

## Pressure transmitters SPTE

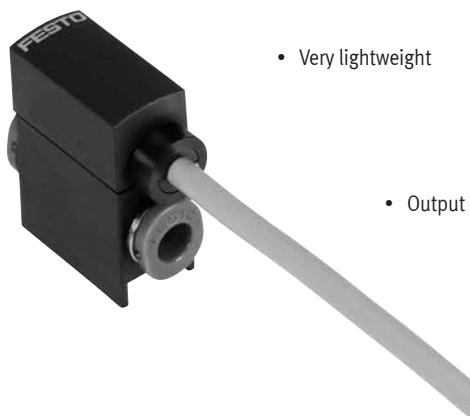
**FESTO**



## Key features

### At a glance

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



### Pneumatic connections



Push-in sleeve



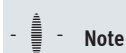
Push-in connector



Flange



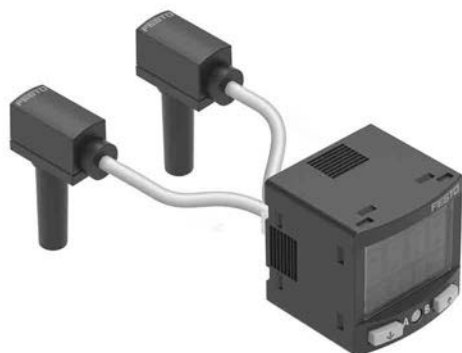
Cartridge



#### Note

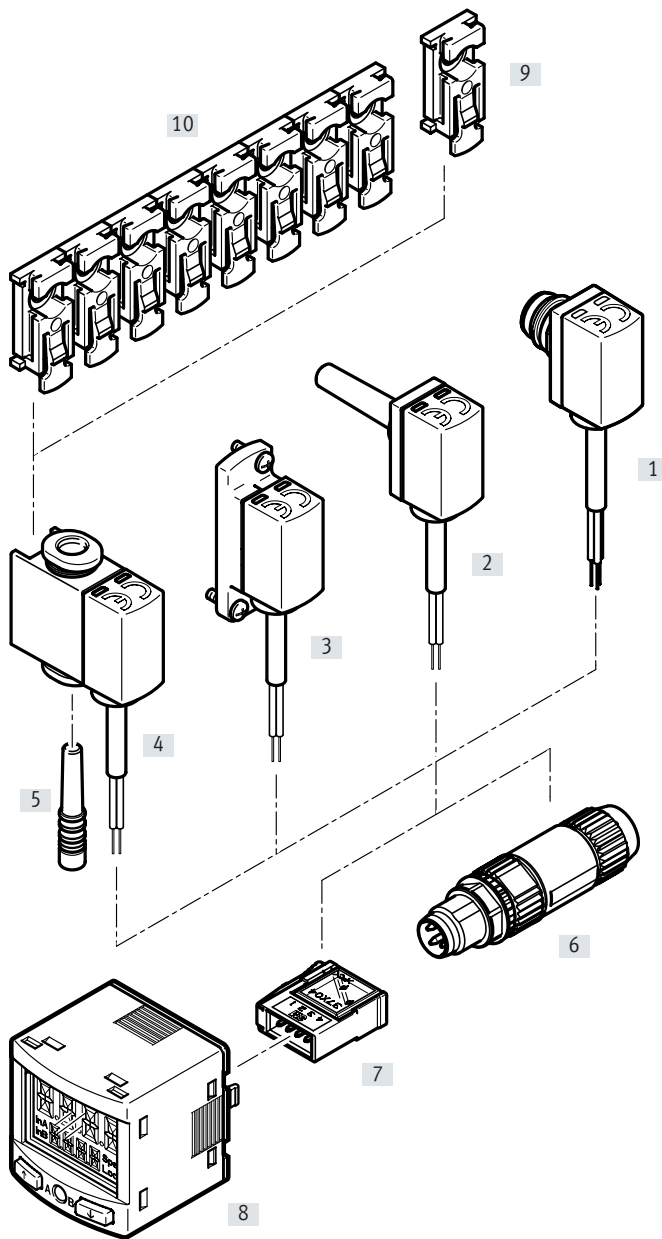
The version with 10 mm cartridge is designed for the vacuum generator OVEL.

