

Pressure transmitters SPTW



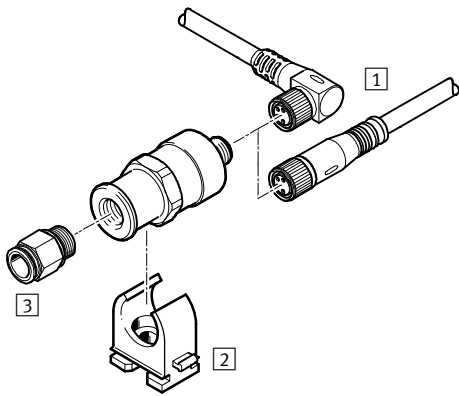
# Pressure transmitters SPTW

Product range overview

Method of measurement	Pressure measuring range [bar]	Measured variable	Pneumatic connection	Operating voltage [V DC]	Electrical connection
Piezoresistive pressure sensor	-1 ... +1	Relative pressure	G $\frac{1}{4}$	8 ... 30	Plug M12x1, 4-pin, to EN 60947-5-2, round design
	0 ... 2				
	0 ... 6				
Thin-film metal pressure sensor	0 ... 10	Relative pressure	G $\frac{1}{4}$	8 ... 30	Plug M12x1, 4-pin, to EN 60947-5-2, round design
	-1 ... +10				
	0 ... 16				
	0 ... 25				
	0 ... 50				
	0 ... 100				

# Pressure transmitters SPTW

Peripherals overview



Mounting attachments and accessories		→ Page/Internet
1	Connecting cable NEBU-M12	8
2	Pipe clamp (included in the scope of delivery)	-
3	Push-in fitting QS-1/4	8

# Pressure transmitters SPTW

Type codes

SPTW - P10 R - G14 - A - M12

### Function

SPTW	Pressure transmitter
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### Pressure measuring range

B2	-1 ... +1 bar
B11	-1 ... +10 bar
P2	0 ... 2 bar
P6	0 ... 6 bar
P10	0 ... 10 bar
P16	0 ... 16 bar
P25	0 ... 25 bar
P50	0 ... 50 bar
P100	0 ... 100 bar

### Pressure input

R	Relative pressure
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### Pneumatic connection

G14	Female thread G $\frac{1}{4}$
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### Electrical output

A	4 ... 20 mA
VD	0.1 ... 10 V

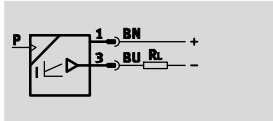
### Electrical connection

M12	Plug M12x1, 4-pin
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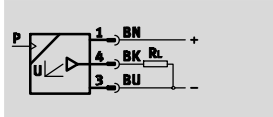
# Pressure transmitters SPTW

Technical data

Function  
SPTW-...-A



SPTW-...-VD



- - Voltage  
8 ... 30 V DC

- - Pressure  
-1 ... +100 bar

- - Temperature range  
0 ... 80 °C



- Pressure and vacuum sensing for gaseous and liquid media
- High media resistance

General technical data	
Certification	cULus listed (OL) C-Tick
CE mark (see declaration of conformity) <sup>1)</sup>	To EU EMC Directive
Note on materials	Contains PWIS (paint wetting impairment substances) RoHS-compliant

1) For information about the applicability of the component see the manufacturer's EC declaration of conformity at: [www.festo.com/sp](http://www.festo.com/sp) → Certificates.  
If the component is subject to restrictions on usage in residential, office or commercial environments or small businesses, further measures to reduce the emitted interference may be necessary.

Input signal/measuring element		B2	P2	P6	P10	B11	P16	P25	P50	P100
SPTW-										
Measured variable		Relative pressure								
Method of measurement		Piezoresistive pressure sensor				Thin-film metal pressure sensor				
Pressure measuring range starting value [bar]		-1	0	0	0	-1	0	0	0	0
Pressure measuring range final value [bar]		1	2	6	10	10	16	25	50	100
Overload pressure [bar]		2	4	12	20	20	32	50	100	200
Operating medium		Compressed air in accordance with ISO 8573-1:2010 [---:--]								
		Neutral liquids								
		Gaseous media								
Temperature of medium [°C]		0 ... 80								
Ambient temperature [°C]		0 ... 80								

Output, general	
Accuracy ±FS <sup>1)</sup> [%]	1
Repetition accuracy ±FS <sup>1)</sup> [%]	0.1

1) % FS = % of the measuring range (full scale)

Analogue output		A	VD
SPTW-...-			
Analogue output [mA]		4 ... 20	-
	[V]	-	0.1 ... 10
Linearity error ±FS <sup>1)</sup> [%]		0.5	

1) % FS = % of the measuring range (full scale)

# Pressure transmitters SPTW

Technical data

FESTO

Output, additional data	
Protection against short circuit	Yes

Electronic components		
SPTW-...-	A	VD
Operating voltage range DC [V]	8 ... 30	14 ... 30
Reverse polarity protection	For operating voltage	

Electromechanical components	
Electrical connection	Plug M12x1, 4-pin
	To EN 60947-5-2
	Round design
Plug housing material	PA

Mechanical components	
Type of mounting	Via female thread
	Via accessories
Mounting position	Any
Pneumatic connection	G $\frac{1}{4}$
Product weight [g]	80
Housing materials	High-alloy stainless steel
	PA
	VMQ (silicone)
Materials in contact with the medium <sup>1)</sup>	High-alloy stainless steel

Immissions/emissions	
Protection class	IP67
Corrosion resistance class CRC <sup>2)</sup>	4

1) Group CrNiMo: 316L, from measurement range 10 bar the membrane is composed of 13-8-PH

2) Corrosion resistance class 4 according to Festo standard 940 070

Components subject to particularly high corrosion stress. Parts used with aggressive media, e.g. in the food or chemical industry. These applications should be supported with special tests with the media if required.

