

Pressure transmitter SPTE

FESTO



Characteristics

At a glance



- Compact design
- Very lightweight
- Different pneumatic connection options
- Choice of pressure ranges
- Output signal: 0 ... 10 V or 1 ... 5 V

Pressure measuring range

[B2] -1 ... 1 bar

[V1] 0 ... -1 bar

[P10] 0 ... 10 bar

Pneumatic connection

[F] Flange/sub-base



[Q3] Push-in connector, 3 mm



[Q4] Push-in connector 4 mm



[S4] Push-in sleeve 4 mm



[S6] Push-in sleeve 6 mm

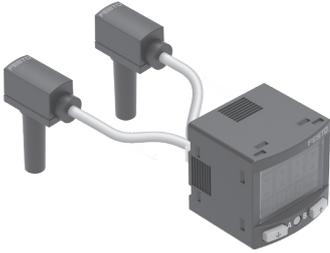


[PC10] Cartridge 10 mm



Characteristics

Description



- One or two SPT pressure transmitters can be connected to a signal converter SCDN
- Measured value indicator with selection of units
- Blue display with high-contrast white text and red switchover
- IO-Link® / 2x PNP or NPN switching outputs
- Min./max. monitoring

Type code

001	Series	
SPTE	Pressure transmitter	
002	Pressure measuring range	
B2	-1 ... 1 bar	
P10	0 ... 10 bar	
V1	0 ... -1 bar	
003	Pressure inlet	
R	Relative pressure	

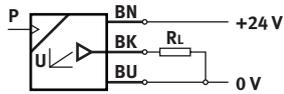
004	Pneumatic connection	
F	Flange/sub-base	
PC10	Cartridge 10 mm	
Q3	Push-in connector, 3 mm	
Q4	Push-in connector 4 mm	
S4	Push-in sleeve 4 mm	
S6	Push-in sleeve 6 mm	

005	Electrical output 1	
B	1 ... 5 V	
V	0 ... 10 V	

006	Electrical connection	
2.5K	Cable 2.5 m, open end	

Datasheet

General technical data



Approval	RCM trademark, c UL us - Recognized (OL)
CE mark (see declaration of conformity) ¹⁾	To EU EMC Directive, In accordance with EU RoHS Directive
UKCA marking (see declaration of conformity)	To UK instructions for EMC, To UK RoHS instructions
Certificate issuing authority	UL E322346
Note on materials	RoHS-compliant

1) For information about the area of use, see the EC declaration of conformity at: www.festo.com/catalogue/SPTE → 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

Pressure measuring range	-1 ... 1 bar [B2]	0 ... 10 bar [P10]	0 ... -1 bar [V1]
Measured variable	Relative pressure		
Measurement method	Piezoresistive pressure sensor		
Start value for pressure measuring range	-0.1 MPa	0 MPa	
End value for pressure measuring range	0.1 MPa	1 MPa	-0.1 MPa
Start value for pressure measuring range	-1 bar	0 bar	
End value for pressure measuring range	1 bar	10 bar	-1 bar
Start value for pressure measuring range	-14.5 psi	0 psi	
End value for pressure measuring range	14.5 psi	145 psi	-14.5 psi
Overload pressure	0.5 MPa	1.5 MPa	0.5 MPa
Overload pressure	5 bar	15 bar	5 bar
Overload pressure	72.5 psi	217.5 psi	72.5 psi
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]		
Note on operating and pilot medium	Lubricated operation possible		
Media temperature	0 ... 50°C		
Ambient temperature	0 ... 50°C		

General output

Accuracy in ± % FS ¹⁾	3 %FS
Repetition accuracy in ± %FS	0.3 %FS
Temperature coefficient in ± %FS/K	0.05 %FS/K

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

Analogue output

Electrical output 1	1 ... 5 V [B]	0 ... 10 V [V]
Rise time	1 ms	
Min. load resistance voltage output	15 kOhm	

Output, further data

Short circuit current rating	For all electrical connections
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Datasheet

Electronics

Electrical output 1	1 ... 5 V [B]	0 ... 10 V [V]
Operational voltage range DC	10 ... 30 V	18 ... 30 V
Reverse polarity protection	For all electrical connections	

