



- Piezoresistive pressure sensor
- Various pressure measuring ranges
- Easy mounting via mounting kit

Pressure sensors SDE

Overview and type codes

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Function	Version	Type	Pneumatic connection	Pressure measuring range [bar]			Analogue output		→ Page
				0 ... 2.5	0 ... 10	0 ... 16	1 ... 5 V/ 4 ... 20 mA	0 ... 10V/ 0 ... 20 mA	
Pressure sensors		SDE-2,5-10V/20MA	G $\frac{1}{4}$	■	–	–	–	■	4 / 8.2-72
		SDE-2,5-5V/20MA	G $\frac{1}{4}$	■	–	–	■	–	
		SDE-10-10V/20MA	G $\frac{1}{4}$	–	■	–	–	■	
		SDE-10-5V/20MA	G $\frac{1}{4}$	–	■	–	■	–	
		SDE-16-10V/20MA	G $\frac{1}{4}$	–	–	■	–	■	

Type codes

SDE – 2.5 – 10V/20MA

Type

SDE Electronic pressure sensor

Pressure range

2.5	0 ... 2.5 bar
10	0 ... 10 bar
16	0 ... 16 bar

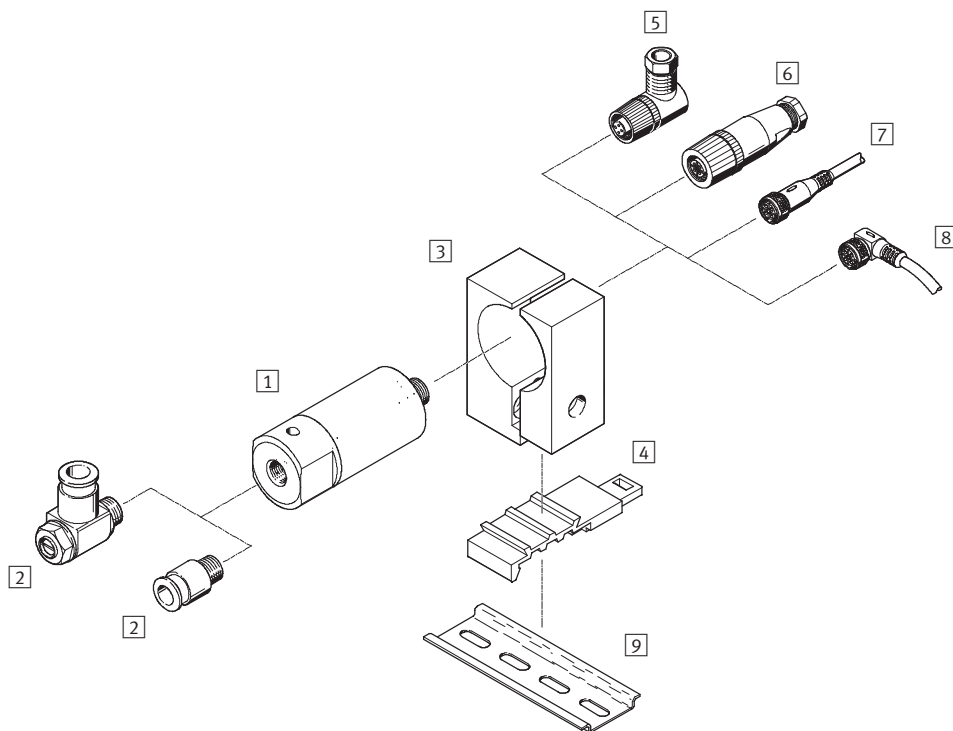
Switch output

5 V/20MA	Analogue output 1 ... 5 V and 4 ... 20 mA
10 V/20MA	Analogue output 0 ... 10 V and 0 ... 20 mA

Pressure sensors SDE

Peripherals overview

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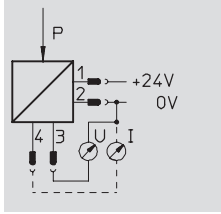
Accessories		
	Brief description	→ Page
1 Pressure sensor SDE	–	4 / 8.2-72
2 Push-in fitting QS	For connecting compressed air tubing with standard external diameters	Volume 3
3 Mounting kit SDE-KL-1	For mounting the pressure sensor	4 / 8.2-75
4 Mounting plate MPL	For mounting the pressure sensor on the DIN mounting rail	4 / 8.2-75
5 Plug socket, angled SIE-GD	–	4 / 8.2-76
6 Plug socket, straight SIE-WD-TR	–	4 / 8.2-76
7 Plug socket with cable, straight socket SIM-M12-4GD	–	4 / 8.2-76
8 Plug socket with cable, angled socket SIM-M12-4WD	–	4 / 8.2-76
9 DIN mounting rail NRH	–	4 / 8.2-75

Pressure sensors SDE

Technical data

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Function



-  - Voltage
12 ... 30 V DC

