

Compact Pneumatic Pressure Sensor

Series *PSE540*



Series	Rated pressure range				
	-100 kPa	0	100 kPa	500 kPa	1 MPa
PSE540		0	1 MPa		
PSE541	-101 kPa	0			
PSE543	-100 kPa		100 kPa		

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

For PSE54□-M3

Application examples

Pads can be directly mounted.

Manifolding is possible.

Applications

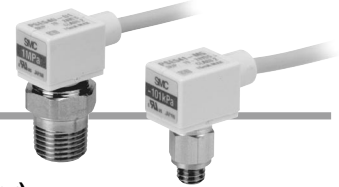
PSE530
PSE540
PSE550
PSE560
PSE570
Controller
PSE200
PSE300

Compact Pneumatic Pressure Sensor

Series PSE540



How to Order



Sensor range

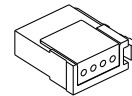
0	Positive pressure [0 to 1 MPa]
1	Negative pressure [0 to -101 kPa]
3	Compound pressure [-100 to 100 kPa]

Accuracy

Nil	±2% F.S.
A	±1% F.S.

Option (Connector)

Nil	None
C2	Connector for pressure sensor controller (1 pc.)



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

PSE54 1 - M3 -

Port size

M3	M3 x 0.5	
M5	M5 x 0.8	
01	R1/8 (with M5 female thread)	
N01	NPT1/8 (with M5 female thread)	
R04	ø4 reducer	
R06	ø6 reducer	

IM5	M5 female thread, through type	
IM5H	M5 female thread, through type (with mounting hole)	

Option/Part No.

Description	Part no.	Note
Connector for pressure sensor controller	ZS-28-C	1 pc.

Specifications

For Pressure Switch Precautions and Specific Product Precautions, refer to “Handling Precautions for SMC Products” and the Operation Manual on SMC website.

Model		PSE540	PSE541	PSE543
Rated pressure range		0 to 1 MPa	0 to −101 kPa	−100 to 100 kPa
Extension analog output range		−0.1 to 0 MPa	10.1 to 0 kPa	—
Proof pressure		1.5 MPa	500 kPa	
Applicable fluid		Air/Non-corrosive gas/Non-flammable gas		
Power supply voltage		12 to 24 VDC ±10%, Ripple (p-p) 10% or less (with reverse connection protection)		
Current consumption		15 mA or less		
Output specifications		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		
Accuracy (Ambient temperature at 25°C)		PSE54□: ±2% F.S. (within rated pressure range), ±5% F.S. (within extension analog output range) PSE54□A: ±1% F.S. (within rated pressure range), ±3% F.S. (within extension analog output range)		
Linearity		±0.7% F.S. or less	±0.4% F.S.	
Repeatability		±0.2% F.S.		
Power supply voltage effect		±0.8% F.S.		
Environment	Enclosure	IP40		
	Operating temperature range	Operating: 0 to 50°C, Stored: −20 to 70°C (No freezing or condensation)		
	Operating humidity range	Operating/Stored: 35 to 85% RH (No condensation)		
	Withstand voltage	1000 VAC (in 50/60 Hz) for 1 minute between terminals and housing		
	Insulation resistance	50 MΩ or more (500 VDC measured via megohmmeter) between terminals and housing		
Temperature characteristics		±2% F.S. (25°C reference)		
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		
Standards		CE, UL/CSA (E216656), RoHS		

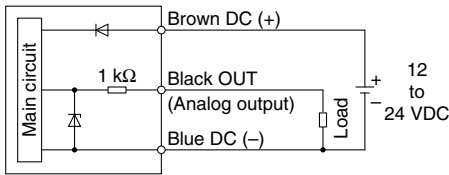
Piping Specifications

Model		M3	M5	01	N01	R04	R06	IM5	IM5H
Port size		M3 x 0.5	M5 x 0.8	R1/8 M5 x 0.8	NPT1/8 M5 x 0.8	ø4 reducer	ø6 reducer	M5 female thread, through type	M5 female thread, through type (with mounting hole)
Material	Case	Resin case: PBT Fitting: Stainless steel 303		Resin case: PBT Fitting: C3604BD		PBT		Resin case: PBT Fitting: A6063S-T5	
	Pressure sensing section	Pressure sensor: Silicon, O-ring: NBR							
Weight	With sensor cable	42.4 g	42.7 g	49.3 g		41.4 g	41.6 g	43.3 g	44.1 g
	Without sensor cable	2.9 g	3.2 g	9.8 g		1.9 g	2.1 g	3.8 g	4.6 g

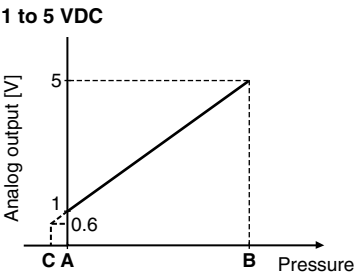
Internal Circuit and Wiring Example

PSE54□

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



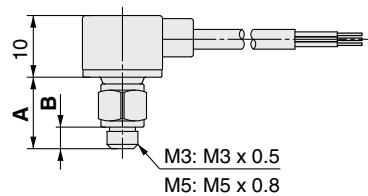
Analog Output



Range	Rated pressure range	A	B	C
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

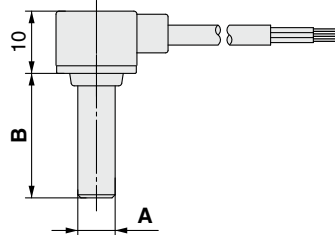
Dimensions

PSE54□-M3
M5



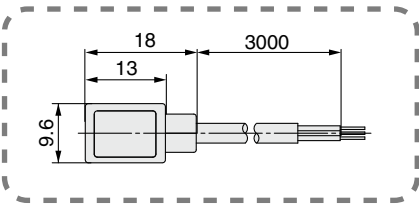
	PSE54□-M3	PSE54□-M5
A	10.8	11.5
B	3	3.5

PSE54□-R04
R06

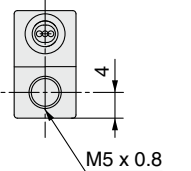
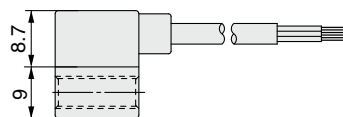


	PSE54□-R04	PSE54□-R06
A	ø4	ø6
B	18	20

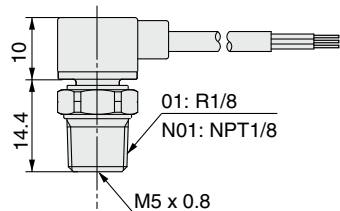
Common Dimensions



PSE54□-IM5



PSE54□-01
N01



PSE54□-IM5H

