

Pressure sensors SDE3, with display

Product overview



- Five pressure measuring ranges
- Measurement of relative or differential pressure or 2 independent pressure inputs
- Switch output 2x PNP or 2x NPN
- Numerical and graphical pressure indicator
- Display in bar, psi, kPa, inches of mercury, inches of water
- Wide range of connection and mounting options
- Specified types in accordance with ATEX directive for potentially explosive atmospheres
→ www.festo.com/en/ex

Detailed product information

→ www.festo.com/catalogue/sde3

Product overview							
Method of measurement	Measured variable	Pressure measuring range [bar]	Switching function	Pneumatic connection	Type of mounting	Electrical output	
						Digital	Analogue
Piezoresistive pressure sensor with display	1x relative pressure	0 ... -1	Freely programmable	Push-in fitting for tubing OD 4 mm	Via DIN H-rail On wall/surface bracket Front panel mounting Via through-hole	2x PNP	-
	2x relative pressure	-1 ... +1					
	1x differential pressure	0 ... 2				2x NPN	-
		0 ... 6					
	0 ... 10						

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Type codes

SDE3 - D10 S - B - HQ4 - 2P - M8 -

Sensor function

SDE3	Piezoresistive pressure sensor with display
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Pressure measuring range

V1	0 ... -1 bar
B2	-1 ... +1 bar
D2	0 ... 2 bar
D6	0 ... 6 bar
D10	0 ... 10 bar

Measured variable

S	1x relative pressure
D	2x relative pressure
Z	1x differential pressure

Display

B	Display in bar
P	Display in psi
K	Display in kPa
H	Display in inches of mercury
W	Display in inches of water

Mounting/pneumatic connection

HQ4	Via DIN H-rail, 4 mm push-in connector
WQ4	Wall mounting, 4 mm push-in connector
FQ4	Panel mounting, 4 mm push-in connector

Electrical output

2P	2 switch outputs PNP
2N	2 switch outputs NPN

Electrical connection

M8	Plug M8x1
K	2.5 m cable

Connecting cable

SIM cable with straight connection socket	
G	2.5 m long
G5	5 m long
SIM cable with angled connection socket	
W	2.5 m long
W5	5 m long

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Technical data

General technical data						
Design						
Pressure measuring range	[bar]	0 ... -1	-1 ... +1	0 ... 2	0 ... 6	0 ... 10
Measured variable	Relative pressure					
	2x relative pressure					
	Differential pressure					
Pneumatic connection	QS-4					
Type of display	Illuminated LCD					
Accuracy FS ²⁾	±2%					
Setting options	Teach-in					
Type of mounting	Via DIN H-rail					
	Via through-hole					
	Front panel mounting					
	With a wall/surface bracket					
Electrical data						
Switch output	2x PNP					
	2x NPN					
Switching element function	Switchable					
Switching function	Freely programmable					
Operating voltage range DC	[V]	15 ... 30				
Max. output current	[mA]	100				
Electrical connection	Plug M8x1, 4-pin, round design to EN 60 947-5-2					
	Cable					
	Cable with plug M8x1, 4-pin, round design to EN 60 947-5-2					
Protection against short circuit	Pulsed					
Protection against polarity reversal	For all electrical connections					
Protection class	IP65					
Operating and environmental conditions						
Operating medium	Filtered compressed air, lubricated or unlubricated, grade of filtration 40µm					
Ambient temperature	[°C]	0 ... 50				
CE mark (see declaration of conformity)	In accordance with EU EMC directive					
Protection class	IP65					
Certification	C-Tick					
Materials						
Housing	Polyamide, reinforced; polycarbonate					

1) % FS = % of measuring range's final value (full scale)

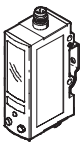
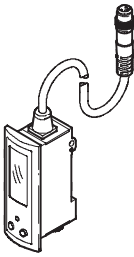
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Technical data



Sensors
Sensors for pressure and vacuum

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Ordering data						
Variant	Pressure measuring range [bar]	Measured variable	Switch output	Display	Part No.	Type
DIN H-rail mounting						
	0 ... -1	Relative pressure	2x PNP	bar	540 193	SDE3-V1S-B-HQ4-2P-M8
				inches of mercury	540 194	SDE3-V1S-H-HQ4-2P-M8
		2x relative pressure	2x PNP	bar	540 196	SDE3-V1D-B-HQ4-2P-M8
				inches of mercury	540 197	SDE3-V1D-H-HQ4-2P-M8
		Differential pressure	2x PNP	bar	540 199	SDE3-V1Z-B-HQ4-2P-M8
				inches of mercury	540 200	SDE3-V1Z-H-HQ4-2P-M8
	0 ... 2	2x relative pressure	2x PNP	bar	540 203	SDE3-D2D-B-HQ4-2P-M8
		Differential pressure			540 205	SDE3-D2Z-B-HQ4-2P-M8
	0 ... 10	Relative pressure	2x PNP	bar	540 207	SDE3-D10S-B-HQ4-2P-M8
		2x relative pressure			540 209	SDE3-D10D-B-HQ4-2P-M8
		Differential pressure	2x NPN	bar	540 211	SDE3-D10Z-B-HQ4-2P-M8
		Differential pressure			540 213	SDE3-D10Z-B-HQ4-2N-M8
Front panel mounting						
	0 ... -1	Relative pressure	2x PNP	bar	540 198	SDE3-V1D-B-FQ4-2P-M8
		2x relative pressure			540 195	SDE3-V1S-B-FQ4-2P-M8
		Differential pressure			540 201	SDE3-V1Z-B-FQ4-2P-M8
	0 ... 2	2x relative pressure	2x PNP	bar	540 204	SDE3-D2S-B-FQ4-2P-M8
		Differential pressure			540 206	SDE3-D2Z-B-FQ4-2P-M8
	0 ... 10	Relative pressure	2x PNP	bar	540 208	SDE3-D10S-B-FQ4-2P-M8
		2x relative pressure			540 210	SDE3-D10D-B-FQ4-2P-M8
		Differential pressure			540 212	SDE3-D10Z-B-FQ4-2P-M8

-  - Note

Additional variants and accessories can be configured and ordered through the SDE3 modular system → 75.

