Remote Type Pressure Sensors/Pressure Sensor Controllers

PSE Series

- PSE200 Multi-Channel Digital Pressure Sensor Controller
  - Connector type
  - P.149

- PSE300 2-Color Display Digital Pressure Sensor Controller
  - DIN rail/Terminal block type
  - P.155

- PSE530 Compact Pneumatic Pressure Sensor
  - P.134

- PSE540 Compact Pneumatic Pressure Sensor
  - P.137

- PSE550 Low Differential Pressure Sensor
  - P.140

- PSE560 Pressure Sensor for General Fluids
  - P.143

- PSE570 Pressure Sensor for General Fluids
  - P.146
## PSE Series Variations

<table>
<thead>
<tr>
<th>Model</th>
<th>Pressure Sensors</th>
<th>Controllers</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSE530</td>
<td>P.134</td>
<td>P1.134</td>
</tr>
<tr>
<td>PSE540</td>
<td>P.137</td>
<td>P1.137</td>
</tr>
<tr>
<td>PSE550</td>
<td>P.140</td>
<td>P1.140</td>
</tr>
<tr>
<td>PSE560</td>
<td>P.143</td>
<td>P1.143</td>
</tr>
<tr>
<td>PSE570</td>
<td>P.146</td>
<td>P1.146</td>
</tr>
<tr>
<td>PSE200</td>
<td>P.149</td>
<td>P1.149</td>
</tr>
<tr>
<td>PSE300</td>
<td>P.155</td>
<td>P1.155</td>
</tr>
</tbody>
</table>

### Basic Specifications

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Air</th>
<th>General fluids</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated pressure range (Minimum display)</td>
<td>±1 % (F.S.)</td>
<td>±0.2 % (F.S.)</td>
</tr>
<tr>
<td>Repeatability</td>
<td>±0.2 % (F.S.)</td>
<td>±0.3 % (F.S.)</td>
</tr>
<tr>
<td>Voltage</td>
<td>12 to 24 VDC</td>
<td></td>
</tr>
<tr>
<td>No. of outputs for switch</td>
<td>5 outputs</td>
<td>2 outputs</td>
</tr>
<tr>
<td>Analog output</td>
<td>1 to 5 V</td>
<td>1 to 5 V</td>
</tr>
<tr>
<td>Operating temp.</td>
<td>0 to 50°C</td>
<td>−10 to 60°C</td>
</tr>
</tbody>
</table>

### Functions

#### Digital display
- 1-color
- 2-color

#### Enclosure
- IP40
- IP65

#### Wiring
- Connector
- Grommet
- Connector

#### Major setting function
- Keylock, Peak/Bottom values holding, Auto-preset, Auto-shift, Display calibration, Anti-chattering

### Connection threads
- M reducer
- M R, NPT reducer
- Resin piping
- R, NPT, Rc
- URJ, TSJ*
- R

### Int'l standards
- CE
- CE, UL, CSA

### Others
- Flexible cable
- Direct
- With bracket
- Panel mount
- DIN rail

* URJ (VCR® fitting compliant), TSJ (Swagelok® fitting compliant)
Main Functions (For details, refer to pages 162 to 164.)

- **Keylock**: Locks the keys from functioning.
- **Peak/Bottom values holding**: Displays the maximum and minimum values being set and can keep those values on the display.
- **Auto-preset**: Able to set the pressure automatically. In the case of suction verification, it memorizes the pressure when adsorbed and released. By repeating several times, the optimum values are calculated automatically.
- **Auto-shift**: Stable switch output is available even though the supply pressure may fluctuate. Automatically corrects the set value in accordance with the fluctuations in the supply pressure.
- **Display calibration**: Able to adjust the displayed value (±5%) and justify distribution of the values displayed on respective pressure switch.
- **Anti-chattering**: Prevents malfunction due to sharp pressure fluctuations. The detection of momentary pressure fluctuation as abnormal pressure can be prevented by changing the setting of the response time.

### Pressure Sensors/PSE5 Series

#### Rated pressure range

<table>
<thead>
<tr>
<th>Vacuum</th>
<th>Compound pressure</th>
<th>Positive pressure</th>
<th>Low differential pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>-100 kPa</td>
<td>0 kPa</td>
<td>0 kPa</td>
<td>0 kPa</td>
</tr>
<tr>
<td>-90 kPa</td>
<td>100 kPa</td>
<td>100 kPa</td>
<td>100 kPa</td>
</tr>
<tr>
<td>-80 kPa</td>
<td>200 kPa</td>
<td>200 kPa</td>
<td>200 kPa</td>
</tr>
<tr>
<td>-70 kPa</td>
<td>300 kPa</td>
<td>300 kPa</td>
<td>300 kPa</td>
</tr>
<tr>
<td>-60 kPa</td>
<td>400 kPa</td>
<td>400 kPa</td>
<td>400 kPa</td>
</tr>
<tr>
<td>-50 kPa</td>
<td>500 kPa</td>
<td>500 kPa</td>
<td>500 kPa</td>
</tr>
<tr>
<td>-40 kPa</td>
<td>600 kPa</td>
<td>600 kPa</td>
<td>600 kPa</td>
</tr>
<tr>
<td>-30 kPa</td>
<td>700 kPa</td>
<td>700 kPa</td>
<td>700 kPa</td>
</tr>
<tr>
<td>-20 kPa</td>
<td>800 kPa</td>
<td>800 kPa</td>
<td>800 kPa</td>
</tr>
<tr>
<td>-10 kPa</td>
<td>900 kPa</td>
<td>900 kPa</td>
<td>900 kPa</td>
</tr>
<tr>
<td>0 kPa</td>
<td>1000 kPa</td>
<td>1000 kPa</td>
<td>1000 kPa</td>
</tr>
<tr>
<td>10 kPa</td>
<td>1100 kPa</td>
<td>1100 kPa</td>
<td>1100 kPa</td>
</tr>
<tr>
<td>20 kPa</td>
<td>1200 kPa</td>
<td>1200 kPa</td>
<td>1200 kPa</td>
</tr>
<tr>
<td>30 kPa</td>
<td>1300 kPa</td>
<td>1300 kPa</td>
<td>1300 kPa</td>
</tr>
<tr>
<td>40 kPa</td>
<td>1400 kPa</td>
<td>1400 kPa</td>
<td>1400 kPa</td>
</tr>
<tr>
<td>50 kPa</td>
<td>1500 kPa</td>
<td>1500 kPa</td>
<td>1500 kPa</td>
</tr>
<tr>
<td>60 kPa</td>
<td>1600 kPa</td>
<td>1600 kPa</td>
<td>1600 kPa</td>
</tr>
<tr>
<td>70 kPa</td>
<td>1700 kPa</td>
<td>1700 kPa</td>
<td>1700 kPa</td>
</tr>
<tr>
<td>80 kPa</td>
<td>1800 kPa</td>
<td>1800 kPa</td>
<td>1800 kPa</td>
</tr>
<tr>
<td>90 kPa</td>
<td>1900 kPa</td>
<td>1900 kPa</td>
<td>1900 kPa</td>
</tr>
<tr>
<td>100 kPa</td>
<td>2000 kPa</td>
<td>2000 kPa</td>
<td>2000 kPa</td>
</tr>
</tbody>
</table>

### Pressure Sensor Controllers/PSE200/300 Series

<table>
<thead>
<tr>
<th>Applicable pressure sensor model</th>
<th>Set/Display resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSE531 PSE541</td>
<td>—</td>
</tr>
<tr>
<td>PSE561</td>
<td>0.1 kPa</td>
</tr>
<tr>
<td>PSE563</td>
<td>0.1 kPa</td>
</tr>
<tr>
<td>PSE573</td>
<td>0.1 kPa</td>
</tr>
<tr>
<td>PSE564</td>
<td>0.2 kPa</td>
</tr>
<tr>
<td>PSE574</td>
<td>1 kPa</td>
</tr>
<tr>
<td>PSE560</td>
<td>0.001 MPa</td>
</tr>
<tr>
<td>PSE570</td>
<td>0.001 MPa</td>
</tr>
<tr>
<td>PSE550</td>
<td>—</td>
</tr>
</tbody>
</table>

### Input/Output specifications

- PSE200
  - NPN 5 outputs + auto-shift input
  - PNPN 5 outputs + auto-shift input

- PSE300
  - NPN 2 outputs + 1–5 V outputs
  - PNPN 2 outputs + 4–20 mA output
  - NPN 2 outputs + auto-shift input
  - PNPN 2 outputs + auto-shift input

<table>
<thead>
<tr>
<th>PSE200</th>
<th>PSE300</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input/Output specifications</td>
<td>Input/Output specifications</td>
</tr>
<tr>
<td>• NPN 5 outputs + auto-shift input</td>
<td>• NPN 2 outputs + 1–5 V outputs</td>
</tr>
<tr>
<td>• PNPN 5 outputs + auto-shift input</td>
<td>• PNPN 2 outputs + 4–20 mA output</td>
</tr>
<tr>
<td>• NPN 2 outputs + auto-shift input</td>
<td>• PNPN 2 outputs + auto-shift input</td>
</tr>
</tbody>
</table>

133 SMC
Compact Pneumatic Pressure Sensor

**PSE530 Series**

Low pressure sensor (PSE532) is used to detect minute differentiations. Auto-shift function reduces influence of fluctuations in the supply pressure.

**Applications**

<table>
<thead>
<tr>
<th>Series</th>
<th>Rated pressure range</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSE530</td>
<td>−100 kPa 0 100 kPa 500 kPa 1 MPa</td>
</tr>
<tr>
<td>PSE531</td>
<td>−101 kPa 0</td>
</tr>
<tr>
<td>PSE532</td>
<td>0 101 kPa</td>
</tr>
<tr>
<td>PSE533</td>
<td>−101 kPa 101 kPa</td>
</tr>
</tbody>
</table>

**Connector type**

Locked

Sensor body

Unlocked

Connector cover

**Application example**

Leak test of radiator

PSE532 + PSE300 Series

RoHS

Series Rated pressure range

<table>
<thead>
<tr>
<th>Series</th>
<th>−100 kPa 0 100 kPa 500 kPa 1 MPa</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSE530</td>
<td>0 100 kPa 500 kPa 1 MPa</td>
</tr>
<tr>
<td>PSE531</td>
<td>−101 kPa 0</td>
</tr>
<tr>
<td>PSE532</td>
<td>0 101 kPa</td>
</tr>
<tr>
<td>PSE533</td>
<td>−101 kPa 101 kPa</td>
</tr>
</tbody>
</table>
How to Order

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSE53 0</td>
<td>M5</td>
<td>Sensor cable (3 m)</td>
</tr>
<tr>
<td></td>
<td>Port size</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>Positive pressure [0 to 1 MPa]</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Vacuum [0 to –101 kPa]</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Low pressure [0 to 101 kPa]</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Compound pressure [–101 to 101 kPa]</td>
<td></td>
</tr>
</tbody>
</table>

Option/Part No.

When only optional parts are required, order using the part numbers listed below.

