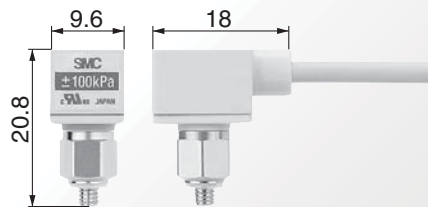


# Compact Pneumatic Pressure Sensor

## 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		

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



ZSE  
ISE

ZSP

PS

ISA

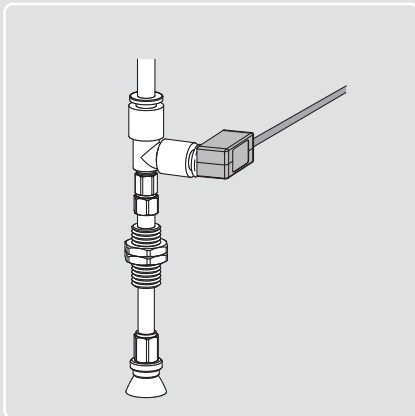
PSE

IS

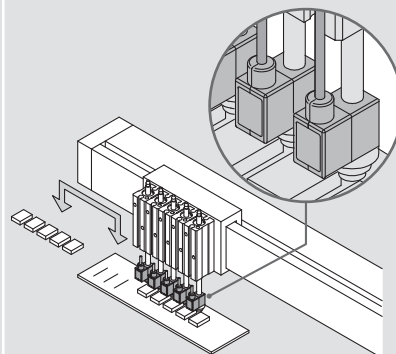
ISG

ZSM

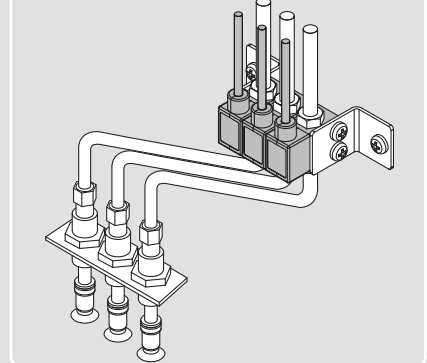
### Application examples



Pads can be directly mounted.



Manifolding is possible.



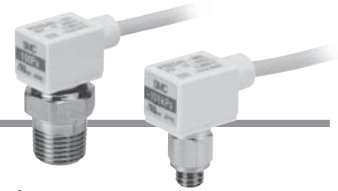
*Applications*

# Compact Pneumatic Pressure Sensor

## Series PSE540



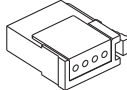
### How to Order



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) At the factory, the connector is not attached to the cable, but packed together with it for shipment.

PSE54 1 - M3 -

#### Port size

M3	M3 x 0.5	
M5	M5 x 0.8	
01	R 1/8 (with M5 female thread)	
N01	NPT 1/8 (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

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

### Specifications

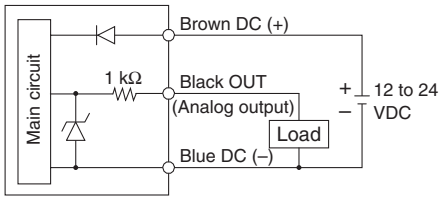
Model	PSE540	PSE541	PSE543
Rated pressure range	0 to 1 MPa	0 to -101 kPa	-100 to 100 kPa
Extension analog output range	-0.1 to 0 MPa	10.1 to 0 kPa	—
Proof pressure	1.5 MPa	500 kPa	
Applicable fluid	Air/Non-corrosive gas/Non-flammable gas		
Power supply voltage	12 to 24 VDC±10%, Ripple (p-p) 10% or less (with power supply polarity protection)		
Current consumption	15 mA or less		
Output specification	Analog output 1 to 5 V (with rated pressure range), 0.6 to 1 V (with extension analog output range), Output impedance: Approx. 1 kΩ		
Accuracy (Ambient temperature at 25°C)	PSE54□: ±2% F.S. or less (with rated pressure range), ±5% F.S. or less (with extension analog output range) PSE54□A: 1% F.S. or less (with rated pressure range), ±3% F.S. or less (with extension analog output range)		
Linearity	±0.7% F.S. or less	±0.4% F.S. or less	
Repeatability	±0.2% F.S. or less		
Power supply voltage effect	±0.8% F.S. or less		
Environmental resistance	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, 50/60 Hz for 1 minute between live parts and case	
	Insulation resistance	50 MΩ or more between live parts and case (at 500 VDC Mega)	
	Vibration resistance	10 to 500 Hz at whichever is smaller of 1.5 mm amplitude or 98 m/s <sup>2</sup> acceleration, in X, Y, Z directions, for 2 hours each (De-energized)	
Impact resistance	980 m/s <sup>2</sup> in X, Y, Z directions, 3 times each (De-energized)		
Temperature characteristics	±2% F.S. or less (Based on 25°C)		
Standards	Compliant with CE marking, UL (CSA)		

