



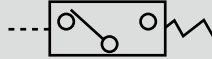
Mechanical pressure switch Standard white series

P4000-W Series

Wide pressure setting range covers 0.1 to 0.8 MPa.

● Port size: 1/4 to 1/2

JIS symbol



Specifications

Descriptions	P4000-8-W	P4000-10-W	P4000-15-W
Working fluid	Compressed air		
Max. working pressure MPa	1.0		
Withstanding pressure MPa	1.5		
Pressure adjusting range MPa	0.1 to 0.8		
Fluid temperature °C	5 to 60		
Port size Rc	1/4	3/8	1/2
Microswitch model no.	Z-15GD-B (OMRON)		
Contact configuration ab	1		
Hysteresis MPa	Hysteresis 0.049 or less at 0.1 to 0.49.		
	Hysteresis 0.078 or less at 0.5 to 0.8.		
Repeatability MPa	±0.02 of set pressure range		
Withstanding cycle frequency cycles/min	20		
Insulation resistance MΩ	100 or more (at CD500V megger)		
Product weight kg	0.5		
Mounting	Install adjusting screw vertically.		

Microswitch rated

Load	Noninductive load (A)				Inductive load (A)			
	Resistance load		Lamp load		Inductive load		Electric motor load	
Circuit	N.C	N.O	N.C	N.O	N.C	N.O	N.C	N.O
AC125V	15	15	3.0	1.5	15	15	5.0	2.5
AC250V	15	15	2.5	1.25	15	15	3.0	1.5
DC30V	6.0	6.0	3.0	1.5	5.0	5.0	5.0	2.5

How to order

P4000 - **8** - **W** - **1N** - **BW**

Ⓐ Port size

Ⓑ Option

Ⓒ Attachment

Symbol	Descriptions
Ⓐ Port size	
8	Rc1/4
10	Rc3/8
15	Rc1/2
Ⓑ Option	
Blank	Without indicator light
1N	For AC100V/200V with indicator light
3N	For DC24V with indicator light
T	Without pressure gauge
Ⓒ Attachment Note 1, Note 3	
Blank	Not attached
A8W	Rc1/4 piping adaptor set
A10W	Rc3/8 piping adaptor set
A15W	Rc1/2 piping adaptor set
A20W	Rc3/4 piping adaptor set
BW	C type bracket

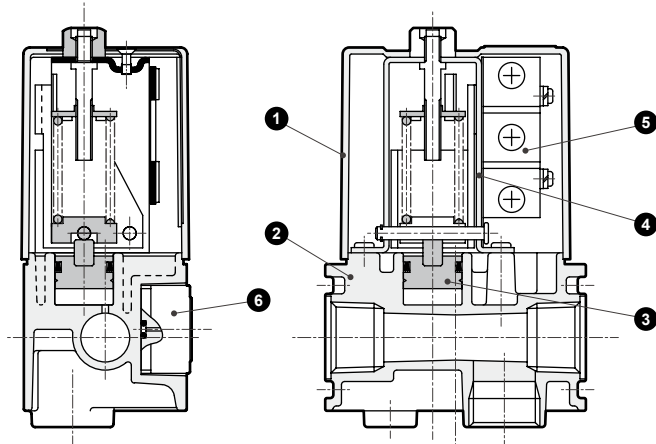
⚠ Cautions for model No. selection

Note 1: C type bracket and piping adapter set can not be used together.

Note 2: Due to modular design, a gasket is attached.

Note 3: A joiner set is attached with the piping adapter 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	Microswitch	-	Z-15GD-B (OMRON)
6	Pressure gauge assembly	PBT resin, brass	G401-W

* Remove cover ① and wire directly to the microswitch ⑤.
* 1 gasket attached

⚠ Safety precautions

■ Design & Selection

⚠ CAUTION

1 Microswitch contact specification.

Closed circuit Maximum 30 A Open circuit Maximum 15A
Rush current should be measured beforehand.

