

Pressure transmitters SPTW

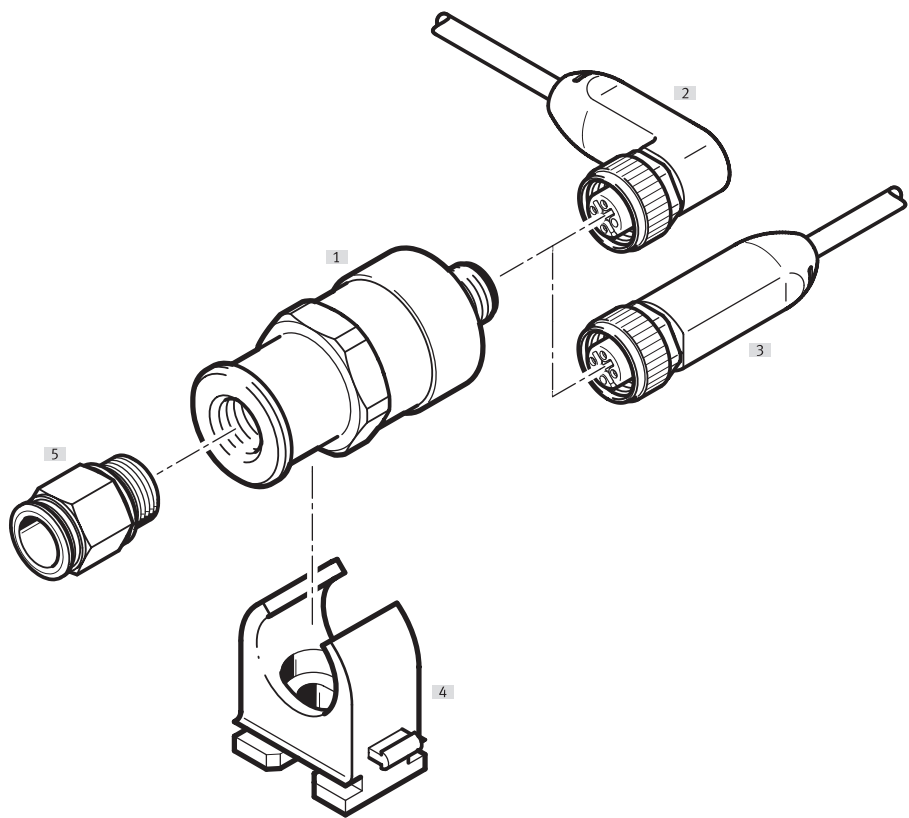
FESTO



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 attachments and accessories		→ Page
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[2]	Connecting cable NEBA-M12, angled socket	8
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[4]	Pipe clamp (included in the scope of delivery)	–
[5]	Push-in fitting QS-1/4	8

Type codes

001	Series	
SPTW	Pressure transmitter	

002	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	

003	Pressure inlet	
R	Relative pressure	

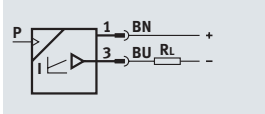
004	Pneumatic connection	
G14	G1/4	

005	Electrical output 1	
A	4 ... 20 mA	
VD	0.1 ... 10 V	

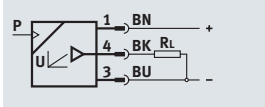
006	Electrical connection	
M12	Plug M12, A-coded	

Datasheet

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	RCM c UL us - Listed (OL)
CE marking (see declaration of conformity) 1)	To EU EMC Directive To EU RoHS Directive
UKCA marking (see declaration of conformity)	To UK EMC regulations To UK RoHS regulations
Note on materials	RoHS-compliant
LABS (PWIS) conformity	VDMA24364-Zone III

1) For information about the area of use, see the EC declaration of conformity at: www.festo.com/catalogue/SPTW...d 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 ±FS1) [%]	1
Repetition accuracy ±FS1) [%]	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 ±FS1) [%]	0.5	

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

Datasheet

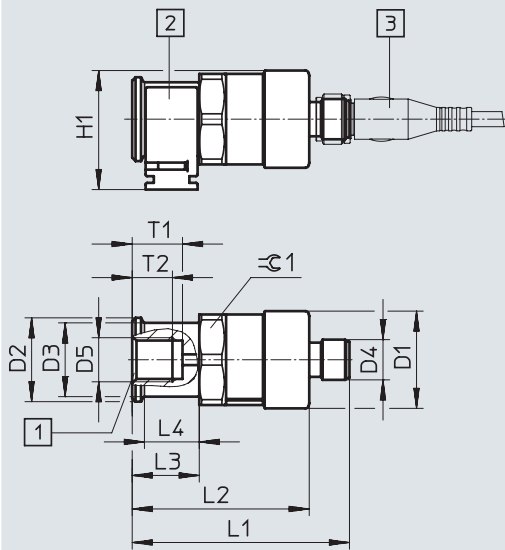
Output, additional data			
Short circuit current rating		Yes	
Electronics			
SPTW-...-		A	VD
Operational voltage range DC [V]		8 ... 30	14 ... 30
Reverse polarity protection		For operating voltage	
Electromechanics			
Electrical connection 1			
Connection type		Plug	
Connection technology		M12x1, A-coded to EN 61076-2-101	
Number of pins/cores		4	
Type of mounting		Screw-type lock	
Information on materials: plug housing		PA	
Plug pattern			
SPTW-...-A			
Plug M12x1, 4-pin	Pin	Description	
	1	Operating voltage U _B / signal +	
	3	0 V / signal –	
SPTW-...-VD			
Plug M12x1, 4-pin	Pin	Description	
	1	Operating voltage U _B	
	3	0 V	
	4	Analogue output	
Mechanical components			
Type of mounting		With female thread	
		With accessories	
Mounting position		Any	
Pneumatic connection		G1/4	
Product weight [g]		80	
Information on housing materials		High-alloy stainless steel	
		PA	
		VMQ (silicone)	
Materials in contact with media1)		High-alloy stainless steel	
Immission/Emission			
Degree of protection		IP67	
Corrosion resistance class CRC2)		4	

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

2) More information www.festo.com/x/topic/crc.

Datasheet

Dimensions

Download CAD data → www.festo.com

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

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

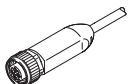
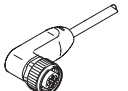
Ordering data

Pressure measuring range [bar]	Analogue output	Pneumatic connection	Electrical connection	Part no.	Type
-1 ... +1	4 ... 20 mA	G1/4	M12x1 plug, 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

Accessories

Ordering data – Connecting cables

Datasheets → Internet: neba

	Number of cores	Cable length [m]	Part no.	Type
M12x1, straight socket, open end				
	3	2.5	8078236	NEBA-M12G5-U-2.5-N-LE3
		5	8078237	NEBA-M12G5-U-5-N-LE3
	4	2.5	8078239	NEBA-M12G5-U-2.5-N-LE4
		5	8078240	NEBA-M12G5-U-5-N-LE4
	5	2.5	8078242	NEBA-M12G5-U-2.5-N-LE5
		5	8078243	NEBA-M12G5-U-5-N-LE5
M12x1, angled socket, open end				
	3	2.5	8078245	NEBA-M12W5-U-2.5-N-LE3
		5	8078246	NEBA-M12W5-U-5-N-LE3
	4	2.5	8078248	NEBA-M12W5-U-2.5-N-LE4
		5	8078249	NEBA-M12W5-U-5-N-LE4

Ordering data – Push-in fittings¹⁾

Datasheets → Internet: qs

	For tubing O.D. Ø	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