li>Easy commissioning thanks to intuitive operation</li> <li>Compact design 30x30 mm</li> <li>Certification: c UL us listed (OL), C-Tick</li> </ul>	<ul style="list-style-type: none"> <li>Mechanical pressure and vacuum switch</li> <li>Adjustable switching point</li> <li>Mounting: screw-in, via through-holes or via H-rail</li> <li>Visual scale for pressure adjustment</li> <li>Certification: CCC</li> </ul>
<b>→ Page/online</b>	<a href="#">spte</a>	<a href="#">sptw</a>	<a href="#">spab</a>	<a href="#">pev</a>

## Pressure and vacuum sensors

Type	 PE converter PEN, PE, VPE	 Pressure sensor SDE1	 Pressure sensor SDE3	 Pressure sensor SDE5
<b>Pressure measuring range</b>	-1 ... 8bar	-1 ... 10 bar	-1 ... 10 bar	-1 ... 10 bar
<b>Switching element function</b>	N/O contact, changeover switch	Switchable	Switchable	N/O contact, switchable, N/C contact
<b>Pneumatic connection</b>	G1/8, M5, PK-3, PK-4	G1/8, QS-4, R1/8, R1/4	QS-5/32, QS-4	QS-5/32, QS-1/4, QS-4, QS-6
<b>Electrical connection</b>	3 connector leads, 3-wire, 4-wire, cable, screw terminal	3-pin, 4-pin, 5-pin, cable, cable with plug, M8x1, M12x1, plug, to EN 60947-5-2, round design	4-, 5-pin, cable, cable with plug, M8x1, M12x1, plug, to EN 60947-5-2, round design	3-wire, 3-pin, cable, M8x1, plug, to EN 60947-5-2, round design
<b>Display type</b>		Illuminated LCD, back-lit LCD	Illuminated LCD	
<b>Description</b>	<ul style="list-style-type: none"> <li>• Pneumatic/electric differential pressure switch</li> <li>• Pneumatic/electric pressure transducer</li> <li>• Design for vacuum</li> <li>• Mounting on mounting frame 2N</li> <li>• Splash-proof design</li> <li>• Certification: CCC</li> </ul>	<ul style="list-style-type: none"> <li>• Five pressure measuring ranges</li> <li>• Measurement of relative or differential pressure</li> <li>• Switching outputs PNP, NPN and with analogue current or voltage output</li> <li>• LCD or illuminated LCD display</li> <li>• Mounting: via H-rail, via wall/surface bracket, mounting on service unit, front panel mounting</li> <li>• Certification: c UL us listed (OL), C-Tick</li> </ul>	<ul style="list-style-type: none"> <li>• Five pressure measuring ranges</li> <li>• Measurement of relative or differential pressure or 2 independent pressure inputs</li> <li>• Switching output 2x PNP or 2x NPN</li> <li>• Numerical and graphical pressure indication</li> <li>• Mounting: via H-rail, via wall/surface bracket, front panel mounting, with through-holes</li> <li>• Certification: C-Tick, ATEX, c UL us - Listed (OL)</li> </ul>	<ul style="list-style-type: none"> <li>• Programmable and configurable pressure switch for simple pressure sensing tasks</li> <li>• Trigger / Window comparator</li> <li>• Switching point adjustment by teach-in function</li> <li>• Integrated microprocessor</li> <li>• Switching status indicated by an LED visible from all sides</li> <li>• Certification: c UL us listed (OL), C-Tick</li> </ul>
<b>→ Page/online</b>	<a href="#">pen</a>	<b>916</b>	<a href="#">sde3</a>	<b>922</b>

## Flow sensors

Type	 Flow sensor SFAB	 Flow sensor SFAM	 Flow sensor SFE3	 Flow sensor SFET
<b>Flow measuring range</b>	0.1 ... 1000 l/min	10 ... 15000 l/min	0.05 ... 50 l/min	-10 ... 50 l/min
<b>Operating medium</b>	Compressed air to ISO 8573-1:2010 [6:4:4], compressed air to ISO 8573-1:2010 [7:4:4], nitrogen	Compressed air to ISO 8573-1:2010 [7:4:4], nitrogen	Compressed air to ISO 8573-1:2010 [1:4:2], nitrogen	Compressed air to ISO 8573-1:2010 [1:4:2], nitrogen
<b>Operating pressure</b>	0 ... 10 bar	0 ... 16 bar	-0.7 ... 7 bar	-0.9 ... 7 bar
<b>Pneumatic connection</b>	QS5/16, QS1/4, QS3/8, QS6, QS8, QS10, QS12	Battery module, G1/2, G1, G1 1/2, NPT1 1/2-11 1/2, NPT1-1 11/2, NPT1/2-14	Female thread G1/8, QS6	Female thread G1/8, QS-4, QS-6
<b>Electrical connection</b>	5-pin, M12x1, straight plug	5-pin, M12x1, straight plug	Cable	Cable
<b>Description</b>	<ul style="list-style-type: none"> <li>• Flow sensor with integrated digital display</li> <li>• With unidirectional flow input</li> <li>• Mounting: H-rail mounting, wall or surface mounting</li> <li>• Certification: C-Tick</li> </ul>	<ul style="list-style-type: none"> <li>• Stand-alone device or combined with MS series service units</li> <li>• Supplies absolute flow information and accumulated air consumption measurements</li> <li>• Covers large measuring range with great precision thanks to high dynamic response</li> <li>• Large, illuminated LCD display</li> </ul>	<ul style="list-style-type: none"> <li>• Flow sensor with integrated digital display</li> <li>• With unidirectional flow input</li> <li>• Mounting: via through-holes or mounting bracket</li> <li>• Electrical connection via open cable end</li> <li>• Cable length 1 m</li> <li>• Certification: C-Tick</li> </ul>	<ul style="list-style-type: none"> <li>• With unidirectional (SFET-F) or bidirectional (SFET-R) flow input</li> <li>• Mounting: via through-holes or mounting bracket</li> <li>• Electrical connection via open cable end</li> <li>• Cable length 1 m, 3 m</li> <li>• Certification: C-Tick</li> </ul>
<b>→ Page/online</b>	<a href="#">sfab</a>	<a href="#">sfam</a>	<a href="#">sfe3</a>	<a href="#">sfet</a>

## Flow sensors

	
Type	Flow indicator SFEV
Flow measuring range	Cable
Operating medium	
Operating pressure	
Pneumatic connection	
Electrical connection	
Description	<ul style="list-style-type: none"> <li>• For flow sensor SFET</li> <li>• 3- 1/2-digit alphanumeric display</li> <li>• Indicating range: 0.05 ... 50 l/min (for flow sensor SFET-F); -0.05 ... +10 l/min (for flow sensor SFET-R)</li> </ul>
→ Page/online	<a href="#">sfev</a>

## Opto-electrical sensors

				
Type	Diffuse sensor, retro-reflective sensor SOEG-RT, SOEG-RS	Through-beam sensor (receiver, transmitter) SOEG-E, SOEG-S	Fibre-optic unit SOEG-L	Laser diffuse sensor, laser retro-reflective sensor SOEL-RT, SOEL-RS
Method of measurement	Diffuse sensor, retro-reflective sensor, diffuse sensor with background suppression, distance sensor, for transparent objects	Distance sensor, through-beam sensor, receiver, for transparent objects, fibre-optic unit, retro-reflective sensor, diffuse sensor with background suppression	Fibre-optic unit	Distance sensor, diffuse sensor, retro-reflective sensor, diffuse sensor with background suppression
Working range	0 ... 5500 mm	0 ... 15000 mm	0 ... 250 mm	0 ... 20000 mm
Size	20x32x12mm, 30x30x15mm, 50x50x17mm, M5x0,5, M12x1, M18x1, M12, M18, 4mm	M18x1 straight, M18x1 angled, 20x32x12 mm, 30x30x15 mm, 50x50x17 mm	20x32x12 mm	20x32x12 mm, 50x50x17 mm
Type of light	Infrared, red, polarised red	Infrared, red, polarised red	Red	Laser, pulsed laser, red, red 650nm, red polarised
Switching output	NPN, PNP	NPN, PNP	NPN, PNP	NPN, PNP
Description	<ul style="list-style-type: none"> <li>• Round design, block design</li> <li>• Setting option: teach-in via button and via electrical connection</li> <li>• Electrical connection via open cable end or plug</li> </ul>	<ul style="list-style-type: none"> <li>• Round design, block design</li> <li>• Setting option: potentiometer, teach-in or teach-in via electrical connection</li> <li>• Electrical connection via open cable end or plug</li> </ul>	<ul style="list-style-type: none"> <li>• Block design</li> <li>• Setting option: potentiometer, teach-in or teach-in via electrical connection</li> <li>• Electrical connection via open cable end or plug</li> </ul>	<ul style="list-style-type: none"> <li>• Setting option: teach-in, teach-in via electrical connection, potentiometer</li> <li>• Electrical connection via open cable end or plug</li> </ul>
→ Page/online	<a href="#">soeg</a>	<a href="#">soeg</a>	<a href="#">soeg</a>	<a href="#">soel</a>

## Opto-electrical sensors

Type	 Colour sensor SOEC	 Fibre-optic unit SOE4	 Fork light barrier SOOF	 Fibre-optic cable SOOC, SOEZ
<b>Method of measurement</b>	Colour sensor	Fibre-optic unit	Fork light barrier	Through-beam sensor, fixed focus, fork light barrier, diffuse sensor, fibre-optic cable
<b>Working range</b>	12 ... 32 mm	2 ... 2000 mm		2 ... 650 mm
<b>Size</b>	50x50x17 mm		Fork 120x60 mm, fork 30x35 mm, fork 50x55 mm, fork, 80x55 mm	
<b>Type of light</b>	White	Red	Red	
<b>Switching output</b>	PNP	NPN, PNP	NPN, PNP	
<b>Description</b>	<ul style="list-style-type: none"> <li>• Diffuse sensor</li> <li>• Block design</li> <li>• Setting option: teach-in, teach-in via electrical connection</li> <li>• Electrical connection via M12x1 plug, 8-pin</li> <li>• Display via 7 LEDs</li> </ul>	<ul style="list-style-type: none"> <li>• Use for precise and space-saving position sensing in electronics and light assembly</li> <li>• Switching frequencies up to 8000 Hz</li> <li>• Operational with fibre-optic cable SOOC as accessory</li> <li>• Variants: LED or LED display, timer function</li> <li>• Setting option: teach-in</li> <li>• Mounting: H-rail mounting or via through-holes</li> <li>• With protection against mutual interference</li> </ul>	<ul style="list-style-type: none"> <li>• Through-beam sensor with minimal installation effort</li> <li>• Design: polymer or metal</li> <li>• Sturdy housing: high shock and vibration resistance</li> <li>• Protection class IP67</li> <li>• Electrical connection via M8x1 plug, 3-pin</li> <li>• Setting option: potentiometer or teach-in</li> <li>• LED displays</li> </ul>	<ul style="list-style-type: none"> <li>• Thread M4, M6</li> <li>• Voltage 10 ... 30 V DC</li> <li>• Cable connection, push-in connector</li> </ul>
<b>→ Page/online</b>	<a href="#">soec</a>	<a href="#">soe4</a>	<a href="#">soof</a>	<a href="#">sooc</a>

## Signal converter

Type	 Signal converter SVE4	 Evaluation unit SMH-AE
<b>Signal range</b>	0 ... 10 V +/-0.3 V, 0 ... 20 mA +/-0.6 mA, adapted for position sensors SMH-S1-HG	
<b>Switching output</b>	2x NPN, 2x PNP	NPN, PNP
<b>Switching function</b>	Freely programmable	
<b>Electrical connection Output</b>	4-pin, M8x1, plug, to EN 60947-5-2	5-pin, plug, M12x1
<b>Electrical connection Input</b>	4-pin, socket, M8x1, to EN 60947-5-2	4-pin, socket, M8x1, to EN 60947-5-2
<b>Description</b>	<ul style="list-style-type: none"> <li>• Converts analogue signals into switching points</li> <li>• Switching function freely programmable with teach-in</li> <li>• Threshold value, hysteresis or window comparator</li> <li>• Mounting: H-rail mounting or via adapter plate</li> <li>• LED switching status display</li> <li>• Certification: c UL us listed (OL), C-Tick</li> </ul>	<ul style="list-style-type: none"> <li>• Electronic evaluation unit for position sensor SMH-S1</li> <li>• Amplifies the signal from the sensor</li> <li>• With 3 potentiometers for setting 3 switching points</li> <li>• LED operating and switching status display</li> </ul>
<b>→ Page/online</b>	<a href="#">sve4</a>	<a href="#">smh-ae</a>

## Air gap sensors

Type	 Air gap sensor SOPA	 Micro reflex sensor, reflex sensor RML, RFL	 Back pressure end stop SD-2, SD-3, SD-3-N	 Air barrier SFL, SML
<b>Sensing range</b>	20 ... 200 µm	Distance between nozzles 4.8 ... 5.1 mm, 4.5 ... 15.5mm	Distance between nozzles 0 ... 0.5 mm	Distance between nozzles 5 ... 50 mm, to 100 mm
<b>Operating pressure</b>	4 ... 7 bar	0.075 ... 0.5 bar, 0.1 ... 1.5 bar	0 ... 8 bar	0.1 ... 0.4 bar, 0.1 ... 4 bar, 0 ... 8bar
<b>Display type</b>	Illuminated LCD, multi-colour	Signal pressure ≥0.5 mbar	Pressure signal 0 ... 8 bar	Pressure signal
<b>Operating medium</b>	Compressed air to ISO 8573-1:2010 [7:4:4]	Filtered, unlubricated compressed air	Compressed air, filtered, lubricated or unlubricated	Filtered, unlubricated compressed air
<b>Description</b>	<ul style="list-style-type: none"> <li>Convenient solution for high-precision contact and distance monitoring</li> <li>Setting option: teach-in or numerical setting using three-button operation</li> <li>Integrated air jet function</li> <li>Multi-coloured LCD display</li> <li>Mounting: H-rail mounting, wall mounting, through-hole</li> <li>Certification: C-Tick</li> </ul>	<ul style="list-style-type: none"> <li>Back pressure actuated valve</li> <li>For non-contacting sensing of indicating instruments, checking pressing and stamping tools, edge control, magazine control, for measuring and counting</li> <li>Can be used even in very dirty environments, in complete darkness, with translucent or magnetic objects</li> </ul>	<ul style="list-style-type: none"> <li>Can be used for stroke-dependent signal generation as a limit switch and fixed stop</li> <li>Ideal for end-position sensing and position control with high accuracy requirements and small actuating forces</li> <li>SD-3-N for sensing fluid levels and heavily foaming liquids</li> <li>For use in inaccessible places</li> </ul>	<ul style="list-style-type: none"> <li>Sender nozzle, receiver nozzle, gap sensor</li> <li>Back pressure actuated valve</li> <li>Operational reliability even in very dirty environments</li> <li>Reliable even with high ambient temperatures</li> <li>Insensitive to mechanical influences and sound waves</li> <li>Reliable even in complete darkness and when sensing translucent objects</li> </ul>
→ Page/online	<a href="#">sopa</a>	<a href="#">rfl</a>	<a href="#">sd</a>	<a href="#">sml</a>