■ Installation & Adjustment

⚠ CAUTION

1 When wiring, loosen cover mounting screws, remove the cover, then wire to the microswitch inside.

2 Wiring the sensor with light

- The light is connected to the microswitch's NC terminal and NO terminal. A fine current flows even when the load (relay, etc.) is not energized, so take care when selecting the load.
AC100V 1.5mA AC200V 2.0mA DC24V 4.5mA
- To turn the light on at a level higher than the set pressure and off at a level less than the set pressure, wire to the microswitch COM terminal and NC terminal. Also, attach it on the cover where it is easily visible
Name plate post **pressure up → lights on**
- To turn the light on at a level less than the set pressure and off at a level higher than the set pressure, wire to the microswitch COM terminal and NO terminal. Also, attach it on the cover where it is easily visible.
Name plate post **pressure up → lights off**
- If there is a large amount of drainage, pipe so that the pressure adjustment screw is facing upward.

3 Avoid using in hot places because the cover is made of resin.

4 Hold the body when piping or installing.

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

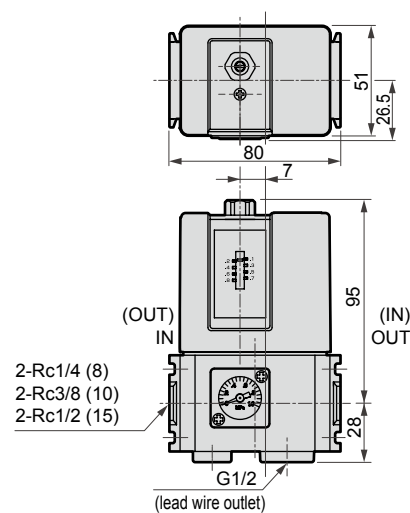
6 Use the pressure absorbing nipple (6556) to detect sudden changes in pressure such as when confirming air cylinder pressure.

7 Use the pressure absorbing nipple (6556) if pressure rise/lower pulsation is frequent. The product life could be shortened if the pressure absorbing nipple is not used.

8 Loosen the nut on the top of the cover, and adjust the pressure with the adjustment screw. The set pressure will rise when the screw is turned to the plus (+) side and will drop when turned to the minus (-) side. Use an 13mm wrench and a slotted screw driver to fix the nut after setting.

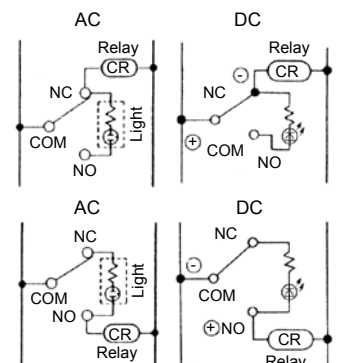
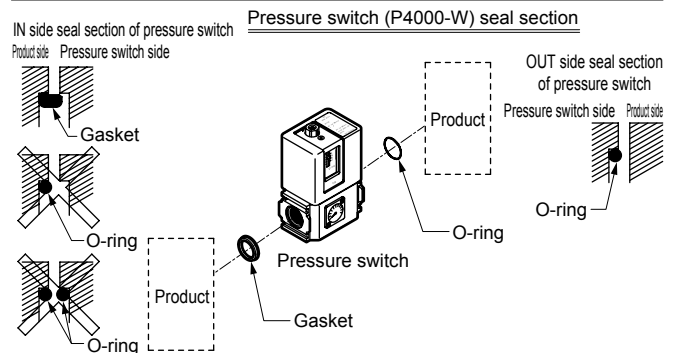
9 The scale is only for reference. (scale margin of error within $\pm 0.05\text{MPa}$)

Dimensions



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

How to assemble





Reed switch type compact mechanical pressure switch standard white series

P1100-W/P4100-W/P8100-W Series

Compatible with modular connection with FRL

JIS symbol



Specifications

Descriptions	P□100-W
Working fluid	Compressed air
Max. working pressure MPa	1
Set pressure range MPa	0.1 to 0.6
Hysteresis MPa	0.08 or less
Repeatability MPa	±0.02 or less
Contact configuration	1a Note 1
Wiring	Lead wire 1m (oil resistant vinyl cabtire cable 2-conductor 0.2 mm ²)
Ambient temperature and fluid temperature.	5 to 60°C
Protective structure Note 2	Equivalent to IP20

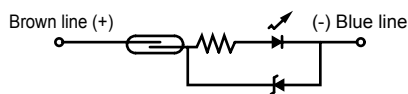
Note 1: The contact turns on if air pressure exceeding the scale setting pressure is applied.