Configurator for types acc. to ATEX directive for explosive atmospheres → www.festo.com/sde3.

Pressure sensors SDE3, with display

Modular product system



M Mandatory data								O Options
Module No.	Function	Pressure measuring range	Pressure input	Display	Mounting/pneumatic connection	Electrical output	Electrical connection	Connecting cable (accessory)
539 679	SDE3	V1 B2 D2 D6 D10	S D Z	B P K H W	HQ4 WQ4 FQ4	2P 2N	M8 K	G W G5 W5
Order example								
539 679	SDE3	- D6	D	- B	- WQ4	- 2N	- K	- W5

Ordering table		Condi- tions	Code	Enter code
M	Module No.	539 679		
	Sensor function	Pressure sensor	SDE3	SDE3
	Pressure measuring range	[bar] 0 ... -1	-V1	
		[bar] -1 ... +1	-B2	
		[bar] 0 ... 2	-D2	
		[bar] 0 ... 6	-D6	
		[bar] 0 ... 10	-D10	
	Pressure input	1x relative pressure	S	
		2x relative pressure, independent	D	
		1x differential pressure	Z	
	Display	Values in bar	-B	
		Values in psi	-P	
		Values in kPa	-K	
		Values in inches of mercury	-H	
		Values in inches of water	-W	
	Mounting/pneumatic connection	Via DIN H-rail, 4 mm push-in connector	-HQ4	
		Wall mounting, 4 mm push-in connector	-WQ4	
		Panel mounting, 4 mm push-in connector	-FQ4	
	Electrical output	2 switch outputs PNP	-2P	
		2 switch outputs NPN	-2N	
	Electrical connection	Plug M8x1	-M8	
		Cable, 2.5 m	-K	
O	Connecting cable (accessory)	Straight socket, 2.5 m	-G	
		Angled socket, 2.5 m	-W	
		Straight socket, 5 m	-G5	
		Angled socket, 5 m	-W5	

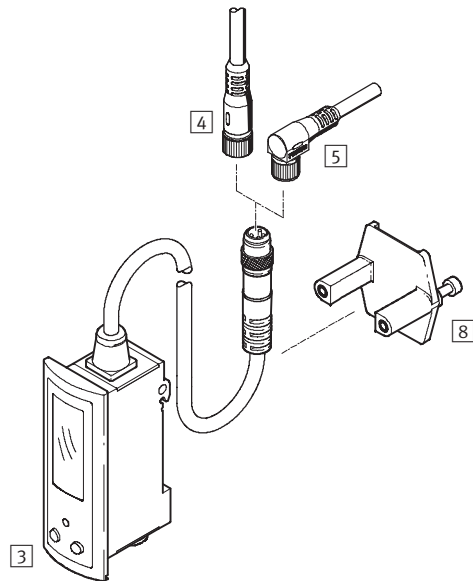
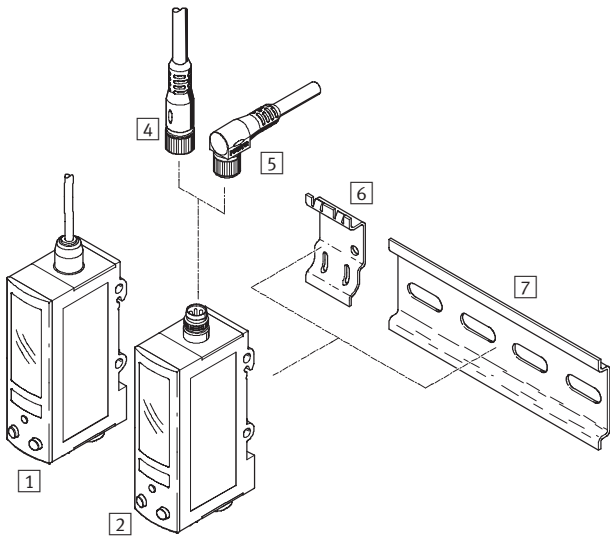
Transfer order code

539 679 SDE3 - - - - - - - - - -

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Peripherals overview




Accessories	
1	Pressure sensor SDE3-...-K
2	Pressure sensor SDE3-...-M8
3	Pressure sensor SDE3-...-F...-M8
4	Connecting cable NEBU-M8G4 with straight socket

Accessories	
5	Connecting cable NEBU-M8W4 with angled socket
6	Adapter plate SXE3-W (included in the scope of delivery for SDE3-...-W...)
7	Mounting rail to DIN EN 50022
8	Clamping plate (included in the scope of delivery for SDE3-...-F...-M8)

Ordering data – Connecting cables		Technical data → 169	
	Number of wires	Cable length [m]	Part No. Type
M8x1, straight socket			
	4	2.5	541 342 NEBU-M8G4-K-2.5-LE4
		5	541 343 NEBU-M8G4-K-5-LE4
M8x1, angled socket			
	4	2.5	541 344 NEBU-M8W4-K-2.5-LE4
		5	541 345 NEBU-M8W4-K-5-LE4

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

Ordering data – Safety clip			
	Size	Part No.	Type
	M8	548 067	NEAU-M8-GD
	M12	548 068	NEAU-M12-GD