## Sensor boxes

Type	 Limit switch attachment SRBF	 Limit switch attachment SRAP	 Limit switch attachment DAPZ	 Limit switch attachment QH-DR-E
<b>Measured variable</b>		rotation angle		
<b>Operating voltage range AC</b>	0 ... 250 V		0 ... 250 V	0 ... 250 V
<b>Operating voltage range DC</b>	0 ... 24 V	15 ... 30 V	0 ... 250 V	0 ... 250 V
<b>Electrical connection</b>		9-pin, screw terminal, plug-in	Screw terminal, plug-in	screw terminal
<b>Type of mounting</b>	On flange to ISO 5211, via accessories	Adapter kit DASB, coupling DARQ	Kit DAPZ-...-RO	With through-hole
<b>Description</b>	<ul style="list-style-type: none"> <li>Based on ISO 5211, DIN EN 60947-5-1</li> <li>With two mechanical switches</li> <li>For mechanical or electrical proximity switches</li> </ul>	<ul style="list-style-type: none"> <li>Based on standard VDI/VDE 3845 (NAMUR)</li> <li>Analogue</li> <li>For monitoring the position of quarter turn actuators</li> <li>Sensors based on 2D Hall technology</li> </ul>	<ul style="list-style-type: none"> <li>Square or round design</li> <li>Drive interface to standard VDI/VDE 3845 (NAMUR)</li> <li>With pneumatic, electric or inductive sensing</li> </ul>	<ul style="list-style-type: none"> <li>Three measuring principles: pneumatic, mechanical, electrical, inductive</li> </ul>
→ Page/online	<a href="#">srbf</a>	<a href="#">srp</a>	<a href="#">dapz</a>	<a href="#">qh-dr</a>

## Electromechanical switches

Type	 <p>Micro switch S-3</p>	 <p>Electric limit switch EL, ER</p>
Operating voltage range AC	12 ... 250 V	0... 250 V
Operating voltage range DC	12 ... 250 V	0 ... 250 V
Electrical connection	Screw connector	4-wire cable with protective earth conductor, 1.1 m
Protection class	IP00	IP54
Type of mounting	2 through-holes in housing, mounting plate	2 through-holes in housing
Description	<ul style="list-style-type: none"> <li>• Electrical limit switch</li> <li>• N/C contact, N/O contact, changeover switch</li> <li>• Actuator attachments: roller lever type AR, roller lever with idle return type AL, whisker actuator type AF</li> </ul>	<ul style="list-style-type: none"> <li>• For signalling in end positions</li> <li>• Max. switching frequency 200/min</li> <li>• With roller lever or with toggle lever and idle return</li> <li>• N/C contact, N/O contact, changeover switch</li> </ul>
→ Page/online	<a href="#">s-3</a>	<a href="#">el</a>



Overview/Configuration/Ordering

→ [www.festo.com/catalogue/sme-8](http://www.festo.com/catalogue/sme-8)

Additional information/Support/User documentation

→ [www.festo.com/sp/sme-8](http://www.festo.com/sp/sme-8)

Proximity sensor

Proximity sensor for T-slot

# SME/SMT-8



- + SME-8: magnetic reed measuring principle
- + SMT-8: magneto-resistive measuring principle
- + Screw-clamped or clamped in slot, insertable in the slot from above or lengthwise
- + Cable length 0.1 ... 30 m
- + Variant suitable for use with energy chains and robots
- + SME8-...-S6: heat-resistant design
- + Variant SMT-8-...-Ex2 for use in potentially explosive areas



- Switching output via reed contact or non-contacting
- Secured with screw or clamped, insertable in the slot from above or lengthwise
- Heat-resistant, welding splash proof and corrosion-resistant designs
- Suitable for use with energy chains and robots
- Selected types in accordance with the ATEX Directive for explosive atmospheres → [www.festo.com/catalogue/ex](http://www.festo.com/catalogue/ex)
- ★ Quick ordering of basic designs → 874, 881

→ [www.festo.com/catalogue/sme-8](http://www.festo.com/catalogue/sme-8)

## Product range overview

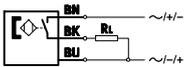
Measuring principle	Type	Electrical connection	Operating voltage range	Switching output	Switching element function	→ Page/online
Magnetic reed	<b>Standard</b>					
	SME-8M	Cable – 2-wire – 3-wire Cable with plug, 2-pin Cable with plug, 3-pin – M8x1, rotatable thread – M8x1, snap-on flange – M12x1, rotatable thread	5 ... 30 V AC 5 ... 30 V DC	Contacting, bipolar	N/O contact N/C contact	873
	SME-8	Cable – 2-wire – 3-wire Cable with plug, 3-pin – M8x1	3 ... 230 V AC 3 ... 230 V DC	Contacting, bipolar	N/O contact N/C contact	875
	SME-8-SL	Plug, 3-pin – M8x1	10 ... 30 V AC 10 ... 30 V DC	Contacting, bipolar	N/O contact	<a href="#">sme</a>
	SME-8-FM	Cable – 2-wire – 3-wire	10 ... 30 V AC 10 ... 30 V DC	Contacting, bipolar	N/O contact	<a href="#">sme</a>
	<b>Block design</b>					
	SME0-8E	Plug, 3-pin – M8x1 – M12x1	3 ... 230 V AC 3 ... 250 V DC	Contacting, bipolar	N/O contact	<a href="#">smeo</a>
	<b>Heat-resistant up to 120 °C</b>					
	SME-8-...-S6	Cable – 2-wire	0 ... 30 V AC 0 ... 30 V DC	Contacting, bipolar	N/O contact	875
	SME0-8E-...-S6	Cable – 2-wire	0 ... 30 V AC 0 ... 30 V DC	Contacting	N/O contact	<a href="#">smeo</a>

## Proximity sensors SME/SMT-8, for T-slot

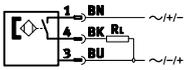
## Product range overview

Measuring principle	Type	Electrical connection	Operating voltage range	Switching output	Switching element function	→ Page/online
Magneto-resistive	<b>Short design</b>					
	SMT-8M-A	Cable, 3-wire Cable with plug, 3-pin – M8x1, rotatable thread – M12x1, rotatable thread	5 ... 30 V DC	PNP NPN Non-contacting, 2-wire	N/O contact N/C contact	878
	<b>Standard</b>					
	SMT-8	Cable, 3-wire Cable with plug, 3-wire – M8x1	10 ... 30 V DC	PNP NPN	N/O contact	<a href="#">smt</a>
	SMT-8-SL	Plug, 3-pin – M8x1	10 ... 30 V DC	PNP	N/O contact	<a href="#">smt</a>
	SMT-8G	Cable, 3-wire Cable with plug, rotatable thread – M8x1, 3-pin	10 ... 30 V DC	PNP	N/O contact	<a href="#">smt</a>
	<b>Corrosion-resistant</b>					
	CRSMT-8M	Cable, 3-wire Cable with plug, rotatable thread	5 ... 0 V DC	PNP	N/O contact	882
	CRSMT-8	Cable, 3-wire	10 ... 30 V DC	PNP	N/O contact	<a href="#">crsmt</a>
	<b>Block design</b>					
	SMT0-8E	Plug, 3-pin – M8x1 – M12x1	10 ... 30 V DC	PNP NPN	N/O contact	<a href="#">smt0</a>
	<b>Welding field immune</b>					
	SDBT-BSW	Cable with plug, 3-pin, rotatable thread – Cable, 3-wire – Cable, 2-wire	10 ... 30 V DC	PNP NPN Non-contacting, 2-wire	N/O contact	<a href="#">sdbt</a>
Magneto-inductive	SMTSO-8E	Plug, 3-pin – M12x1	10 ... 30 V DC	PNP NPN	N/O contact	<a href="#">smtso</a>

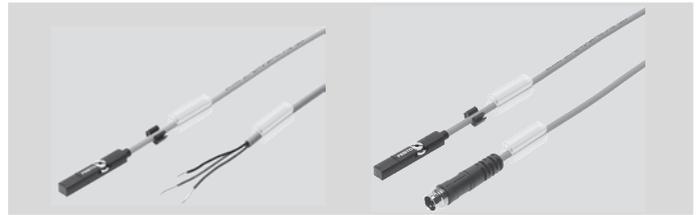
## Data sheet



E.g. N/O contact, 3-wire, with cable



E.g. N/O contact, 3-wire, with plug



Technical data		Download CAD data → <a href="http://www.festo.com">www.festo.com</a>		
SME-8M-		DS	ZS	DO
Measuring principle	Magnetic reed			
Switching output	Contacting, bipolar			
Switching element function	N/O contact		N/O contact	N/C contact
Operating voltage range [V DC]	5 ... 30			
Operating voltage range [V AC]	5 ... 30			
Max. output current [mA]	500	80	80	
Type of mounting	Screw-clamped, insertable in the slot from above			
Special features	Oil-resistant			
Cable length [m]	0.2 ... 10			
Max. connecting cable length [m]	10			
Length/width/height [mm]	32/5/5			

## Pin allocation to EN 60947-5-2

DS				DS				ZS			
Plug, 3-pin				Plug, 3-pin				Plug, 2-pin			
M12x1	Pin	Wire colour	Allocation	M8x1	Pin	Wire colour	Allocation	M8x1	Pin	Wire colour	Allocation
	1	Brown	+		1	Brown	+		1	Brown	+
	3	Blue	-		3	Blue	-		4	Blue	-
	4	Black	Output		4	Black	Output				
ZS				DO				DO			
Plug, 2-pin				Plug, 3-pin				Plug, 3-pin			
M12x1	Pin	Wire colour	Allocation	M8x1	Pin	Wire colour	Allocation	M12x1	Pin	Wire colour	Allocation
	1	Brown	+		1	Brown	+		1	Brown	+
	4	Blue	-		3	Blue	-		3	Blue	-
					4	Black	Output		2	White	Output

## Operating conditions

Ambient temperature [°C]	-40 ... +70
Ambient temperature with flexible cable installation [°C]	-5 ... +70

## Materials

Housing	PA, TPE-(PU), high-alloy stainless steel, nickel-plated brass
Cable sheath	TPE-U (PU), oil-resistant

## Proximity sensors SME-8M, for T-slot

## Order code

SME		8M		24V							
<b>Type</b>											
SME		Proximity sensor, magnetic reed									
<b>Design</b>											
8M		For T-slot, insertable in the slot from above									
<b>Switching output, switching element function</b>											
ZS		N/O contact, 2-wire									
DS		N/O contact, 3-wire									
DO		N/C contact, 3-wire									
<b>Rated operating voltage</b>											
24 V		24 V DC									
<b>Cable characteristics</b>											
C		Standard + energy chain									
E		Energy chain + robot									
<b>Cable length</b>											
...		0.2 m ... 10 m (0.2 ... 5.0 m in 0.1 m increments, 5.0 ... 10 m in 0.5 m increments)									
<b>Connection technology</b>											
OE		Open end									
M 8		Cable with plug M8x1, snap-on flange									
M8D		Cable with plug M8x1, rotatable thread									
M12		Cable with plug M12x1, rotatable thread									

## Order example:

SME-8M-DS-24 V-K-2,5-OE

Proximity sensor, magnetic reed - for T-slot, insertable in the slot from above - N/O contact, 3-wire - 24 V DC - standard + energy chain - cable 2.5 m - open end

## Ordering – Product options



**Configurable product**

**This product and all its options can be ordered using the configurator.**

The configurator can be found under Products on the DVD or  
[→ www.festo.com/catalogue/...](http://www.festo.com/catalogue/...)

Enter the type code in the search field.

★ Quick ordering<sup>1)</sup>

## N/O contact, contacting, bipolar

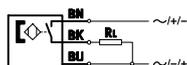
Part no.	Type
<b>Electrical connection – Cable, 3-wire</b>	
543862	SME-8M-DS-24 V-K-2,5-OE
543863	SME-8M-DS-24 V-K-5,0-OE
<b>Cable with plug, M8x1, rotatable thread, 3-pin</b>	
543861	SME-8M-DS-24 V-K-0,3-M8D
<b>Cable, 2-wire</b>	
543872	SME-8M-ZS-24 V-K-2,5-OE

## N/C contact, contacting, bipolar

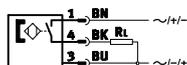
Part no.	Type
<b>Cable, 3-wire</b>	
546799	SME-8M-DO-24 V-K-7,5-OE

1) All products in this table are easy to select and quick to order.

## Data sheet



E.g. N/O contact, 3-wire, with cable



E.g. N/O contact, 3-wire, with plug



Technical data		Download CAD data → <a href="http://www.festo.com">www.festo.com</a>					
Electrical connection	3-wire			2-wire			
Connection direction	In-line			In-line			
Variant	Standard			Heat-resistant	Standard		
SME-8-	C	S	O	K-24-S6	K-LED-230	ZS	
Measuring principle	Magnetic reed						
Switching output	Contacting, bipolar						
	-				Without LED function		
Switching element function	N/O contact	N/O contact	N/C contact	N/O contact	N/O contact	N/O contact	
Operating voltage range [V DC]	12 ... 30	12 ... 30	12 ... 30	0 ... 30	3 ... 230	12 ... 27	
Operating voltage range [V AC]	12 ... 30	12 ... 30	12 ... 30	0 ... 30	3 ... 230	-	
Max. output current [mA]	500	500	50	500	120	80	
Type of mounting	Clamped in T-slot, insertable in the slot lengthwise						
Cable length [m]	2.5	0.3	7.5	2.5	2.5	2.5	
	5						
	7.5						
Length/width/height [mm]	29/7/5	29/7/5	31/7/5	29/7/5	27/7/10	31/7/5	

## Pin allocation to EN 60947-5-2

Plug, 3-pin, M8x1	Pin	Wire colour	Allocation
	1	Brown	+
	3	Blue	-
	4	Black	Output

## Operating conditions

Electrical connection	C	K5	K-7,5	S	O	K-24-S6	K-LED-230	ZS
Ambient temperature [°C]	-40 ... +60	-40 ... +70	-40 ... +70	-40 ... +70	-40 ... +60	-40 ... +120	-30 ... +60	-40 ... +60
Ambient temperature with flexible cable installation [°C]	-5 ... +60	-5 ... +70	-5 ... +70	-5 ... +70	-5 ... +60	-5 ... +120	-5 ... +60	-5 ... +60

Materials	SME-8	SME-8-...-S6
Housing	Epoxy resin, PC, PET, high-alloy stainless steel	
Cable sheath	TPE-U (PUR)	Thermoplastic styrene elastomer

## Proximity sensors SME-8, for T-slot

FESTO

## Order code – 3-wire

SME		–	8	–	–	–	LED	–	24
<b>Type</b>									
SME	Proximity sensor, magnetic reed								
<b>Design</b>									
8	For T-slot, insertable in the slot lengthwise								
<b>Switching element function</b>									
–	N/O contact, 3-wire								
0	N/C contact, 3-wire								
<b>Electrical connection, cable length</b>									
C	Cable, 2.5 m (N/O contact)								
	Cable, 7.5 m (N/C contact)								
K5	Cable, 5 m								<sup>1</sup>
K-7,5	Cable, 7.5 m								<sup>1</sup>
S	Cable with plug M8x1, 0.3 m								<sup>1</sup>
<b>Switching status indication</b>									
LED	Yellow LED								
<b>Rated operating voltage</b>									
24	24 V DC								

<sup>1</sup> Not with switching element function 0.