### Use with SCDN



- One or two SPTE 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

## Peripherals overview



| Accessories |                                                                                 | → Page/Internet |
|-------------|---------------------------------------------------------------------------------|-----------------|
| [1]         | Pressure transmitter SPTE-...-PC10-...                                          | 5               |
| [2]         | Pressure transmitter SPTE-...-S-...                                             | 5               |
| [3]         | Pressure transmitter SPTE-...-F-...                                             | 5               |
| [4]         | Pressure transmitter SPTE-...-Q...                                              | 5               |
| [5]         | Blanking plug QSMC-3H<br>(included in the scope of delivery with SPTE-...-Q...) | qs              |
| [6]         | Plug NECU-S-M8G3-HX-Q3                                                          | 10              |
| [7]         | Plug NECU-S-ECG4-HX-Q3                                                          | 10              |
| [8]         | Signal converter SCDN-2V-EC4-PNLK-L1                                            | scdn            |
| [9]         | Mounting clip SAMH-PE-MC-1                                                      | 10              |
| [10]        | Mounting clip SAMH-PE-MC-8                                                      | 10              |

## Type codes

|      |                      |  |
|------|----------------------|--|
| 001  | Series               |  |
| SPTE | Pressure transmitter |  |

|     |                          |  |
|-----|--------------------------|--|
| 002 | Pressure measuring range |  |
| B2  | -1 ... 1 bar             |  |
| V1  | 0 ... -1 bar             |  |
| P10 | 0 ... 10 bar             |  |

|     |                   |  |
|-----|-------------------|--|
| 003 | Pressure inlet    |  |
| R   | Relative pressure |  |

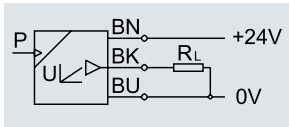
|      |                        |  |
|------|------------------------|--|
| 004  | Pneumatic connection   |  |
| F    | Flange/sub-base        |  |
| Q3   | Push-in connector 3 mm |  |
| Q4   | Push-in connector 4 mm |  |
| S4   | Push-in sleeve 4 mm    |  |
| S6   | Push-in sleeve 6 mm    |  |
| PC10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

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

|      |                       |  |
|------|-----------------------|--|
| 006  | Electrical connection |  |
| 2.5K | Cable 2.5 m, open end |  |

## Data sheet

## Function



-  - Voltage  
10 ... 30 V DC
-  - Pressure  
-1 ... +10 bar
-  - Temperature range  
0 ... +50°C



## General technical data

|                                                          |                           |
|----------------------------------------------------------|---------------------------|
| Certification                                            | RCM                       |
|                                                          | c UL us - Recognized (OL) |
| CE marking (see declaration of conformity) <sup>1)</sup> | To EU EMC Directive       |
| Note on materials                                        | RoHS-compliant            |

## Input signal/measuring element

| SPTE: ... -                                | V1R                                       | B2R | P10R |
|--------------------------------------------|-------------------------------------------|-----|------|
| Measured variable                          | Relative pressure                         |     |      |
| Measurement method                         | Piezoresistive pressure sensor            |     |      |
| Pressure measuring range start value [bar] | 0                                         | -1  | 0    |
| Pressure measuring range end value [bar]   | -1                                        | 1   | 10   |
| Max. overload pressure [bar]               | 5                                         | 5   | 15   |
| Operating medium                           | Compressed air to ISO 8573-1:2010 [7:4:4] |     |      |
| Note on the operating/pilot medium         | Lubricated operation possible             |     |      |
| Temperature of medium [°C]                 | 0 ... +50                                 |     |      |
| Ambient temperature [°C]                   | 0 ... +50                                 |     |      |

## Output, general

|                                                 |                                                                                        |
|-------------------------------------------------|----------------------------------------------------------------------------------------|
| Accuracy ±FS <sup>2)</sup> [%]                  | 3 (at room temperature of approx. 23°C)<br>4 (in ambient temperature range 0 ... 50°C) |
| Repetition accuracy ±FS <sup>2)</sup> [%]       | 0.3                                                                                    |
| Temperature coefficient ±FS/K <sup>2)</sup> [%] | 0.05                                                                                   |

