

# 10-PSE200A series

3-Screen Display  
Multi-channel Digital Sensor Monitor



## How to Order

PSE20 0 A - M

### Input/Output specification

0	NPN 5 outputs + Auto-shift input
1	PNP 5 outputs + Auto-shift input

### Unit specification

Nil	With unit selection function*1
M	SI units only*2

- \*1 Under the New Measurement Act, switches with the unit selection function are no longer allowed for use in Japan.  
\*2 Fixed unit: kPa, MPa, Pa

### Option 1

Nil	None
A	Panel mount adapter 
	Front protection cover + Panel mount adapter 

\* Options are not assembled, but shipped together.

### Option 3

Nil	Power supply/Output connection cable (2 m)
N	
	None

\* Cable is shipped together, but not connected.

### Option 2

Nil	None
4C	Sensor connector (4 pcs.) 
	Connector

- \* Connector is not connected, but shipped together.  
\* This connector cannot be used with the PSE570 series.

## ⚠ Caution

1. This product is blown with air and double packed in a Class M3.5 (ISO Class 5) clean room.
2. The clean specification part of the model number (10-) is not printed on the product body.

For pressure switch precautions and specific product precautions, refer to the "Operation Manual" on the SMC website. Click [here](#) for details.

**Specifications**

Series		PSE200A					
<b>Applicable SMC pressure sensor</b>	10-PSE550	10-PSE531 10-PSE541 10-PSE561	10-PSE533 10-PSE543 10-PSE563	10-PSE532	10-PSE564	10-PSE530 10-PSE540 10-PSE560	
<b>Rated pressure range</b>	0 to 2 kPa	0 to -101 kPa	-100 to 100 kPa	0 to 100 kPa	0 to 500 kPa	0 to 1 MPa	
<b>Display/Set pressure range</b>	-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	
<b>Display/Smallest settable increment</b>	0.001 kPa	0.1 kPa	0.1 kPa	0.1 kPa	1 kPa	0.001 MPa	
<b>Electrical</b> <small>(Power supply voltage)</small>	When used as a switch output device 12 to 24 VDC ±10% with 10% ripple (p-p) or less						
<b>Current consumption</b>	55 mA or less						
<b>Protection</b>	Polarity protection						
<b>Power supply voltage for sensor<sup>1)</sup></b>	[Power supply voltage] -1.5 V						
<b>Power supply current for sensor<sup>2)</sup></b>	Max. 50 mA (However, the total current for the 4 inputs is 200 mA maximum or less.)						
<b>Display accuracy</b>	±0.5% F.S. ±1 digit (Ambient temperature of 25 ±3°C)						
<b>Repeatability</b>	±0.1% F.S. ±1 digit						
<b>Temperature characteristics</b>	±0.5% F.S. (Reference: 25°C)						
<b>Output type</b>	NPN or PNP open collector output: 5 outputs						
<b>Output mode</b>	Hysteresis mode, Window comparator mode, Error output, Output OFF						
<b>Switch operation</b>	Normal output, Reversed output						
<b>Max. load current</b>	80 mA						
<b>Max. applied voltage (NPN only)</b>	30 VDC						
<b>Internal voltage drop (Residual voltage)</b>	1.5 V or less (at load current of 80 mA)						
<b>Delay time<sup>3)</sup></b>	5 ms or less, variable from 0 to 60 s/0.01 s increments						
<b>Hysteresis</b>	Variable from 0 <sup>4)</sup>						
<b>Protection</b>	Over current protection						
<b>Sensor input</b>	Voltage input: 1 to 5 VDC (Input impedance: 1 MΩ)						
<b>Input type</b>	4 inputs						
<b>Number of inputs</b>	e-CON						
<b>Connection method</b>	Over voltage protection (up to a voltage of 26.4 VDC)						
<b>Protection</b>	Auto-shift input <sup>5)</sup> Voltage free input (Reed or Solid state), input for 5 ms or longer, Independently controllable auto-shift function ON/OFF						
<b>Unit<sup>6)</sup></b>	MPa, kPa, Pa, kgf/cm <sup>2</sup> , bar, mbar, psi, inHg, mmHg, mmH <sub>2</sub> O (depends on selected range)						
<b>Display</b>	LCD						
<b>Display type</b>	3-screen display (Main screen, Sub screen x 2)						
<b>Number of screens</b>	Main screen: Red/Green, Sub screen: Orange						
<b>Display color</b>	Main screen: 4 digits (7 segments), Sub screen (Left): 4 digits (some digits are 11-segments, 7 segments for other), Sub screen (Right): 5 digits (some digits are 11-segments, 7 segments for other)						
<b>Number of display digits</b>	Indicator light Lights up when switch output is turned ON. OUT1, OUT2: Orange						
<b>Indicator light</b>	Digital filter <sup>7)</sup> Variable from 0 to 30 s/0.01 s increments						
<b>Digital filter<sup>7)</sup></b>	Enclosure Front face: IP65 (when panel-mounted), Others: IP40 <sup>8)</sup>						
<b>Environment</b>	Withstand voltage 1000 VAC for 1 minute between terminals and housing						
<b>Insulation resistance</b>	50 MΩ or more (500 VDC measured via megohmmeter) between terminals and housing						
<b>Operating temperature range</b>	Operating: 0 to 50°C, Stored: -10 to 60°C (No condensation)						
<b>Operating humidity range</b>	Operating/Stored: 35 to 85% RH (No condensation)						
<b>Standards</b>	CE marking (EMC Directive, RoHS Directive)						
<b>Weight</b>	Body 51 g (Excludes power supply and output cable)						
<b>Power supply/Output cable</b>	60 g						
<b>e-CON (1 pc.)</b>	2 g						
<b>Cleanliness class (ISO class)</b>	Class 3						