Pin allocation					
SPTW-...-A			SPTW-...-VD		
Plug M12x1, 4-pin	Pin	Meaning	Plug M12x1, 4-pin	Pin	Meaning
	1	Operating voltage $U_0$ /signal +		1	Operating voltage $U_0$
	3	0 V/signal -		3	0 V
					4

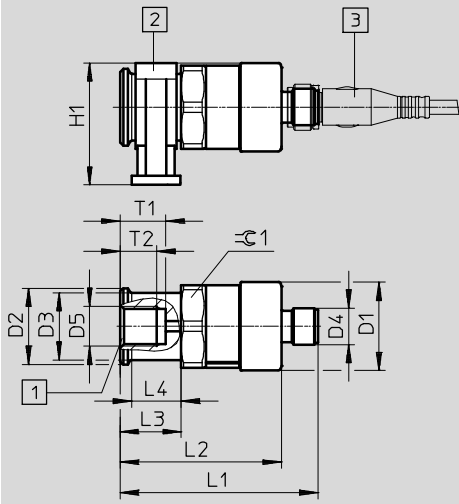
# Pressure transmitters SPTW

Technical data

FESTO

## Dimensions

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



- 1 Pneumatic connection
- 2 Pipe clamp (included in the scope of delivery)
- 3 Connecting cable

Type	D1	D2	D3	D4	D5	H1	L1	L2	L3	L4	T1	T2	☉
SPTW	29	25	22	M12x1	G $\frac{1}{4}$	40	64.8	52.8	20	16.5	15	12	27




## Ordering data

Pressure measuring range [bar]	Analogue output	Pneumatic connection	Electrical connection	Part No.	Type
-1 ... +1	4 ... 20 mA	G $\frac{1}{4}$	Plug M12x1, 4-pin	8000100	SPTW-B2R-G14-A-M12
-1 ... +10				8000101	SPTW-B11R-G14-A-M12
0 ... 2				8000102	SPTW-P2R-G14-A-M12
0 ... 6				8000103	SPTW-P6R-G14-A-M12
0 ... 10				8000104	SPTW-P10R-G14-A-M12
0 ... 16				8000105	SPTW-P16R-G14-A-M12
0 ... 25				8000106	SPTW-P25R-G14-A-M12
0 ... 50				8000107	SPTW-P50R-G14-A-M12
0 ... 100				8000108	SPTW-P100R-G14-A-M12
-1 ... +1				0.1 ... 10 V	G $\frac{1}{4}$
-1 ... +10	8000110	SPTW-B11R-G14-VD-M12			
0 ... 2	8000111	SPTW-P2R-G14-VD-M12			
0 ... 6	8000112	SPTW-P6R-G14-VD-M12			
0 ... 10	8000113	SPTW-P10R-G14-VD-M12			
0 ... 16	8000114	SPTW-P16R-G14-VD-M12			
0 ... 25	8000115	SPTW-P25R-G14-VD-M12			
0 ... 50	8000116	SPTW-P50R-G14-VD-M12			
0 ... 100	8000117	SPTW-P100R-G14-VD-M12			


# Pressure transmitters SPTW

Accessories

FESTO

Ordering data – Connecting cables				Technical data → Internet: nebu	
	Number of wires/pins	Cable length [m]	Part No.	Type	
<b>M12x1, straight socket, open end</b>					
	3	2.5	<b>541363</b>	<b>NEBU-M12G5-K-2.5-LE3</b>	
		5	<b>541364</b>	<b>NEBU-M12G5-K-5-LE3</b>	
	4	2.5	<b>550326</b>	<b>NEBU-M12G5-K-2.5-LE4</b>	
		5	<b>541328</b>	<b>NEBU-M12G5-K-5-LE4</b>	
	5	2.5	<b>541330</b>	<b>NEBU-M12G5-K-2.5-LE5</b>	
		5	<b>541331</b>	<b>NEBU-M12G5-K-5-LE5</b>	
<b>M12x1, angled socket, open end</b>					
	3	2.5	<b>541367</b>	<b>NEBU-M12W5-K-2.5-LE3</b>	
		5	<b>541370</b>	<b>NEBU-M12W5-K-5-LE3</b>	
	4	2.5	<b>550325</b>	<b>NEBU-M12W5-K-2.5-LE4</b>	
		5	<b>541329</b>	<b>NEBU-M12W5-K-5-LE4</b>	
<b>Socket M12x1, straight; plug M8x1, straight</b>					
	4	2.5	<b>554034</b>	<b>NEBU-M12G5-E-2.5-W2-M8G4-V1<sup>1)</sup></b>	
	4		<b>554033</b>	<b>NEBU-M12G5-E-2.5-W3-M8G4-V2<sup>2)</sup></b>	

- 1) Pin allocation designed for connecting the pressure transmitter SPTW...-A-M12 to the signal converter SVE4-IS
- 2) Pin allocation designed for connecting the pressure transmitter SPTW...-VD-M12 to the signal converter SVE4-US

Ordering data – Push-in fittings <sup>1)</sup>				Technical data → Internet: qs	
	For tubing O.D.	Part No.	Type		
	4 mm	<b>190644</b>	<b>QS-¼-4<sup>1)</sup></b>		
	6 mm	<b>153003</b>	<b>QS-¼-6<sup>1)</sup></b>		
	8 mm	<b>153005</b>	<b>QS-¼-8<sup>1)</sup></b>		

- 1) Temperature-dependent operating pressure –0.95 ... 14 bar