<table>
<thead>
<tr>
<th>Description</th>
<th>Part no.</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connector for pressure sensor controller</td>
<td>ZS-28-C</td>
<td>1 pc. per set</td>
</tr>
<tr>
<td>Sensor cable</td>
<td>ZS-26-F</td>
<td>Cable length: 3 m</td>
</tr>
<tr>
<td>Connector for pressure sensor controller + Sensor cable</td>
<td>ZS-26-J</td>
<td>Cable length: 3 m, The connector is not attached to the cable at the time of shipment.</td>
</tr>
</tbody>
</table>

Piping Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>M5</th>
<th>R06</th>
<th>R07</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port size</td>
<td>M5 x 0.8 male thread</td>
<td>ø6 reducer type</td>
<td>1/4 inch reducer type</td>
</tr>
</tbody>
</table>

Materials of parts in contact with fluid

<table>
<thead>
<tr>
<th>With sensor cable (3 m)</th>
<th>41 g</th>
<th>38 g</th>
</tr>
</thead>
<tbody>
<tr>
<td>Without sensor cable</td>
<td>7 g</td>
<td>3.8 g</td>
</tr>
</tbody>
</table>
### Internal Circuit and Wiring Example

**PSE53□**
- **Voltage output type**: 1 to 5 V
- **Output impedance**: Approx. 1 kΩ

#### Analog Output

- **1 to 5 VDC**

<table>
<thead>
<tr>
<th>Range</th>
<th>Rated pressure range</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>For vacuum</td>
<td>0 to −101 kPa</td>
<td>0</td>
<td>−101 kPa</td>
<td>10.1 kPa</td>
</tr>
<tr>
<td>For compound pressure</td>
<td>−101 kPa to 101 kPa</td>
<td>−101 kPa</td>
<td>101 kPa</td>
<td>—</td>
</tr>
<tr>
<td>For low pressure</td>
<td>0 to 101 kPa</td>
<td>0</td>
<td>101 kPa</td>
<td>−10.1 kPa</td>
</tr>
<tr>
<td>For positive pressure</td>
<td>0 to 1 MPa</td>
<td>0</td>
<td>1 MPa</td>
<td>−0.1 MPa</td>
</tr>
</tbody>
</table>

### Dimensions

**PSE53□-M5**

**PSE53□-R06**

**PSE53□-R07**

<table>
<thead>
<tr>
<th>Model</th>
<th>Applicable fitting size (D)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSE53□-R06</td>
<td>6</td>
</tr>
<tr>
<td>PSE53□-R07</td>
<td>1/4&quot;</td>
</tr>
</tbody>
</table>

With sensor cable
Compact Pneumatic Pressure Sensor

**PSE540 Series**

<table>
<thead>
<tr>
<th>Series</th>
<th>Rated pressure range</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSE540</td>
<td>-100 kPa 0 100 kPa 500 kPa 1 MPa</td>
</tr>
<tr>
<td>PSE541</td>
<td>-101 kPa 0</td>
</tr>
<tr>
<td>PSE543</td>
<td>-100 kPa 100 kPa</td>
</tr>
</tbody>
</table>

- Weight: 2.9 g
- Head size: 9.6 x 20.8 x 18 mm

Application examples

- Pads can be directly mounted.
- Manifolding is possible.

For PSE540-M3
### How to Order

#### Option/Part No.

**PSE54 1 M3**

*Note: The connector is not attached to the cable, but is included with the shipment.*

<table>
<thead>
<tr>
<th>Port size</th>
<th>Description</th>
<th>Part no.</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>M3</td>
<td>M3 x 0.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M5</td>
<td>M5 x 0.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>01</td>
<td>R1/8 (with M5 female thread)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N01</td>
<td>NPT1/8 (with M5 female thread)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R04</td>
<td>ø4 reducer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R06</td>
<td>ø6 reducer</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Option (Connector)

- C2: Connector for pressure sensor controller (1 pc.)

Refer to pages 11 and 12 for Pressure Switch Precautions. For details about the Specific Product Precautions, refer to the Operation Manual on the SMC website, http://www.smcworld.com

### Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>PSE540</th>
<th>PSE541</th>
<th>PSE543</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated pressure range</td>
<td>0 to 1 MPa</td>
<td>0 to –101 kPa</td>
<td>–100 to 100 kPa</td>
</tr>
<tr>
<td>Extension analog output range</td>
<td>–0.1 to 0 MPa</td>
<td>10.1 to 0 kPa</td>
<td>—</td>
</tr>
<tr>
<td>Proof pressure</td>
<td>1.5 MPa</td>
<td>500 kPa</td>
<td>—</td>
</tr>
<tr>
<td>Applicable fluid</td>
<td>Air/Non-corrosive gas/Non-flammable gas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power supply voltage</td>
<td>12 to 24 VDC ±10%</td>
<td>Ripple (p-p) 10% or less (with reverse connection protection)</td>
<td></td>
</tr>
<tr>
<td>Current consumption</td>
<td>15 mA or less</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Output specifications</td>
<td>Analog output 1 to 5 V (within rated pressure range), 0.6 to 1 V (within extension analog output range), Output impedance: Approx. 1 kΩ</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accuracy (Ambient temperature at 25°C)</td>
<td>PSE540: ±2% F.S. (within rated pressure range), ±5% F.S. (within extension analog output range)</td>
<td>PSE541: ±1% F.S. (within rated pressure range), ±3% F.S. (within extension analog output range)</td>
<td></td>
</tr>
<tr>
<td>Linearity</td>
<td>±0.7% F.S. or less</td>
<td>±0.4% F.S.</td>
<td></td>
</tr>
<tr>
<td>Repeatability</td>
<td>±0.2% F.S.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power supply voltage effect</td>
<td>±0.8% F.S.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Piping Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>M3</th>
<th>M5</th>
<th>01</th>
<th>N01</th>
<th>R04</th>
<th>R06</th>
<th>IM5</th>
<th>IM5H</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port size</td>
<td>M3 x 0.5</td>
<td>M5 x 0.8</td>
<td>R1/8</td>
<td>NPT1/8</td>
<td>M5 x 0.8</td>
<td>ø4 reducer</td>
<td>ø6 reducer</td>
<td>M5 female thread, through type</td>
</tr>
<tr>
<td>Pressure sensing section</td>
<td>Pressure sensor: Silicon, O-ring: NBR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>42.4 g</td>
<td>42.7 g</td>
<td>48.3 g</td>
<td>41.4 g</td>
<td>41.6 g</td>
<td>43.3 g</td>
<td>44.1 g</td>
<td>2.9 g</td>
</tr>
</tbody>
</table>
Internal Circuit and Wiring Example

PSE54□
Voltage output type
1 to 5 V
Output impedance
Approx. 1 kΩ

M3: M3 x 0.5
M5: M5 x 0.8

Pressure
Analog output [V]

Analog Output
1 to 5 VDC

Range
Rated pressure range

For vacuum
0 to –101 kPa
0 –101 kPa
10.1 kPa

For compound pressure
–100 kPa to 100 kPa
–100 kPa
100 kPa

For positive pressure
0 to 1 MPa
0 1 MPa
–0.1 MPa

Dimensions

PSE54□-M3-M5

<table>
<thead>
<tr>
<th></th>
<th>PSE54□-M3</th>
<th>PSE54□-M5</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>10.8</td>
<td>11.5</td>
</tr>
<tr>
<td>B</td>
<td>3</td>
<td>3.5</td>
</tr>
</tbody>
</table>

Common Dimensions

<table>
<thead>
<tr>
<th></th>
<th>PSE54□-R04</th>
<th>PSE54□-R06</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>ø4</td>
<td>ø6</td>
</tr>
<tr>
<td>B</td>
<td>18</td>
<td>20</td>
</tr>
</tbody>
</table>

PSE54□-IM5

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>8.7</td>
</tr>
<tr>
<td>B</td>
<td>9</td>
</tr>
</tbody>
</table>

PSE54□-01 N01

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>14.4</td>
</tr>
<tr>
<td>B</td>
<td>10</td>
</tr>
</tbody>
</table>

PSE54□-IM5H

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>8.7</td>
</tr>
<tr>
<td>B</td>
<td>13</td>
</tr>
</tbody>
</table>

With across
flats 12

Internal Circuit and Wiring Example

Brown DC (+)

Black OUT
(Analog output)

Blue DC (-)

Main circuit

12 to
24 VDC

Analog output [V]

Pressure

Range
Rated pressure range

For vacuum
0 to –101 kPa
0 –101 kPa
10.1 kPa

For compound pressure
–100 kPa to 100 kPa
–100 kPa
100 kPa

For positive pressure
0 to 1 MPa
0 1 MPa
–0.1 MPa
Low Differential Pressure Sensor

**PSE550 Series**

**Application examples**

- **Flow control**
  - PSE550 Series
  - Can control air flow by monitoring the flow rate inside the duct.

- **Filter clogging monitoring**
  - PSE550 Series
  - Can control filtration and replacement periods by monitoring the clogging of the filter.

- **Liquid level detection**
  - PSE550 Series
  - Can detect the liquid level through changes in the purge pressure.

### Power LED status indicator

- LED display

### 2 mounting types

- Mounting directly
- Mounting with bracket

### Accuracy

±1% F.S.

### Proof pressure

65 kPa

### Rated pressure range

<table>
<thead>
<tr>
<th>Series</th>
<th>0 kPa</th>
<th>1 kPa</th>
<th>2 kPa</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSE550</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Series

- RoHS
Low Differential Pressure Sensor

**PSE550 Series**

**How to Order**

**Option/Part No.**

<table>
<thead>
<tr>
<th>Description</th>
<th>Part no.</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bracket</td>
<td>ZS-30-A</td>
<td>With M3 x 5L (2 pcs.)</td>
</tr>
<tr>
<td>Connector for pressure sensor controller</td>
<td>ZS-28-C</td>
<td>1 pc.</td>
</tr>
</tbody>
</table>

**Specifications**

Refer to pages 11 and 12 for Pressure Switch Precautions. For details about the Specific Product Precautions, refer to the Operation Manual on the SMC website, http://www.smcworld.com

### Model

<table>
<thead>
<tr>
<th></th>
<th>PSE550</th>
<th>PSE550-28</th>
</tr>
</thead>
</table>

- **Rated differential pressure range**: 0 to 2 kPa
- **Operating pressure range**: –50 to 50 kPa (RoHS)
- **Operating temperature range**: 0 to 50°C (No freezing or condensation)
- **Stored**: –20 to 70°C (No freezing or condensation)
- **Operating/Stored**: 35 to 85% RH (No condensation)
- **Insulation resistance**: 50 MΩ or more (500 VDC measured via megohmmeter) between terminals and housing
- **Temperature characteristics**: ±3% F.S. (25°C reference)
- **Port size**: ø4.8 (ø4.4 in the end) resin piping (Applicable to 1/4D, ø4 air tubing)
- **Materials of parts in contact with fluid**: Resin pipe: Nylon, Piston area of sensor: Silicon
- **Sensor cable**: Oilproof heavy-duty vinyl cable (ellipse), 3 cores, 2.7 x 3.2, 3 m (Conductor area: 0.15 mm², Insulator O.D.: 0.9 mm)
- **Conductor area**: 0.15 mm², Insulator O.D.: 0.9 mm
- **Weight**: With sensor cable 75 g, Without sensor cable 35 g
- **Standards**: CE, UL/CSA (E216656), RoHS

**Note** Can detect differential pressure from 0 to 2 kPa within the range of –50 to 50 kPa.
PSE550 Series

Internal Circuit and Wiring Example

PSE550
Voltage output type
1 to 5 V
Output impedance
Approx. 1 kΩ

PSE550-28
Current output type
4 to 20 mA
Allowable load impedance
500 Ω or less (at 24 VDC)
100 Ω or less (at 12 VDC)

* Install the load either on the LINE (+) or LINE (−) side.

