

Pressure Sensor for General Fluids

PSE57□ Series



RoHS



How to Order

PSE57 0 - 01 - □ - □

Sensor range

0	Positive pressure [0 to 1 MPa]
3	Compound pressure [-100 to 100 kPa]
4	Positive pressure [0 to 500 kPa]
5	Positive pressure [0 to 2 MPa]
6	Positive pressure [0 to 5 MPa]
7	Positive pressure [0 to 10 MPa]

Option (Lead wire)

Nil	Lead wire and M12 connector (3 m), Straight
L	Lead wire and M12 connector (3 m), Right angle
N	None

* See page 9 for connection to the PSE300AC.

Options/Part Nos.

	Description	Part no.	Material	Note
①	Lead wire and M12 connector (3 m), Straight	ZS-37-A	—	1 pc.
②	Lead wire and M12 connector (3 m), Right angle	ZS-37-B	—	1 pc.
③	Assembly-type connector	PCA-1557743	—	1 pc.
④	Adapter with restrictor Rc1/4	ZS-31-X175	Stainless steel 304	1 pc.
⑤	Adapter with restrictor Rc1/8	ZS-31-X188	Stainless steel 304	1 pc.
⑥	Orifice M5	ZS-48-A	Stainless steel 303	1 pc.
⑦	① + ③	ZS-37-A-X448	—	The lead wire and connector are shipped together. (but not assembled)
⑧	② + ③	ZS-37-B-X449	—	

Output specification

Nil	Voltage output type 1 to 5 V
28	Current output type 4 to 20 mA

Port size

Symbol	Port size	Model					
		PSE570	PSE573	PSE574	PSE575	PSE576	PSE577
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

Model		PSE570	PSE573	PSE574	PSE575	PSE576	PSE577
Fluid	Applicable fluid	Gas or liquid that will not corrode the materials of parts in contact with fluid					
Pressure	Rated pressure range	0 to 1 MPa	−100 to 100 kPa	0 to 500 kPa	0 to 2 MPa	0 to 5 MPa	0 to 10 MPa
	Proof pressure	3.0 MPa	600 kPa	1.5 MPa	5.0 MPa	12.5 MPa	30 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 of 25°C)	±1.0% F.S.			±2.5% F.S.		
	Linearity	±0.5% F.S.					
	Repeatability (Ambient temperature of 25°C)	±0.2% F.S.			±0.5% F.S.		
	Temperature characteristics (25°C reference)	±2%F.S. (0 to 50°C) ±3%F.S. (−10 to 60°C)	±3% F.S. (0 to 50°C) ±4% F.S. (−10 to 60°C)			±5% F.S. (−10 to 60°C)	
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					
	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)					
Standards		CE marking (EMC directive/RoHS directive)					
Materials of parts in contact with fluid		Piping port: C3604 + Nickel plating, Pressure sensor: Al2O3 (Alumina 96%), O-ring: FKM + Grease			Piping port: C3604 + Nickel plating, Pressure sensor: Al2O3 (Alumina 96%), Square ring: FKM		
Model		PSE57□-□			PSE57□-□-28		
Analog output	Output	Voltage output: 1 to 5 V			Current output: 4 to 20 mA		
	Impedance	Output impedance: Approx. 1 kΩ			Maximum load impedance: 500 Ω or less (at 24 VDC) 100 Ω or less (at 12 VDC)		

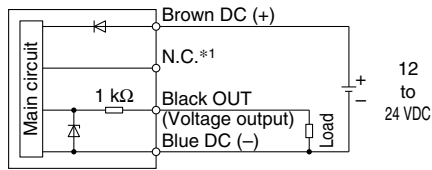
Piping Specifications

Part no.	PSE570/573/574-01	PSE570/573/574-02	PSE575/576/577-02
Port size	R1/8 M5 x 0.8	R1/4 M5 x 0.8	R1/4 M5 x 0.8
Materials of parts in contact with fluid	Piping port: C3604 + Nickel plating Pressure sensor: Al ₂ O ₃ (Alumina 96%) O-ring: FKM + Grease		Piping port: C3604 + Nickel plating Pressure sensor: Al ₂ O ₃ (Alumina 96%) Square ring: FKM
Weight	Without lead wire and M12 connector	88 g	95 g
	With lead wire and M12 connector	175 g	182 g

Internal Circuits and Wiring Examples

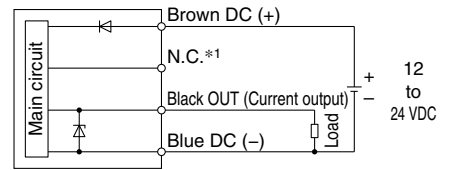
PSE57 -

Voltage output type
1 to 5 V
Output impedance
Approx. 1 k Ω



PSE57 - -28

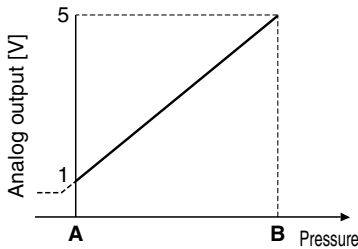
Current output type
4 to 20 mA
Allowable load impedance
500 Ω or less (at 24 VDC)
100 Ω or less (at 12 VDC)



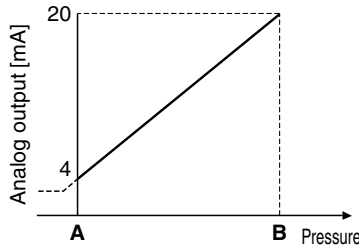
*1 The unconnected terminals are only used by SMC, so please do not connect them.