## Analogue output

| SPTE: ... -                                 | -B-     | -V-      |
|---------------------------------------------|---------|----------|
| Analogue output [V]                         | 1 ... 5 | 0 ... 10 |
| Rise time [ms]                              | 1       |          |
| Min. load resistance of voltage output [kΩ] | 15      |          |

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

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

## Data sheet

|                                              |  |                                |                        |                 |           |                                                    |
|----------------------------------------------|--|--------------------------------|------------------------|-----------------|-----------|----------------------------------------------------|
| Output, additional data                      |  |                                |                        |                 |           |                                                    |
| Short circuit current rating                 |  | For all electrical connections |                        |                 |           |                                                    |
|                                              |  |                                |                        |                 |           |                                                    |
| Electronics                                  |  |                                |                        |                 |           |                                                    |
| SPTE-...-                                    |  | -B-                            |                        |                 | -V-       |                                                    |
| Operating voltage range DC                   |  | [V]                            | 10 ... 30              |                 | 18 ... 30 |                                                    |
| Reverse polarity protection                  |  | For all electrical connections |                        |                 |           |                                                    |
|                                              |  |                                |                        |                 |           |                                                    |
| Electromechanics                             |  |                                |                        |                 |           |                                                    |
| Electrical connection                        |  | Cable, 3-wire, open end        |                        |                 |           |                                                    |
| Cable length                                 |  | [m]                            | 2.5                    |                 |           |                                                    |
|                                              |  |                                |                        |                 |           |                                                    |
| Mechanics                                    |  |                                |                        |                 |           |                                                    |
| SPTE-...-                                    |  | S4                             | S6                     | Q3              | Q4        | F<br>PC10                                          |
| Type of mounting                             |  | Plug-in                        |                        | Via accessories |           | With through-hole and screw<br>Pin-type connection |
| Mounting position                            |  | Any                            |                        |                 |           |                                                    |
| Pneumatic connection                         |  | Push-in sleeve<br>QS-4         | Push-in sleeve<br>QS-6 | QS-3            | QS-4      | Flange<br>Cartridge 10 mm                          |
| Product weight                               |  | [g]                            | 35                     |                 |           |                                                    |
| Information on materials: housing            |  | PA-reinforced                  |                        |                 |           |                                                    |
|                                              |  |                                |                        |                 |           |                                                    |
| Immission/emission                           |  |                                |                        |                 |           |                                                    |
| Degree of protection                         |  | IP40                           |                        |                 |           |                                                    |
| Corrosion resistance class CRC <sup>1)</sup> |  | 2                              |                        |                 |           |                                                    |

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

Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

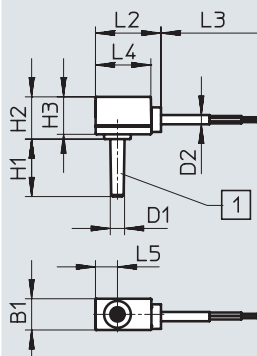
## Data sheet

## Dimensions

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

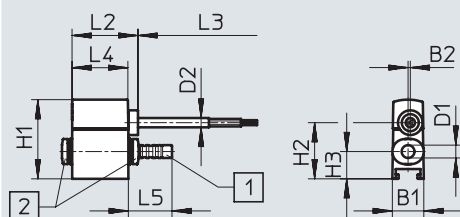
SPTE-...S...

[1] Pneumatic connection



| Type       | B1  | D1<br>Ø | D2<br>Ø | H1 | H2   | H3   | L2   | L3   | L4   | L5  |
|------------|-----|---------|---------|----|------|------|------|------|------|-----|
| SPTE-...S4 | 9.8 | 4       | 2.9     | 18 | 13.3 | 11.8 | 20.5 | 2500 | 17.5 | 6.9 |
| SPTE-...S6 |     | 6       |         | 18 | 13.3 | 11.8 |      |      |      | 6.9 |

SPTE-...Q...

