

## Pressure transmitters SPTW

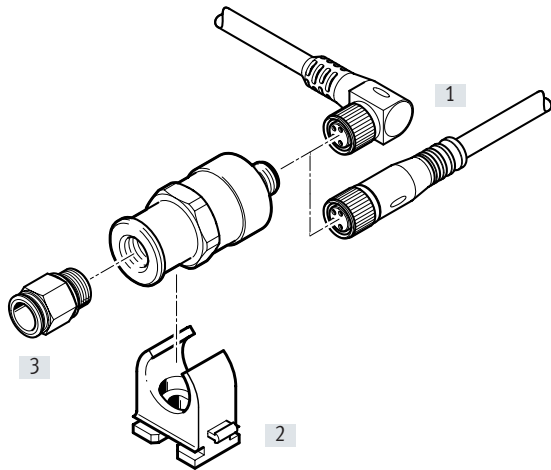
**FESTO**



Product range overview

Measurement method	Pressure measuring range	Measured variable	Pneumatic connection	Operating voltage	Electrical connection
	[bar]			[V DC]	
Piezoresistive pressure sensor	-1 ... +1	Relative pressure	G1/4	8 ... 30	Plug M12x1, 4-pin, to EN 60947-5-2, round design
	0 ... 2				
	0 ... 6				
Metal thin-film pressure sensor	0 ... 10	Relative pressure	G1/4	8 ... 30	Plug M12x1, 4-pin, to EN 60947-5-2, round design
	-1 ... +10				
	0 ... 16				
	0 ... 25				
	0 ... 50				
	0 ... 100				

Peripherals overview



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

## Type codes

<b>001</b>	Series
<b>SPTW</b>	Pressure transmitter

<b>002</b>	Pressure measuring range
<b>B2</b>	-1 ... 1 bar
<b>B11</b>	-1 ... 10 bar
<b>P2</b>	0 ... 2 bar
<b>P6</b>	0 ... 6 bar
<b>P10</b>	0 ... 10 bar
<b>P16</b>	0 ... 16 bar
<b>P25</b>	0 ... 25 bar
<b>P50</b>	0 ... 50 bar
<b>P100</b>	0 ... 100 bar

<b>003</b>	Pressure inlet
<b>R</b>	Relative pressure

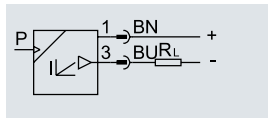
<b>004</b>	Pneumatic connection
<b>G14</b>	G1/4

<b>005</b>	Electrical output 1
<b>A</b>	4 ... 20 mA
<b>VD</b>	0.1 ... 10 V

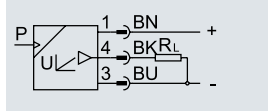
<b>006</b>	Electrical connection
<b>M12</b>	Plug M12, A-coded

## Data sheet

Function  
SPTW-...-A



SPTW-...-VD



Voltage  
8 ... 30 V DC

Pressure  
-1 ... +100 bar

Temperature range  
0 ... 80°C



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

### General technical data

Certification	c UL us listed (OL) C-Tick
CE marking (see declaration of conformity) <sup>1)</sup>	To EU EMC Directive
Note on materials	Contains paint-wetting impairment substances RoHS-compliant

- 1) For information about the area of use, see the EC declaration of conformity at: [www.festo.com/catalogue/SPTW..](http://www.festo.com/catalogue/SPTW..) → Support/Downloads.  
If the devices are subject to usage restrictions in residential, commercial or light-industrial environments, further measures for the reduction of the emitted interference may be necessary.

### Input signal/measuring element

SPTW-	B2	P2	P6	P10	B11	P16	P25	P50	P100
Measured variable	Relative pressure								
Measurement method	Piezoresistive pressure sensor				Metal thin-film pressure sensor				
Pressure measuring range start value [bar]	-1	0	0	0	-1	0	0	0	0
Pressure measuring range end 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 to ISO 8573-1:2010 [---:--]								
	Liquid media								
	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

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

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

## Data sheet

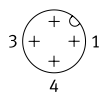
Output, additional data		
Short circuit current rating	Yes	
Electronics		
SPTW-...-	A	VD
Operating voltage range DC [V]	8 ... 30	14 ... 30
Reverse polarity protection	For operating voltage	
Electromechanics		
Electrical connection	Plug M12x1, 4-pin	
	To EN 60947-5-2	
	Round design	
Information on materials: housing	PA	
Mechanics		
Type of mounting	With female thread	
	Via accessories	
Mounting position	Any	
Pneumatic connection	G1/4	
Product weight [g]	80	
Information on materials: housing	High-alloy stainless steel	
	PA	
	VMQ (silicone)	
Materials in contact with the medium <sup>1)</sup>	High-alloy stainless steel	
Immission/emission		
Degree of protection	IP67	
Corrosion resistance class CRC <sup>2)</sup>	4	

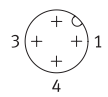
1) CrNiMo group: 316L, from a measuring range of 10 bar the membrane consists of 13-8-PH

2) Corrosion resistance class CRC 4 to Festo standard FN 940070

Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

### Pin allocation

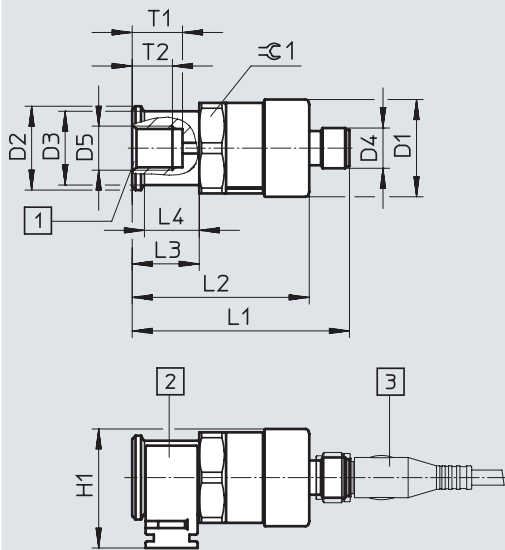
SPTW-...-A		
Plug M12x1, 4-pin	Pin	Meaning
	1	Operating voltage $U_B$ / signal +
	3	0 V / signal -

SPTW-...-VD		
Plug M12x1, 4-pin	Pin	Meaning
	1	Operating voltage $U_B$
	3	0 V
	4	Analogue output

Data sheet

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	G1/4	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	G1/4	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	G1/4
-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			

## Accessories

### Ordering data – Connecting cables


Data sheets → Internet: nebu

	Number of wires/pins	Cable length [m]	Part no.	Type
<b>M12x1, straight socket, open end</b>				
	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
	5	2.5	541330	NEBU-M12G5-K-2.5-LE5
		5	541331	NEBU-M12G5-K-5-LE5
<b>M12x1, angled socket, open end</b>				
	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>Socket M12x1, straight; plug M8x1, straight</b>				
	4	2.5	554034	NEBU-M12G5-E-2.5-W2-M8G4-V1 <sup>1)</sup>
	4		554033	NEBU-M12G5-E-2.5-W3-M8G4-V2 <sup>2)</sup>

- 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>

Data sheets → Internet: qs

	For tubing O.D.	Part no.	Type
	4 mm	190644	QS-1/4-4 <sup>1)</sup>
	6 mm	153003	QS-1/4-6 <sup>1)</sup>
	8 mm	153005	QS-1/4-8 <sup>1)</sup>

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



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