

Pressure transmitters SPTW

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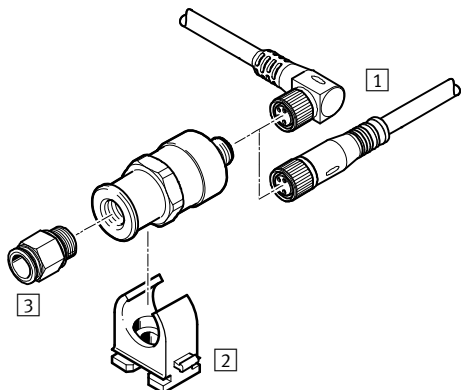


Product range overview

Method of measurement	Pressure measuring range [bar]	Measured variable	Pneumatic connection	Operating voltage [V DC]	Electrical connection
Piezoresistive pressure sensor	-1 ... +1	Relative pressure	G1/4	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	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				

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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

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Type codes

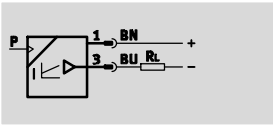
		SPTW	-	P10	R	-	G14	-	A	-	M12
Function											
SPTW	Pressure transmitter										
Pressure measuring range											
B2	-1 ... +1 bar										
B11	-1 ... +10 bar										
P2	0 ... 2 bar										
P6	0 ... 6 bar										
P10	0 ... 10 bar										
P16	0 ... 16 bar										
P25	0 ... 25 bar										
P50	0 ... 50 bar										
P100	0 ... 100 bar										
Pressure input											
R	Relative pressure										
Pneumatic connection											
G14	Female thread G1/4										
Electrical output											
A	4 ... 20 mA										
VD	0.1 ... 10 V										
Electrical connection											
M12	Plug M12x1, 4-pin										

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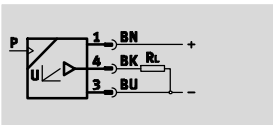
Technical data

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) ¹⁾	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 → User documentation.
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									
SPTW-	B2	P2	P6	P10	B11	P16	P25	P50	P100
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 ¹⁾	[%]	1
Repetition accuracy ±FS ¹⁾	[%]	0.1

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

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

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

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Technical data

Output, additional data		
Protection against short circuit	Yes	
Electronic components		
SPTW-...-	A	VD
Operating voltage range DC	[V]	8 ... 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	G1/4	
Product weight	[g]	80
Housing materials	High-alloy stainless steel	
	PA	
	VMQ (silicone)	
Materials in contact with the medium ¹⁾	High-alloy stainless steel	
Immissions/emissions		
Protection class	IP67	
Corrosion resistance class CRC ²⁾	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		
Plug M12x1, 4-pin	Pin	Meaning
	1	Operating voltage U ₀ /signal +
	3	0 V/signal –
SPTW-...-VD		
Plug M12x1, 4-pin	Pin	Meaning
	1	Operating voltage U ₀
	3	0 V
	4	Analogue output

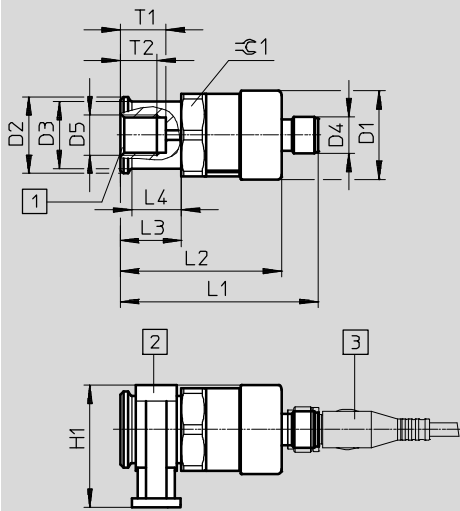
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Technical data

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Dimensions

Download CAD data → www.festo.com



Type	D1 Ø	D2 Ø	D3 Ø	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	Plug M12x1, 4-pin	8000109	SPTW-B2R-G14-VD-M12
-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

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Accessories



Ordering data – Connecting cables			Technical data ➔ Internet: nebu	
	Number of wires/pins	Cable length [m]	Part No.	Type
M12x1, straight socket, open end				
	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
M12x1, angled socket, open end				
	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
Socket M12x1, straight; plug M8x1, straight				
	4	2.5	554034	NEBU-M12G5-E-2.5-W2-M8G4-V1 1)
	4		554033	NEBU-M12G5-E-2.5-W3-M8G4-V2 2)

- 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 ¹⁾				Technical data → Internet: qs
	For tubing O.D.	Part No.	Type	
	4 mm	190644	QS-1/4-4 ¹⁾	
	6 mm	153003	QS-1/4-6 ¹⁾	
	8 mm	153005	QS-1/4-8 ¹⁾	

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

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