-  - Pressure
0 ... 16 bar

-  - Temperature range
0 ... +85°C



General technical data						
Type	SDE-2,5-10V/20MA		SDE-2,5- 5V/20MA	SDE-10-10V/20MA	SDE-10-5V/20MA	SDE-16-10V/20MA
Operating pressure [bar]	0 ... 2.5			0 ... 10		0 ... 16
Mechanical						
Pneumatic connection	G1/4					
Method of measurement	Piezoresistive pressure sensor					
Measured variable	Relative pressure					
Accuracy	1%					
Hysteresis	Linearity and hysteresis to DIN 16 005					
Electrical connection	Plug M12x1, 4-pin					
Type of mounting	Threaded					
Mounting position	Any ¹⁾					
Weight [g]	120					
Electrical						
Operating voltage range [V DC]	12 ... 30					
Output voltage [V DC]	0 ... 10	1 ... 5	0 ... 10	1 ... 5	0 ... 10	
Output current [mA]	0 ...20	4 ... 20	0 ... 20	4 ... 20	0 ... 20	
Protection against short circuit	Yes					
Protection class to EN 60 529	IP65					
CE symbol	89/336/EEC (EMC)					

1) The collection of condensate in the sensor should be prevented.

Operating and environmental conditions					
Type	SDE-2,5-10V/20MA		SDE-2,5-5V/20MA	SDE-10-10V/20MA	SDE-10-5V/20MA
Operating medium	Filtered compressed air, lubricated or unlubricated				
Pressure measuring range [bar]	0 ... 2.5			0 ... 10	0 ... 16
Ambient temperature [°C]	0 ... 85				

Pressure sensors SDE

Technical data

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Sensors and monitoring devices
Sensors

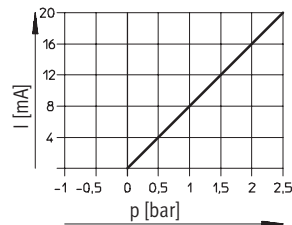
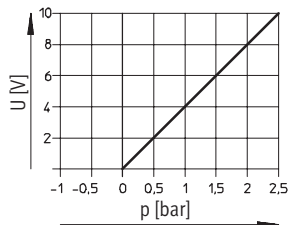
8.2

Pressure switches – Output functions

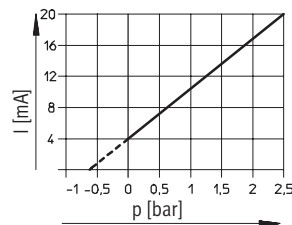
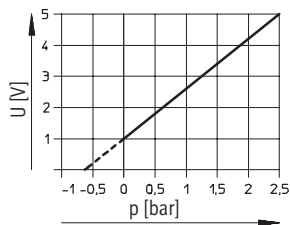
Output voltage U as a function of operating pressure p

Output current I as a function of operating pressure p

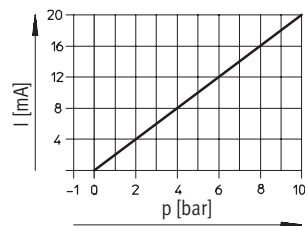
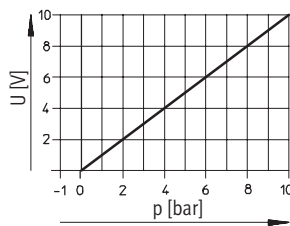
SDE-2,5-10V/20MA