Electromechanics

Electrical connection	3-wire, Cable, Open end
Cable length	2.5 m

Mechanics

Pneumatic connection	Cartridge 10 mm	Flange	QS-3	QS-4	Push-in sleeve QS-4	Push-in sleeve QS-6
Type of mounting	Pin-type connection	Via through-hole and screw	With accessories		Plug-in	
Mounting position	optional					
Product weight	35 g					
Material housing	PA-reinforced					
Material sealing ring	FPM, NBR	FPM	FPM, NBR		FPM	

Immission, emission

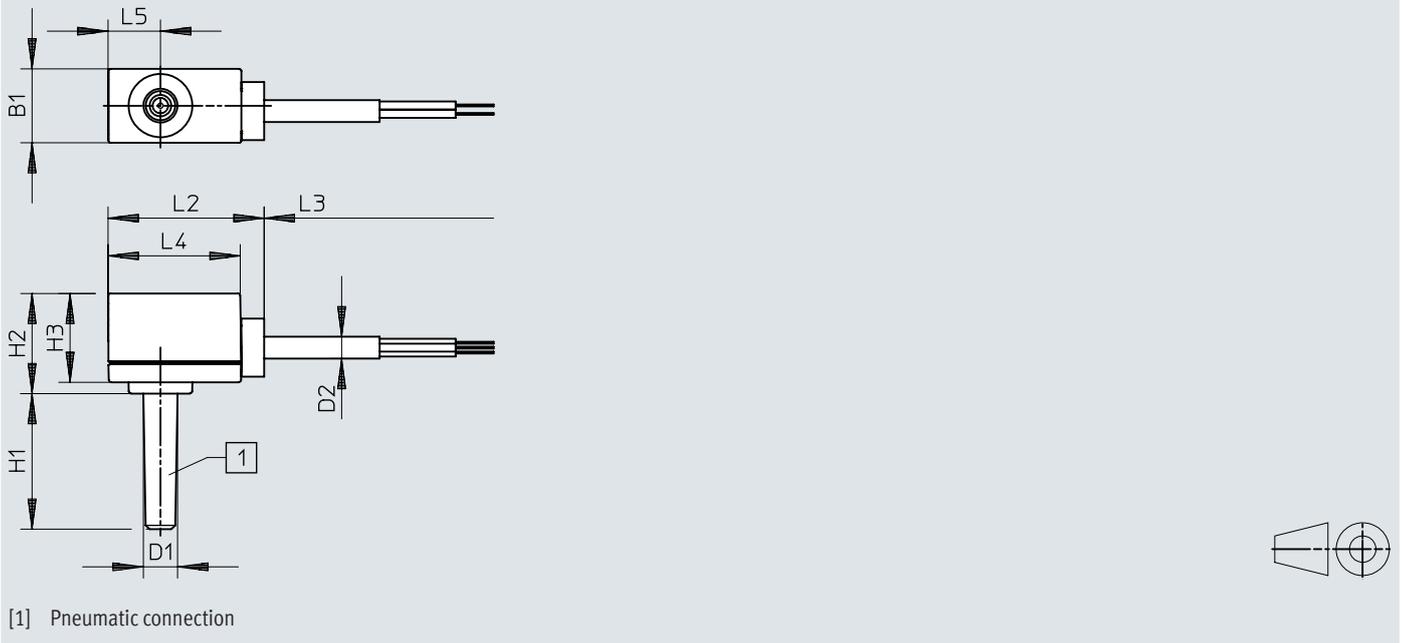
Pneumatic connection	Cartridge 10 mm	Flange	QS-3	QS-4	Push-in sleeve QS-4	Push-in sleeve QS-6
Degree of protection	IP40					
Corrosion resistance class CRC ¹⁾	2 - Moderate corrosion stress					
LABS (PWIS) conformity	VDMA24364-B2-L					
Suitability for the production of Li-ion batteries	Suitable for battery production with reduced Cu/Zn/Ni values (F1a)	–				Suitable for battery production with reduced Cu/Zn/Ni values (F1a)

1) Corrosion resistance class CRC 2 to Festo standard FN 940070. Moderate corrosion stress. Indoor application where condensation can occur. External visible parts with primarily decorative surface requirements that are in direct contact with a normal industrial environment.