## Order example:

SME-8-K-LED-24

Proximity sensor, magnetic reed - for T-slot, insertable in the slot lengthwise - N/O contact, 3-wire - cable 2.5 m - yellow LED - 24 V DC

## Order code – 2-wire, heat-resistant

SME		–	8	–	–	–	C	–	24	–	S6
<b>Type</b>											
SME	Proximity sensor, magnetic reed										
<b>Design</b>											
8	For T-slot, insertable in the slot lengthwise										
<b>Switching element function</b>											
–	N/O contact, 2-wire										
<b>Electrical connection, cable length</b>											
C	Cable, 2.5 m										
<b>Rated operating voltage</b>											
24	24 V DC										
<b>Variant</b>											
S6	Heat-resistant										

## Order example:

SME-8-K-24-S6

Proximity sensor, magnetic reed - for T-slot, insertable in the slot lengthwise - N/O contact, 2-wire - cable 2.5 m - 24 V DC - heat-resistant

## Order code – 2-wire, in-line connection

		SME	–	8	–		–	LED	–	
<b>Type</b>										
SME	Proximity sensor, magnetic reed									
<b>Design</b>										
8	For T-slot, insertable in the slot lengthwise									
<b>Switching element function</b>										
–	N/O contact, 2-wire									
ZS	N/O contact, without LED function, 2-wire									
<b>Electrical connection, cable length</b>										
C	Cable, 2.5 m	1								
KL	Cable, 2.5 m	2								
<b>Switching status indication</b>										
LED	Yellow LED									
<b>Rated operating voltage</b>										
24	24 V DC	2								
230	230 V AC	1								

1 Not with switching element function ZS

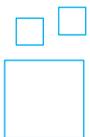
2 Only with switching element function ZS

**Order example:**

SME-8-K-LED-230

Proximity sensor, magnetic reed - for T-slot, insertable in the slot lengthwise - N/O contact, 2-wire - cable 2.5 m - yellow LED - 230 V DC

## Ordering – Product options



**Configurable product**

**This product and all its options can be ordered using the configurator.**

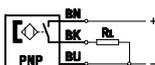
The configurator can be found under Products on the DVD or

→ [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...)

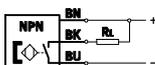
Enter the type code in the search field.

# Proximity sensors SMT-8M-A, for T-slot

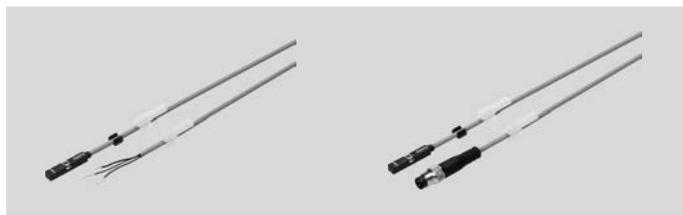
## Data sheet



E.g. N/O contact, PNP, with cable



E.g. N/O contact, NPN, with cable



Technical data		Download CAD data → <a href="http://www.festo.com">www.festo.com</a>					
SMT-8M-A		PS	NS	PO	ZS	PNS	PSO
Measuring principle		Magneto-resistive					
Switching output		PNP	NPN	PNP	Non-contacting, 2-wire	PNP, NPN switchable	PNP
Switching element function		N/O contact	N/O contact	N/C contact	N/O contact	N/O contact	N/C contact, N/O contact switchable
Operating voltage range	[V DC]	5 ... 30				7 ... 30	
Max. output current	[mA]	100 <sup>1)</sup>	100 <sup>1)</sup>	100 <sup>1)</sup>	80 <sup>1)</sup>	100	100
Max. output current in mounting kits	[mA]	100	100	100	80 <sup>1)</sup>	100	100
Max. switching capacity DC	[W]	2.8	2.8	2.8	1.9	2.7	2.7
Max. switching capacity DC in mounting kits	[W]	2.8 <sup>2)</sup>	2.8 <sup>2)</sup>	2.8 <sup>2)</sup>	1.5 <sup>2)</sup>	2.7	2.7
Type of mounting		Screw-clamped, insertable in the slot from above					
Cable length	[m]	0.1 ... 30					
Max. connecting cable length	[m]	30					
Length/width/height	[mm]	29/5/5				35/5/5	

- 1) Variant ...PS/NS/PO-...-Ex2: max. output current in mounting kits 80 mA, T<sub>a</sub> 70 °C  
 Variant ...ZS-...-Ex2: max. output current in mounting kits 50 mA, T<sub>a</sub> 70 °C  
 2) Variant ...PS/NS/PO-...-Ex2: max. switching capacity 2.2 W.  
 Variant ...ZS-...-Ex2: max. switching capacity 1.2 W.

### Pin allocation to EN 60947-5-2

ZS			
M8x1, 2-pin			
M8x1	Pin	Wire colour	Allocation
	1	Brown	+
	4	Blue	-

ZS			
M12x1, 2-pin			
M12x1	Pin	Wire colour	Allocation
	1	Brown	+
	4	Blue	-

### Pin allocation to EN 60947-5-2

PS/NS/PO			
Plug, 3-pin			
M8x1	Pin	Wire colour	Allocation
	1	Brown	+
	3	Blue	-
	4	Black	Output

PS/NS			
Plug, 3-pin			
M12x1	Pin	Wire colour	Allocation
	1	Brown	+
	3	Blue	-
	4	Black	Output

PO			
Plug, 3-pin			
M12x1	Pin	Wire colour	Allocation
	1	Brown	+
	3	Blue	-
	2	White	Output

## Data sheet

Operating conditions	
Ambient temperature	[°C] -40 ... +85
Ambient temperature with flexible cable installation	[°C] -20 ... +85
ATEX	
SMT-8M-A-...-	Ex2
ATEX category for gas	II 3G
Type of ignition protection for gas	Ex nA IIC T4 X Gc
ATEX category for dust	II 3D
Type of ignition protection for dust	Ex tc IIIC T120 °C X Dc IP65
Explosion-proof ambient temperature	-40 °C ≤ Ta ≤ +70 °C
ATEX certification	For zones 2 and 22
CE marking (see declaration of conformity)	To EU Explosion Protection Directive (ATEX)
Materials	
Housing	PA reinforced, high-alloy stainless steel, nickel-plated brass
Cable sheath	TPE-U (PU)

## Proximity sensors SMT-8M-A, for T-slot

## Order code

		SMT-8M	-	A	-		-	24V	-	E	-		-		-		-	
<b>Type</b>																		
SMT-8M	Proximity sensor, magneto-resistive, for T-slot, insertable in the slot from above																	
<b>Design</b>																		
A	Short design																	
<b>Switching output</b>																		
PS	PNP, N/O contact, 3-wire																	
PO	PNP, N/C contact, 3-wire																	
NS	NPN, N/O contact, 3-wire																	
ZS	N/O contact, 2-wire																	
PNS	PNP, NPN switchable																	
PSO	PNP, N/C contact, N/O contact switchable																	
<b>Rated operating voltage</b>																		
24 V	24 V DC																	
<b>Cable characteristics</b>																		
E	Energy chain + robot																	
<b>Cable length</b>																		
...	0.1 m ... 30 m (0.1 ... 5.0 m in 0.1 m increments, 5.0 ... 30 m in 0.5 m increments)																	
<b>Cable designation</b>																		
-	With inscription label holder																	
N	Without inscription label holder																	
<b>Electrical connection</b>																		
OE	Open end																	
M 8	Cable with plug M8x1, snap-on flange																	
M8D	Cable with plug M8x1, rotatable thread																	
M12	Cable with plug M12x1, rotatable thread																	
<b>EU certification</b>																		
Ex2	II 3GD in accordance with EU Directive 94/9/EC <span style="border: 1px solid black; padding: 0 2px;">1</span>																	

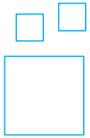
1 Not with switching output PNS, PSO, minimum cable length 0.2 m.

**Order example:**

SMT-8M-A-PS-24 V-E-0,3-M8D

Proximity sensor, magneto-resistive, for T-slot, insertable in the slot from above - short design - PNP, N/O contact, 3-wire - 24 V DC - energy chain + robot - cable 0.3 m - with inscription label holder - cable with plug M8x1, rotatable thread

## Ordering – Product options



**Configurable product**

**This product and all its options can be ordered using the configurator.**

The configurator can be found under Products on the DVD or

→ [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...)

Enter the type code in the search field.

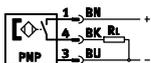
★ Quick ordering<sup>1)</sup>

Switching output	Electrical connection			Cable length [m]	Part no.	Type
	Cable	Cable with plug, rotatable thread				
		M8x1	M12x1			
N/O contact						
PNP	–	3-pin	–	0.3	574334	SMT-8M-A-PS-24 V-E-0,3-M8D
PNP	3-wire	–	–	2.5	574335	SMT-8M-A-PS-24 V-E-2,5-OE
PNP	3-wire	–	–	5	574336	SMT-8M-A-PS-24 V-E-5,0-OE
PNP	–	–	3-pin	0.3	574337	SMT-8M-A-PS-24 V-E-0,3-M12
NPN	3-wire	–	–	2.5	574338	SMT-8M-A-NS-24 V-E-2,5-OE
PNP	–	–	3-pin	0.3	574339	SMT-8M-A-NS-24 V-E-0,3-M8D
PNP	3-wire	–	–	7.5	574340	SMT-8M-A-PO-24 V-E-7,5-OE
Contactless	2-wire	–	–	5	574341	SMT-8M-A-ZS-24 V-E-5,0-OE-Ex2

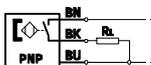
1) All products in this table are easy to select and quick to order.

## Proximity sensors CRSMT-8M, for T-slot

## Data sheet



e.g. N/O contact, PNP, with cable



- Suitable for use in the food industry
- Acid resistant
- Alkali resistant
- Resistant to cooling lubricants



## Technical data

Download CAD data → [www.festo.com](http://www.festo.com)

CRSMT-8M

Measuring principle	Magneto-resistive	
Switching output	PNP	
Switching element function	N/O contact	
Operating voltage range	[V DC]	5 ... 30
Max. output current	[mA]	100
Max. switching capacity DC	[W]	2.8
Type of mounting	Screw-clamped, insertable in the slot from above	
Cable length	[m]	0.3 ... 10
Max. connecting cable length	[m]	30
Length/width/height	[mm]	29/5/5

## Pin allocation to EN 60947-5-2

M8x1, 3-pin

N/O contact

	Pin	Wire colour	Allocation
	1	Brown	+
	3	Blue	-
	4	Black	Output

M12x1, 3-pin

N/O contact

	Pin	Wire colour	Allocation
	1	Brown	+
	3	Blue	-
	4	Black	Output

## Data sheet

## Operating conditions

Ambient temperature	[°C]	-40 ... +85
---------------------	------	-------------

## Materials

Housing	High-alloy stainless steel, PP
Cable sheath	TPE-O

## Order code

		CRSMT	-	8M	-	PS	-	24V	-	C	-		-	
<b>Type</b>														
CRSMT	Proximity sensor, magneto-resistive, suitable for use in the food industry, resistant to acids and cooling lubricants													
<b>Design</b>														
8M	For T-slot, insertable in the slot from above													
<b>Switching output</b>														
PS	PNP, N/O contact, 3-wire													
<b>Rated operating voltage</b>														
24 V	24 V DC													
<b>Cable characteristics</b>														
C	Standard and energy chain													
<b>Cable length</b>														
0.3	Cable, 0.3 m													1
5.0	Cable, 5 m, open end													2
10.0	Cable, 10 m, open end													2
<b>Connection</b>														
OE	Open end													
M8D	M8x1, rotatable thread													
M12	M12													

1 Only with M8D or M12 connection

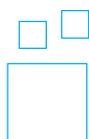
2 Only with OE connection

## Order example:

CRSMT-8M-PS-24 V-K-5,0-OE

Proximity sensor, magneto-resistive, suitable for the food industry, resistant to acids and cooling lubricants - for T-slot, insertable in the slot from above - PNP, N/O contact, 3-wire - 24 V DC - standard and energy chain - cable 5 m - open end

## Ordering – Product options



**Configurable product**

**This product and all its options can be ordered using the configurator.**

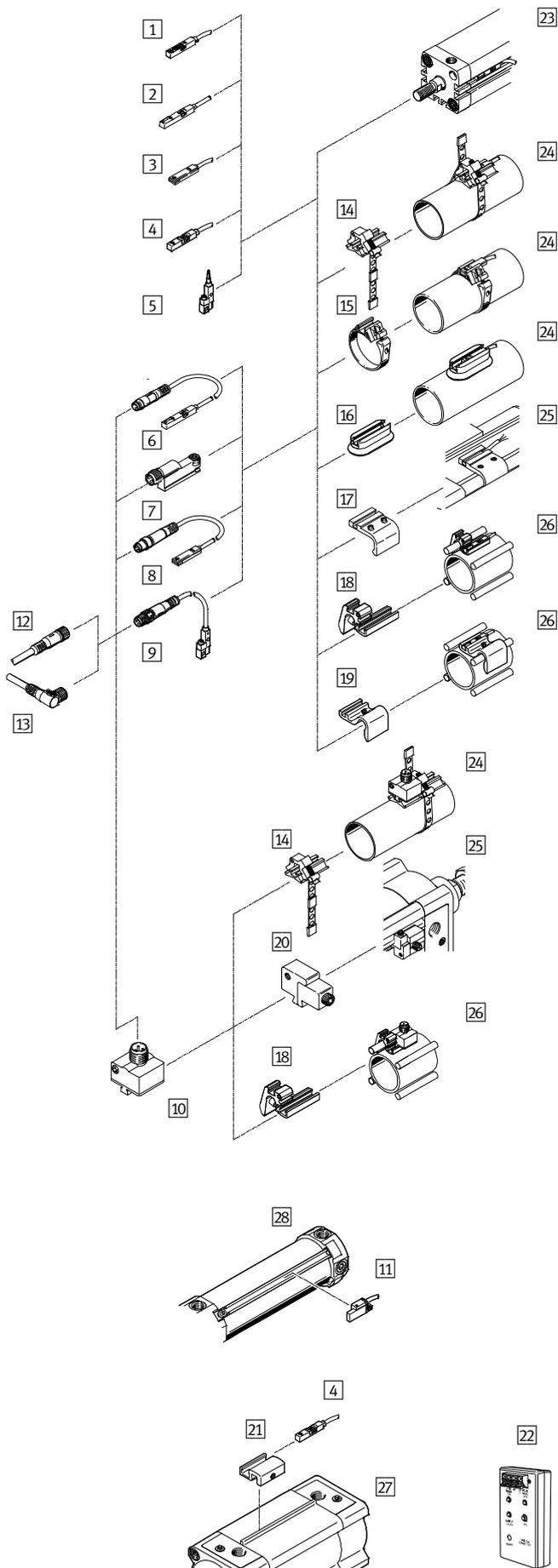
The configurator can be found under Products on the DVD or

→ [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...)

Enter the type code in the search field.