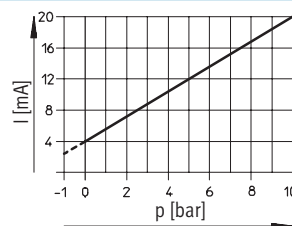
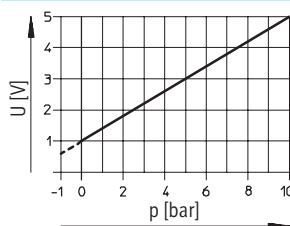
SDE-2,5-5V/20MA



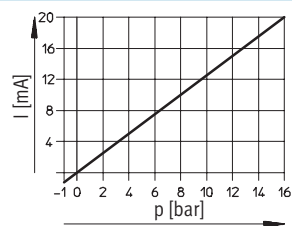
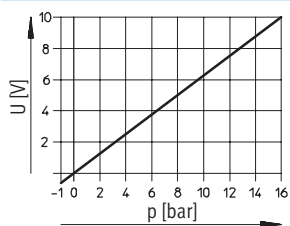
SDE-10-10V/20MA



SDE-10-5V/20MA



SDE-16-10V/20MA



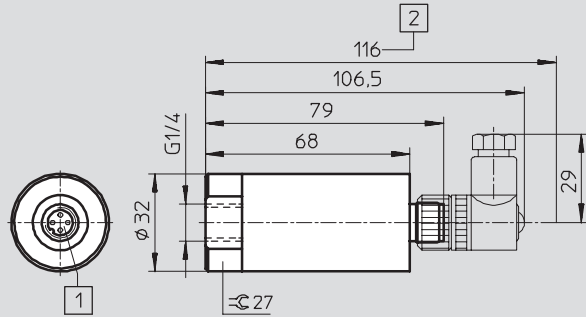
Pressure sensors SDE

Technical data

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Dimensions

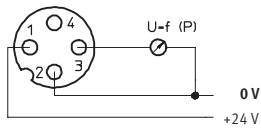
Download CAD data → www.festo.com/en/engineering



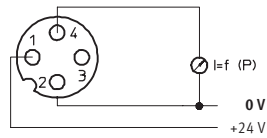
- 1 Connection to fit angled socket and straight socket
- 2 Installation space for angled socket

Terminal allocation

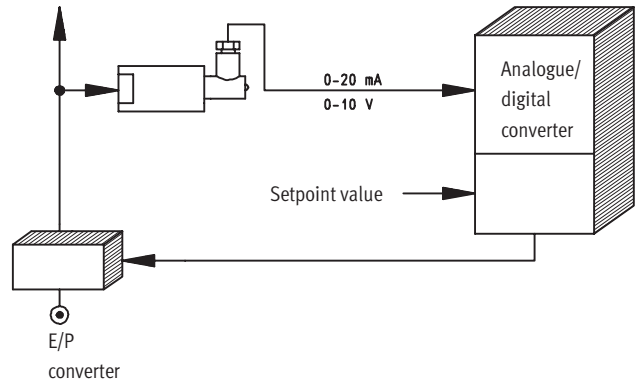
Voltage output



Current output



Application example



Ordering data

Circuit symbol	Pneumatic connection	Pressure measuring range [bar]	Output voltage [V]	Output current [mA]	Part No.	Type
	G1/4	0 ... 2.5	0 ... 10	0 ... 20	19 560	SDE-2,5-10V/20MA
			1 ... 5	4 ... 20	19 561	SDE-2,5-5V/20MA
		0 ... 10	0 ... 10	0 ... 20	19 562	SDE-10-10V/20MA
			1 ... 5	4 ... 20	19 563	SDE-10-5V/20MA
		0 ... 16	0 ... 10	0 ... 20	19 564	SDE-16-10V/20MA