Dimensions

Dimensions – SPTE-...-S...

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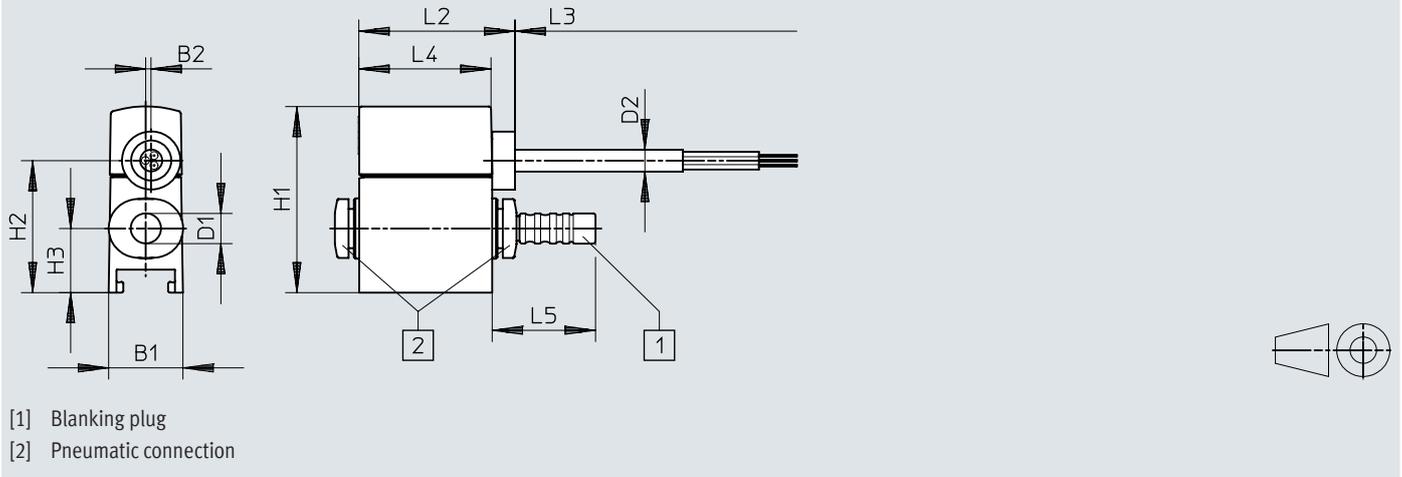


	B1	D1 ∅	D2 ∅	H1	H2	H3	L2	L3	L4	L5
SPTE-...-S4	9,8	4	2,9	18	13,3	11,8	20,5	2500	17,5	6,8
SPTE-...-S6		6		21						

Dimensions

Dimensions – SPTE-...-Q...