Analog Output

1 to 5 VDC

4 to 20 mA DC

Dimensions

With bracket

A View
Pressure Sensor
For General Fluids

PSE560 Series

Applicable fluids example
- Argon
- Air-containing drainage
- Refrigerant
- Nitrogen
- Hydraulic oil
- Silicone oil
- Water
- Carbon dioxide
- Lubricant
- Fluorocarbon
- Air

Variations

<table>
<thead>
<tr>
<th>Port type</th>
<th>Thread type</th>
<th>Special fitting type for semiconductors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port size</td>
<td>R1/8, R1/4, Rc1/8, NPT1/8, NPT1/4</td>
<td>URJ1/4, TSJ1/4*</td>
</tr>
<tr>
<td>Leakage</td>
<td>1 x 10⁻⁴Pa·m³/s</td>
<td>1 x 10⁻¹⁰Pa·m³/s</td>
</tr>
<tr>
<td>Analog output</td>
<td>1 to 5 V voltage output</td>
<td>4 to 20 mA current output</td>
</tr>
</tbody>
</table>

* For URJ1/4, TSJ1/4, refer to “Glossary of Terms/Technical Information” on pages 182 to 196.

Series | Rated pressure range
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PSE560</td>
<td>−100 kPa to 1 MPa</td>
</tr>
<tr>
<td>PSE561</td>
<td>−101 kPa to 0</td>
</tr>
<tr>
<td>PSE563</td>
<td>−100 kPa to 100 kPa</td>
</tr>
<tr>
<td>PSE564</td>
<td>0 to 500 kPa</td>
</tr>
</tbody>
</table>

Application examples

- Cleaning lines
- Check for working pressure for hydraulic cylinders
- Suction verification of workpieces containing moisture

Note: When vacuum is released, take precautions to avoid water collision with inertia force. (An adapter with restrictor (ZS-31-X175) is available to prevent water collision with rush inertia.) (Refer to “NOTE” on the Operation Manual at SMC website for details.)
Pressure Sensor
For General Fluids

PSE560 Series

How to Order

Sensor range

<table>
<thead>
<tr>
<th>Option (Connector)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nil</td>
<td>Connector for pressure sensor controller (1 pc.)</td>
</tr>
<tr>
<td>C2</td>
<td>Adapter with restrictor Rs1/8</td>
</tr>
<tr>
<td></td>
<td>Adapter with restrictor NPT1/4</td>
</tr>
<tr>
<td></td>
<td>Adapter with restrictor Rs1/8</td>
</tr>
<tr>
<td></td>
<td>Adapter with restrictor NPT1/8</td>
</tr>
</tbody>
</table>

Output specifications

<table>
<thead>
<tr>
<th>Description</th>
<th>Part no.</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connector for pressure sensor controller</td>
<td>ZS-28-C</td>
<td>1 pc.</td>
</tr>
<tr>
<td>Adapter with restrictor Rs1/8</td>
<td>ZS-31-X175</td>
<td>1 pc.</td>
</tr>
<tr>
<td>Adapter with restrictor NPT1/4</td>
<td>ZS-31-X186</td>
<td>1 pc.</td>
</tr>
<tr>
<td>Adapter with restrictor Rs1/8</td>
<td>ZS-31-X188</td>
<td>1 pc.</td>
</tr>
<tr>
<td>Adapter with restrictor NPT1/8</td>
<td>ZS-31-X189</td>
<td>1 pc.</td>
</tr>
</tbody>
</table>

Specifications

Refer to pages 11 and 12 for Pressure Switch Precautions. For details about the Specific Product Precautions, refer to the Operation Manual on the SMC website, http://www.smcworld.com

<table>
<thead>
<tr>
<th>Model</th>
<th>PSE560 (Positive pressure)</th>
<th>PSE561 (Vacuum)</th>
<th>PSE563 (Compound pressure)</th>
<th>PSE564 (Positive pressure)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated pressure range</td>
<td>0 to 1 MPa</td>
<td>0 to –101 kPa</td>
<td>–100 to 100 kPa</td>
<td>0 to 500 kPa</td>
</tr>
<tr>
<td>Extension analog output range</td>
<td>–0.1 to 0 MPa</td>
<td>10.1 to 0 kPa</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Proof pressure</td>
<td>1.5 MPa</td>
<td>500 kPa</td>
<td>500 kPa</td>
<td>750 kPa</td>
</tr>
</tbody>
</table>

Applicable fluid
Liquid or gas that will not corrode or attack stainless steel 316L

Power supply voltage
12 to 24 VDC ±10%, Ripple (p-p) 10% or less (with reverse connection protection)

Current consumption
10 mA or less —

Output specifications
Analogue output: 1 to 5 V (within rated pressure range) | 0.6 to 1 V (within extension analog output range)
Output impedance: Approx. 1 kΩ

Accuracy (Ambient temperature at 25°C)
±1% F.S. (within rated pressure range), ±3% F.S. (within extension analog output range)

Linearity
±0.5% F.S.

Repeatability
±0.2% F.S.

Power supply voltage effect
±0.3% F.S.

Enclosure
IP65

Operating temperature range
Operating: –10 to 60°C, Stored: –20 to 70°C (No freezing or condensation)

Operating humidity range
Operating/STORED: 35 to 85% RH (No condensation)

Withstand voltage
250 VAC for 1 minute between terminals and housing

Insulation resistance
50 MΩ or more (50 VDC measured via megohmmeter) between terminals and housing

Temperature characteristics
±2% F.S. (0 to 50°C; 25°C reference), ±3% F.S. (–10 to 60°C; 25°C reference)

Sensor cable
PSE560-□-□: Oilproof heavy-duty vinyl cable with air tubing, 3 cores, ø1.3, 3 m, Conductor area: 0.2 mm², Insulator O.D.: 1.12 mm

PSE563-□-□-28: Oilproof heavy-duty vinyl cable with air tubing, 2 cores, ø1.3, 3 m, Conductor area: 0.2 mm², Insulator O.D.: 1.12 mm

Standards
CE, UL/CSA (E216656), RoHS

Piping Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>O1</th>
<th>O2</th>
<th>N01</th>
<th>N02</th>
<th>C01</th>
<th>A2</th>
<th>B2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port size</td>
<td>R1/8</td>
<td>M5 x 0.8</td>
<td>R1/4</td>
<td>M5 x 0.8</td>
<td>NPT1/8</td>
<td>M5 x 0.8</td>
<td>NPT1/4</td>
</tr>
<tr>
<td>Material</td>
<td>Case: C3604 + Nickel plating, Piping port/Pressure sensor: Stainless steel 316L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>193 g</td>
<td>200 g</td>
<td>194 g</td>
<td>201 g</td>
<td>187 g</td>
<td>203 g</td>
<td>193 g</td>
</tr>
<tr>
<td>With sensor cable</td>
<td>193 g</td>
<td>200 g</td>
<td>194 g</td>
<td>201 g</td>
<td>187 g</td>
<td>203 g</td>
<td>193 g</td>
</tr>
<tr>
<td>Without sensor cable</td>
<td>101 g</td>
<td>108 g</td>
<td>102 g</td>
<td>109 g</td>
<td>95 g</td>
<td>111 g</td>
<td>101 g</td>
</tr>
</tbody>
</table>

Note 1) Current output type cannot be connected to the PSE200 series.
Note 2) The connector is not attached to the cable, but is included with the shipment.
### Internal Circuit and Wiring Example

**PSE56□□□**
- **Voltage output type**
  - 1 to 5 V
  - Output impedance: Approx. 1 kΩ
- **Brown DC (+)**
- **Black OUT**
- **Blue DC (–)**

**PSE56□□□-28**
- **Current output type**
  - 4 to 20 mA
  - Allowable load impedance: 500 Ω or less (at 24 VDC)
  - 100 Ω or less (at 12 VDC)

*Install the load either on the LINE (+) or LINE (–) side.*

### Analog Output

**1 to 5 VDC**

**4 to 20 mA DC**

<table>
<thead>
<tr>
<th>Range</th>
<th>Rated pressure range</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>For vacuum</td>
<td>0 to –101 kPa</td>
<td>0</td>
<td>–101 kPa</td>
<td>10.1 kPa</td>
</tr>
<tr>
<td>For compound pressure</td>
<td>–100 kPa to 100 kPa</td>
<td>–100 kPa</td>
<td>100 kPa</td>
<td>—</td>
</tr>
<tr>
<td>For positive pressure</td>
<td>0 to 1 MPa</td>
<td>0</td>
<td>1 MPa</td>
<td>–0.1 MPa</td>
</tr>
<tr>
<td></td>
<td>0 to 500 kPa</td>
<td>0</td>
<td>500 kPa</td>
<td>–50 kPa</td>
</tr>
</tbody>
</table>

### Dimensions

**PSE56□□□-01**, **PSE56□□□-02**

![Diagram](image1)

- **M5 x 0.8**
- **Part-C**
  - Air tubing (Atmospheric release)

*The dimensions of part C are common to all PSE56□□□ models.*

**PSE56□□□-C01**

![Diagram](image2)

**PSE56□□□-B2**

![Diagram](image3)

**Adapter with restrictor ZS-31-X□□□**

![Diagram](image4)

**PSE56□□□-A2**

![Diagram](image5)

<table>
<thead>
<tr>
<th>Model</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSE56□□□-01</td>
<td>8.2</td>
<td>R1/8</td>
</tr>
<tr>
<td>PSE56□□□-02</td>
<td>12</td>
<td>R1/4</td>
</tr>
<tr>
<td>PSE56□□□-N01</td>
<td>9.2</td>
<td>NPT1/8</td>
</tr>
<tr>
<td>PSE56□□□-N02</td>
<td>12.2</td>
<td>NPT1/4</td>
</tr>
<tr>
<td>PSE56□□□-C01</td>
<td>—</td>
<td>Rc1/8</td>
</tr>
<tr>
<td>PSE56□□□-A2</td>
<td>15.5</td>
<td>URJ1/4</td>
</tr>
<tr>
<td>PSE56□□□-B2</td>
<td>9.5</td>
<td>TSJ1/4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Part no.</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZS-31-X188</td>
<td>20</td>
<td>9</td>
<td>R1/8</td>
<td>Rc1/8</td>
<td>14</td>
<td>1.5</td>
</tr>
<tr>
<td>ZS-31-X189</td>
<td>20</td>
<td>9</td>
<td>NPT1/8</td>
<td>NPT1/8</td>
<td>14</td>
<td>1.5</td>
</tr>
<tr>
<td>ZS-31-X175</td>
<td>29</td>
<td>13</td>
<td>R1/4</td>
<td>Rc1/4</td>
<td>17</td>
<td>1.6</td>
</tr>
<tr>
<td>ZS-31-X186</td>
<td>29</td>
<td>13</td>
<td>NPT1/4</td>
<td>NPT1/4</td>
<td>17</td>
<td>1.6</td>
</tr>
</tbody>
</table>

Note: If it is predicted that the pressure, such as the water hammer or surge pressure fluctuates rapidly, refer to the Precautions stated in the Operation Manual at SMC website (http://www.smcworld.com).
Pressure Sensor
For General Fluids

PSE570 Series

RoHS

M12 connector

Materials of Parts in Contact with Fluid

- Piping port*: C3604 + Nickel plating
- Pressure sensor*: Al2O3 (Alumina 96%)
- Seals: O-ring: FKM + Grease, Square ring: FKM

* Stainless steel 316L is used for the PSE560.
For details, refer to page 143.