## Proximity sensors SME/SMT-8, for T-slot

## Accessories



→ Page/on-line

## Proximity sensor

1	SMT-8M-A, with cable	878
2	SME-8M-...-OE, with cable	873
3	SME-8-FM-...-K, with cable	<a href="#">sme</a>
	CRSMT-8-K, with cable, corrosion-resistant	<a href="#">crsmt</a>
4	CRSMT-8-M, with cable	882
5	SMT-8G-...-OE, with cable	<a href="#">smt</a>
6	SME-8M-...-M, with cable and plug connector	873
7	SME-8-SL, with plug	<a href="#">sme</a>
	SMT-8-SL, with plug	<a href="#">smt</a>
8	SME-8, with cable and plug connector	875
9	SMT-8G-...-M, with cable and plug connector	<a href="#">smt</a>
10	SMEO-8E, with plug, block design	<a href="#">smeo</a>
	SMTO-8E, with plug, block design	<a href="#">smtto</a>
	SMTSO-8E, with plug, welding field immune	<a href="#">smtso</a>
11	SDBT-BSW, welding field immune	<a href="#">sdbt</a>
Accessories		
12	Connecting cable NEBU-M...G	885
13	Connecting cable NEBU-M...W	885
14	Mounting kit SMBR-8-8/100-S6, heat-resistant	885
15	Mounting kit SMBR	885
16	Mounting kit CRSMB, corrosion-resistant	885
17	Mounting kit SMB-8-FENG	885
18	Mounting SMBZ-8	885
19	Sensor bracket DASP-M4	885
20	Mounting kit SMB-8E	885
21	Mounting kit SMB-8-C	885
22	Sensor tester SM-TEST-1	<a href="#">sm-test-1</a>
-	Position marker SMM-8	885
	Inscription label ASLR	885
	Clip SMBK-8	885
	Safety clip NEAU	<a href="#">neau</a>
Drives		
23	Drives with T-slot	-
24	Round cylinders	-
25	Standard cylinder DSBC	-
26	Drives with tie or mounting rod	-
27	Standard cylinders DSBF	-
28	Hinge cylinders DFAW	-

## Accessories – Ordering data

	Cable length [m]		Part no.	Type
<b>12</b>	<b>Connecting cable, straight socket M8x1</b> Technical data → 1161			
	2.5	★	541333	NEBU-M8G3-K-2.5-LE3
	5	★	541334	NEBU-M8G3-K-5-LE3
<b>13</b>	<b>Angled socket M8x1</b> Technical data → 1161			
	2.5	★	541338	NEBU-M8W3-K-2.5-LE3
	5	★	541341	NEBU-M8W3-K-5-LE3
<b>12</b>	<b>Straight socket M12x1</b> Technical data → 1161			
	2.5	★	541363	NEBU-M12G5-K-2.5-LE3
	5	★	541364	NEBU-M12G5-K-5-LE3
<b>13</b>	<b>Angled socket M8x1</b> Technical data → 1161			
	2.5		541367	NEBU-M12W5-K-2.5-LE3
	5		541370	NEBU-M12W5-K-5-LE3

	For Ø		Part no.	Type
<b>14</b>	<b>Mounting kit, max. ambient temperature 120°C</b>			
	8 ... 100	★	538937	SMBR-8-8/100-S6
<b>15</b>	<b>Max. ambient temperature 70°C</b>			
	8		175091	SMBR-8-8
	10		175092	SMBR-8-10
	12	★	175093	SMBR-8-12
	16	★	175094	SMBR-8-16
	20	★	175095	SMBR-8-20
	25	★	175096	SMBR-8-25
	32		175097	SMBR-8-32
	40		175098	SMBR-8-40
	50		175099	SMBR-8-50
	63		175100	SMBR-8-63

	For Ø	Part no.	Type
<b>16 ... 21</b>	<b>Mounting kit</b>		
	32 ... 100	525565	CRSMB-8-32/100
	32/40	175705	SMB-8-FENG-32/40
	50/63	175706	SMB-8-FENG-50/63
	80/100	175707	SMB-8-FENG-80/100
	32 ... 100	537806	SMBZ-8-125/300
	125 ... 320	537808	SMBZ-8-125/320
	125	1451483	DASP-M4-125-A
	160	1553813	DASP-M4-160-A
	250	1456781	DASP-M4-250-A
	320	3015256	DASP-M4-320-A
	–	178230	SMB-8E
	–	1806790	SMB-8-C

	Size	Part no.	Type	PU <sup>1)</sup>
<b>Position marker</b>				
	10	547941	SMM-8	10
<b>Inscription label</b>				
	23x4 mm	541598	ASLR-L-423	34
<b>Clip</b>				
	–	534254	SMBK-8	1

1) Packaging unit.



Overview/Configuration/Ordering  
→ [www.festo.com/catalogue/sme-10](http://www.festo.com/catalogue/sme-10)



Additional information/Support/User documentation  
→ [www.festo.com/sp/sme-10](http://www.festo.com/sp/sme-10)

Proximity sensor

Proximity sensor for C-slot

# SME/SMT-10



- + SME-10: magnetic reed measuring principle
- + SMT-10: magneto-resistive measuring principle
- + Clamped in C-slot, insertable in the slot from above or lengthwise
- + Cable length 0.2 ... 10 m



- Switching output via reed contact or non-contacting
- Secured with screw or clamped, insertable in the slot from above or lengthwise
- Suitable for use with energy chains and robots
- Selected types in accordance with the ATEX Directive for explosive atmospheres → [www.festo.com/catalogue/ex](http://www.festo.com/catalogue/ex)
- ★ Quick ordering of basic designs → 889, 894

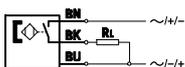
→ [www.festo.com/catalogue/sme-10](http://www.festo.com/catalogue/sme-10)

### Product range overview

Measuring principle	Type	Electrical connection	Operating voltage range	Switching output	Switching element function	→ Page/online
Magnetic reed	SME-10M	Cable – 2-wire – 3-wire Cable with plug, 2-pin Cable with plug, 3-pin – M8x1, rotatable thread – M8x1, snap-on flange – M12x1, rotatable thread	5 ... 30 V AC 5 ... 30 V DC	Contacting, bipolar	N/O contact	888
	SME-10	Cable – 3-wire Cable with plug, 3-pin – M8x1	12 ... 27 V AC 12 ... 27 V DC	Contacting, bipolar	N/O contact	890
Magneto-resistive	SMT-10M	Cable – 2-wire – 3-wire Cable with plug, 2-pin Cable with plug, 3-pin – M8x1, rotatable thread – M8x1, snap-on flange – M12x1, rotatable thread	10 ... 30 V DC	PNP NPN Non-contacting, 2-wire	N/O contact	892
	SMT-10G	Cable – 3-wire Cable with plug, 3-pin – M8x1, rotatable thread	10 ... 30 V DC	PNP	N/O contact	<a href="#">smt-10</a>

## Proximity sensors SME-10M, for C-slot

## Data sheet



E.g. N/O contact, 3-wire, with cable



E.g. N/O contact, 3-wire, with plug



Technical data		Download CAD data → <a href="http://www.festo.com">www.festo.com</a>	
SME-10M-	DS	ZS	
Measuring principle	Magnetic reed		
Switching output	Contacting, bipolar		
Switching element function	N/O contact		
Operating voltage range	[V DC]	5 ... 30	
Operating voltage range	[V AC]	5 ... 30	
Max. output current	[mA]	300	100
Type of mounting	Screw-clamped, insertable in the slot from above		
Outlet direction of connection	In-line		
	Lateral		
Special features	Oil-resistant		
Cable length	[m]	0.2 ... 10	
Max. connecting cable length	[m]	10	
Length/width/height	[mm]	27/3/5 (25/3/6) <sup>1)</sup>	

1) Value in brackets for lateral connection.

10

## Pin allocation to EN 60947-5-2

M8x1

2-pin	Pin	Wire colour	Allocation	3-pin	Pin	Wire colour	Allocation
	1	Brown	+		1	Brown	+
	4	Black	Output		3	Blue	-
					4	Black	Output

M12x1

2-pin	Pin	Wire colour	Allocation	3-pin	Pin	Wire colour	Allocation
	1	Brown	+		1	Brown	+
	4	Black	Output		3	Blue	-
					4	Black	Output

## Operating conditions

Ambient temperature	[°C]	-40 ... +70
Ambient temperature with flexible cable installation	[°C]	-20 ... +70

## Materials

Housing	PA reinforced, high-alloy stainless steel
Cable sheath	TPE-U (PUR)

## Ordering – Product options

**Configurable product**

**This product and all its options can be ordered using the configurator.**

The configurator can be found under Products on the DVD or  
→ [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...)

Enter the type code in the search field.

## Order code

SME		10M		24V		E									
<b>Type</b>															
SME		Proximity sensor, magnetic reed													
<b>Design</b>															
10M		For C-slot, insertable in the slot from above													
<b>Switching output, switching element function</b>															
DS		N/O contact, 3-wire													
ZS		N/O contact, 2-wire													
<b>Rated operating voltage</b>															
24 V		24 V DC													
<b>Cable characteristics</b>															
E		Energy chain + robot													
<b>Cable length</b>															
...		0.2 m ... 10 m (0.2 ... 5.0 m in 0.1 m increments, 5.0 ... 10 m in 0.5 m increments)													
<b>Connection direction</b>															
L		In-line													
Q		Lateral													
<b>Cable designation</b>															
-		With inscription label holder													
N		Without inscription label holder													
<b>Connection technology</b>															
OE		Open end													
M 8		Cable with plug M8x1, snap-on flange													
M8D		Cable with plug M8x1, rotatable thread													
M12		Cable with plug M12x1, rotatable thread													

**Order example:**

SME-10M-DS-24 V-E-2,5-L-OE

Proximity sensor, magnetic reed - for C-slot, insertable in the slot from above - N/O contact, 3-wire - 24 V DC - energy chain + robot - cable 2.5 m - in-line - with inscription label holder - open end

★ **Quick ordering<sup>1)</sup>****N/O contact, contacting, bipolar**

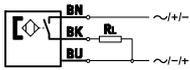
Part no.	Type
<b>Electrical connection – Cable, 3-wire</b>	
551365	SME-10M-DS-24 V-E-2,5-L-OE
551366	SME-10M-DS-24 V-E-2,5-Q-OE
<b>Cable, 2-wire with plug, rotatable thread</b>	
551367	SME-10M-DS-24 V-E-0,3-L-M8D
551368	SME-10M-DS-24 V-E-0,3-Q-M8D

Part no.	Type
<b>Electrical connection – Cable, 2-wire</b>	
551369	SME-10M-ZS-24 V-E-2,5-L-OE
551370	SME-10M-ZS-24 V-E-2,5-Q-OE

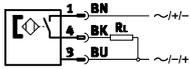
1) All products in this table are easy to select and quick to order.

## Proximity sensors SME-10, for C-slot

## Data sheet



E.g. N/O contact, 3-wire, with cable



E.g. N/O contact, 3-wire, with plug



Technical data		Download CAD data → <a href="http://www.festo.com">www.festo.com</a>	
SME-10-...-		C	S
Measuring principle		Magnetic reed	
Switching output		Contacting, bipolar	
Switching element function		N/O contact	
Operating voltage range	[V DC]	12 ... 27	
Operating voltage range	[V AC]	12 ... 27	
Max. output current	[mA]	100	
Type of mounting		Clamped in C-slot, insertable in the slot lengthwise	
Outlet direction of connection		In-line	
		Lateral	
Cable length	[m]	2.5	0.3
Length/width/height	[mm]	22/4/6 (19/6/9) <sup>1)</sup>	

1) Value in brackets for lateral connection.

## Pin allocation to EN 60947-5-2

Plug, 3-pin

M8x1	Pin	Wire colour	Allocation
	1	Brown	+
	3	Blue	-
	4	Black	Output

## Operating conditions

Ambient temperature	[°C]	-20 ... +70
Ambient temperature with flexible cable installation	[°C]	-5 ... +70

## Materials

Housing	PPS, high-alloy stainless steel, TPE-U (PUR)
Cable sheath	TPE-U (PUR)

## Order code

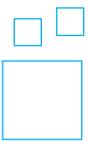
		SME	–	10	–		–	LED	–	24
<b>Type</b>										
SME	Proximity sensor, magnetic reed									
<b>Design</b>										
10	For C-slot, insertable in the slot lengthwise									
<b>Electrical connection, cable length, outlet direction of connection</b>										
KL	Cable, 2.5 m, in-line									
KQ	Cable, 2.5 m, lateral									
SL	Cable with plug M8x1, 0.3 m, in-line									
SQ	Cable with plug M8x1, 0.3 m, lateral									
<b>Switching status indication</b>										
LED	Yellow LED									
<b>Rated operating voltage</b>										
24	24 V DC									

## Order example:

SME-10-KL-LED-24

Proximity sensor, magnetic reed - for C-slot, insertable in the slot lengthwise - cable 2.5 m, in-line - yellow LED - 24 V DC

## Ordering – Product options



**Configurable product**

**This product and all its options can be ordered using the configurator.**

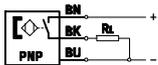
The configurator can be found under Products on the DVD or

→ [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...)

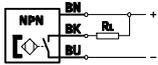
Enter the type code in the search field.

## Proximity sensors SMT-10M, for C-slot

## Data sheet



E.g. PNP, N/O contact, with cable



E.g. NPN, N/O contact, with cable



Technical data		Download CAD data → <a href="http://www.festo.com">www.festo.com</a>		
SMT-10M-	PS	NS	ZS	
Measuring principle	Magneto-resistive			
Switching output	PNP	NPN	Non-contacting, 2-wire	
Switching element function	N/O contact			
Operating voltage range [V DC]	10 ... 30			
Max. output current [mA]	100			
Type of mounting	Screw-clamped, insertable in the slot from above			
Outlet direction of connection	In-line			
	Lateral			
Cable length [m]	0.2 ... 30			
Max. connecting cable length [m]	30			
Length/width/height [mm]	23/3/5 (21/3/6) <sup>1)</sup>			

1) Value in brackets for lateral connection.

## Pin allocation to EN 60947-5-2

M8x1

2-pin	Pin	Wire colour	Allocation
	1	Brown	+
	4	Black	Output

3-pin	Pin	Wire colour	Allocation
	1	Brown	+
	3	Blue	-
	4	Black	Output

M12x1

2-pin	Pin	Wire colour	Allocation
	1	Brown	+
	4	Black	Output

3-pin	Pin	Wire colour	Allocation
	1	Brown	+
	3	Blue	-
	4	Black	Output

## Operating conditions

Ambient temperature [°C]	-20 ... +70
Ambient temperature with flexible cable installation [°C]	-20 ... +70

## Materials

Housing	PA, high-alloy stainless steel
Cable sheath	TPE-U (PU)

## Order code

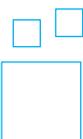
		SMT	-	10M	-		-	24V	-	E	-		-		-		-	
<b>Type</b>																		
SMT	Proximity sensor, magneto-resistive																	
<b>Design</b>																		
10M	For C-slot, insertable in the slot from above																	
<b>Switching output, switching element function</b>																		
PS	PNP, N/O contact, 3-wire																	
NS	NPN, N/O contact, 3-wire																	
ZS	N/O contact, 2-wire																	
<b>Rated operating voltage</b>																		
24 V	24 V DC																	
<b>Cable characteristics</b>																		
E	Energy chain + robot																	
<b>Cable length</b>																		
...	0.2 m ... 30 m (0.2 ... 5.0 m in 0.1 m increments, 5.0 ... 30 m in 0.5 m increments)																	
<b>Connection direction</b>																		
L	In-line																	
Q	Lateral																	
<b>Cable designation</b>																		
-	With inscription label holder																	
N	Without inscription label holder																	
<b>Connection technology</b>																		
OE	Open end																	
M 8	Cable with plug M8x1, snap-on flange																	
M8D	Cable with plug M8x1, rotatable thread																	
M12	Cable with plug M12x1, rotatable thread																	

## Order example:

SMT-10M-PS-24V-E-2,5-L-OE

Proximity sensor, magneto-resistive - for C-slot, insertable in the slot from above - PNP, N/O contact, 3-wire - 24 V DC - energy chain + robot - cable 2.5 m - in-line - with inscription label holder - open end

## Ordering – Product options



**Configurable product**

**This product and all its options can be ordered using the configurator.**

The configurator can be found under Products on the DVD or  
→ [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...)

Enter the type code in the search field.

