




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

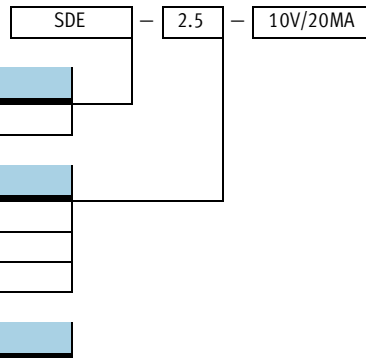
# Pressure sensors SDE

Overview and type codes



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 / 8.2-70
		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



Type	
SDE	Electronic pressure sensor

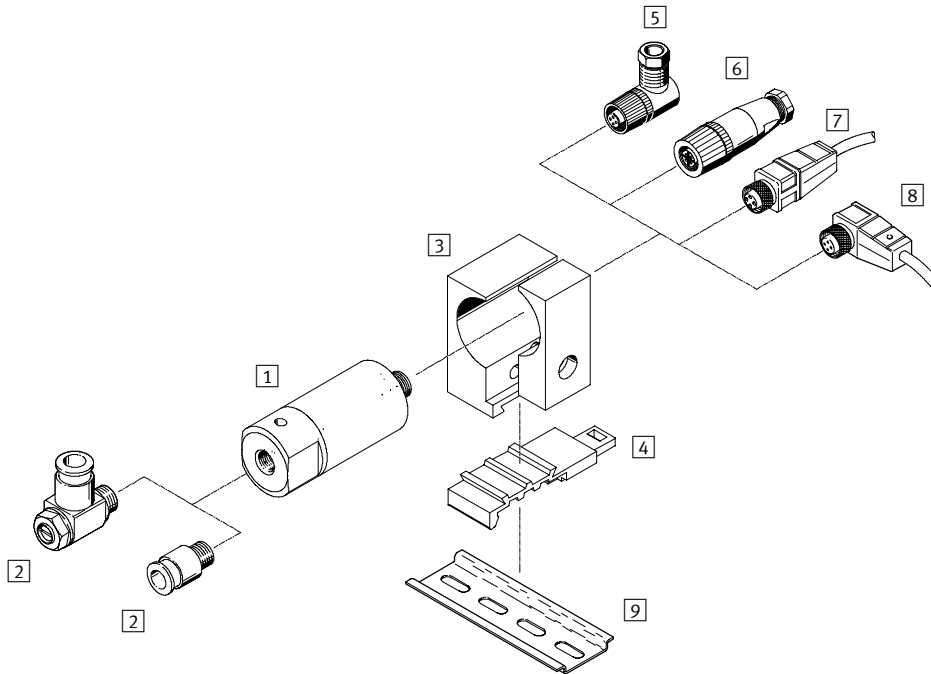
Pressure range	
2.5	0 ... 2.5 bar
10	0 ... 10 bar
16	0 ... 16 bar

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



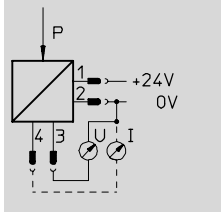
Accessories		
	Brief description	→ Page
1	Pressure sensor SDE	4 / 8.2-70
2	Push-in fitting QS	For connecting compressed air tubing with standard external diameters to CETOP RP 54 P Volume 3
3	Mounting kit SDE-KL-1	For mounting the pressure sensor 4 / 8.2-73
4	Mounting plate MPL	For mounting the pressure sensor on the DIN mounting rail 4 / 8.2-73
5	Plug socket, angled SIE-GD	4 / 8.2-74
6	Plug socket, straight SIE-WD-TR	4 / 8.2-74
7	Plug socket with cable, straight socket SIM-M12-4GD	4 / 8.2-74
8	Plug socket with cable, angled socket SIM-M12-4WD	4 / 8.2-74
9	DIN mounting rail NRH	4 / 8.2-73

# Pressure sensors SDE

Technical data



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	G $\frac{1}{4}$				
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 <sup>1)</sup>				
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	SDE-16-10V/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