Note 2: The protective structure is IP 65 or equivalent if an optional joint is connected to the atmospheric pressure introduction port and extended with tubes to a place free of water. This port can not be used outdoors.

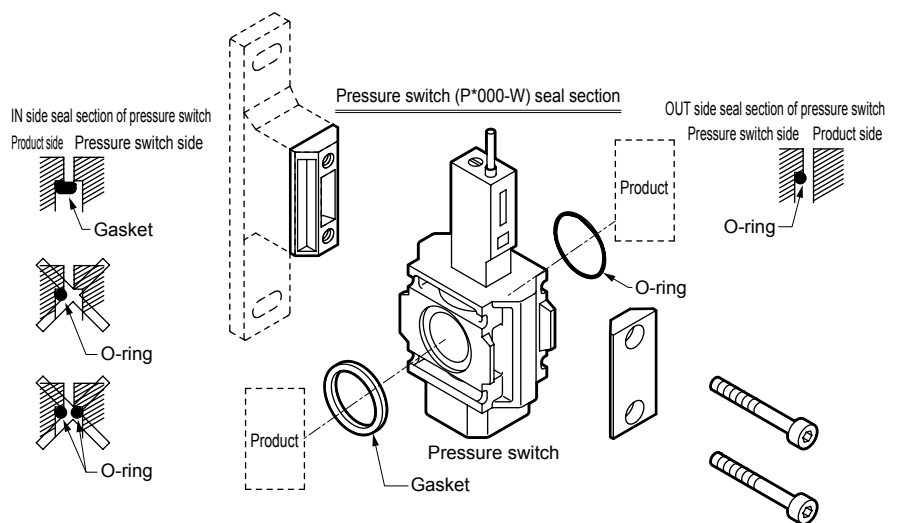
Electric component section specification

Load voltage	DC12/24V	AC100V
Load voltage	5 to 50mA	7 to 20mA
Internal voltage drop	3V or less	
Light	LED(ON lighting)	
Maximum shock resistance	294m/S ²	
Insulation resistance	20MΩ and over at 500 VDC megger	
Withstanding voltage	No abnormality after application of AC1000V for 1 minute.	

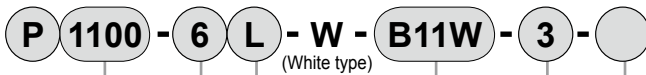
Internal circuit diagram



How to assemble (P1100-W, P4100-W, P8100-W)



How to order (modular connection compatible)



A Series model no

B Port size

C Branching direction

D Attachment

E Lead wire length

F Option

Symbol	Descriptions			
A Series model no				
1100	For 1000-W Series modular connection			
4100	For 2500-W, 3000-W, 4000-W Series modular connection			
8100	For 6000-W, 8000-W Series modular connection			
B Port size				
		1100	4100	8100
6	Rc1/8	●		
8	Rc1/4	●	●	
10	Rc3/8		●	
15	Rc1/2		●	
20	Rc3/4			●
25	Rc1			●
C Branching direction Note 1				
Blank	Note 2	L	R	
D Attachment				
		1100	4100	8100
Blank	Joiner set and gasket	●	●	●
B11W	T type bracket and gasket	●		
B31W	T type bracket and gasket		●	
B41W	T type bracket and gasket		●	
B81W	T type bracket and gasket			●
4	Fitting for atmospheric releas port attached (M3 elbow)	●	●	●
E Lead wire length				
Blank	1m			
3	3m			
5	5m			
F Option				
Blank	None			
P6	Copper and PTFE free (custom order)			

⚠ Cautions for model No. selection

Note 1: This is used for intermediate connection of the module series so the module connection section is not threaded.

Note 2: A masking plug matching the port size is enclosed.