Withstand voltage

500 VAC
<Twice that of the PSE560>

IP65

Application examples

- Liquid coolant pressure control
- PET bottle molding machines
- Liquid pressure control of gun drills
# PSE570 Series Pressure Sensor for General Fluids

## How to Order

**PSE57**

<table>
<thead>
<tr>
<th>Part no.</th>
<th>Model</th>
<th>Sensor range</th>
</tr>
</thead>
<tbody>
<tr>
<td>001</td>
<td>PSE577</td>
<td>Positive pressure [0 to 1 MPa]</td>
</tr>
<tr>
<td>002</td>
<td>PSE577</td>
<td>Compound pressure [−100 to 100 kPa]</td>
</tr>
<tr>
<td>003</td>
<td>PSE577</td>
<td>Positive pressure [0 to 500 kPa]</td>
</tr>
<tr>
<td>004</td>
<td>PSE577</td>
<td>Positive pressure [0 to 2 MPa]</td>
</tr>
<tr>
<td>005</td>
<td>PSE577</td>
<td>Positive pressure [0 to 5 MPa]</td>
</tr>
<tr>
<td>006</td>
<td>PSE577</td>
<td>Positive pressure [0 to 10 MPa]</td>
</tr>
</tbody>
</table>

### Option (Lead wire)

- **L**: Lead wire and M12 connector (3 m), Straight
- **N**: None

### Output specification

- **Nil**: Voltage output type 1 to 5 V
- **L**: Current output type 4 to 20 mA

### Port size

- **01**: R1/8 (with M5 female thread)
- **02**: R1/4 (with M5 female thread)

**For pressure switch precautions and specific product precautions, refer to the "Operation Manual" on the SMC website.**

### Specifications

#### Fluid

- **Applicable fluid**: Gas or liquid that will not corrode materials of parts in contact with fluid

#### Pressure

- **Rated pressure range**: 0 to 1 MPa
- **Proof pressure**: 3.0 MPa

#### Electrical

- **Power supply voltage**: 12 to 24 VDC ±10% with 10% voltage ripple or less
- **Current consumption**: 10 mA or less
- **Protection**: Reverse connection protection
- **Accuracy**: 
  - Analog output accuracy (Ambient temperature at 25°C)
    - ±1.0% F.S.
    - ±2.5% F.S.
  - Linearity
    - ±0.2% F.S.
    - ±0.5% F.S.
  - Temperature characteristics (25°C reference)
    - ±2% F.S. (±10°C to ±10°C)
    - ±3% F.S. (0 to 50°C)
    - ±4% F.S. (−10°C to ±10°C)
  - Repeatability (Ambient temperature at 25°C)
    - ±1% F.S.
    - ±2% F.S.

#### Environment

- **Enclosure**: IP65
- **Withstand voltage**: 500 VAC for 1 minute between terminals and housing
- **Insulation resistance**: 100 MΩ or more (500 VDC measured via megohmmeter) between terminals and housing

#### Standards

- **CE**, **RoHS**

#### Materials of parts in contact with fluid

- **Piping port**: C3604 + Nickel plating, Pressure sensor: Al2O3 (Alumina 96%), O-ring: FKM + Grease
- **Square ring**: FKM

#### Weight

- **Without lead wire and M12 connector**: 88 g, 95 g, 103 g
- **With lead wire and M12 connector**: 175 g, 182 g, 191 g

#### Cable Specifications

- **Conductor**: AWG23
- **Insulator**: Cross-linked vinyl chloride
- **Color**: Brown, Blue, Black, White

#### Piping Specifications

<table>
<thead>
<tr>
<th>Part no.</th>
<th>PSE570/573/574-01</th>
<th>PSE570/573/574-02</th>
<th>PSE575/576/577-02</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port size</td>
<td>R1/8 M5 x 0.8</td>
<td>R1/4 M5 x 0.8</td>
<td>R1/4 M5 x 0.8</td>
</tr>
</tbody>
</table>

**For pressure switch precautions and specific product precautions, refer to the "Operation Manual" on the SMC website.**

---

### Options/Part Nos.

<table>
<thead>
<tr>
<th>Description</th>
<th>Part no.</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead wire and M12 connector (3 m), Straight</td>
<td>ZS-37-B</td>
<td>1 pc.</td>
</tr>
<tr>
<td>Adapter with restrictor R1/4</td>
<td>ZS-31-X175</td>
<td>1 pc.</td>
</tr>
<tr>
<td>Adapter with restrictor R1/8</td>
<td>ZS-31-X188</td>
<td>1 pc.</td>
</tr>
<tr>
<td>Assembly type connector</td>
<td>PCA-1557743</td>
<td>1 pc.</td>
</tr>
</tbody>
</table>

---

**For pressure switch precautions and specific product precautions, refer to the "Operation Manual" on the SMC website.**
PSE570 Series

Internal Circuits and Wiring Examples

### PSE570

**Voltage output type**
1 to 5 V
Output impedance
Approx. 1 kΩ

**PSE570-28**

**Current output type**
4 to 20 mA
Allowable load impedance
500 Ω or less (at 24 VDC)
100 Ω or less (at 12 VDC)

+1 The unconnected terminals are used in SMC, so please do not connect them.

---

**Analog Output**

1 to 5 VDC

4 to 20 mA DC

---

**Dimensions**

---

**Lead wire and M12 connector**

**ZS-37-A**

---

**ZS-37-B**

---

**Adapter with restrictor**

**ZS-31-X**

---

If it is expected that the pressure, such as the water hammer or surge pressure will fluctuate rapidly, refer to the Precautions in the Operation Manual on the SMC website (http://www.smcworld.com).

---

Part no. Description
ZS-37-A Straight type 3 m
ZS-37-B Right angle type 3 m

---

If it is expected that the pressure, such as the water hammer or surge pressure will fluctuate rapidly, refer to the Precautions in the Operation Manual on the SMC website (http://www.smcworld.com).
Pressure Sensor for General Fluids

- **Rated pressure range**: 0 to 2 MPa / 0 to 5 MPa / 0 to 10 MPa added
- **Withstand voltage**: 500 VAC (Twice that of the PSE560)
- **M12 connector**
- **Enclosure**: IP65

**Materials of Parts in Contact with Fluid**

- **Piping port**: C3604 + Nickel plating
- **Pressure sensor**: Al2O3 (Alumina 96%)
- **Square ring**: FKM

*1: Stainless steel 316L is used for the PSE560. For details, refer to the WEB catalog.

**Application Examples**

- Liquid coolant pressure control
- PET bottle molding machines
- Liquid pressure control of gun drills

**Series Variations**

<table>
<thead>
<tr>
<th>Series</th>
<th>Rated pressure range</th>
<th>Proof pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSE570</td>
<td>1 MPa</td>
<td>3.0 MPa</td>
</tr>
<tr>
<td>PSE573</td>
<td>±100 kPa</td>
<td>600 kPa</td>
</tr>
<tr>
<td>PSE574</td>
<td>500 kPa</td>
<td>1.5 MPa</td>
</tr>
<tr>
<td>New PSE575</td>
<td>2 MPa</td>
<td>5.0 MPa</td>
</tr>
<tr>
<td>New PSE576</td>
<td>5 MPa</td>
<td>12.5 MPa</td>
</tr>
<tr>
<td>New PSE577</td>
<td>10 MPa</td>
<td>30 MPa</td>
</tr>
</tbody>
</table>

For details, refer to the WEB catalog.
Safety Instructions
Be sure to read the “Handling Precautions for SMC Products” (M-E03-3) and “Operation Manual” before use.
## Multi-Channel Digital Pressure Sensor Controller

**PSE200 Series**

### Applicable sensors

<table>
<thead>
<tr>
<th>PSE53</th>
<th>PSE54</th>
<th>PSE55</th>
<th>PSE56</th>
<th>PSE57</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSE531</td>
<td>PSE541</td>
<td>—</td>
<td>PSE561</td>
<td>—</td>
</tr>
<tr>
<td>PSE533</td>
<td>PSE543</td>
<td>—</td>
<td>PSE563</td>
<td>PSE573</td>
</tr>
<tr>
<td>PSE530</td>
<td>PSE540</td>
<td>—</td>
<td>PSE560</td>
<td>PSE570</td>
</tr>
<tr>
<td>PSE532</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

### Rated pressure range

<table>
<thead>
<tr>
<th>Applicable sensors</th>
<th>Rated pressure range</th>
<th>Set/Display resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSE531 PSE541 PSE561 PSE573</td>
<td>-101 kPa 0 100 kPa 1 MPa</td>
<td>0.1 kPa</td>
</tr>
<tr>
<td>PSE533 PSE543 PSE563 PSE573</td>
<td>-101 kPa 0 101 kPa</td>
<td>0.1 kPa</td>
</tr>
<tr>
<td>PSE530 PSE540 PSE560 PSE570</td>
<td>0 101 kPa</td>
<td>1 MPa</td>
</tr>
<tr>
<td>PSE532</td>
<td>—</td>
<td>0 101 kPa</td>
</tr>
</tbody>
</table>

### Set/Display resolution

<table>
<thead>
<tr>
<th>Applicable sensors</th>
<th>Rated pressure range</th>
<th>Set/Display resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSE531 PSE541 PSE561 PSE573</td>
<td>-101 kPa 0 100 kPa 1 MPa</td>
<td>0.1 kPa</td>
</tr>
<tr>
<td>PSE533 PSE543 PSE563 PSE573</td>
<td>-101 kPa 0 101 kPa</td>
<td>0.1 kPa</td>
</tr>
<tr>
<td>PSE530 PSE540 PSE560 PSE570</td>
<td>0 101 kPa</td>
<td>1 MPa</td>
</tr>
<tr>
<td>PSE532</td>
<td>—</td>
<td>0 101 kPa</td>
</tr>
</tbody>
</table>

### A single controller monitors up to 4 pressure sensors.
- Sensor input: 4 inputs
- Switch output: 5 outputs (2 outputs for 1ch, 1 output for 2 to 4ch)

### Functions

- Auto-shift function
- Auto-preset function
- Auto-identification function
- Copy function
- Channel scan function
- Zero-clear function
- Keylock function
- Peak/Bottom values holding/display function
- Display unit switching function
- Display calibration function
- Anti-chattering function

### Connector type

![Connector type diagram](image)

### A single controller monitors various applications.

- **Suction verification**
- **Leak test**
- **Placement verification**
- **Check for working pressure for hydraulic cylinders**
- **Check for supply pressure for ejectors**
- **Check for supply pressure for cleaning lines**
- **Suction verification of workpieces containing moisture**

### 76% reduction in installation space

(Compared with the panel mounted ZSE40/ISE40)
Multi-Channel Controller

PSE200 Series

How to Order

PSE20 0 - M

Input/Output specifications

<table>
<thead>
<tr>
<th>Option 2</th>
<th>Nil</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>4C</td>
<td>Sensor connector (4 pcs.)</td>
<td></td>
</tr>
</tbody>
</table>

Unit specifications

<table>
<thead>
<tr>
<th>Nil</th>
<th>With display unit switching function</th>
<th>Note 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>Fixed SI unit</td>
<td>Note 2</td>
</tr>
</tbody>
</table>

Note 1: Under the New Measurement Law, sales of switches with the unit switching function are not allowed for use in Japan.

Note 2: Fixed unit
For vacuum, low pressure and compound pressure: kPa
For positive pressure: MPa

Accessory: Power supply/Output connection cable (2 m)
Included with the controller.