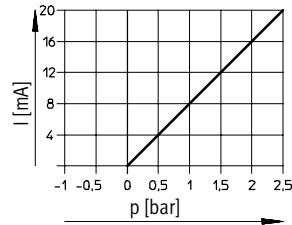
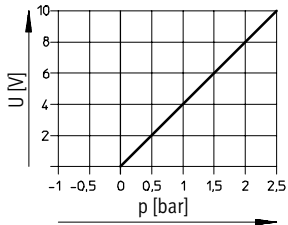
Technical data

## Pressure switches – Output functions

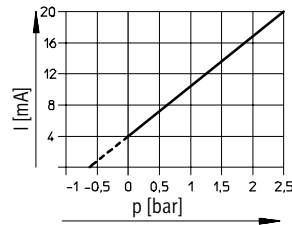
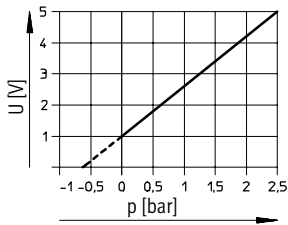
Output voltage  $U$  as a function of operating pressure  $p$

Output current  $I$  as a function of operating pressure  $p$

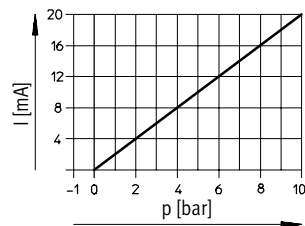
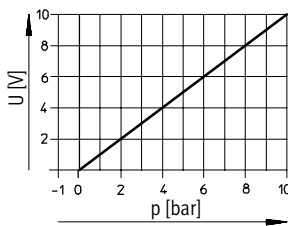
### SDE-2,5-10V/20MA



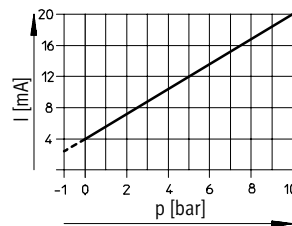
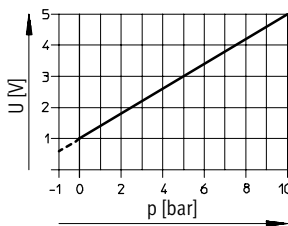
### SDE-2,5-5V/20MA



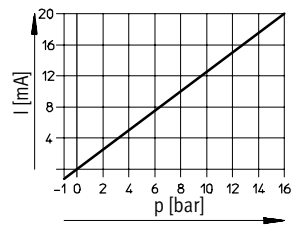
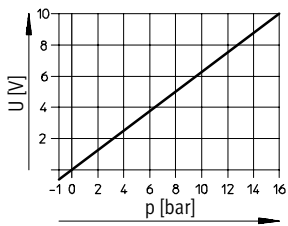
### SDE-10-10V/20MA



### SDE-10-5V/20MA



### SDE-16-10V/20MA



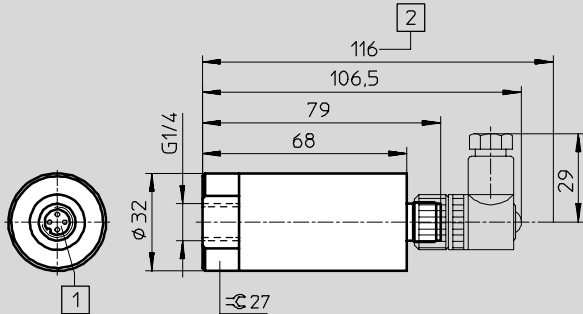
# Pressure sensors SDE

Technical data



## Dimensions

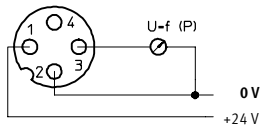
Download CAD data → [www.festo.com/en/engineering](http://www.festo.com/en/engineering)



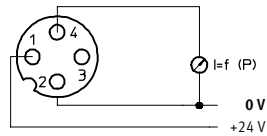
- 1 Connection to fit angled socket and straight socket
- 2 Installation space for angled socket