### Piping Specifications

Model	M3	M5	01	N01	R04	R06	IM5	IM5H
Port size	M3 x 0.5	M5 x 0.8	R 1/8 M5 x 0.8	NPT 1/8 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						
Sensor cable	Oil proof heavy-duty vinyl cable (ellipse), 3 cores, 2.7 x 3.2, 3 m, Conductor area: 0.15 mm <sup>2</sup> , Insulator O.D.: 0.9 mm							
Mass	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

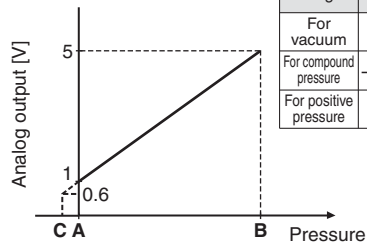
## Internal Circuit

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



## Analog Output

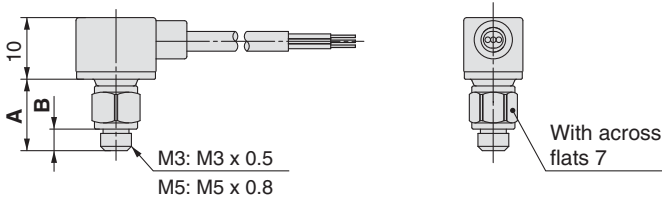
1 to 5 VDC



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

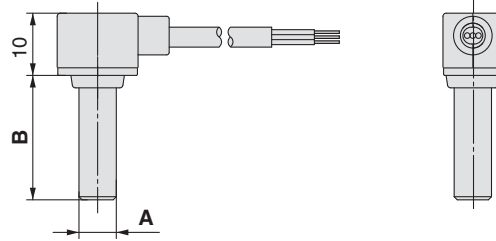
**PSE54□-M3**  
M5



(mm)

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

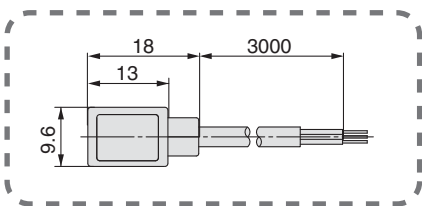
**PSE54□-R04**  
R06



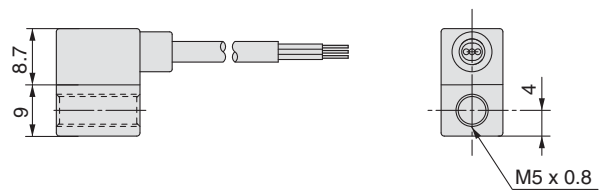
(mm)

	PSE54□-R04	PSE54□-R06
A	∅4	∅6
B	18	20

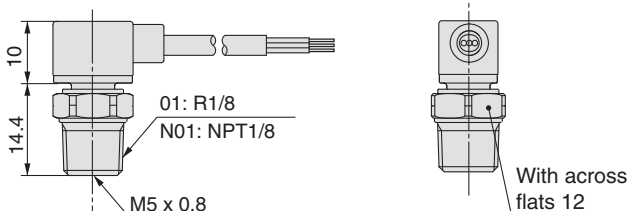
## Common Dimensions



**PSE54□-IM5**



**PSE54□-01**  
N01



**PSE54□-IM5H**