\*1 Check the power supply voltage range of the connected sensor.

\*2 Over current on DC (+) side and DC (-) side of the sensor input connector results in breakage of the product.

\*3 Value without digital filter (at 0 ms)

\*4 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.

\*5 This setting is only possible for the PSE200A/PSE201A.

\*6 This setting is only possible for models with the unit selection function. Only MPa, kPa, or Pa is available for models without this function.

\*7 The response time indicates when the set value is 90% in relation to the step input.

\*8 If □48 conversion adapter is used, it meets IP40.

\* Products with tiny scratches, marks, or display color or brightness variations which do not affect the performance of the product are verified as conforming products.

**Cable Specifications**

<b>Conductor area</b>	0.15 mm <sup>2</sup> (AWG26)	
<b>Insulator</b>	<b>O.D.</b>	0.9 mm
<b>Sheath</b>	<b>Finished O.D.</b>	ø4.8

**Applicable Pressure Sensors**

Applicable SMC pressure sensor				Rated pressure range							
10-PSE53	10-PSE54	10-PSE550	10-PSE56	-100 kPa	0	100 kPa	500 kPa	1 MPa	2 MPa	5 MPa	10 MPa
PSE531	PSE541	—	PSE561	-101 kPa	0						
PSE533	PSE543	—	PSE563	-100 kPa	100 kPa						
PSE532	—	—	—	0	100 kPa						
—	—	—	PSE564	0	500 kPa						
PSE530	PSE540	—	PSE560	0	1 MPa						
—	—	PSE550	—	0	2 kPa						

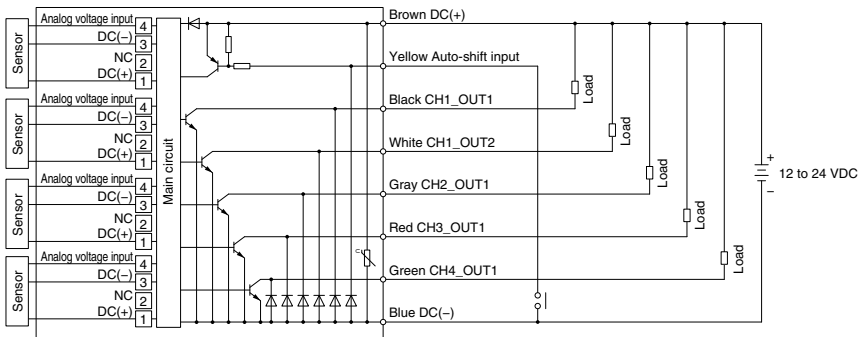
**Internal Circuits and Wiring Examples**

**10-PSE200A** - [ ] [ ] [ ] [ ] [ ]

• Input/Output specifications

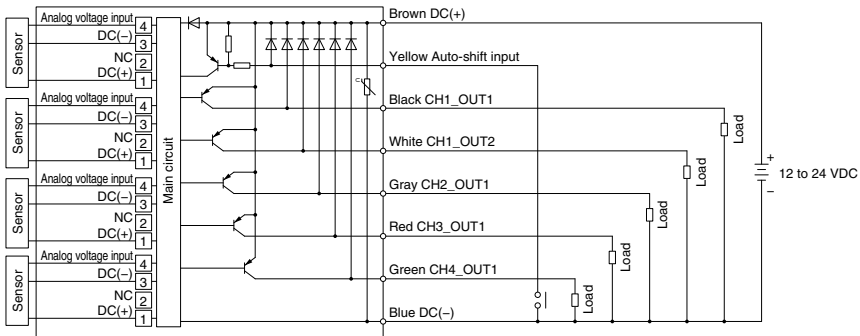
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• NPN open collector 5 outputs + Auto-shift 1 input

