

Mechanical pressure switch Standard White Series

P4000-W Series

Wide pressure setting range covers 0.1 to 0.8 MPa.

● Port size: 1/4 to 1/2

JIS symbol



RoHS CAD

Specifications

Item	P4000-8-W	P4000-10-W	P4000-15-W
Working fluid	Compressed air		
Max. working pressure MPa	1.0 (≈150 psi, 10 bar)		
Proof pressure MPa	1.5 (≈220 psi, 15 bar)		
Pressure adjusting range MPa	0.1 (≈15 psi, 1 bar) to 0.8 (≈120 psi, 8 bar)		
Ambient / fluid temperatures °C	5 (41°F) to 60 (140°F)		
Port size Rc	1/4	3/8	1/2
Micro switch	Z-15GD-B (OMRON)		
Contact array	1C		
Hysteresis MPa	0.1 (≈15 psi, 1 bar) to 0.49 (≈71 psi, 4.9 bar), hysteresis within 0.049 (≈7.1 psi, 0.49 bar)		
	0.5 (≈73 psi, 5 bar) to 0.8 (≈120 psi, 8 bar), hysteresis within 0.078 (≈11 psi, 0.78 bar)		
Repeatability MPa	±0.02 (≈2.9 psi, 0.2 bar) of set pressure		
Allowable operation frequency times/min.	20		
Insulation resistance MΩ	100 or more (with 500 VDC megger)		
Weight kg	0.5		
Mounting orientation	Install adjusting screw vertically		

Micro switch rated

Load	Non-inductive load (A)				Inductive load (A)			
Circuit	Resistance load		Lamp load		Inductive load		Electric motor load	
Voltage	N.C	N.O	N.C	N.O	N.C	N.O	N.C	N.O
125 VAC	15	15	3.0	1.5	15	15	5.0	2.5
250 VAC	15	15	2.5	1.25	15	15	3.0	1.5
30 VDC	6.0	6.0	3.0	1.5	5.0	5.0	5.0	2.5

Option weight

* Add to the weight of the standard accessories.

Unit: kg

Code	Attachment				Bracket
	A8*W	A10*W	A15*W	A20*W	BW
P4000	0.16	0.16	0.16	0.16	0.21

How to order

P4000 - 8 - W - 1N - BW

Ⓐ Port size

Ⓑ Option

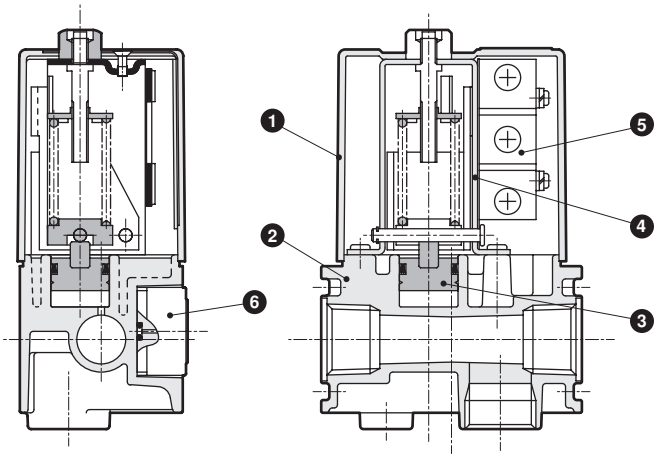
Ⓒ Attachment

Code		Description
Ⓐ Port size		
8		Rc1/4
10		Rc3/8
15		Rc1/2
Ⓑ Option		
Light	Blank	Without indicator lamp
	1N	100/200 VAC with indicator lamp
	3N	24 VDC with indicator lamp
Pressure gauge	Blank	With standard pressure gauge (G401-W)
	T	No pressure gauge (gauge port (Rc 1/4) is assembled sealed)
	T8	Pressure gauge ready (gauge port (Rc 1/4) is left open)
Ⓒ Other attachments		***1, *3**
Blank		Not included
A8W		Rc1/4 pipe adaptor set
A10W		Rc3/8 pipe adaptor set
A15W		Rc1/2 pipe adaptor set
A20W		Rc3/4 pipe adaptor set
BW		C-bracket

⚠ Precautions for model No. selection

*1: C-bracket and pipe adaptor set cannot be used together.
*2: Due to the modular design, a gasket is attached.
*3: The joiner set is enclosed with the pipe adaptor set.