## Proximity sensors SMT-10M, for C-slot

★ Quick ordering<sup>1)</sup>

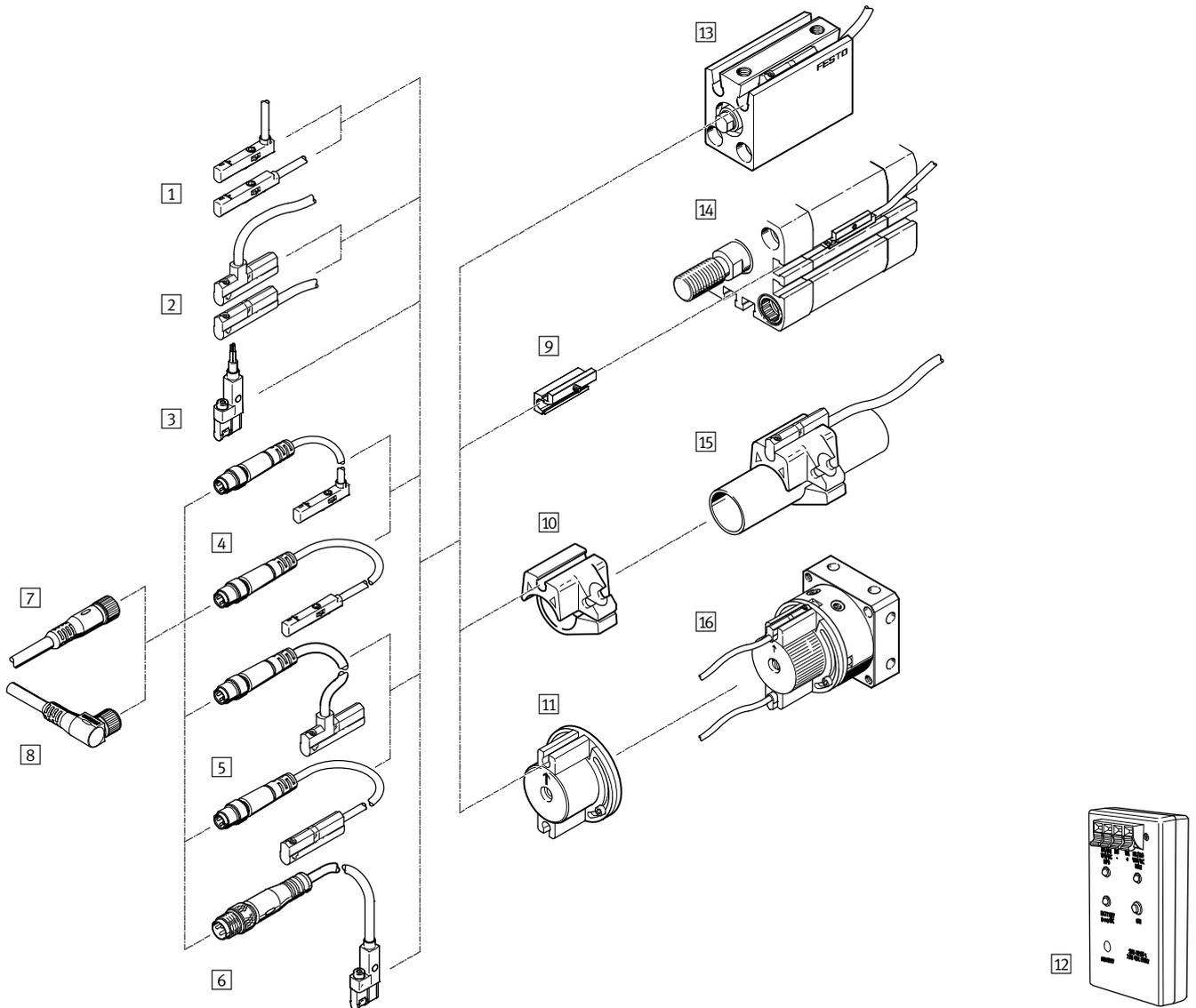
## N/O contact

Part no.	Type
<b>Electrical connection – Cable, 3-wire, PNP</b>	
551373	SMT-10M-PS-24 V-E-2,5-L-OE
551374	SMT-10M-PS-24 V-E-2,5-Q-OE
<b>Cable with plug, M8x1, rotatable thread, 3-pin, PNP</b>	
551375	SMT-10M-PS-24 V-E-0,3-L-M8D
551376	SMT-10M-PS-24 V-E-0,3-Q-M8D
<b>Electrical connection – Cable, 3-wire, NPN</b>	
551377	SMT-10M-NS-24 V-E-2,5-L-OE
551378	SMT-10M-NS-24 V-E-2,5-Q-OE
<b>Cable with plug, M8x1, rotatable thread, 3-pin, NPN</b>	
551379	SMT-10M-NS-24 V-E-0,3-L-M8D
551380	SMT-10M-NS-24 V-E-0,3-Q-M8D

Part no.	Type
<b>Cable, 2-wire, non-contacting</b>	
551382	SMT-10M-ZS-24 V-E-2,5-L-OE
551383	SMT-10M-ZS-24 V-E-2,5-Q-OE

1) All products in this table are easy to select and quick to order.

## Accessories



10

		→ Page/on-line
Proximity sensor		
1	SME-10M-...-OE, with cable SMT-10M-...-OE, with cable	888 892
2	SME-10-...-K, with cable	890
3	SMT-10G-...-OE, with cable	<a href="#">smt-10</a>
4	SME-10M-...-M..., with cable with plug SMT-10M-...-M..., with cable with plug	888 892
5	SME-10-...-S..., with cable with plug	890
6	SMT-10G-...-M..., with cable with plug	<a href="#">smt-10</a>

		→ Page/on-line
Accessories		
7	Connecting cable NEBU-M8G3	896
8	Connecting cable NEBU-M8W3	896
9	Mounting SMBN-10	896
10	Mounting kit SMBR-10	896
11	Mounting kit WSM-...-SME-10	896
12	Sensor tester SM-TEST-1	<a href="#">sm-test-1</a>
-	Position marker SMM-10	896
	Inscription label ASLR	896
	Safety clip NEAU	<a href="#">neau</a>
	Clip SMBK-8	<a href="#">smbk</a>
Drives		
13	Drives with C-slot	-
14	Drives with T-slot	
15	Round cylinders	
16	Quarter turn actuator DSM	

## Proximity sensors SME/SMT-10, for C-slot

FESTO

## Accessories – Ordering data

	Cable length [m]		Part no.	Type
<b>7</b>	<b>Connecting cable, straight socket M8x1</b>			<b>Technical data → 1161</b>
	2.5	★	541333	NEBU-M8G3-K-2.5-LE3
	5	★	541334	NEBU-M8G3-K-5-LE3
<b>8</b>	<b>Angled socket M8x1</b>			
	2.5	★	541338	NEBU-M8W3-K-2.5-LE3
	5	★	541341	NEBU-M8W3-K-5-LE3

	For Ø		Part no.	Type
<b>9</b>	<b>Mounting</b>			
	125 ... 320		537809	SMBN-10

<b>10</b>	<b>Mounting kit for round cylinder</b>			
	8		175101	SMBR-10-8
	10		173227	SMBR-10-10
	12		175102	SMBR-10-12
	16		173228	SMBR-10-16
	20		175103	SMBR-10-20
	25		175104	SMBR-10-25
	32		175105	SMBR-10-32
	40		175106	SMBR-10-40
	50		175107	SMBR-10-50
	63		175108	SMBR-10-63

<b>11</b>	<b>for swivel module</b>			
	6		173205	WSM-6-SME-10
	8		173206	WSM-8-SME-10
	10		173207	WSM-10-SME-10

	Size		Part no.	Type	PU <sup>1)</sup>
<b>Position marker</b>					
	10		547942	SMM-10	10
<b>Inscription label</b>					
	23x4 mm		541598	ASLR-L-423	34

1) Packaging unit.



Overview/Configuration/Ordering  
→ [www.festo.com/catalogue/sie](http://www.festo.com/catalogue/sie)



Additional information/Support/User documentation  
→ [www.festo.com/sp/sie](http://www.festo.com/sp/sie)

Inductive sensors

Proximity sensors, inductive

SIE...



- + With standard switching distance
- + For DC voltage
- + Round design
- + Metric thread
- + Flush or non-flush mounting
- + With switching status indication
- + Design with metal housing
- + Design with polyamide housing



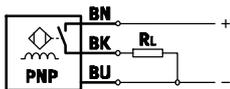
- Versions for DC and AC voltage
- Switching output PNP, NPN or analogue output
- Corrosion-resistant and welding field immune versions
- Versions with increased sensing distance
- ★ Quick ordering of basic designs → 902

→ [www.festo.com/catalogue/sie](http://www.festo.com/catalogue/sie)

### Product range overview

Version	Type	Operating voltage	Switching output/ analogue output	Type of installation	Size	→ Page/ online
<b>Reduction factor, material-specific</b>						
Standard switching distance	SIEN Basic design	10 ... 30 V DC 15 ... 34 V DC	PNP NPN	Flush Non-flush	∅ 4 mm, M5, ∅ 6.5 mm, M8, M12, M18, M30	899
	SIEN-...-PA Polyamide housing	10 ... 30 V DC	PNP NPN	Flush Non-flush	M12, M18, M30	900
	SIED Basic design	20 ... 265 V AC 20 ... 320 V DC	Non-contacting, 2-wire	Flush Non-flush	M12, M18, M30	<a href="#">sied</a>
	SIED-...-PA Polyamide housing	20 ... 250 V AC 10 ... 300 V DC	Non-contacting, 2-wire	Flush Non-flush	M12, M18, M30	<a href="#">sied</a>
	SIES Special design	10 ... 30 V DC	PNP NPN	Flush	5x5x25 mm ... 40x40x120 mm	<a href="#">sies</a>
Increased sensing distance	SIEH Basic design	10 ... 30 V DC 15 ... 34 V DC	PNP NPN	Flush	∅ 3 mm, M12, M18	<a href="#">sieh</a>
	SIEH-...-CR Stainless steel housing	10 ... 30 V DC	PNP NPN	Flush	M12, M18	<a href="#">sieh</a>
	SIEA	15 ... 30 V DC	0 ... 10 V and 4 ... 20 mA	Flush	M8, M12, M18, M30	<a href="#">siea</a>
<b>Reduction factor 1 for all metals, welding field immune</b>						
Increased sensing distance	SIEF Basic design	10 ... 65 V DC	PNP NPN	Flush Partially flush	M8, M12, M18, M30, 40x40x65 mm	<a href="#">sief</a>
	SIEF-...-WA Housing resistant to welding spatter	10 ... 30 V DC	PNP NPN	Flush Partially flush	M12, M18, M30	<a href="#">sief</a>

## Data sheet – With standard switching distance



E.g. N/O contact, PNP, with cable



Technical data		Download CAD data → <a href="http://www.festo.com">www.festo.com</a>						
Size		4	6.5	M5	M 8	M12	M18	M30
Rated operating distance	Flush [mm]	0.8	1.5	0.8	1.5	2	5	10
	Non-flush [mm]	–	–	–	2.5	4	8	15
Switching output		PNP						
		NPN						
Switching element function		N/O contact						
		N/C contact						
Type of installation		Flush						
		–					Non-flush	
Type of mounting		Clamped		Via lock nut				
Electrical connection		Cable, 3-wire						
		Plug connector M8x1, 3-pin				Plug connector M12x1, 3-pin		
Operating voltage range	[V DC]	10 ... 30						
Max. output current	[mA]	200						
∅/length	[mm]	8/42 (4/25) <sup>1)</sup>	8/45 (6.5/35) <sup>1)</sup>	8/42 (5/25) <sup>1)</sup>	8/45 (8/35) <sup>1)</sup>	12/45 (12/35) <sup>1)</sup>	18/48.5 (18/35) <sup>1)</sup>	30/48.5 (30/35) <sup>1)</sup>
Max. connecting cable length	[m]	2.5						

1) Value in brackets for electrical connection via cable.

## Pin allocation to EN 60947-5-2

M8x1, 3-pin

N/O contact and N/C contact			
	Pin	Wire colour	Allocation
	1	Brown	+
	3	Blue	–
	4	Black	Output

M12x1, 3-pin

N/O contact			
	Pin	Wire colour	Allocation
	1	Brown	+
	3	Blue	–
	4	Black	Output

N/C contact			
	Pin	Wire colour	Allocation
	1	Brown	+
	3	Blue	–
	2	White	Output

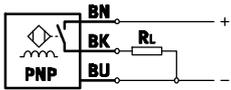
## Operating conditions

Ambient temperature	[°C]	–25 ... +70
Ambient temperature with flexible cable installation	[°C]	–5 ... +70

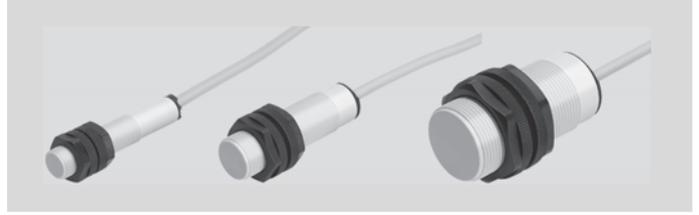
## Materials

	M4 ... M8	M12 ... M30
Housing	High-alloy stainless steel	Nickel-plated brass
Cable sheath	PUR	

## Data sheet – With standard switching distance, polyamide housing



E.g. N/O contact, PNP, with cable



Technical data		Download CAD data → <a href="http://www.festo.com">www.festo.com</a>		
Size		M12	M18	M30
Rated operating distance	Flush [mm]	2	5	10
	Non-flush [mm]	4	8	15
Switching output		PNP		
		NPN		
Switching element function		N/O contact		
Type of installation		Flush		
		Non-flush		
Type of mounting		Via lock nut		
Electrical connection		Cable, 3-wire		
Operating voltage range	[V DC]	10 ... 30		
Max. output current	[mA]	200		
∅/length	[mm]	12/60	18/60	30/60
Max. connecting cable length	[m]	2.5		

## Operating conditions

Ambient temperature	[°C]	-25 ... +70
Ambient temperature with flexible cable installation	[°C]	0 ... +70

## Materials

Housing	PA
Cable sheath	PVC

## Order code – With standard switching distance

SIEN							L
<b>Type</b>							
SIEN	Proximity sensor with standard switching distance						
<b>Design/size</b>							
4; 6.5	Round O.D. 4 or 6.5 mm						
M5, M8, M12, M18, M30	Metric thread M5, M8, M12, M18, M30						
<b>Type of installation</b>							
B	Flush						
NB	Non-flush <span style="border: 1px solid black; padding: 0 2px;">1</span>						
<b>Switching output</b>							
P	PNP						
N	NPN						
<b>Switching element function</b>							
S	N/O contact						
O	N/C contact						
<b>Electrical connection</b>							
K	Cable						
S	Plug connector						
<b>Display</b>							
L	Switching status						
<b>Version</b>							
-	Basic design						
PA	Polyamide housing <span style="border: 1px solid black; padding: 0 2px;">2</span>						

1 Only with design/size M8 ... M30.

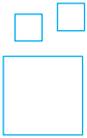
2 Only with design/size M12 ... M30,  
and switching element function S,  
and electrical connection K.

**Order example:**

SIEN-M5B-PS-K-L

Proximity sensor with standard switching distance - metric thread M5 - flush installation - switching output PNP - switching element function N/O contact - electrical cable connection - switching status display - basic design

## Ordering – Product options



**Configurable product**

**This product and all its options can be ordered using the configurator.**

The configurator can be found under Products on the DVD or

→ [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...)

Enter the type code in the search field.