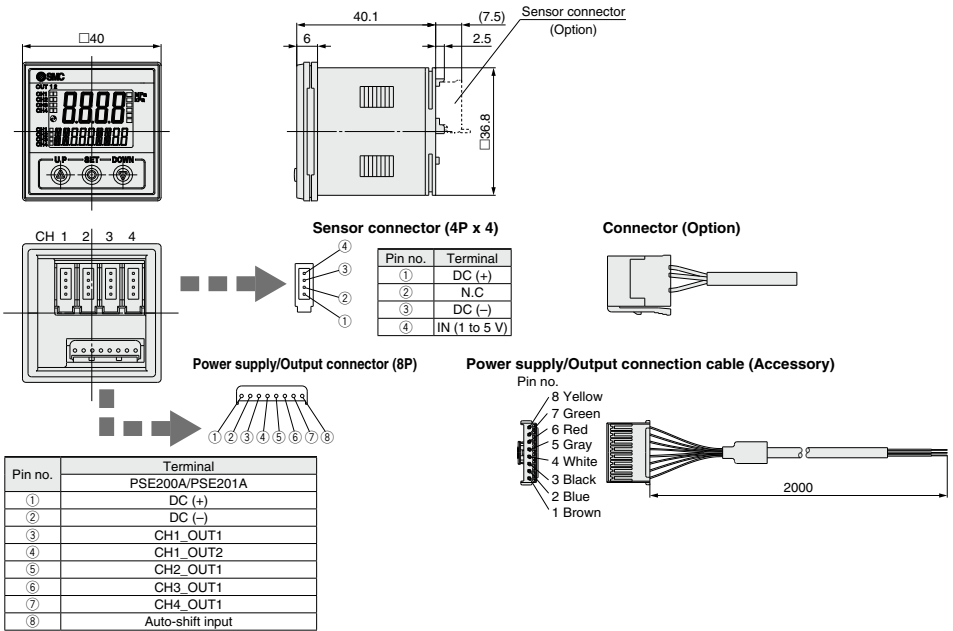


**1**

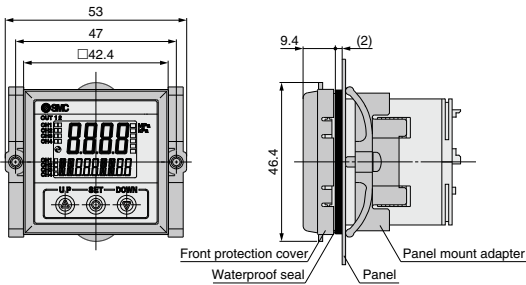
• PNP open collector 5 outputs + Auto-shift 1 input



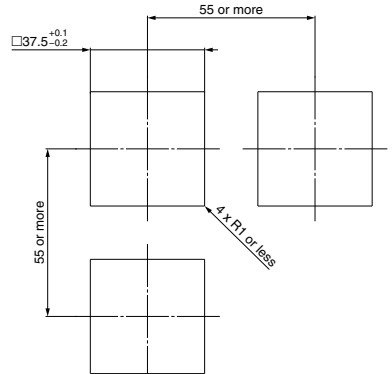
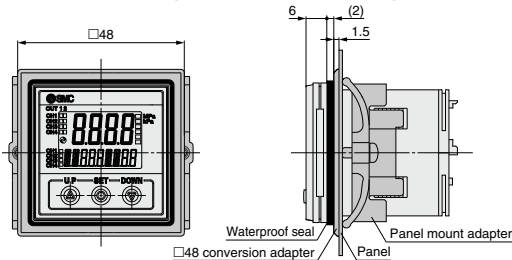
**Dimensions**



**Front protection cover + Panel mount adapter**



**48 conversion adapter + Panel mount adapter**



**Panel fitting dimensions**  
Applicable panel thickness:  
0.5 to 8 mm

Directional Control Valves  
Air Cylinders  
Rotary Actuators  
Air Grippers  
Air Preparation Equipment  
Modular F. R.  
Pressure Control Equipment  
Fittings & Tubing  
Flow Control Equipment  
Pressure Switches/ Pressure Sensors