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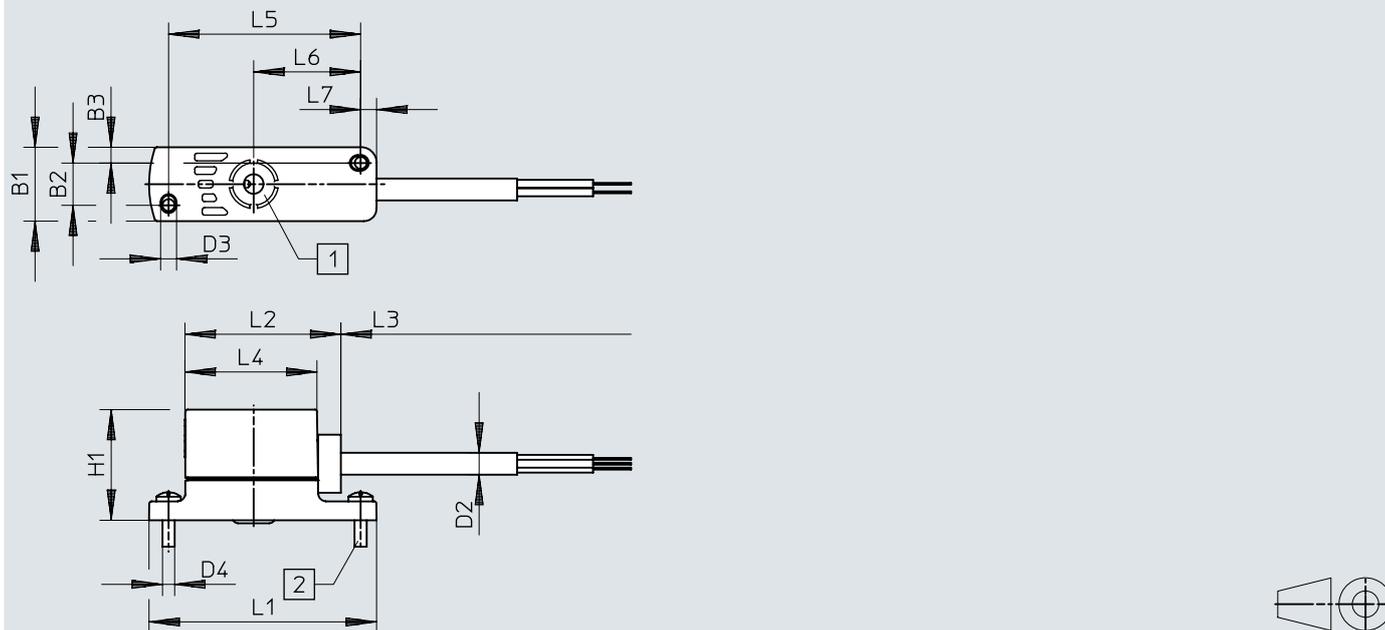


	B1	B2	D1 ∅	D2 ∅	H1	H2	H3	L2	L3	L4	L5
SPTE-...-Q3	9,8	0,7	3	2,9	24,7	17,5	8,5	20,5	2500	17,5	13,6
SPTE-...-Q4			4								

Dimensions

Dimensions – SPTE-...-F

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[1] Pneumatic connection with O-ring for flat mounting

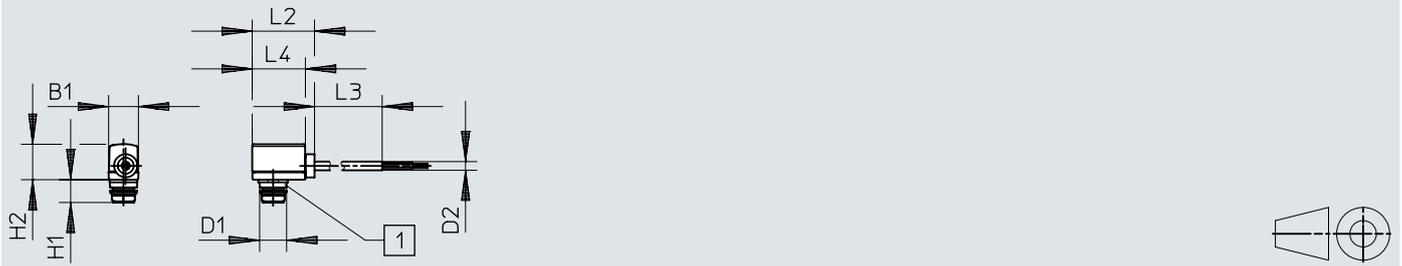
[2] M2x6 screw

	B1	B2	B3	D2 ∅	D3 ∅	D4	H1	L1	L2	L3	L4	L5	L6	L7
SPTE-...-F	9,8	5,4	2,1	2,9	2,1	M2x6	15	30	20,5	2500	17,5	25	13,9	2,3

Dimensions

Dimensions – SPTE...PC10...

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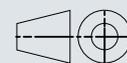
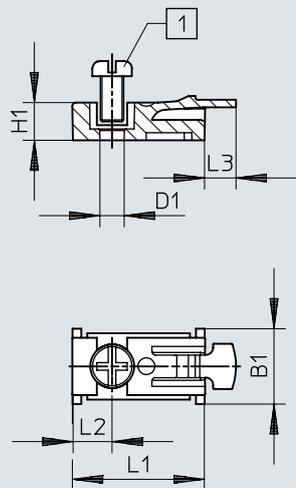
[1] Pressure connection: pin-type cartridge 10 mm