Power supply/Output connection cable ZS-26-A

Option/Part No.

When only optional parts are required, order with the part numbers listed below.

<table>
<thead>
<tr>
<th>Description</th>
<th>Part no.</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panel mount adapter</td>
<td>ZS-26-B</td>
<td>Waterproof seal, mounting screws M3 x 8L (2 pcs.) included</td>
</tr>
<tr>
<td>Front protective cover + Panel mount adapter</td>
<td>ZS-26-C</td>
<td>Waterproof seal, mounting screws M3 x 8L (2 pcs.) included</td>
</tr>
<tr>
<td>□48 conversion adapter</td>
<td>ZS-26-D</td>
<td>□48 conversion adapter</td>
</tr>
<tr>
<td></td>
<td></td>
<td>+ This adapter is used to mount the PSE200 series on the panel fitting of the PSE100 series.</td>
</tr>
<tr>
<td>Front protective cover</td>
<td>ZS-26-01</td>
<td>Order panel mount adapter separately.</td>
</tr>
<tr>
<td>Sensor connector</td>
<td>ZS-28-C (1 pc. per set)</td>
<td></td>
</tr>
</tbody>
</table>

*48 conversion adapter
Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>PSE200</th>
<th>PSE201</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply voltage</td>
<td>12 to 24 VDC ±10%, Ripple (p-p) 10% or less (with reverse connection protection)</td>
<td></td>
</tr>
<tr>
<td>Current consumption</td>
<td>55 mA or less (Current consumption for sensor is not included.)</td>
<td></td>
</tr>
<tr>
<td>Power supply voltage for sensor</td>
<td>[Power supply voltage] –1.5 V</td>
<td></td>
</tr>
<tr>
<td>Power supply current for sensor Note 1)</td>
<td>Maximum 40 mA (100 mA maximum for the total power supply current when 4 sensors are input.)</td>
<td></td>
</tr>
<tr>
<td>Sensor input</td>
<td>1 to 5 VDC (Input impedance: Approx. 800 kΩ)</td>
<td></td>
</tr>
<tr>
<td>Number of inputs</td>
<td>4 inputs</td>
<td></td>
</tr>
<tr>
<td>Input protection</td>
<td>With excess voltage protection (Up to 26.4 V)</td>
<td></td>
</tr>
<tr>
<td>Switch output</td>
<td>Maximum load current 80 mA</td>
<td>PNP open collector output: 5 outputs (Sensor input CH1: 2 outputs, CH2 to 4: 1 output)</td>
</tr>
<tr>
<td></td>
<td>Maximum load voltage 30 V</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Residual voltage 1 V or less (with load current of 80 mA)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Response time 5 ms or less (Response time selections with anti-chattering function: 20 ms, 160 ms, 640 ms)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Short circuit protection With short circuit protection</td>
<td></td>
</tr>
<tr>
<td>Repeatability</td>
<td>±0.1% F.S. ±1 digit</td>
<td></td>
</tr>
<tr>
<td>Hysteresis mode</td>
<td>Adjustable (can be set from 0)</td>
<td></td>
</tr>
<tr>
<td>Hysteresis mode</td>
<td>Fixed (3 digits)</td>
<td></td>
</tr>
<tr>
<td>Window comparator mode</td>
<td>For measured value display: 4-digit, 7-segment indicator, Display color: Orange (Sampling frequency: 4 times/sec)</td>
<td>For channel display: 1-digit, 7-segment indicator, Display color: Red</td>
</tr>
<tr>
<td>Display accuracy (Operating temperature at 25°C)</td>
<td>±0.5% F.S. ±1 digit</td>
<td></td>
</tr>
<tr>
<td>Indicator light</td>
<td>Red (Lights up when output is turned ON.)</td>
<td></td>
</tr>
<tr>
<td>Auto-shift input</td>
<td>Non-voltage input (Reed or Solid state), Input 10 ms or more, Independently controllable auto-shift function ON/OFF</td>
<td></td>
</tr>
<tr>
<td>Auto-identification function</td>
<td>With auto-identification function Note 2)</td>
<td></td>
</tr>
<tr>
<td>Environment Enclosure</td>
<td>Front face: IP65 (when panel-mounted), Others: IP40 Note 3)</td>
<td></td>
</tr>
<tr>
<td>Ambient temperature range</td>
<td>Operating: 0 to 50°C, Stored: –10 to 60°C (No freezing or condensation)</td>
<td></td>
</tr>
<tr>
<td>Ambient humidity range</td>
<td>Operating/Stored: 35 to 85% RH (No condensation)</td>
<td></td>
</tr>
<tr>
<td>Temperature characteristics</td>
<td>±0.5% F.S. (25°C reference)</td>
<td></td>
</tr>
<tr>
<td>Connection Power supply/Output connection: 8P connector, Sensor connection: e-con connector</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Material Housing</td>
<td>PBT; Display: Transparent nylon; Back rubber cover: CR</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>Approx. 60 g (Excluding power supply/output cable)</td>
<td></td>
</tr>
<tr>
<td>Power supply/Output connection cable</td>
<td>Heat resistant heavy-duty cable, 8 cores, ø4.8, 2 m, Conductor area: 0.15 mm², Insulator O.D.: 0.9 mm</td>
<td></td>
</tr>
<tr>
<td>Standards</td>
<td>CE, RoHS</td>
<td></td>
</tr>
</tbody>
</table>

Note 1) If the Vcc and 0 V side of the sensor input connector are short circuited, the inside of the controller will be damaged.

Note 2) Auto-identification function comes with “the PSE53□ series” pressure sensor only. Other SMC series (PSE540, 560, 570) are not equipped with this function.

Note 3) IP40 when using the □48 conversion adapter.

Applicable Pressure Sensor

<table>
<thead>
<tr>
<th>Applicable sensor</th>
<th>Rated pressure range</th>
<th>Set/Display resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSE53</td>
<td>PSE54</td>
<td>PSE55</td>
</tr>
<tr>
<td>PSE531</td>
<td>PSE541</td>
<td>–</td>
</tr>
<tr>
<td>PSE533</td>
<td>PSE543</td>
<td>–</td>
</tr>
<tr>
<td>PSE530</td>
<td>PSE540</td>
<td>–</td>
</tr>
<tr>
<td>PSE532</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>
PSE200 Series

Internal Circuit and Wiring Example

PSE200-(M)
- NPN open collector 5 outputs + Auto-shift 1 input

PSE201-(M)
- PNP open collector 5 outputs + Auto-shift 1 input
Pin no. | Terminal
---|---
1 | DC (+)
2 | N.C.
3 | DC (–)
4 | IN (1 to 5 V)

Power supply/output connector (8P)

---

Sensor connector (4P x 4)

---

Connector (Option)

---

Power supply/output connection cable (Accessory)

---

Dimensions

PSE200/201

---

Multi-Channel Controller **PSE200 Series**

---

ZSE20
ISE20
ZSE30
ISE30
ZSE40
ISE40
ZSE10
ISE10
ISE70
ZSE80
ISE80
PS
ISA3
ISA2
ISE35
PSE
IS
ISG
ZSM1

---

SMC
Dimensions

Front protective cover + Panel mount adapter

48 conversion adapter + Panel mount adapter

Panel fitting dimensions

Applicable panel thickness: 0.5 to 8 mm
2-Color Display Digital Pressure Sensor Controller

PSE300 Series

Applicable sensors

<table>
<thead>
<tr>
<th>Pattern</th>
<th>ON</th>
<th>OFF</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Red</td>
<td>Green</td>
</tr>
<tr>
<td>2</td>
<td>Green</td>
<td>Red</td>
</tr>
<tr>
<td>3</td>
<td>Red</td>
<td>Red</td>
</tr>
<tr>
<td>4</td>
<td>Green</td>
<td>Green</td>
</tr>
</tbody>
</table>

Available sensors:

- PSE53
- PSE54
- PSE55
- PSE56
- PSE57

Power supply/Output connector

Sensor connector

Connector type

DIN rail/Terminal block type

Current input type

Electrical current input (4 to 20 mA DC) is added to the sensor input.

Applicable sensor type:
- PSE56 (Current input type)
- PSE57 (Current output type)

Response time:
1 ms

Possible to reduce panel fitting labor.

Can be mounted in close proximity with each other either horizontally or vertically.

2-color display (Red/Green)

Possible to set 4 patterns of display color.

- Pattern 1: Red/ Green
- Pattern 2: Green/ Red
- Pattern 3: Red/ Red
- Pattern 4: Green/ Green

Available patterns:

- Pattern ON OFF
- Pattern 1: Red Green
- Pattern 2: Green Red
- Pattern 3: Red Red
- Pattern 4: Green Green

Rated pressure range

<table>
<thead>
<tr>
<th>Applicable sensors</th>
<th>Rated pressure range</th>
<th>Set/Display resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSE53 PSE54 PSE55 PSE56 PSE57</td>
<td>-100 kPa to 1 MPa</td>
<td>0.1 kPa</td>
</tr>
<tr>
<td>PSE531 PSE541 PSE561</td>
<td>-101 kPa to 100 kPa</td>
<td>0.2 kPa</td>
</tr>
<tr>
<td>PSE533 PSE543 PSE563 PSE573</td>
<td>-100 kPa to 1 MPa</td>
<td>0.001 MPa</td>
</tr>
<tr>
<td>PSE530 PSE540 PSE560 PSE570</td>
<td>0 to 100 kPa</td>
<td>0.1 kPa</td>
</tr>
<tr>
<td>PSE532</td>
<td>0 to 100 kPa</td>
<td>0.01 kPa</td>
</tr>
<tr>
<td>— — — PSE564 PSE574</td>
<td>0 to 500 kPa</td>
<td>1 kPa</td>
</tr>
<tr>
<td>— — PSE550</td>
<td>0 to 2 kPa</td>
<td>0.01 kPa</td>
</tr>
</tbody>
</table>

Available sensors:

- PSE53
- PSE54
- PSE55
- PSE56
- PSE57

Available pressure range:

- -100 kPa to 1 MPa
- -101 kPa to 100 kPa
- -100 kPa to 1 MPa
- 0 to 100 kPa
- 0 to 100 kPa
- 0 to 500 kPa
- 0 to 2 kPa
- 0 to 500 kPa
- 0 to 2 kPa

Available set and display resolution:

- 0.1 kPa
- 0.2 kPa
- 0.001 MPa
- 0.1 kPa
- 0.01 kPa
- 1 kPa
- 0.01 kPa

Additional details:

- Auto-shift function
- Auto-preset function
- Display calibration function
- Peak/Bottom values holding/display function
- Keylock function
- Zero-clear function
- Error indication function
- Display unit switching function
- Anti-chattering function

Functions

Response time:

1 ms

Available response time:

- 1 ms

Available display colors:

- Red
- Green

Available patterns:

- Pattern 1
- Pattern 2
- Pattern 3
- Pattern 4

Available connector types:

- Power supply/Output connector
- Sensor connector

Available connector types:

- e-CON connector

Available mounting options:

- Can be mounted in close proximity with each other either horizontally or vertically.

Available length:

- 30 mm
**Pressure Sensor Controller**

**PSE300 Series**

### How to Order

- **Option 1**
  - Nil
  - None
  - Power supply/Output connection cable (2 m) ZS-28-A
  - Bracket ZS-28-B With M3 x 5L (2 pcs.)
  - Sensor connector ZS-28-C 1 pc.
  - Panel mount adapter ZS-27-C With M3 x 8L (2 pcs.)
  - Panel mount adapter + Front protective cover ZS-27-D With M3 x 8L (2 pcs.)
  - Front protective cover ZS-27-01 1 pc.