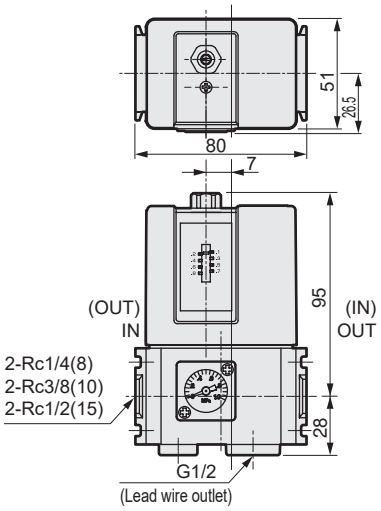
Internal structure and parts list



No.	Part name	Material	No.
1	Cover	Resin	-
2	Body	Aluminum alloy die-casting	-
3	Piston assembly	Polyacetal resin, nitrile rubber	-
4	Frame	Steel	-
5	Micro switch	-	Z-15GD-B [OMRON]
6	Pressure gauge assembly	PBT resin, copper alloy	G401-W

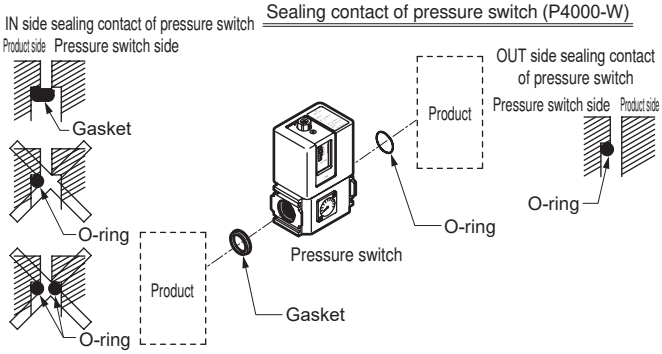
* To wire, remove cover (1), and connect directly to the micro switch (5).
* One gasket is enclosed.

Dimensions CAD



Reduction rate 0.24.
(Photocopy at 141% four times to see actual dimensions.)

How to assemble



Safety precautions

■Design/selection

⚠ CAUTION

1 Micro switch contact specifications

Regular closed circuit max. 30 A Regular open circuit max. 15 A
Starting current should be measured beforehand.

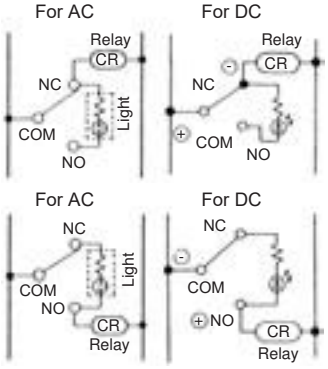
■Mounting, installation and adjustment

⚠ CAUTION

1 When wiring, loosen cover fastening screws, remove the cover, then wire to the micro switch inside.

2 Wiring the sensor with lamp

- The lamp is connected to the micro switch's NC terminal and NO terminal. As a fine current flows even when the load (relay, etc.) is not energized, take care when selecting the load.
  100 VAC 1.5 mA 200 VAC 2.0 mA 24 VDC 4.5 mA
- To turn the lamp ON at the set pressure or more, and OFF at the set pressure or lower, wire to the micro switch COM terminal and NC terminal.
  Attach [Pressure Rise → Lamp ON] plate at a visible section on the cover.
- To turn the lamp ON at the set pressure or lower, and OFF at the set pressure and over, wire to the micro switch COM terminal and NO terminal.
  Attach [Pressure Rise → Lamp OFF] plate at a visible section on the cover.
- If there is a large amount of drainage, pipe so that the pressure adjustment screw is facing upward.



3 Avoid using in hot environments as the cover is made of resin.

4 Hold the body section when piping or installing.

5 Use with air that has been passed through an air filter.

6 Use the pressure absorbing nipple (6556) to detect sudden changes in pressure, such as when confirming air cylinder pressure.

7 Loosen the nut on the top of the cover, and adjust the pressure with the adjusting screw. The set pressure rises when the nut is turned to the plus (+) side and drops when turned to the minus (-) side. (Work tools: Wrench 13 mm, flat-tip screwdriver) Fix with the nut after setting.

8 The scale plate is for reference. (scale error: within ±0.05 MPa)