[1] Blanking plug  
[2] Pneumatic connection

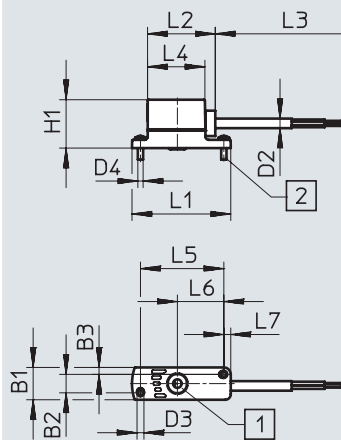
| Type       | B1  | B2  | D1<br>Ø | D2<br>Ø | H1   | H2   | H3  | L2   | L3   | L4   | L5   |
|------------|-----|-----|---------|---------|------|------|-----|------|------|------|------|
| SPTE-...Q3 | 9.8 | 0.7 | 3       | 2.9     | 24.7 | 17.5 | 8.5 | 20.5 | 2500 | 17.5 | 13.6 |
| SPTE-...Q4 |     | 0.7 | 4       |         | 24.7 | 17.5 | 8.5 |      |      |      | 13.6 |

## Data sheet

### Dimensions

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

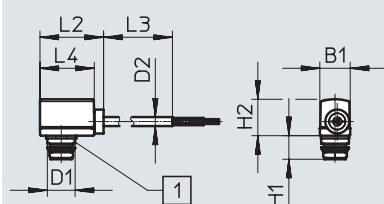
SPTE-...-F



- [1] Pneumatic connection with  
O-ring for flat mounting
- [2] Screw M2x6

| Type       | B1  | B2  | B3  | D2<br>Ø | D3<br>Ø | 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 |

SPTE...PC10...



- [1] Supply port: pin-type cartridge  
10 mm

| Type                | B1  | D1<br>Ø | D2<br>Ø | H1  | H2   | L2   | L3   | L4   |
|---------------------|-----|---------|---------|-----|------|------|------|------|
| SPTE-V1R-PC10-V-... | 9.8 | 8.9     | 2.9     | 7.6 | 11.7 | 20.5 | 2500 | 17.5 |
| SPTE-V1R-PC10-B-... |     |         |         |     |      |      |      |      |
| SPTE-B2R-PC10-V-... |     |         |         |     |      |      |      |      |
| SPTE-B2R-PC10-B-... |     |         |         |     |      |      |      |      |



## Data sheet

| Ordering data                                   |                        |                        |                         |          |                      |
|-------------------------------------------------|------------------------|------------------------|-------------------------|----------|----------------------|
| Pressure measuring range <sup>1)</sup><br>[bar] | Analogue output<br>[V] | Pneumatic connection   | Electrical connection   | Part no. | Type                 |
| -1 ... 1                                        | 1 ... 5                | Cartridge 10 mm        | Cable, 3-wire, open end | 8025977  | SPTE-B2R-PC10-B-2.5K |
|                                                 | 0 ... 10               |                        |                         | 8025976  | SPTE-B2R-PC10-V-2.5K |
| 0 ... -1                                        | 1 ... 5                | Cartridge 10 mm        |                         | 8025975  | SPTE-V1R-PC10-B-2.5K |
|                                                 |                        | Push-in sleeve 4 mm    |                         | 571469   | SPTE-V1R-S4-B-2.5K   |
|                                                 |                        | Push-in sleeve 6 mm    |                         | 571470   | SPTE-V1R-S6-B-2.5K   |
|                                                 |                        | Push-in connector 3 mm |                         | 571471   | SPTE-V1R-Q3-B-2.5K   |
|                                                 |                        | Push-in connector 4 mm |                         | 571472   | SPTE-V1R-Q4-B-2.5K   |
|                                                 |                        | Flange                 |                         | 571473   | SPTE-V1R-F-B-2.5K    |
|                                                 | 0 ... 10               | Cartridge 10 mm        |                         | 8025974  | SPTE-V1R-PC10-V-2.5K |
|                                                 |                        | Push-in sleeve 4 mm    |                         | 571474   | SPTE-V1R-S4-V-2.5K   |
|                                                 |                        | Push-in sleeve 6 mm    |                         | 571475   | SPTE-V1R-S6-V-2.5K   |
|                                                 |                        | Push-in connector 3 mm |                         | 571476   | SPTE-V1R-Q3-V-2.5K   |
|                                                 |                        | Push-in connector 4 mm |                         | 571477   | SPTE-V1R-Q4-V-2.5K   |
|                                                 |                        | Flange                 |                         | 571478   | SPTE-V1R-F-V-2.5K    |
| 0 ... 10                                        | 1 ... 5                | Push-in sleeve 4 mm    |                         | 571479   | SPTE-P10R-S4-B-2.5K  |
|                                                 |                        | Push-in sleeve 6 mm    |                         | 571480   | SPTE-P10R-S6-B-2.5K  |
|                                                 |                        | Push-in connector 3 mm |                         | 571481   | SPTE-P10R-Q3-B-2.5K  |
|                                                 |                        | Push-in connector 4 mm |                         | 571482   | SPTE-P10R-Q4-B-2.5K  |
|                                                 |                        | Flange                 |                         | 571483   | SPTE-P10R-F-B-2.5K   |
|                                                 | 0 ... 10               | Push-in sleeve 4 mm    |                         | 571484   | SPTE-P10R-S4-V-2.5K  |
|                                                 |                        | Push-in sleeve 6 mm    |                         | 571485   | SPTE-P10R-S6-V-2.5K  |
|                                                 |                        | Push-in connector 3 mm |                         | 571486   | SPTE-P10R-Q3-V-2.5K  |
|                                                 |                        | Push-in connector 4 mm |                         | 571487   | SPTE-P10R-Q4-V-2.5K  |
|                                                 |                        | Flange                 |                         | 571488   | SPTE-P10R-F-V-2.5K   |