- **Option 2**
  - Nil
  - None
  - Bracket M3 x 5L
  - Panel mount adapter
  - Panel Mounting screw (M3 x 8L)

- **Option 3**
  - Nil
  - None
  - Sensor connector
  - Sensor connector (e-con connector)

**Note:** The connector is not attached to the cable, but is included with the shipment.

**Option/Part No.**

<table>
<thead>
<tr>
<th>Description</th>
<th>Part no.</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply/Output connection cable (2 m)</td>
<td>ZS-28-A</td>
<td></td>
</tr>
<tr>
<td>Bracket</td>
<td>ZS-28-B</td>
<td>With M3 x 5L (2 pcs.)</td>
</tr>
<tr>
<td>Sensor connector</td>
<td>ZS-28-C</td>
<td>1 pc.</td>
</tr>
<tr>
<td>Panel mount adapter</td>
<td>ZS-27-C</td>
<td>With M3 x 8L (2 pcs.)</td>
</tr>
<tr>
<td>Panel mount adapter + Front protective cover</td>
<td>ZS-27-D</td>
<td>With M3 x 8L (2 pcs.)</td>
</tr>
<tr>
<td>Front protective cover</td>
<td>ZS-27-01</td>
<td>1 pc.</td>
</tr>
</tbody>
</table>

**Input specifications**

- 0 Voltage input
- 1 Current input

**Input/Output specifications**

- 0 NPN 2 outputs + 1-5 V output
- 1 NPN 2 outputs + 4-20 mA output
- 2 NPN 2 outputs + Auto-shift input
- 3 PNP 2 outputs + 1-5 V output
- 4 PNP 2 outputs + 4-20 mA output
- 5 PNP 2 outputs + Auto-shift input

**Unit specifications**

- Nil With display unit switching function **Note 1)**
- M Fixed SI unit **Note 2)**

**Note 1:** Under the New Measurement Law, sales of switches with the unit switching function are not allowed for use in Japan.

**Note 2:** Fixed unit
  - For vacuum, low pressure, low differential pressure and compound pressure: kPa
  - For positive pressure: MPa (For 1 MPa) kPa (For 500 kPa)

**Order DIN rail separately. Refer to page 161.**

---

**How to Order**

- **Option**
  - Nil
  - None

- **Front protective cover**
  - E

- **Panel mount adapter + Front protective cover**
  - D

**Note:** These options are not attached to products, but are included with the shipment.

---

**Description**

- Power supply/Output connection cable (2 m) ZS-28-A
- Bracket ZS-28-B With M3 x 5L (2 pcs.)
- Sensor connector ZS-28-C 1 pc.
- Panel mount adapter ZS-27-C With M3 x 8L (2 pcs.)
- Panel mount adapter + Front protective cover ZS-27-D With M3 x 8L (2 pcs.)
- Front protective cover ZS-27-01 1 pc.
### Specifications

<table>
<thead>
<tr>
<th>Applicable pressure sensor</th>
<th>PSE353</th>
<th>PSE531</th>
<th>PSE541</th>
<th>PSE561</th>
<th>PSE532</th>
<th>PSE560</th>
<th>PSE570</th>
<th>PSE564</th>
<th>PSE574</th>
<th>PSE550</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display/Set pressure (differential pressure) range</td>
<td>–101 to 101 kPa</td>
<td>10 to –101 kPa</td>
<td>–10 to 100 kPa</td>
<td>–0.1 to 1 MPa</td>
<td>–50 to 500 kPa</td>
<td>–0.2 to 2 kPa</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Display/Set resolution</td>
<td>0.2 kPa</td>
<td>0.1 kPa</td>
<td>0.1 kPa</td>
<td>0.001 MPa</td>
<td>1 kPa</td>
<td>0.01 kPa</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pressure range (^{Note 1})</td>
<td>For compound pressure</td>
<td>For vacuum</td>
<td>For low pressure</td>
<td>For positive pressure</td>
<td>For differential pressure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rated pressure (differential pressure) range</td>
<td>–100 to 100 kPa</td>
<td>0 to –101 kPa</td>
<td>0 to 100 kPa</td>
<td>0 to 1 MPa</td>
<td>0 to 500 kPa</td>
<td>0 to 2 kPa</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extension analog output range (^{Note 2})</td>
<td>10.1 to 0 kPa</td>
<td>–10 to 0 kPa</td>
<td>–0.1 to 0 MPa</td>
<td>–50 to 0 kPa</td>
<td>–0.2 to 0 kPa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Analog Output

- **Power supply voltage:** 12 to 24 VDC ±10%, Ripple (p-p) 10% or less (with reverse connection protection)
- **Current consumption:** 50 mA or less (Current consumption for sensor is not included.)
- **Sensor input:**
  - Voltage input 1 to 5 VDC (Input impedance: 1 MΩ)
  - Current input 4 to 20 mA DC (Input impedance: 100 Ω)

#### Environment

- **Enclosure:** IP40
- **Operating temperature range:** 0 to 50 °C
- **Operating humidity range:** 20% to 90% RH
- **Temperature characteristics:**
  - For compound pressure: –100 kPa to 100 kPa
  - For low pressure: 0 to 100 kPa
  - For positive pressure: 0 to 10 MPa
  - For vacuum & compound pressure: 0 to –101 kPa
  - For low pressure & compound pressure: 0 to 100 kPa
  - For positive pressure & low pressure: 0 to 1 MPa

#### Connection

- **Power supply/Output connection cable:** Oilproof heavy-duty vinyl cable, 5 cores, ø4.1, 2 m, Conductor area: 0.2 mm² Insulator O.D.: 1.12 mm

#### Notes

- **Note 1:** Pressure range can be selected during initial setting. Also, analog output option is not available when auto-shift function is selected.
- **Note 2:** Auto-shift function is not available when analog output option is selected. Extension analog output is not available for the PSE570 series.
- **Note 3:** The following units can be selected with display unit switching function:
  - For vacuum & compound pressure: kPa, kgf/cm², bar, psi, mmHg, inHg
  - For low pressure & compound pressure: kPa, kgf/cm², bar, psi
  - For positive pressure: kPa, kgf/cm², bar, psi
  - For differential pressure: kPa, mmHg, inHg

---

### Analog Output

![Analog Output Graph](image.png)

<table>
<thead>
<tr>
<th>Range</th>
<th>Pressure</th>
<th>Voltage</th>
<th>Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>For vacuum</td>
<td>0 to –101 kPa</td>
<td>0</td>
<td>–101 kPa</td>
</tr>
<tr>
<td>For compound pressure</td>
<td>–100 kPa to 100 kPa</td>
<td>–100 kPa</td>
<td>100 kPa</td>
</tr>
<tr>
<td>For low pressure</td>
<td>0 to 100 kPa</td>
<td>0</td>
<td>100 kPa</td>
</tr>
<tr>
<td>For positive pressure</td>
<td>0 to 1 MPa</td>
<td>0</td>
<td>1 MPa</td>
</tr>
<tr>
<td>For differential pressure</td>
<td>0 to 500 kPa</td>
<td>0</td>
<td>500 kPa</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Range</th>
<th>Pressure</th>
<th>Voltage</th>
<th>Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>For low pressure</td>
<td>0 to 2 kPa</td>
<td>0</td>
<td>2 kPa</td>
</tr>
<tr>
<td>For high pressure</td>
<td>0 to 2 kPa</td>
<td>0</td>
<td>2 kPa</td>
</tr>
</tbody>
</table>

---

Refer to pages 11 and 12 for Pressure Switch Precautions. For details about the Specific Product Precautions, refer to the Operation Manual on the SMC website, http://www.smcworld.com
**Internal Circuit and Wiring Example**

**PSE3 □ □ (T) - □ □ □ □**

- **Input/Output specification**
- **Input specification**

**PSE3 □ 0(T)**
NPN (2 outputs) + Analog voltage output

- **PSE3 □ 1(T)**
NPN (2 outputs) + Analog current output

- **PSE3 □ 2(T)**
NPN (2 outputs) + Auto-shift 1 input

- **PSE3 □ 3(T)**
PNP (2 outputs) + Analog voltage output

- **PSE3 □ 4(T)**
PNP (2 outputs) + Analog current output

- **PSE3 □ 5(T)**
PNP (2 outputs) + Auto-shift 1 input

**Connector for Sensor Connection**

<table>
<thead>
<tr>
<th>PIN no.</th>
<th>PSE30 □ (Voltage input)</th>
<th>PSE31 □ (Current input)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DC (+) (Brown)</td>
<td>DC (+) (Brown)</td>
</tr>
<tr>
<td>2</td>
<td>N.C.</td>
<td>N.C.</td>
</tr>
<tr>
<td>3</td>
<td>DC (–) (Blue)</td>
<td>N.C.</td>
</tr>
<tr>
<td>4</td>
<td>IN (1 to 5 V) (Black)</td>
<td>IN (4 to 20 mA) (Black)</td>
</tr>
</tbody>
</table>

Note: The colors in ( ) indicate the wire color of the PSE3□□ series.
Pressure Sensor Controller **PSE300 Series**

**Dimensions**

PSE3□□

**Power supply/Output connection cable (ZS-28-A)**

- DC (+) Brown 5
- OUT1 Black 4
- OUT2 White 3
- Analog output or auto-shift input Gray 2
- DC (–) Blue 1

**Sensor connector**

<table>
<thead>
<tr>
<th>PIN no.</th>
<th>Terminal</th>
<th>PSE30□□</th>
<th>PSE31□□</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>(DC+)(Brown)</td>
<td>DC+)(Brown)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>N.C.</td>
<td>N.C.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>DC(–)(Blue)</td>
<td>N.C.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>IN (1 to 5 V)</td>
<td>IN (4 to 20 mA)</td>
<td>Bus</td>
</tr>
</tbody>
</table>

Note: The colors in ( ) indicate the wire color of the PSE5□□ series.

**With bracket**

- Bracket

**With panel mount adapter**

- Panel mount adapter

**With panel mount adapter + Front protective cover**

- Panel thickness 0.5 to 6
- Panel mount adapter + Front protective cover
Panel fitting dimensions

Mount of single unit

Horizontal stacking mount of multiple units (n pcs.)

Mount of single unit

Vertical stacking mount of multiple units (n pcs.)
**Dimensions**

**PSE3□□T**

![Diagram of PSE3□□T](image)

- Front protective cover (Option) (Rotate 90° to mount.)
- 8 x M3
- 3 x 7.2 (= 21.6)
- 2 x ø3.4 mounting hole
- 2 x ø6.4

**Connections**

**PSE3□□T**

(Voltage input, Current input: Pressure sensor 3-wire type)

- 12 to 24 VDC
- OUT1
- OUT2
- GND
- 5: DC (+)
- 6: IN
- 7: DC (-)
- 8: FUNC
- (Analog output or auto-shift input)
- Brown, Black, Blue
- Pressure sensor

**PSE31□□T**

(Current input: Pressure sensor 2-wire type)

- 12 to 24 VDC
- OUT1
- OUT2
- GND
- 5: DC (+)
- 6: IN
- 7: DC (-)
- 8: FUNC
- (Analog output or auto-shift input)
- Brown, Blue
- Pressure sensor

**DIN Rail**

**ISA-5□**

![Diagram of ISA-5□](image)

<table>
<thead>
<tr>
<th>Part no.</th>
<th>L</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISA-5-1</td>
<td>73.0</td>
</tr>
<tr>
<td>ISA-5-2</td>
<td>135.5</td>
</tr>
<tr>
<td>ISA-5-3</td>
<td>173.0</td>
</tr>
<tr>
<td>ISA-5-4</td>
<td>210.5</td>
</tr>
<tr>
<td>ISA-5-5</td>
<td>248.0</td>
</tr>
<tr>
<td>ISA-5-6</td>
<td>285.5</td>
</tr>
<tr>
<td>ISA-5-7</td>
<td>323.0</td>
</tr>
</tbody>
</table>
### Function Details

#### A Auto-shift function

When there are large fluctuations in the supply pressure, the switch may fail to operate correctly. The auto-shift function compensates such supply pressure fluctuations. It measures the (differential) pressure at the time of auto-shift signal input and uses it as the reference (differential) pressure to correct the set value on the switch.