Note 3: When piping the isolated P*100-W unit, use piping adapter A*00-W.
(The horizontal direction port does not have threads)

Specification for LiB production (Catalog No.CC-947)

● Specification for LiB manufacturing process

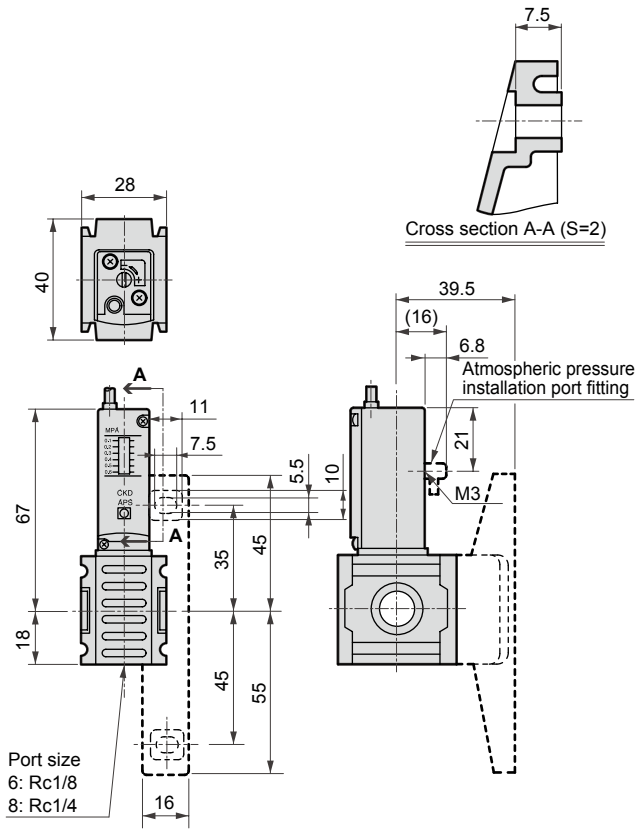
P4100 - - P4

P*100-W Series

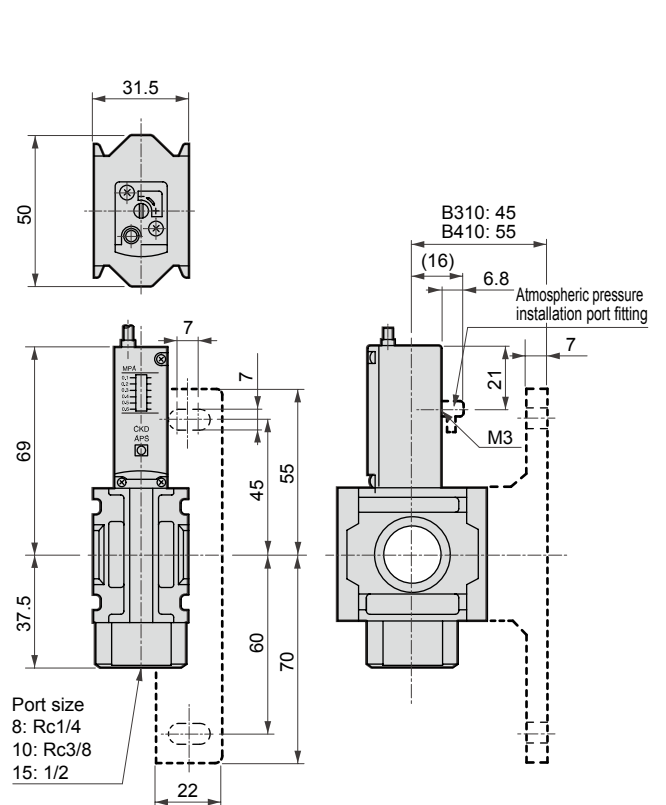
Dimensions 

● P1100-W

● P4100-W

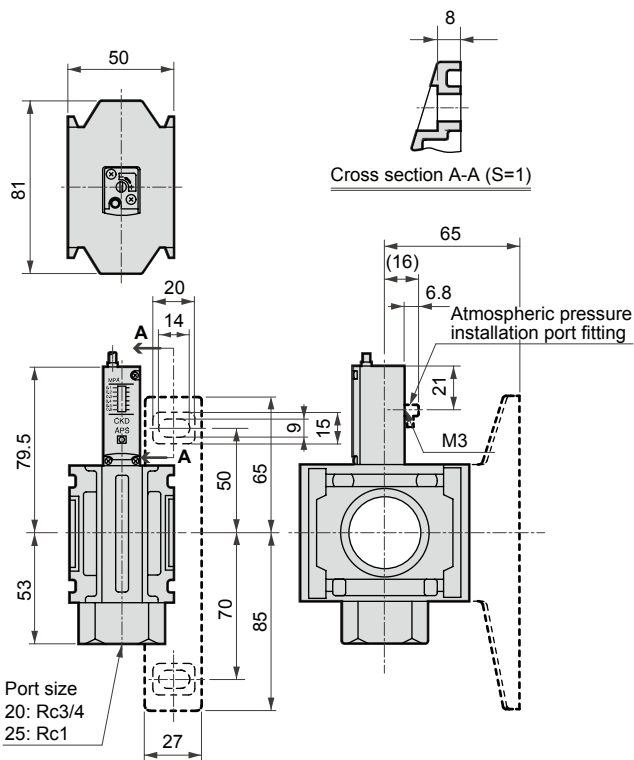


Weight 126g



Weight 190g

● P8100-W



Weight 467g

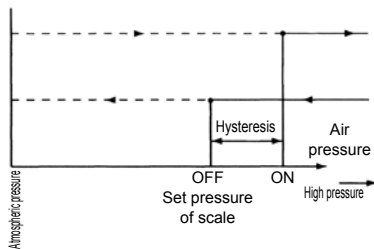
⚠ Safety precautions

■ Installation & Adjustment

⚠ CAUTION

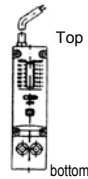
- 1 Setting pressure Settings are applied when the value is changed.
 - Pressure displayed on the scale plate is used as the reference. When setting pressure, refer to the separate pressure gauge.
 - Pressure displayed on the scale plate is the value when the contact is off. To set the value when the contact is on, set the pressure displayed on the scale plate to a value smaller than that from which hysteresis has been subtracted. If not set, operation may not take place at the set value.
(Hysteresis is the the difference of pressure it is required to turn the switch off after it has been turned on at the set pressure)

Operation chart



2 Installation

- Do not drop or bump the panel when handling it.
- Wire the lead so that the repeated bending strain and tensile strength are not applied to the wire as it may lead to disconnection