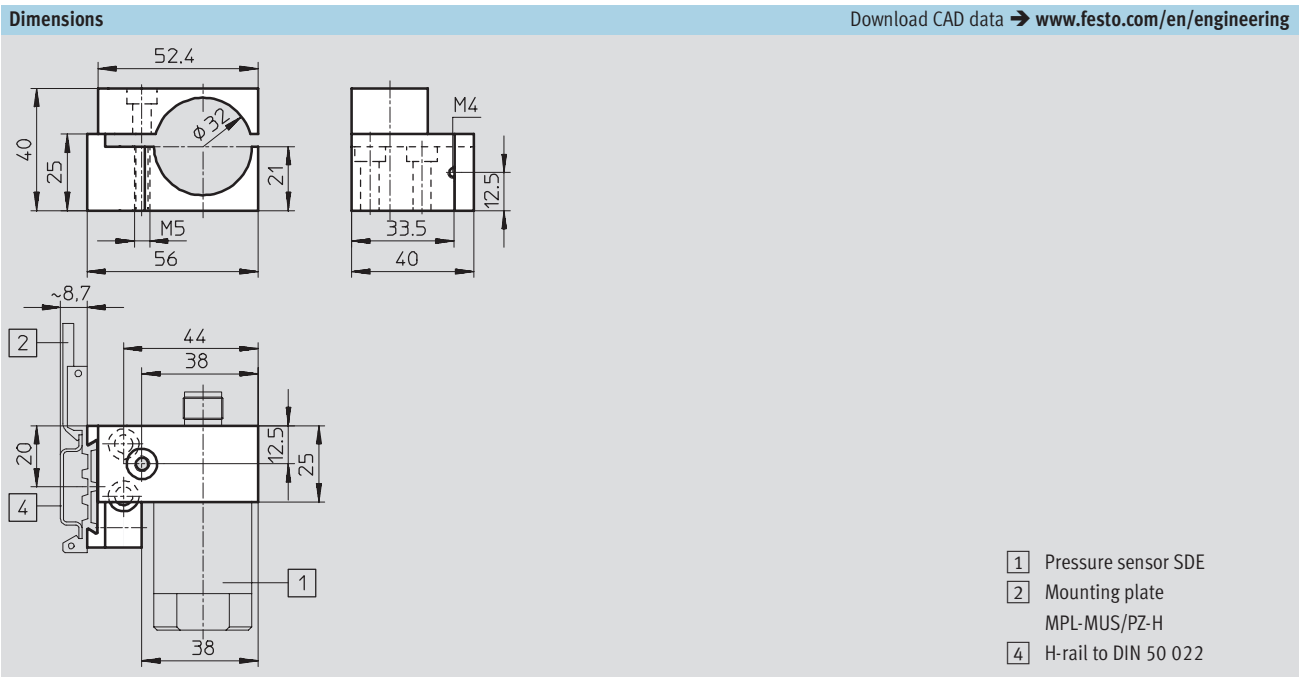
Pressure sensors SDE

Accessories

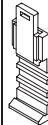
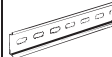
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Mounting kit SDE-KL-1

Material:
Wrought aluminium alloy



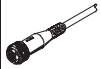
Ordering data	
Part No.	Type
35 319	SDE-KL-1

Ordering data		Data sheets → 4 / 6.2-34	
	Length	Part No.	Type
Mounting plate for H-rail			
	—	19 135	MPL-MUS/PZ-H
DIN mounting rail to EN 60715 (H-rail)			
	2 m	35 430	NRH-35-2000

Pressure sensors SDE

Accessories

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Ordering data – Plug sockets with cable M12x1						Technical data ➔ 4 / 8.3-27	
	Assembly	Port	for switch output		Cable length [m]	Part No.	Type
			PNP	NPN			
Straight socket							
	Union nut M12x1	4-pin	■	■	5	164 259	SIM-M12-4GD-5-PU
Angled socket							
	Union nut M12x1	4-pin	■	■	5	164 258	SIM-M12-4WD-5-PU

Ordering data – Sensor sockets M12x1						Technical data ➔ 4 / 8.3-3	
	Mounting	Connection	Switch output		Cable length [m]	Part No.	Type
			PNP	NPN			
Straight socket							
	Union nut M12x1	4-pin	■	■	–	18 494	SIE-GD
Angled socket							
	Union nut M12x1	4-pin	■	■	–	12 956	SIE-WD-TR
Operational status display for angled socket SIE-WD-TR							
	–	–	■	■	–	12 957	SIE-LP-LED-GR