**Set value correction by auto-shift function**

![Auto-shift circuit](image)

*Rectified value*

When the auto-shift is selected, "ooo" will be displayed for approximately 1 second, and the pressure value at that point will be saved as a rectified value "C_5" (for CH1 of PSE200 and PSE300) or "C_3" (for CH2 to 4 for PSE200). Based on the saved rectified values (Note), the set value "P_1" to "P_4" (for PSE200) or "P_1", "H_1", "P_3", "H_2" (for PSE300) will likewise be rectified.

Note) When an output is reversed, "n_1" to "n_4" (for PSE200) or "n_1", "H_1", "n_3", "H_2" (for PSE300) will be rectified.

**Settable Range for Auto-Shift Input**

<table>
<thead>
<tr>
<th>PSE200</th>
<th>Set pressure (differential pressure) range</th>
<th>Settable range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compound pressure</td>
<td>–101.0 to 101.0 kPa</td>
<td>–101.0 to 101.0 kPa</td>
</tr>
<tr>
<td>Vacuum</td>
<td>10.0 to –101.0 kPa</td>
<td>101.0 to –101.0 kPa</td>
</tr>
<tr>
<td>Low pressure</td>
<td>–10.0 to 101.0 kPa</td>
<td>–100.0 to 101.0 kPa</td>
</tr>
<tr>
<td>Positive pressure</td>
<td>–0.1 to 1.000 MPa</td>
<td>–1.000 to 1.000 MPa</td>
</tr>
<tr>
<td>Low differential pressure</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PSE300</th>
<th>Set pressure (differential pressure) range</th>
<th>Settable range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compound pressure</td>
<td>–101.0 to 101.0 kPa</td>
<td>–101.0 to 101.0 kPa</td>
</tr>
<tr>
<td>Vacuum</td>
<td>10.0 to –101.0 kPa</td>
<td>101.0 to –101.0 kPa</td>
</tr>
<tr>
<td>Low pressure</td>
<td>–10 to 100.0 kPa</td>
<td>–100.0 to 100.0 kPa</td>
</tr>
<tr>
<td>Positive pressure</td>
<td>–0.1 to 1.000 MPa</td>
<td>–1.000 to 1.000 MPa</td>
</tr>
<tr>
<td>Low differential pressure</td>
<td>–0.2 to 2.00 kPa</td>
<td>–2.00 to 2.00 kPa</td>
</tr>
</tbody>
</table>

**Auto-shift zero (PSE300 series only)**

The basic function of auto-shift zero is the same as the function for auto-shift. Also, it corrects values on the display, based on a pressure value of 0, when the auto-shift is selected.

#### B Auto-preset function

Auto-preset function, when selected in the initial setting, calculates and stores the set-value from the measured (differential) pressure. The optimum set-value is determined automatically by repeating vacuum and break with the target workpiece several times.

**Formula for Obtaining the Set Value**

<table>
<thead>
<tr>
<th>PSE200</th>
<th>P_1 or P_3 = A–(A–B)/4</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSE300</td>
<td>P_1(P3) = A–(A–B)/4</td>
</tr>
<tr>
<td></td>
<td>P_2(H_1) or P_4(H_2)</td>
</tr>
</tbody>
</table>
**Function Details**

**C Display calibration function**
Fine adjustment of the indicated value of the pressure sensor can be made within the range of ±5% of the read value.
(The scattering of the indicated value can be eliminated.)

Note) When the display calibration function is used, the set pressure value may change ±1 digit.

**D Peak/Bottom values holding/display function**
This function constantly detects and updates the maximum and minimum values and allows to hold the display value.
For PSE300, when the 

---

**E Keylock function**
Prevents operation errors such as accidentally changing setting values.

**F Zero-clear function**
This function clears and resets the zero value on the display of measuring mode.

**G Error indication function**

<table>
<thead>
<tr>
<th>Error name</th>
<th>Error code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSE200</td>
<td>PSE300</td>
<td></td>
</tr>
</tbody>
</table>

- **Overcurrent error**
  - **Er 1**
    - Load current of 80 mA or more is applied to the switch output (OUT1).
  - **Er 2**
    - Load current of 80 mA or more is applied to the switch output (OUT2).

- **Residual pressure error**
  - **Er 3**
    - Pressure applied during the zero reset operation exceeds ±7% F.S.
    - After displaying the error code for 3 seconds, the switch automatically returns to the measuring mode. Due to individual product differences, the setting range varies ±4 digits.

- **Applied-pressure error**
  - **- - - LLL**
    - Supply pressure exceeds the maximum set (differential) pressure or upper limit of the display pressure.
  - **- - - HHH**
    - A sensor may be disconnected or mis-wired. Or, supply pressure is below the minimum set (differential) pressure or lower limit of the display pressure.

- **Auto-shift error**
  - **or**
    - The value measured at the time of auto-shift input is outside the set (differential) pressure range.
    - After displaying the error code for one second, the switch returns to the measuring mode.

- **Error**
  - **Er 5**
    - Internal data error
  - **Er 6**
    - Internal data error
  - **Er 7**
    - Internal data error
  - **Er 8**
    - Internal data error

**H Copy function (PSE200 series only)**
Information that can be copied includes the following: ① Pressure set values, ② Range settings, ③ Display units, ④ Output modes, ⑤ Response times.
- When CH1 is copied to CH2, CH3, and CH4, information of OUT1 in CH1 will be copied.
- When CH2, CH3, or CH4 is copied to CH1, information of OUT1 in CH2, CH3, or CH4 will be copied only to OUT1 in CH1.

Note) When the copy function is used, the regulating pressure value of the copied channel may change ±1 digit.

**I Auto-identification function (PSE200 series only)**
This function automatically identifies the pressure range of the pressure sensor that is connected to themulti-channel pressure sensor controller, thus eliminating the need of having to reset the range again after replacing the sensor. This function will be activated either when “Aon” is set in the auto-identification mode or when the power is turned back on in that condition. However, this function only works in conjunction with specific pressure sensors (SMC PSE53 series).
When other pressure sensors are used, this function will not work.

**J Anti-chattering function**
A large bore cylinder or ejector consumes a large volume of air in operation and may experience a temporary drop in the supply pressure. This function prevents detection of such temporary drops in the supply pressure as an error.

<table>
<thead>
<tr>
<th>Available response time settings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PSE200</strong></td>
</tr>
<tr>
<td>20 ms, 160 ms, 640 ms</td>
</tr>
<tr>
<td><strong>PSE300</strong></td>
</tr>
<tr>
<td>20 ms, 160 ms, 640 ms, 1280 ms</td>
</tr>
</tbody>
</table>

<Principle>
This function averages pressure values measured during the response time set by the user and then compares the average pressure value with the pressure set point value to output the result on the switch.

**K Channel selection function (PSE200 series only)**
Pressure value for the selected channel is displayed.

**L Channel scan function (PSE200 series only)**
Pressure values for each channel are displayed by turns at 2-second intervals.
**Display unit switching function**

Display units can be switched with this function. Units that can be displayed vary depending on the range of the pressure sensors connected to the controller.

### PSE200

<table>
<thead>
<tr>
<th>Pressure range</th>
<th>For compound pressure</th>
<th>For vacuum</th>
<th>For low pressure</th>
<th>For positive pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applicable pressure sensor</td>
<td>PSE533 PSE543 PSE563 PSE573</td>
<td>PSE531 PSE541 PSE561</td>
<td>PSE532</td>
<td>PSE530 PSE540 PSE560 PSE570</td>
</tr>
<tr>
<td>Set pressure (differential pressure) range</td>
<td>–101 to 101 kPa</td>
<td>10 to –101 kPa</td>
<td>–10 to 101 kPa</td>
<td>–0.1 to 1 MPa</td>
</tr>
<tr>
<td>PR (kPa)</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
<td>—</td>
</tr>
<tr>
<td>MPa</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>0.001</td>
</tr>
<tr>
<td>G (kgf/cm²)</td>
<td>0.001</td>
<td>0.001</td>
<td>0.001</td>
<td>0.01</td>
</tr>
<tr>
<td>b (bar)</td>
<td>0.001</td>
<td>0.001</td>
<td>0.001</td>
<td>0.01</td>
</tr>
<tr>
<td>P (psi)</td>
<td>0.02</td>
<td>0.01</td>
<td>0.01</td>
<td>0.1</td>
</tr>
<tr>
<td>inHg</td>
<td>0.1</td>
<td>0.1</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>mmHg</td>
<td>1</td>
<td>1</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

### PSE300

<table>
<thead>
<tr>
<th>Pressure range</th>
<th>For compound pressure</th>
<th>For vacuum</th>
<th>For low pressure</th>
<th>For positive pressure</th>
<th>For low differential pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applicable pressure sensor</td>
<td>PSE533 PSE543 PSE563 PSE573</td>
<td>PSE531 PSE541 PSE561</td>
<td>PSE532</td>
<td>PSE530 PSE540 PSE560 PSE570</td>
<td>PSE550</td>
</tr>
<tr>
<td>Set pressure (differential pressure) range</td>
<td>–101 to 101 kPa</td>
<td>10 to –101 kPa</td>
<td>–10 to 100 kPa</td>
<td>–0.1 to 1 MPa</td>
<td>–50 to 500 kPa</td>
</tr>
<tr>
<td>PR (kPa)</td>
<td>0.2</td>
<td>0.1</td>
<td>0.1</td>
<td>—</td>
<td>1</td>
</tr>
<tr>
<td>MPa</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>0.001</td>
<td>—</td>
</tr>
<tr>
<td>G (kgf/cm²)</td>
<td>0.002</td>
<td>0.001</td>
<td>0.001</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>b (bar)</td>
<td>0.002</td>
<td>0.001</td>
<td>0.001</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>P (psi)</td>
<td>0.05</td>
<td>0.02</td>
<td>0.02</td>
<td>0.2</td>
<td>0.1</td>
</tr>
<tr>
<td>inHg</td>
<td>0.1</td>
<td>0.1</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>mmHg</td>
<td>2</td>
<td>1</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>
# 3-Screen Display Sensor Monitor

## PSE300AC Series

### How to Order

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZS-31-B</td>
<td>Straight (5 m) 1 pc.</td>
<td></td>
</tr>
<tr>
<td>ZS-31-C</td>
<td>Right angle (5 m) 1 pc.</td>
<td></td>
</tr>
</tbody>
</table>

### Option (Power supply/output lead wire)

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nil</td>
<td>Straight lead wire</td>
</tr>
<tr>
<td>L</td>
<td>Right angle lead wire</td>
</tr>
<tr>
<td>N</td>
<td>None</td>
</tr>
</tbody>
</table>