★ Quick ordering<sup>1)</sup>

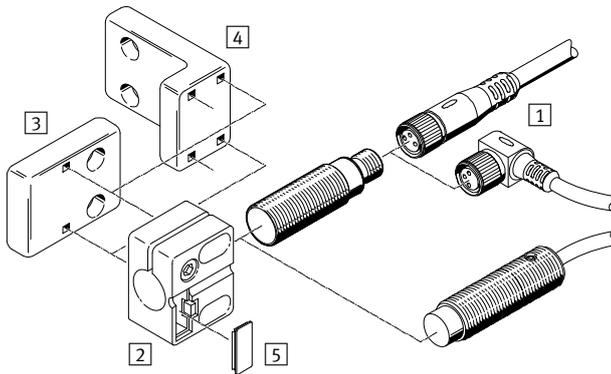
Size	Electrical connection	Part no.	Type
M5			
	Cable	150368	SIEN-M5B-NS-K-L
		150370	SIEN-M5B-PS-K-L
	Plug connector	150369	SIEN-M5B-NS-S-L
		150371	SIEN-M5B-PS-S-L

Size	Electrical connection	Part no.	Type
M8			
	Cable	150384	SIEN-M8B-NS-K-L
		150386	SIEN-M8B-PS-K-L
	Plug connector	150385	SIEN-M8B-NS-S-L
		150387	SIEN-M8B-PS-S-L

1) All products in this table are easy to select and quick to order.

## Accessories

SIE



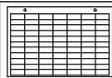
		→ Page/online
1	Connecting cable NEBU	903
2	Sensor bracket SIEZ-...B	903
3	Sensor bracket SIEZ-UV	903

		→ Page/online
4	Sensor bracket SIEZ-UH	903
5	Inscription label SIEZ-LB	903

## Accessories – Ordering data

	Cable length [m]		Part no.	Type
<b>1</b>	<b>Connecting cable, straight socket</b> <span style="float:right">Technical data → 1161</span>			
	2.5	★	541333	NEBU-M8G3-K-2.5-LE3
	5	★	541334	NEBU-M8G3-K-5-LE3
	2.5	★	541363	NEBU-M12G5-K-2.5-LE3
	5	★	541364	NEBU-M12G5-K-5-LE3
	2.5	★	550326	NEBU-M12G5-K-2.5-LE4 <sup>1</sup>
	5	★	541328	NEBU-M12G5-K-5-LE4 <sup>1</sup>
<b>Angled socket</b>				
	2.5	★	541338	NEBU-M8W3-K-2.5-LE3
	5	★	541341	NEBU-M8W3-K-5-LE3
	2.5		541367	NEBU-M12W5-K-2.5-LE3
	5		541370	NEBU-M12W5-K-5-LE3
	2.5		550325	NEBU-M12W5-K-2.5-LE4 <sup>1</sup>
	5		541329	NEBU-M12W5-K-5-LE4 <sup>1</sup>

1) For connecting proximity sensor SIE...M12/M18/M30 in N/C contact version with plug.

	For design	Part no.	Type
<b>2</b> Sensor bracket with stop for flush fitting			
	M8	538346	SIEZ-B-8
	M12	538348	SIEZ-B-12
	M18	538350	SIEZ-B-18
	M30	538352	SIEZ-B-30
<b>3</b> Without stop			
	4	538343	SIEZ-NB-4
	6.5	538344	SIEZ-NB-6,5
	M8	538345	SIEZ-NB-8
	M12	538347	SIEZ-NB-12
	M18	538349	SIEZ-NB-18
	M30	538351	SIEZ-NB-30
	M12, M18	538355	SIEZ-UV
<b>4</b> Without stop			
	M12, M18	538354	SIEZ-UH
<b>5</b> Inscription label			
	M12 ... M30	538353	SIEZ-LB



Overview/Configuration/Ordering

→ [www.festo.com/catalogue/sies-8m](http://www.festo.com/catalogue/sies-8m)



Additional information/Support/User documentation

→ [www.festo.com/sp/sies-8m](http://www.festo.com/sp/sies-8m)

Inductive sensors

Proximity sensor, inductive, for T-slot

# SIES-8M



- + Suitable for position sensing for electric axes EGC and grippers with T-slot
- + With 2 LEDs for better visibility
- + Flush mounting



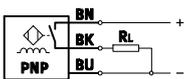
- Insertable in T-slot, flush
- Position sensing for electric axes EGC, EGSK, EGSP and grippers with T-slot
- Switching output PNP or NPN
- 2 LEDs for visibility regardless of the direction from which the sensor is approached

→ [www.festo.com/catalogue/sies-8m](http://www.festo.com/catalogue/sies-8m)

## Product range overview

Version	Type	Operating voltage	Switching output	Design
Standard switching distance	SIES Special design	10 ... 30 V DC	PNP NPN	For T-slot

## Data sheet



E.g. N/O contact, PNP, with cable

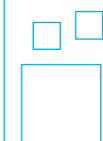
10

Technical data		Download CAD data → <a href="http://www.festo.com">www.festo.com</a>
Rated operating distance	[mm]	1.5
Switching output		PNP or NPN
Switching element function		N/O contact or N/C contact
Type of mounting		Screw-clamped, insertable from above, flush with T-slot
Electrical connection		Cable, 3-wire Cable with plug M8x1, 3-pin, rotatable thread
Operating voltage range	[V DC]	10 ... 30
Max. output current	[mA]	150
Length/width/height	[mm]	5/5/32

Operating conditions		
Ambient temperature	[°C]	-25 ... +70
Ambient temperature with flexible cable installation	[°C]	-5 ... +70

Materials	SIES-8M-...-OE	SIES-8M-...-M8D
Housing	PA, PUR, high-alloy stainless steel	PA, PUR, nickel-plated brass, high-alloy stainless steel
Cable sheath	TPE-U (PU)	

## Ordering – Product options



Configurable product

This product and all its options can be ordered using the configurator.

The configurator can be found under Products on the DVD or  
→ [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...)

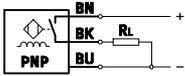
Enter the type code in the search field.

## Data sheet

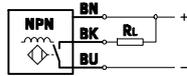
## Pin allocation

Cable

PNP, N/O contact

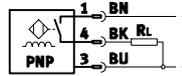


NPN, N/O contact

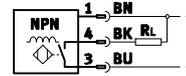


Plug connector

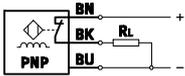
PNP, N/O contact



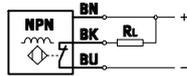
NPN, N/O contact



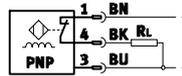
PNP, N/C contact



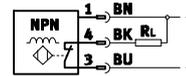
NPN, N/C contact



PNP, N/C contact



NPN, N/C contact



Wire colours

BN = Brown

BK = Black

BU = Blue

## Order code – Special design

		SIES	-	8M	-		-		-	24V	-	C	-		-	
<b>Type</b>																
SIES	Sensor, special design															
<b>Design</b>																
8M	For T-slot															
<b>Switching output</b>																
P	PNP															
N	NPN															
<b>Switching element function</b>																
S	N/O contact															
O	N/C contact															
<b>Rated operating voltage</b>																
24 V	24 V DC															
<b>Cable characteristics</b>																
C	Standard + energy chain															
<b>Cable length</b>																
0.3	0.3 m															2
2.5	2.5 m															2
5	5 m															2
7.5	7.5 m															1
10	10 m															2
<b>Electrical connection</b>																
OE	Cable, 3-wire, open end															
M8D	Cable with plug M8x1, 3-pin, rotatable thread															

1 Only with electrical connection OE

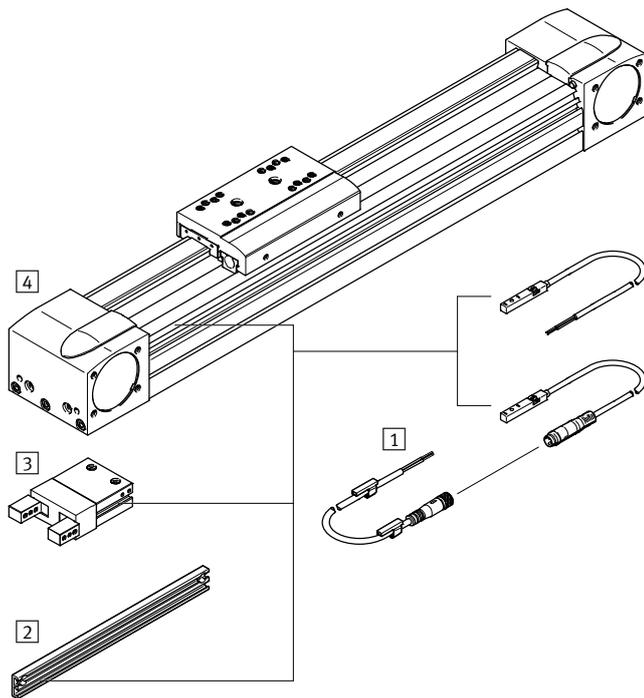
2 Only with electrical connection M8D

## Order example:

SIES-8M-PS-24 V-K-0,3-M8D

Sensor, special design for T-slot - switching output PNP - switching element function N/O contact - rated operating voltage 24 V DC - cable characteristic standard + energy chain - cable length 0.3 m - cable with plug M8x1, 3-pin, rotatable thread

## Accessories



		→ Page/online
1	Connecting cable NEBU-M8...3	907
2	Sensor bracket SIEZ-8M	907
3	Gripper with T-slot, e.g. parallel gripper DHPS	<a href="#">gripper</a>
4	Electric axes, e.g. toothed belt axis EGC...-TB	<a href="#">egc</a> <a href="#">egsk</a> <a href="#">egsp</a>
-	Slot cover	907

## Accessories – Ordering data

	Cable length [m]	Part no.	Type
<b>1</b> 	<b>Connecting cable, straight socket</b> <span style="float: right;">Technical data → 1161</span>		
	2.5	★ 541333	NEBU-M8G3-K-2.5-LE3
	5	★ 541334	NEBU-M8G3-K-5-LE3
	10	★ 541332	NEBU-M8G3-K-10-LE3
<b>Angled socket</b>			
	2.5	★ 541338	NEBU-M8W3-K-2.5-LE3
	5	★ 541341	NEBU-M8W3-K-5-LE3
	10	★ 541335	NEBU-M8W3-K-10-LE3

	Length [m]	Part no.	Type
<b>2</b> 	<b>Sensor bracket</b>		
	0.2	551406	SIEZ-8M-200
	0.4	551407	SIEZ-8M-400
<b>Slot cover for T-slot</b>			
	2x 0.5	563360	ABP-5-S1





Overview/Configuration/Ordering  
→ [www.festo.com/catalogue/spau](http://www.festo.com/catalogue/spau)



Additional information/Support/User documentation  
→ [www.festo.com/sp/spau](http://www.festo.com/sp/spau)

Pressure and vacuum sensors  
Pressure sensor

# SPAU



- + An assembly concept with short assembly times that is easy to implement in all installation situations
- + Flexible assembly and mounting options
- + Maximum versatility and reduced warehousing owing to switchable electrical outputs
- + The variant with display offers the option of reading the pressure and set values on-site



- Pressure switches and pressure transmitters with focus on pneumatic applications
- The sensor is positioned as the SDE1, however with extended mechanical and electrical function range
- Many pressure ranges selectable, multicolour display and simple intuitive operation
- Configurable outputs (PNP / NPN / N/C contact / N/O contact) switchable, current/voltage output switchable, IO-Link 1.1

→ [www.festo.com/catalogue/spau](http://www.festo.com/catalogue/spau)

## Product range overview

Method of measurement	Pressure measuring range [bar]	Measured variable	Switching element function	Switching function	Pneumatic port	Electrical connection	Electrical output	
							1	2
Piezoresistive pressure sensor with display	-1... 1 bar -1... 10 bar 0... -0.25 bar 0... -0.5 bar 0... -1 bar 0... 0.25 bar 0... 0.5 bar 0... 1 bar 0... 2 bar 0... 6 bar 0... 10 bar 0... 12 bar 0... 16 bar	Relative pressure	Switchable	Freely programmable	G 1/8 M5 M7 NPT 1/8 Plug connector 4 mm Plug connector 6 mm R 1/4 R 1/8 Push-in connector 5/32	Plug M8x1 Plug M12x1	IO-Link PNP or NPN or IO-Link	4 ... 20 mA 1 ... 5 V PNP or NPN or 0 ... 10 V or 1 ... 5 V 4 ... 20 mA

## Product options

### Sensor with display

- Pressure display, pressure switching outputs and readout of analogue value from an on-site device can be set
- Quick commissioning of the pressure sensor thanks to straightforward menu navigation
- Display colour blue/red as visual feedback about the pressure of the medium
- Min./max. value memory for monitoring compressed air (display of rapid pressure peaks that are not visible to the human eye)
- Adjustable filter attenuates the sensor signal generated by pressure peaks
- Scaling the analogue output to increase the signal dynamics

- Choice of pressure units: bar, MPa, PSI and more
- Offset compensation possible
- ECO function "Switch off display" available
- Optional security code can be freely chosen (4-digit code)
- All settings that have been carried out on one sensor (master) can be transferred (replication) to other, identical sensors (device). This enables the commissioning time to be significantly shortened

### Sensor without display

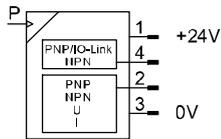
- Analogue value output and pressure switching outputs proportional to the pressure
- Switching output behaviour can be set on the machine display using IO-Link
- Other functions can be set using IO-Link

### IO-Link:

- With and without display
- Serial communication integrated using IO-Link 1.1
- Analogue process value is provided digitally
- The sensor can be parameterised and maintained remotely at control level using an IO-Link master
- Automatic parameterisation following sensor change: no need to repeat parameterisation and sensor settings after changing the sensor

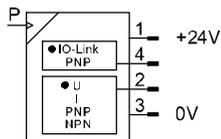
## Data sheet

Display ... -L



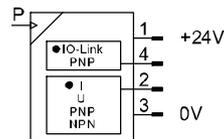
Variant without display

Output preset to voltage ... -LK-V



Variant without display

Output preset to current ... -LK-A



Technical data		Display variant	Display variant for front panel mounting	Variant without display
Type of mounting				
Operating voltage range	[V DC]	20 ... 30	20 ... 30	20 ... 30
Electrical connection		Plug M8, plug M12, A-coded	Plug M8, plug M12, A-coded	Plug M12, A-coded
Length/width/height	[mm]	64/32/83	67/40/55	83/32/57

Download CAD data → [www.festo.com](http://www.festo.com)

## Input signal, measuring element

SPAU	-B2	-B11	-V025	-V05	-V1	-P025	-P05	-P1	-P2	-P6	-P10	-P12	-P16
Pressure measuring range starting value	-1		0										
Pressure measuring range final value	1	10	-0.25	-0.5	-1	0.25	0.5	1	2	6	10	12	16
Overload range	5	15	1	2	5	1	2	5	6	15	15	15	20
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]												
Note on operating/pilot medium	Lubricated operation possible												
Ambient temperature	[°C] 0 ... +50												
Temperature of medium	[°C] 0 ... +50												

## Switching output

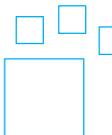
	SPAU-...-PNLK	SPAU-...-PNVBA	SPAU-...-LK-A	SPAU-...-LK-V
Switching output	2 x PNP or 2 x NPN, switchable		PNP/NPN, switchable	
Switching function	Freely programmable		Freely programmable	
Switching element function	N/C or N/O contact, switchable		N/C or N/O contact, switchable	

## Analogue output

	SPAU-...-PNLK	SPAU-...-PNVBA	SPAU-...-LK-A	SPAU-...-LK-V
Analogue output	[V]	0 ... 10	-1)	
	[V]	1 ... 5	-2)	
	[mA]	4 ... 20	-3)	

- 1) 0 ... 10 V analogue output can only be activated using IO-Link
- 2) 1 ... 5 V analogue output can only be activated using IO-Link
- 3) 4 ... 20 mA analogue output can only be activated using IO-Link

## Ordering – Product options



**Configurable product**

**This product and all its options can be ordered using the configurator.**

The configurator can be found under Products on the DVD or  
[→ www.festo.com/catalogue/...](http://www.festo.com/catalogue/...)

Enter the type code in the search field.