	B1	D1 ∅	D2 ∅	H1	H2	L2	L3	L4
SPTE...-PC10	9,8	8,9	2,9	7,6	11,7	20,5	2500	17,5

Dimensions

Dimensions – Mounting clip SAMH-PE-MC-1

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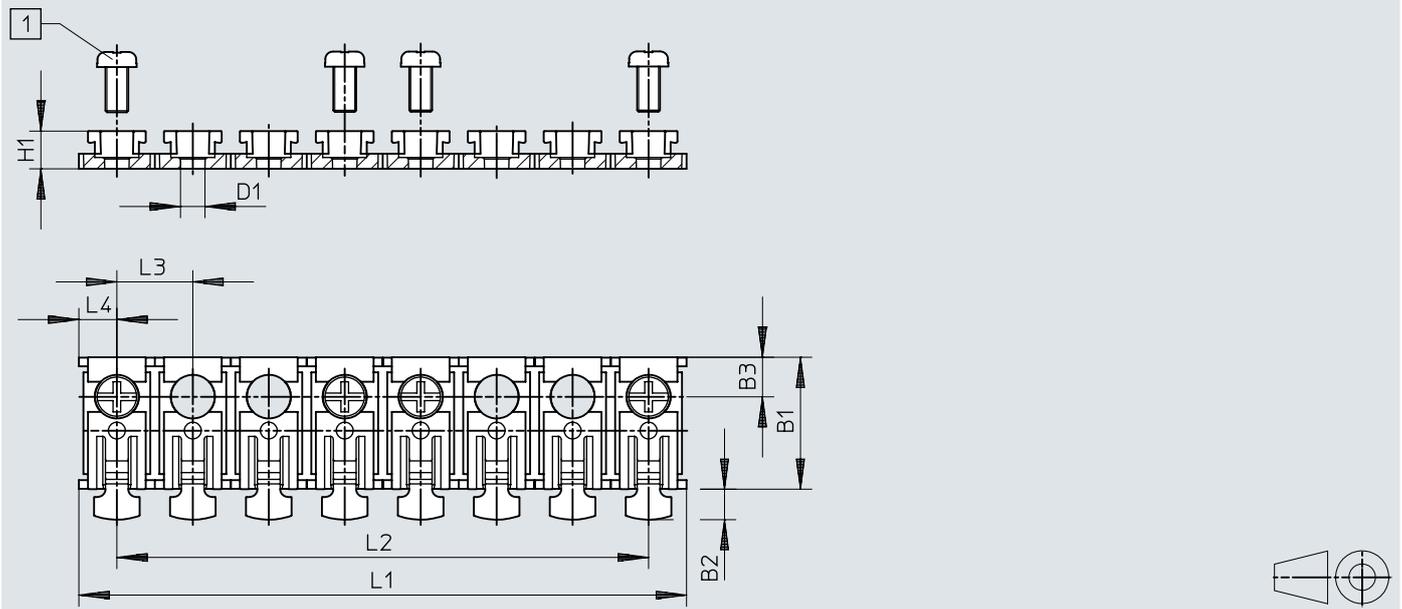
[1] M3x6 screw (included in the scope of delivery)

	B1	D1 ∅	H1	L1	L2	L3
SAMH-PE-MC-1	10	3,2	5	17,5	5,3	4

Dimensions

Dimensions – Mounting clip SAMH-PE-MC-8

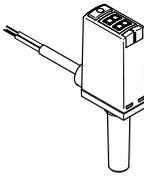
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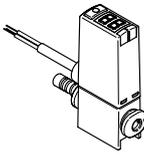
[1] M3x6 screw (4 included in the scope of delivery)

	B1	B2	B3	D1 ∅	H1	L1	L2	L3	L4
SAMH-PE-MC-8	17,5	4	5,3	3,2	5	80	70	10	5

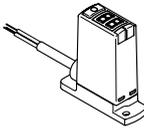
Ordering data

Ordering data – Push-in sleeve					
	Start value for pressure measuring range ¹⁾	End value for pressure measuring range	Pneumatic connection	Part no.	Type
	0 bar	-1 bar	Push-in sleeve QS-4	571474	SPTE-V1R-S4-V-2.5K
				571469	SPTE-V1R-S4-B-2.5K
			Push-in sleeve QS-6	571475	SPTE-V1R-S6-V-2.5K
			571470	SPTE-V1R-S6-B-2.5K	
		10 bar	Push-in sleeve QS-4	571479	SPTE-P10R-S4-B-2.5K
			571484	SPTE-P10R-S4-V-2.5K	
			Push-in sleeve QS-6	571480	SPTE-P10R-S6-B-2.5K
			571485	SPTE-P10R-S6-V-2.5K	