Analog Output

1 to 5 VDC

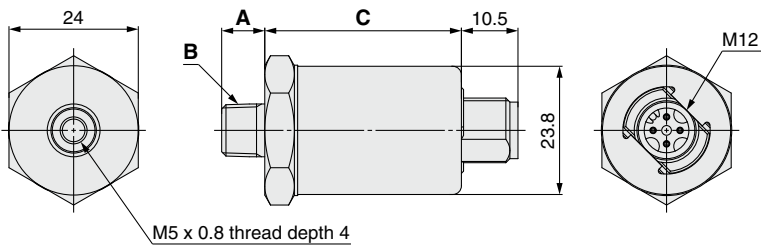


4 to 20 mA DC



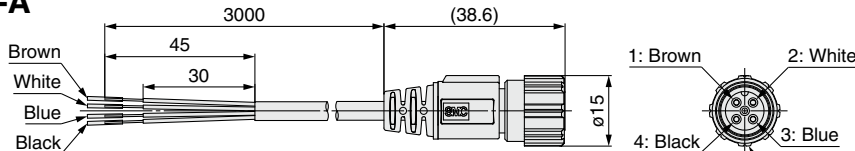
Model	Rated pressure range	A	B
PSE570	0 to 1 MPa	0 MPa	1 MPa
PSE573	-100 to 100 kPa	-100 kPa	100 kPa
PSE574	0 to 500 kPa	0 kPa	500 kPa
PSE575	0 to 2 MPa	0 MPa	2 MPa
PSE576	0 to 5 MPa	0 MPa	5 MPa
PSE577	0 to 10 MPa	0 MPa	10 MPa

Dimensions

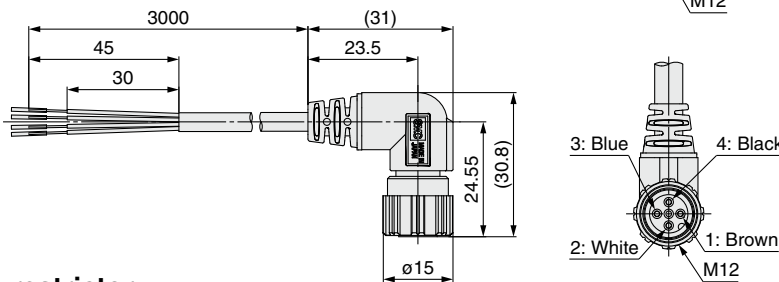


Part no.	A	B	C
PSE570/573/574-01	8	R1/8	36.5
PSE570/573/574-02	12	R1/4	36.5
PSE575/576/577-02	12	R1/4	39.7

Lead wire and M12 connector ZS-37-A



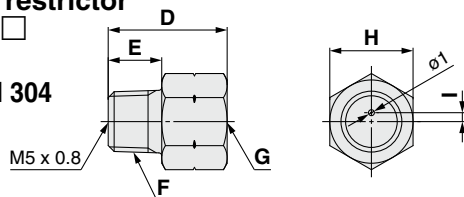
ZS-37-B



Adapter with restrictor

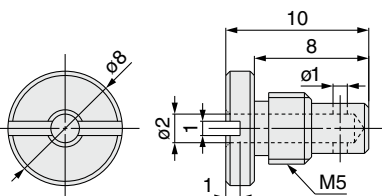
ZS-31-X

Material:
Stainless steel 304



Orifice ZS-48-A

Material:
Stainless steel 303



Cable Specifications

Conductor	Nominal cross section	AWG23
	Outside diameter	0.72 mm
Insulator	Material	Cross-linked vinyl chloride
	Outside diameter	1.14 mm
	Number of cores	4
Sheath	Material	Oil resistant vinyl chloride
	Finished outside diameter	$\phi 4$

Pin no.	Lead wire color	Description
1	Brown	DC (+)
2	White	N.C.*1
3	Blue	DC (-)
4	Black	OUT1

*1 The unconnected terminals are only used by SMC, so please do not connect them.

Part no.	D	E	F	G	H	I
ZS-31-X188	20	9	R1/8	Rc1/8	14	1.5
ZS-31-X175	29	13	R1/4	Rc1/4	17	1.6

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