## Order code

SPAU		–		R	–		–		–	
------	--	---	--	---	---	--	---	--	---	--

Type	
SPAU	Pressure sensors

Pressure measuring range [bar]	
P025	0 ... 0.25
P05	0 ... 0.5
P1	0 ... 1
P2	0 ... 2
P6	0 ... 6
P10	0 ... 10
P12	0 ... 12
P16	0 ... 16
B2	-1 ... 1
B11	-1 ... 10
V025	0 ... -0.25
V05	0 ... -0.5
V1	0 ... -1

Supply port	
R	Relative pressure

Type of mounting	
T	Threaded mounting
H	H-rail mounting
W	Wall mounting
A	Mounting bracket
F	Front panel mounting

Pneumatic connection	
G18	G $\frac{1}{8}$
R14	R $\frac{1}{4}$ <span style="border: 1px solid black; padding: 0 2px;">15</span>
R18	R $\frac{1}{8}$
N18	NPT $\frac{1}{8}$
M5	M5 <span style="border: 1px solid black; padding: 0 2px;">1</span>
M7	M7
Q4	Push-in connector 4 mm <span style="border: 1px solid black; padding: 0 2px;">2</span>
Q6	Push-in connector 6 mm <span style="border: 1px solid black; padding: 0 2px;">2</span>
T532	Push-in connector 5/32 <span style="border: 1px solid black; padding: 0 2px;">2</span>

Thread type	
–	None
M	Male thread <span style="border: 1px solid black; padding: 0 2px;">3</span> <span style="border: 1px solid black; padding: 0 2px;">4</span>
F	Female thread <span style="border: 1px solid black; padding: 0 2px;">3</span> <span style="border: 1px solid black; padding: 0 2px;">5</span>

Outlet direction	
–	Rear <span style="border: 1px solid black; padding: 0 2px;">6</span>
D	Bottom <span style="border: 1px solid black; padding: 0 2px;">7</span>

1 Only with mounting type A, F

2 Not with type of mounting T, not with pressure measuring range P16

3 Only in combination with pneumatic connection G18, N18, R18, R14, M7, M5

4 Not with type of mounting W, H, not with pneumatic connection Q4, Q6, T532, M7, M5

5 Not with type of mounting A if pneumatic connection G18, N18, R18

6 Not with type of mounting W, H, not with thread type F if pneumatic connection G18, N18, R18

7 Not with pneumatic connection M5, not with type of mounting A, not with thread type M

15 Only with thread type M, only outlet direction at rear, not with type of mounting W or H, not with electrical outlet direction at rear

## Order code

## Advertisement

-	None	
L	LCD, backlit	8

## Electrical output 1

PNLK	PNP, NPN, IO-Link	10
LK	IO-Link	9

## Electrical output 2

PNVBA	PNP, NPN, 0 ... 10 V, 1 ... 5 V, 4 ... 20 mA	10
V	0 ... 10 V	9
B	1 ... 5 V	9
A	4 ... 20 mA	9

## Electrical connection

M 8	M8 plug
M12	M12 plug, A-coded

## Electrical outlet direction

-	Rear	11
D	Bottom	12
U	Top	13

## Electrical accessories

-	None
2.5A	Angled socket, cable 2.5 m
2.5S	Straight socket, cable 2.5 m
5A	Angled socket, cable 5 m
5S	Straight socket, cable 5 m

## Protective devices

-	None	
G	Safety guard	14

## Certificate

-	None
T	Test report

8 Only in combination with type of mounting F

9 Not with display L

10 Not without display

11 Only with type of mounting A, F, not with pneumatic connection G18, N18, R18, M7, M5, not with outlet direction D, U, only with thread type "none"

12 Only with outlet direction D if pneumatic connection QS4, or T532 selected, not with outlet direction at rear if pneumatic connection QS4, QS6, T532

13 Only with outlet direction U if pneumatic connection QS4, or T532 selected, not with outlet direction at rear if pneumatic connection QS4, QS6, T532

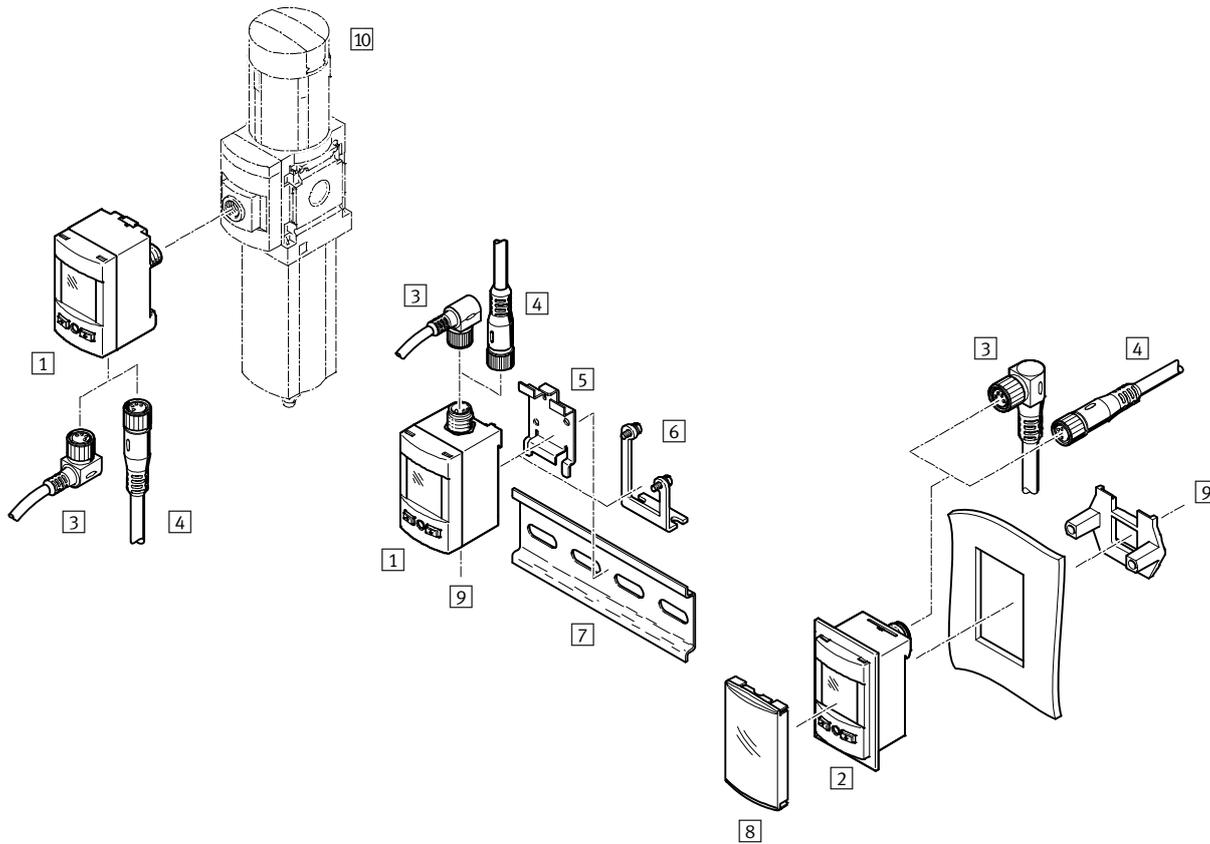
14 Only with display L

## Order example:

SPAU-B2R-T-R18M-L-PNLK-PNVBA-M8D

Pressure sensor with display - pressure measuring range 0 ... 0.25 bar - supply port relative pressure - type of mounting thread mounting - pneumatic connection R<sup>1</sup>/<sub>4</sub> - thread type male - display LCD, backlit - electrical output 1 PNLK - electrical output 2 PNVBA - electrical connection M8 - electrical outlet direction on top

## Accessories



10

		→ Page/ online
1	Pressure sensors SPAU, display variants	<a href="#">spau</a>
2	Pressure sensors SPAU, display variants for front panel mounting	<a href="#">spau</a>
3	Connecting cable, angled socket	915
4	Connecting cable, straight socket	915
5	Wall mounting SAMH-PU-W	915

		→ Page/ online
6	Mounting bracket SAMH-PU-A	915
7	Mounting rail to DIN EN 60715	<a href="#">nrh</a>
8	Safety guard SACC-PU-G	915
9	Pressure supply port	-
10	Service unit	-

## Accessories – Ordering data

	Electrical connection	Number of wires	Cable length [m]	Part no.	Type
<b>Connecting cables M12x1</b>					
<b>4 Straight socket</b> <span style="float: right;">Technical data → 1161</span>					
	M8x1, 4-pin	4	2.5	541342	NEBU-M8G4-K-2.5-LE4
			5	541343	NEBU-M8G4-K-5-LE4
	M12x1, 5-pin	4	2.5	★ 550326	NEBU-M12G5-K-2.5-LE4
			5	★ 541328	NEBU-M12G5-K-5-LE4
<b>3 Angled socket</b> <span style="float: right;">Technical data → 1161</span>					
	M8x1, 4-pin	4	2.5	541344	NEBU-M8W4-K-2.5-LE4
			5	541345	NEBU-M8W4-K-5-LE4
	M12x1, 5-pin	4	2.5	550325	NEBU-M12W5-K-2.5-LE4
			5	541329	NEBU-M12W5-K-5-LE4
<b>Wall mounting</b>					
	-			8003355	SAMH-PU-W
<b>Mounting bracket</b>					
	-			8003354	SAMH-PU-A
<b>Safety guard</b>					
	-			8003353	SACC-PU-G



Overview/Configuration/Ordering  
→ [www.festo.com/catalogue/sde1](http://www.festo.com/catalogue/sde1)



Additional information/Support/User documentation  
→ [www.festo.com/sp/sde1](http://www.festo.com/sp/sde1)

Pressure and vacuum sensors

Pressure sensors with display

# SDE1



- + Five pressure measuring ranges
- + Measurement of relative or differential pressure
- + Switching outputs PNP, NPN and with analogue current or voltage output
- + LCD or illuminated LCD display
- + Via H-rail, via wall/surface bracket, mounting on service unit, front panel mounting
- + Certification: c UL us Listed (OL), C-Tick



- Five pressure measuring ranges
- Measurement of relative or differential pressure
- Switching outputs PNP, NPN and with analogue current or voltage output
- LCD or illuminated LCD display
- Wide range of connection and mounting options

→ [www.festo.com/catalogue/sde1](http://www.festo.com/catalogue/sde1)

### Product range overview

Method of measurement	Pressure measuring range [bar]	Measured variable	Switching element function	Switching function	Pneumatic port	Electrical connection	Electrical output	
							Digital	Analogue
Piezoresistive pressure sensor with display	-1 ... 0, -1 ... +1, 0 ... 2, 0 ... 6, 0 ... 10	Relative pressure Differential and relative pressure <sup>1)</sup>	Switchable	Freely programmable	R $\frac{1}{8}$ R $\frac{1}{4}$ G $\frac{1}{8}$ QS-4	Plug M8x1 Plug M12x1	PNP	-
							2x PNP	-
							PNP	0 ... 10 V
							PNP	4 ... 20 mA
							2x PNP	4 ... 20 mA
							NPN	-
							2x NPN	-
							NPN	0 ... 10 V
NPN	4 ... 20 mA							

1) Versions with push-in connector QS-4.

### Product options

- LCD display with backlighting (optimised operation)
- Illuminated LCD display (optimised reading)
- Type of mounting: On service unit, via H-rail, via wall/surface bracket, front panel mounting
- Pneumatic connection: Male thread, female thread, push-in connector
- Connecting cable



## Order code

		SDE1	-		-	G2	-		-		-		-		-	
<b>Type</b>																
SDE1	Pressure sensor with display															
<b>Pressure measuring range</b>																
B2	-1 ... +1 bar															
V1	-1 ... 0 bar															
D2	0 ... +2 bar															
D6	0 ... +6 bar															
D10	0 ... +10 bar															
<b>Absolute accuracy</b>																
G2	Accuracy 2%															
<b>Pneumatic connection and mounting</b>																
R18	Male thread R $\frac{1}{8}$ , mounting on service unit															
R14	Male thread R $\frac{1}{4}$ , mounting on service unit															
MS4	Direction connection to service unit															
MS6	Direction connection to service unit															
H18	Female thread G $\frac{1}{8}$ , H-rail mounting															
W18	Female thread G $\frac{1}{8}$ , wall or surface mounting															
HQ4	Push-in connector QS-4, H-rail mounting															
WQ4	Push-in connector QS-4, wall or surface mounting															
FQ4	Push-in connector QS-4, front panel mounting															
<b>Display and setting</b>																
C	LCD display with backlighting (optimised operation)															
L	Illuminated LCD display (optimised reading)															
<b>Electrical output</b>																
P1	1 switching output PNP															
P2	2 switching outputs PNP															
PU	1 switching output PNP, 1 analogue output 0 ... 10 V															
PI	1 switching output PNP, 1 analogue output 4 ... 20 mA															
N1	1 switching output NPN															
N2	2 switching outputs NPN															
NU	1 switching output NPN, 1 analogue output 0 ... 10 V															
NI	1 switching output NPN, 1 analogue output 4 ... 20 mA															
<b>Electrical connection</b>																
M 8	Plug M8x1															
M12	Plug M12x1															
<b>Accessories</b>																
G	Connecting cable, straight socket, 2.5 m														1	
W	Connecting cable, angled socket, 2.5 m														1	
G5	Connecting cable, straight socket, 5 m															
W5	Connecting cable, angled socket, 5 m															

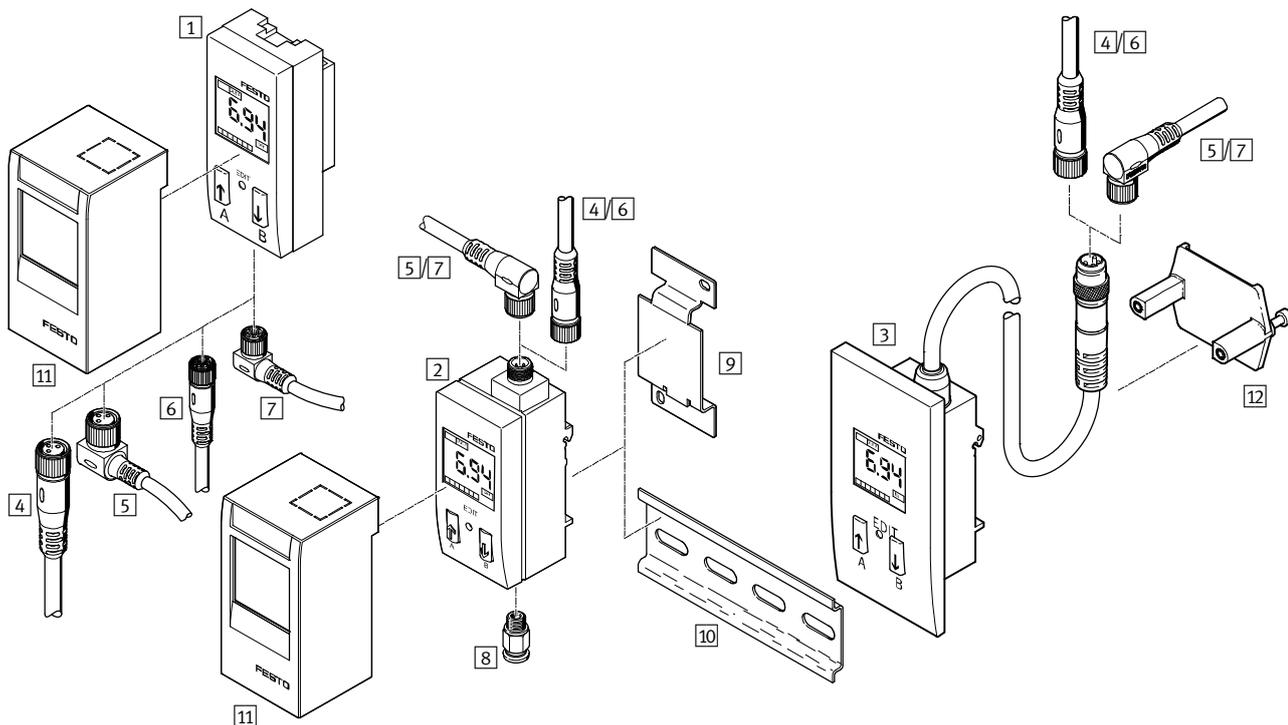
1 Not with electrical connection M12 in combination with electrical output P2, PU, PI, N2, NU, NI