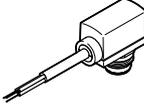
1) Additional pressure ranges on request (batch size 80)

Ordering data – Push-in connector					
	Start value for pressure measuring range ¹⁾	End value for pressure measuring range	Pneumatic connection	Part no.	Type
	0 bar	-1 bar	QS-3	571476	SPTE-V1R-Q3-V-2.5K
				571471	SPTE-V1R-Q3-B-2.5K
			QS-4	571472	SPTE-V1R-Q4-B-2.5K
			571477	SPTE-V1R-Q4-V-2.5K	
		10 bar	QS-3	571481	SPTE-P10R-Q3-B-2.5K
			571486	SPTE-P10R-Q3-V-2.5K	
			QS-4	571487	SPTE-P10R-Q4-V-2.5K
			571482	SPTE-P10R-Q4-B-2.5K	

1) Additional pressure ranges on request (batch size 80)

Ordering data – Flange					
	Start value for pressure measuring range ¹⁾	End value for pressure measuring range	Pneumatic connection	Part no.	Type
	0 bar	-1 bar	Flange	571478	SPTE-V1R-F-V-2.5K
				571473	SPTE-V1R-F-B-2.5K
	10 bar			571483	SPTE-P10R-F-B-2.5K
				571488	SPTE-P10R-F-V-2.5K

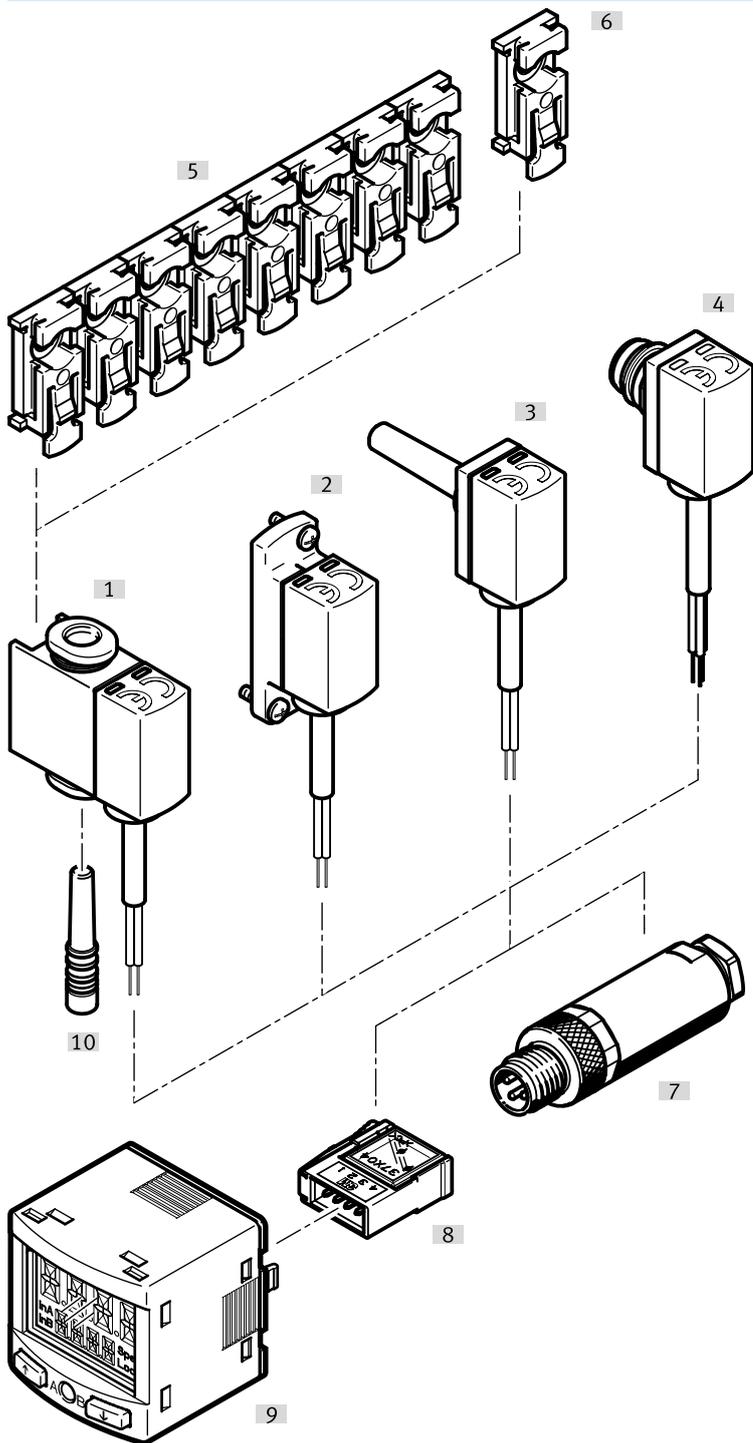
1) Additional pressure ranges on request (batch size 80)