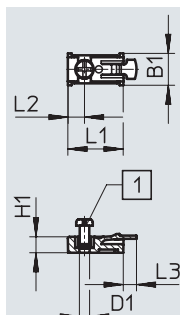
1) Additional pressure ranges on request (batch size 80)

## Accessories

### Mounting clip SAMH-PE-MC-1

Material:  
POM

Note on materials:  
RoHS-compliant



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

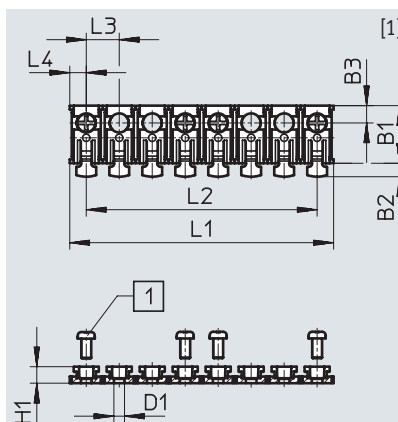
#### Dimensions and ordering data

| B1 | D1<br>Ø | H1 | L1   | L2  | L3 | Part no. | Type         |
|----|---------|----|------|-----|----|----------|--------------|
| 10 | 3.2     | 5  | 17.5 | 5.3 | 4  | 571489   | SAMH-PE-MC-1 |

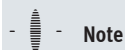
### Mounting clip SAMH-PE-MC-8

Material:  
POM

Note on materials:  
RoHS-compliant



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



#### Note

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

#### Dimensions and ordering data

| B1   | B2 | B3  | D1<br>Ø | H1 | L1 | L2 | L3 | L4 | Part no. | Type         |
|------|----|-----|---------|----|----|----|----|----|----------|--------------|
| 17.5 | 4  | 5.3 | 3.2     | 5  | 80 | 70 | 10 | 5  | 571490   | SAMH-PE-MC-8 |

#### Ordering data – Plugs

|  | Electrical connection                                                  | Part no. | Type              |
|--|------------------------------------------------------------------------|----------|-------------------|
|  | Straight plug, 4-pin, square design, insulation displacement connector | 570922   | NECU-S-ECG4-HX-Q3 |
|  | Plug M8x1, straight, 3-pin, insulation displacement connector          | 564945   | NECU-S-M8G3-HX-Q3 |
|  | Straight plug, 4-pin, straight, screw terminal                         | 192008   | SEA-4GS-7-2.5     |

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