## Terminal allocation

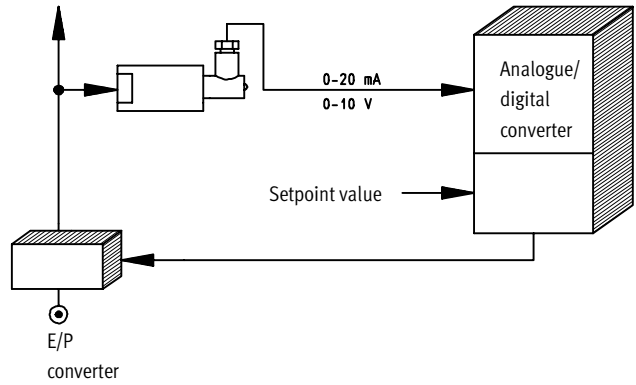
### Voltage output



### 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

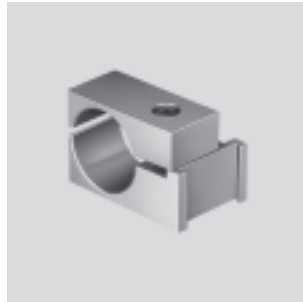
# Pressure sensors SDE

Accessories



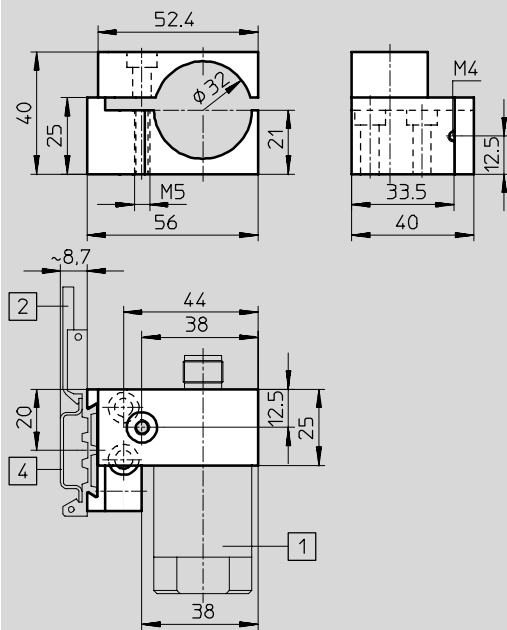
## Mounting kit SDE-KL-1

Material:  
Wrought aluminium alloy



### Dimensions

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



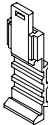
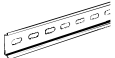
- 1 Pressure sensor SDE
- 2 Mounting plate  
MPL-MUS/PZ-H
- 4 H-rail to DIN 50 022

### Ordering data

Part No.	Type
35 319	SDE-KL-1

### Ordering data



Data sheets → 4 / 6.2-34




	Length	Part No.	Type
<b>Mounting plate for H-rail</b>			
	-	19 135	MPL-MUS/PZ-H
<b>DIN mounting rail to DIN EN 50 022 (H-rail)</b>			
	2 m	35 430	NRH-35-2000

# Pressure sensors SDE

Accessories



Ordering data – Plug sockets with cable M12x1 for pressure switches PEV-1/4-B-M12						Data sheets → 4 / 8.3-12	
	Mounting	Connection	Switch output		Cable length [m]	Part No.	Type
			PNP	NPN			
<b>Straight socket</b>							
	Union nut M12x1	4-pin	■	■	5	164 259	SIM-M12-4GD-5-PU
<b>Angled socket</b>							
	Union nut M12x1	4-pin	■	■	5	164 258	SIM-M12-4WD-5-PU

Ordering data – Sensor sockets M12x1 for pressure switches PEV-1/4-B-M12						Data sheets → 4 / 8.3-4	
	Mounting	Connection	Switch output		Cable length [m]	Part No.	Type
			PNP	NPN			
<b>Straight socket</b>							
	Union nut M12x1	4-pin	■	■	–	18 494	SIE-GD
<b>Angled socket</b>							
	Union nut M12x1	4-pin	■	■	–	12 956	SIE-WD-TR
<b>Operational status display for angled socket SIE-WD-TR</b>							
	–	–	■	■	–	12 957	SIE-LP-LED-GR