Ordering information – Cartridge					
	Start value for pressure measuring range ¹⁾	End value for pressure measuring range	Pneumatic connection	Part no.	Type
	-1 bar	1 bar	Cartridge 10 mm	8025977	SPTE-B2R-PC10-B-2.5K
				8025976	SPTE-B2R-PC10-V-2.5K
	0 bar	-1 bar		8025975	SPTE-V1R-PC10-B-2.5K
				8025974	SPTE-V1R-PC10-V-2.5K

1) Additional pressure ranges on request (batch size 80)

Peripherals

Peripherals overview

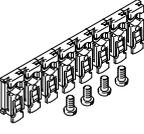


Accessories		→ Link
Type/order code	Description	
[1] Pressure transmitter SPTE-...-Q...	With push-in connector 3 mm or 4 mm	spte
[2] Pressure transmitter SPTE-...-F...	With flange/connecting plate	spte
[3] Pressure transmitter SPTE-...-S...	With push-in sleeve 4 mm or 6 mm	spte
[4] Pressure transmitter SPTE-...-PC10...	With cartridge 10 mm	spte
[5] Mounting clip SAMH-PE-MC-8	can be shortened to the required number of slots	16
[6] Mounting clip SAMH-PE-MC-1	-	16
[7] Plug	3-pin, straight	16
[8] Plug NECU-S-M8G3-HX-Q3	-	16
[9] Signal converter SCDN-2V-EC4-PNLK-L1	-	scdn

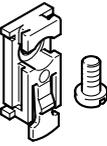
Peripherals

Accessories		→ Link
Type/order code	Description	
[10] Blanking plug QSMC-3H	(included in the scope of delivery with SPTE-...-Q...)	qs

Accessories

Mounting clip SAMH-PE-MC-8				
	Material mounting ¹⁾	Note on materials	Part no.	Type
	POM	RoHS-compliant	571490	SAMH-PE-MC-8

1) The mounting clip SAMH-PE-MC-8 can be shortened by the user to the required number of slots.

Mounting clip SAMH-PE-MC-1				
	Material mounting	Note on materials	Part no.	Type
	POM	RoHS-compliant	571489	SAMH-PE-MC-1

Plug, 4-pin, square design				
	Electrical connection	Material housing	Part no.	Type
	4-pin, Straight plug/insulation displacement connector, Square design	PBT, PC	570922	NECU-S-ECG4-HX-Q3

Plug NECU-S-M8G3-HX-Q3				
	Electrical connection	Material housing	Part no.	Type
	3-pin, M8x1, Straight plug/insulation displacement connector	PA, Die-cast zinc, Nickel-plated	564945	NECU-S-M8G3-HX-Q3

Plug NECB-S-M12G4-C2					
	Electrical connection 1, number of connections/cores	Electrical connection 1, connector system	Material housing	Part no.	Type
	4	M12x1, A-coded to EN 61076-2-101	PA66-GF30	8162294	NECB-S-M12G4-C2