**Order example:**

SDE1-V1-G2-H18-C-P1-M8

Pressure sensor with display - -1 ... 0 bar - accuracy 2% - female thread G $\frac{1}{8}$ , H-rail mounting - LCD display with backlighting (optimised operation) - 1 switching output PNP - plug M8x1

## Accessories

→ Page/  
online

1	Pressure sensor SDE1-...-R14	918
2	Pressure sensor SDE1-...-H18, SDE1-...-W18	918
3	Pressure sensor SDE1-...-FQ4	918
4	Connecting cable NEBU-M12G, straight socket	921
5	Connecting cable NEBU-M12W, angled socket	921
6	Connecting cable NEBU-M8G, straight socket	921
7	Connecting cable NEBU-M8W, angled socket	921

→ Page/  
online

8	Push-in fitting QS-1/8	921
9	Adapter plate SDE1-...-W..	<a href="#">sde1-w</a>
10	Mounting rail to EN 60715	<a href="#">nrh</a>
11	Safety guard SDE1-SH	<a href="#">sde1-sh</a>
12	Clamping plate (included in the scope of delivery of SDE1-...-FQ4)	-

## Accessories – Ordering data

	Number of wires	Cable length [m]		Part no.	Type
<b>Connecting cables M12x1</b>					
<b>4 Straight socket</b> <span style="float: right;">Technical data → 1161</span>					
	3	2.5	★	541363	NEBU-M12G5-K-2.5-LE3
		5	★	541364	NEBU-M12G5-K-5-LE3
	4	2.5	★	550326	NEBU-M12G5-K-2.5-LE4
		5	★	541328	NEBU-M12G5-K-5-LE4
<b>5 Angled socket</b> <span style="float: right;">Technical data → 1161</span>					
	3	2.5		541367	NEBU-M12W5-K-2.5-LE3
		5		541370	NEBU-M12W5-K-5-LE3
	4	2.5		550325	NEBU-M12W5-K-2.5-LE4
		5		541329	NEBU-M12W5-K-5-LE4
<b>Connecting cables M8x1</b>					
<b>6 Straight socket</b> <span style="float: right;">Technical data → 1161</span>					
	3	2.5	★	541333	NEBU-M8G3-K-2.5-LE3
		5	★	541334	NEBU-M8G3-K-5-LE3
	4	2.5		541342	NEBU-M8G4-K-2.5-LE4
		5		541343	NEBU-M8G4-K-5-LE4
<b>7 Angled socket</b> <span style="float: right;">Technical data → 1161</span>					
	3	2.5	★	541338	NEBU-M8W3-K-2.5-LE3
		5	★	541341	NEBU-M8W3-K-5-LE3
	4	2.5		541344	NEBU-M8W4-K-2.5-LE4
		5		541345	NEBU-M8W4-K-5-LE4
<b>8 Push-in fittings</b> <span style="float: right;">Technical data → 1106</span>					
	4		★	186095	QS-G $\frac{1}{8}$ -4
	6		★	186096	QS-G $\frac{1}{8}$ -6
	8		★	186098	QS-G $\frac{1}{8}$ -8



Overview/Configuration/Ordering  
→ [www.festo.com/catalogue/sde5](http://www.festo.com/catalogue/sde5)



Additional information/Support/User documentation  
→ [www.festo.com/sp/sde5](http://www.festo.com/sp/sde5)

Pressure and vacuum sensors  
Pressure sensors

# SDE5



- + Programmable and configurable pressure switch for simple pressure sensing tasks
- + Threshold/window comparator
- + Teach-in function for programming
- + Integrated microprocessor
- + Switching status indicated by an LED visible from all sides
- + Certification: c UL us Listed (OL), C-Tick



- Programmable and configurable pressure switch for simple pressure sensing tasks
- Teach-in function for programming
- Integrated microprocessor
- Switching status indicated by an LED visible from all sides
- ★ Quick ordering of basic designs → 926

→ [www.festo.com/catalogue/sde5](http://www.festo.com/catalogue/sde5)

## Product range overview

Method of measurement	Pressure measuring range [bar]	Switching element function	Switching function	Pneumatic port	Electrical output	Electrical connection
Piezoresistive	-1 ... 0, -1 ... 1, 0 ... 2, 0 ... 6, 0 ... 10	N/O contact, N/C contact Switchable	Threshold value, window comparator	QS-4, QS-6, QS-1/4", QS-5/32"	Switching output PNP, switching output NPN, Analogue output	Plug M8x1, 3-pin; Cable, 3-wire

## Product options

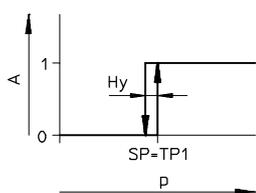
- Threshold value with fixed hysteresis
- Threshold value with variable hysteresis
- Window comparator with fixed hysteresis
- Connecting cable
- Teach-in points permanently set

### Switching functions

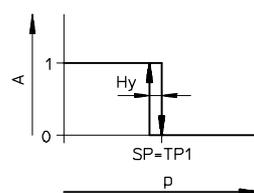
#### Operating mode 0

Threshold value with fixed hysteresis, 1 teach-in pressure

N/O switching element



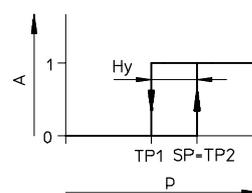
N/C switching element



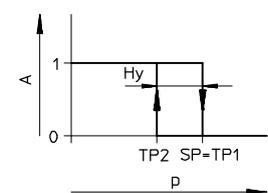
#### Operating mode 2

Threshold value with variable hysteresis, 2 teach-in pressures

N/O switching element



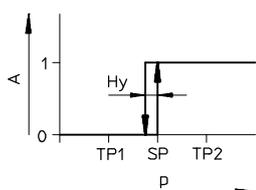
N/C switching element



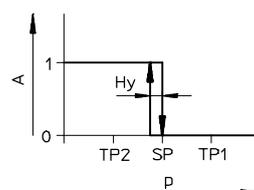
#### Operating mode 1

Threshold value with fixed hysteresis, 2 teach-in pressures

N/O switching element



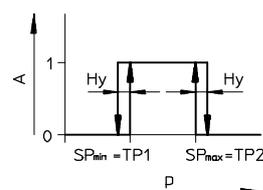
N/C switching element



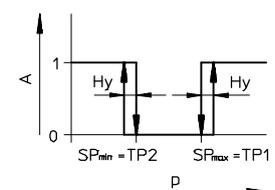
#### Operating mode 3

Window comparator with fixed hysteresis, 2 teach-in pressures

N/O switching element

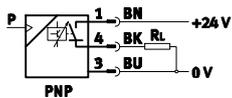


N/C switching element



- A Binary output signal
- p Pressure
- SP Switching point
- TP Teach-in pressure
- Hy Hysteresis

## Data sheet



E.g. N/O contact, PNP, with plug



## Technical data

Download CAD data → [www.festo.com](http://www.festo.com)

Electrical connection		Plug connector M8x1, 3-pin	Cable
Pneumatic port		QS-4	
		QS-6	
		QS-1/4"	
Operating voltage range	[V DC]	15 ... 30	
Max. output current	[mA]	100	
Switching output		PNP	
		NPN	
Switching function		Freely programmable (switching/teach-in function, N/O contact, N/C contact)	
		Threshold value with fixed hysteresis	
		Threshold value with variable hysteresis	
		Window comparator with fixed hysteresis	
Switching element function		N/C contact	
		N/O contact	
		Switchable	
Output characteristic	[V]	0 ... 10	
Length/width/height	[mm]	56/16/25	45/16/25

## Operating conditions

SDE5-		V1	D10
Pressure measuring range	[bar]	-1 ... 0	0 ... +10
Threshold value setting range	[%]	0 ... 100	
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]	
Note on operating/pilot medium		Lubricated operation possible (in which case lubricated operation will always be required)	
Ambient temperature	[°C]	0 ... +50	
Temperature of medium	[°C]	0 ... +50	

## Materials

Materials	
Housing	PA, POM

## Ordering – Product options



Configurable product

This product and all its options can be ordered using the configurator.

The configurator can be found under Products on the DVD or  
→ [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...)

Enter the type code in the search field.

## Order code

SDE5								
<b>Sensor function</b>								
SDE5	Pressure sensors							
<b>Pressure measuring range</b>								
V1	-1 ... 0 bar							
D10	0 ... 10 bar							
<b>Supply port</b>								
-	Relative pressure							
Z	Differential pressure							
<b>Output function</b>								
FP	Freely programmable, N/O contact, N/C contact							
O	Threshold value with fixed hysteresis, 1 teach-in pressure, N/O contact							
C	Threshold value with fixed hysteresis, 1 teach-in pressure, N/C contact							
O1	Threshold value with fixed hysteresis, 2 teach-in pressures, N/O contact							
O2	Threshold value with variable hysteresis, 2 teach-in pressures, N/O contact							
O3	Window comparator with fixed hysteresis, 2 teach-in pressures, N/O contact							
C3	Window comparator with fixed hysteresis, 2 teach-in pressures, N/C contact							
NF	No binary switching function (analogue output)							
<b>Pneumatic port</b>								
Push-in connector at both ends								
Q4	For tubing O.D. 4 mm							
Q6	For tubing O.D. 6 mm							
Push-in connector at one end								
Q4E	For tubing O.D. 4 mm						1	
Q6E	For tubing O.D. 6 mm						1	
T14E	For tubing O.D. 1/4"						1	
<b>Electrical output</b>								
P	1 switching output PNP						2	
N	1 switching output NPN						2	
V	1 analogue output 0 ... 10 V						3	
<b>Electrical connection</b>								
C	Cable, 2.5 m							
M8	Plug M8, 3 pin							
<b>Electrical accessories</b>								
-	Without electrical accessories							
G	Connecting cable, straight socket, 2.5 m						4	

1 Not in combination with supply port Z

2 Not in combination with output function NF

3 Only in combination with output function NF

4 Only in combination with M8

## Order example:

SDE5-D10Z-FP-Q6-P-M8

Pressure sensor - 0 ... 10 bar - differential pressure - freely programmable N/O contact, N/C contact - for tubing O.D. 6 mm - 1 switching output PNP - plug M8 - 3-pin

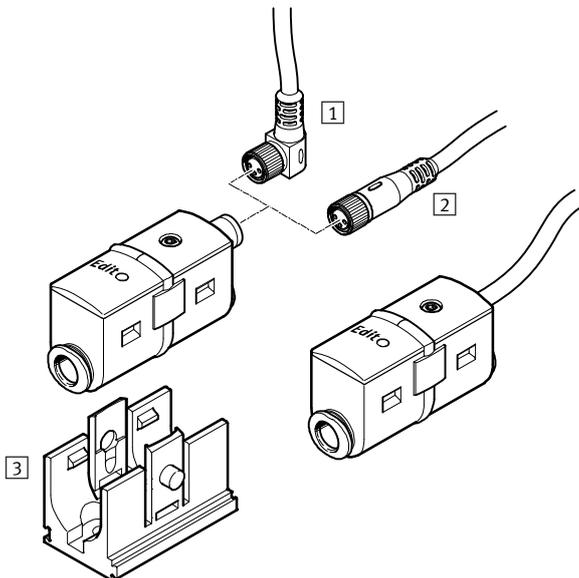
★ Quick ordering<sup>1)</sup>

Pressure measuring range [bar]	Electrical output	Part no.	Type
<b>Freely programmable (switching/teach-in function, N/O contact, N/C contact)</b>			
0 ... -1	Plug connector M8x1, 3-pin	542887	SDE5-V1-FP-Q6-P-M8
0 ... +10	Plug connector M8x1, 3-pin	542900	SDE5-D10-FP-Q4E-P-M8
		542897	SDE5-D10-FP-Q6E-P-M8
		542898	SDE5-D10-FP-Q6-P-M8
	Cable, 3-wire	542901	SDE5-D10-FP-Q4E-P-K
		542899	SDE5-D10-FP-Q6-P-K
<b>Threshold value with fixed hysteresis, 1 teach-in pressure, N/O contact</b>			
0 ... -1	Plug connector M8x1, 3-pin	527460	SDE5-V1-O-Q4E-P-M8
		527461	SDE5-V1-O-Q6E-P-M8
		527457	SDE5-V1-O-Q4-P-M8
		527458	SDE5-V1-O-Q6-P-M8
0 ... +2	Cable, 3-wire	542888	SDE5-D2-O-Q6E-P-K
0 ... +10	Plug connector M8x1, 3-pin	527466	SDE5-D10-O-Q4E-P-M8
		527467	SDE5-D10-O-Q6E-P-M8
		527463	SDE5-D10-O-Q4-P-M8
		527464	SDE5-D10-O-Q6-P-M8
	Cable, 3-wire	542890	SDE5-D10-O-Q6E-P-K
<b>N/C contact</b>			
0 ... +10	Plug connector M8x1, 3-pin	542889	SDE5-D10-C-Q4E-P-M8
		542894	SDE5-D10-C-Q6E-P-M8
	Cable, 3-wire	542895	SDE5-D10-C-Q6E-P-K

Pressure measuring range [bar]	Electrical output	Part no.	Type
<b>Threshold value with fixed hysteresis, 2 teach-in pressures with mean value calculation, N/O contact</b>			
0 ... -1	Plug connector M8x1, 3-pin	542886	SDE5-V1-O1-Q6-P-M8
<b>Threshold value with variable hysteresis, 2 teach-in pressures, N/O contact</b>			
0 ... +10	Plug connector M8x1, 3-pin	542891	SDE5-D10-O2-Q6E-P-M8
		542892	SDE5-D10-O2-Q6-P-M8
<b>Window comparator with fixed hysteresis, 2 teach-in pressures, N/O contact</b>			
0 ... +10	Cable, 3-wire	542893	SDE5-D10-O3-Q6E-P-K
<b>N/C contact</b>			
0 ... +10	Cable, 3-wire	542896	SDE5-D10-C3-Q6E-P-K

1) All products in this table are easy to select and quick to order.

## Accessories and ordering data



	Cable length [m]		Part no.	Type
<b>1</b>	<b>Connecting cable, angled socket M8x1</b>		<b>Technical data → 1161</b>	
	2.5	★	541338	NEBU-M8W3-K-2.5-LE3
	5	★	541341	NEBU-M8W3-K-5-LE3
	10	★	541335	NEBU-M8W3-K-10-LE3
<b>2</b>	<b>Straight socket M8x1</b>		<b>Technical data → 1161</b>	
	2.5	★	541333	NEBU-M8G3-K-2.5-LE3
	5	★	541334	NEBU-M8G3-K-5-LE3
	10	★	541332	NEBU-M8G3-K-10-LE3

	→ Page/ online
<b>1</b> Connecting cable NEBU-M8W3, angled socket	926
<b>2</b> Connecting cable NEBU-M8G3, straight socket	926
<b>3</b> Wall bracket (included in the scope of delivery)	-