---

## Specifications

### M12 Connector Type

### Applicable SMC pressure sensor
- PSE550
- PSE561
- PSE533/PSE543
- PSE563/PSE573
- PSE532
- PSE564
- PSE574
- PSE530/PSE540
- PSE560/PSE570
- PSE575
- PSE576
- PSE577

### Rated pressure range
- 0 to 2 kPa
- 0 to −101 kPa
- −100 to 100 kPa
- 0 to 100 kPa
- 0 to 500 kPa
- 0 to 1 MPa
- 0 to 2 MPa
- 0 to 5 MPa
- 0 to 10 MPa

### Display/Set pressure range
- −0.2 to 2.1 kPa
- 10 to −105 kPa
- −105 to 105 kPa
- −10 to 105 kPa
- −50 to 525 kPa
- −0.105 to 1.05 MPa
- −0.105 to 2.1 MPa
- −0.1 to 5.25 MPa
- −0.1 to 10.5 MPa

### Display/Set smallest settable increment
- 0.001 kPa
- 0.1 kPa
- 0.1 kPa
- 0.1 kPa
- 1 kPa
- 0.001 MPa
- 0.001 MPa
- 0.01 MPa
- 0.01 MPa

### Electrical
- Power supply voltage: 12 to 24 VDC (±10%)
- Current consumption: 25 mA or less
- Protection: Reverse connection protection

### Accuracy
- Display accuracy: ±0.5% F.S. ±Min. display unit (Ambient temperature at 25°C)
- Repeatability: ±0.1% F.S. ±Min. display unit (Ambient temperature at 25°C)
- Temperature characteristics: ±0.5% F.S. (Ambient temperature of 0 to 50°C, 25°C reference)

### Switch output
- Output type: Select from hysteresis mode, window comparator mode, error output or switch output OFF.
- Switch operation: Select from normal output or reverse output.
- Max. load current: 20 mA
- Max. applied voltage (NPN only): 36 VDC
- Internal voltage drop (Residual voltage): 1 V or less (with load current of 20 mA)
- Delay time: 1 ms or less (with anti-chattering function: 20, 100, 500, 1000, 2000, 5000 ms)
- Hysteresis: Variable from 0°F
- Protection: Over current protection

### Sensor input
- Input type: Voltage input: 1 to 5 VDC (Input impedance: 1 MΩ), Current input: 4 to 20 mA DC (Input impedance: 51 Ω)
- Number of inputs: 1 input
- Connection method: M12-4 pin connector

### Display
- Unit stability: MPa, kPa, Pa, kgl/cm², bar, mbar, psi, inHg, mmHg, mmH2O
- Display type: LCD
- Number of screens: 3-screen display (Main screen, Sub screen x 2)
- Display color: 1) Main screen: Red/Green, 2) Sub screen: Orange
- Number of display digits: 1) Main screen: 4-digit (7-segment), 2) Sub screen: 4-digit (Upper 1-digit 11-segment, 7-segment for other)
- Indicator light: Lights up when switch output is turned ON, OUT1/OUT2: Orange

### Digital filter
- Value without digital filter (at 0 ms)
- If the applied pressure fluctuates around the set value, the hysteresis must be set to a value more than the amount of fluctuation, or chattering will occur.
- This setting is only available for models with the unit selection function. Only MPa, kPa or Pa is available for models without this function.
- The response time indicates when the set value is 90% in relation to the step input.

### Environment
- Enclosure: IP65
- Withstand voltage: 1000 VAC for 1 minute between terminals and housing
- Insulation resistance: 50 MΩ or more (500 VDC measured via megohmmeter) between terminals and housing
- Operating temperature range: 0 to 50°C, Stored: −10 to 60°C (No freezing or condensation)
- Operating humidity range: Operating/Stored: 35 to 85% RH (No condensation)

### Standards
- CE, RoHS

### Weight
- 55.4 g (without power supply or output lead wires)

---

**Note:**
- Value without digital filter (at 0 ms)
- If the applied pressure fluctuates around the set value, the hysteresis must be set to a value more than the amount of fluctuation, or chattering will occur.
- This setting is only available for models with the unit selection function. Only MPa, kPa or Pa is available for models without this function.
- The response time indicates when the set value is 90% in relation to the step input.

---

**Under the new Measurement Act, sales of switches with the unit selection function have not been allowed for use in Japan.**

**Fixed unit: Pa, kPa, MPa**

---

**For pressure switch precautions and specific product precautions, refer to the “Operation Manual” on the SMC website.**
Internal Circuits and Wiring Examples

Setting of NPN open collector 2 outputs: Pressure sensor 3-wire type

Setting of PNP open collector 2 outputs: Pressure sensor 3-wire type

Setting of NPN open collector 2 outputs: Pressure sensor 2-wire type

Setting of PNP open collector 2 outputs: Pressure sensor 2-wire type

* The output type can be changed in the function selection mode.
* Numbers in the figures show the connector pin layout.

Dimensions

Power supply/output connector pin no.

Sensor connector pin no.

Power supply/output lead wire

ZS-31-B

ZS-31-C

<table>
<thead>
<tr>
<th>Part no.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZS-31-B</td>
<td>Straight type 5 m</td>
</tr>
<tr>
<td>ZS-31-C</td>
<td>Right angle type 5 m</td>
</tr>
</tbody>
</table>
**Function Details**

**A** Auto-preset function (F4)
Auto-preset function, when selected in the initial setting, calculates and stores the set value from the measured pressure. For example, if this function is used for suction verification, the optimum set value is determined automatically by repeating vacuum and break with the target workpiece several times.

**B** Display value fine adjustment function (F6)
Fine adjustment of the indicated value of the pressure sensor can be made within the range of ±5% of the read value. (The scattering of the indicated value can be eliminated.)

**C** Peak/Bottom value indication function
This function constantly detects and updates the maximum (minimum) pressure when the power is supplied, and allows to hold the maximum (minimum) pressure value. The held value is maintained even if the power supply is cut. When the buttons are simultaneously pressed for 1 second or longer, while “holding”, the held value will be reset.

**D** Keylock function
Prevents operation errors such as accidentally changing setting values.

**E** Zero-clear function
This function clears and resets the zero value on the display of measured pressure. The indicated value can be adjusted within ±7% F.S. of the pressure when ex-factory. (±3.5% F.S. for compound pressure)

**F** Error indication function
This function is to display error location and content when a problem or error has occurred.

<table>
<thead>
<tr>
<th>Error name</th>
<th>Error code</th>
<th>Description</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Over current error</td>
<td></td>
<td>Load current of 20 mA or more is applied to the switch output.</td>
<td>Turn the power off and remove the cause of the over current. Then supply the power again.</td>
</tr>
<tr>
<td>Residual pressure error</td>
<td></td>
<td>During zero-clear operation, pressure over ±7% F.S. (±3.5% F.S. for compound pressure) is present. Note that the mode is returned to measurement mode automatically 1 second later. The zero clear range varies by ±1% F.S. due to variation between individual products.</td>
<td>Perform zero-clear operation again after restoring the applied pressure to an atmospheric pressure condition.</td>
</tr>
<tr>
<td>Applied pressure error</td>
<td></td>
<td>Supply pressure exceeds the maximum set pressure.</td>
<td>Reset applied pressure to a level within the set pressure range.</td>
</tr>
<tr>
<td>System error</td>
<td></td>
<td>Internal data error</td>
<td>Turn off the power supply and then turn on it again. If the failure cannot be solved, please contact SMC for investigation.</td>
</tr>
</tbody>
</table>

If the error cannot be reset after the above measures are taken, or errors other than above are displayed, please contact SMC.
Function Details

G Anti-chattering function (Simple setting mode or F1)
A large bore cylinder or ejector consumes a large volume of air in operation and may experience a temporary drop in the supply pressure. This function prevents detection of such temporary drops in the supply pressure as an error by changing the delay time setting.

<table>
<thead>
<tr>
<th>Available delay time settings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 ms or less, 20 ms, 100 ms, 500 ms, 1000 ms, 2000 ms, 5000 ms</td>
</tr>
</tbody>
</table>

- **<Principle>**
  This function averages pressure values measured during the response time set by the user and then compares the average pressure value with the pressure set point value to output the result on the switch.

H Unit selection function (F0)
Display units can be switched with this function.

<table>
<thead>
<tr>
<th>Display unit</th>
<th>Rated pressure range</th>
<th>MPa</th>
<th>kPa</th>
<th>Pa</th>
<th>kgf/cm²</th>
<th>bar</th>
<th>mbar</th>
<th>psi</th>
<th>inHg</th>
<th>mmHg</th>
<th>mmH2O</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSE550</td>
<td>0 to 2 kPa</td>
<td>0.001</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSE531</td>
<td>0 to –101 kPa</td>
<td>0.001</td>
<td>0.1</td>
<td>0.001</td>
<td>0.001</td>
<td>0.01</td>
<td>0.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSE533</td>
<td>–100 to 100 kPa</td>
<td>0.001</td>
<td>0.1</td>
<td>0.001</td>
<td>0.001</td>
<td>0.02</td>
<td>0.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSE532</td>
<td>0 to 100 kPa</td>
<td>0.001</td>
<td>0.1</td>
<td>0.001</td>
<td>0.001</td>
<td>0.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSE564</td>
<td>0 to 500 kPa</td>
<td>0.001</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSE574</td>
<td>0 to 1 MPa</td>
<td>0.001</td>
<td>1</td>
<td>0.01</td>
<td>0.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSE530</td>
<td>0 to 2 MPa</td>
<td>0.001</td>
<td>1</td>
<td>0.01</td>
<td>0.01</td>
<td>0.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSE576</td>
<td>0 to 5 MPa</td>
<td>0.01</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSE577</td>
<td>0 to 10 MPa</td>
<td>0.01</td>
<td>0.1</td>
<td>0.1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Available delay time settings**
  1 ms or less, 20 ms, 100 ms, 500 ms, 1000 ms, 2000 ms, 5000 ms

- **Function Details**
  - **164-4**
  - **ZSE20 ISE20**
  - **ZSE30 ISE30**
  - **ZSE40 ISE40**
  - **ZSE10 ISE10**
  - **ISE70**
  - **ZSE80 ISE80**
  - **PS**
  - **ISA3**
  - **ISA2**
  - **ISE35**
  - **PSE**
  - **IS**
  - **ISG**
  - **ZSM1**

- **I Power saving mode (F80)**
  Power saving mode can be selected.
  It shifts to the power saving mode without button operation for 30 seconds.
  It is set to the normal mode (Power saving mode is OFF.) when ex-factory.
  (During power saving mode, [ECo] will flash in the sub screen and the operation light is ON (only when the switch is ON).)

- **J Setting of secret code (F81)**
  Users can select whether a secret code must be entered to release key lock.
  At the time of shipment from the factory, it is set such that the secret code is not required.
Options / Connection Examples

Power supply/output lead wire
ZS-31-C (Right angle 5 m)

PLC

ZS-31-B (Straight 5 m)

PSE300AC series

To POWER

To SENSOR

Lead wire and M12 connector (ZS-37-A/ZS-37-B) + PCA-1557743

Assembly type connector PCA-1557743

ZS-37-A (Lead wire and M12 connector, Straight 3 m)

ZS-37-B (Lead wire and M12 connector, Right angle 3 m)

PSE57□ series

ZS-37-A (Straight 5 m)