- Do not use this sensor near a strong magnetic field or large current (large magnet or spot welder, etc.) because the sensor could malfunction.
- The pressure switch is equivalent to IP-20, but the installation direction is limited to upward vertical. If water enters the introduction port for atmospheric pressure from below, pipe an M3 joint and extend with tubing to where water will not enter. Do not plug the fork lift holes as recycled air is discharged. (Only SHD Series) This port can not be used outdoors.
- P*100 Series
If there is drainage in pneumatic piping, install so that the pressure switch is higher than the drain.
- Do not pressurize suddenly. Product performance could drop or the product could be damaged.



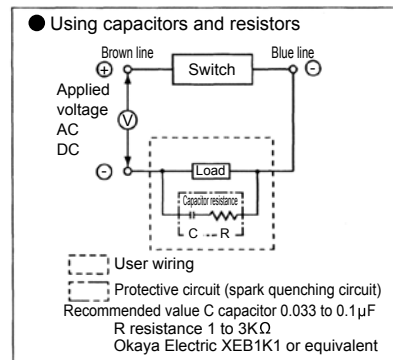
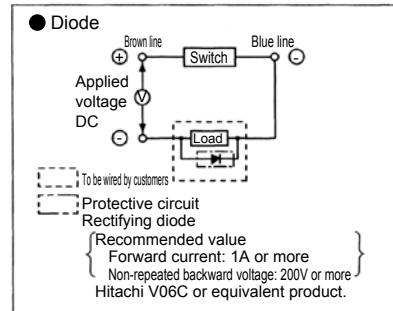
3 Wiring

- Connecting the lead wire
 - ① Do not connect the lead directly to the power supply. Connect the load serially. Failure to do so could lead to disconnection.
 - ② When using for DC, connect the brown wire to the ⊕ side and the blue wire to the ⊖ side. The light will not light if wires are connected in reverse.
 - ③ When connected to the AC relay or PC input, if half wave rectification is done with these circuits, the switch light may not light. In this case, the light will light if the switch lead polarity is reversed.
- Contact capacity
Do not exceed the specified load voltage and load current range.

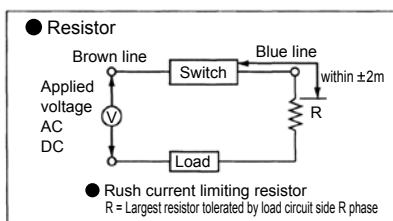
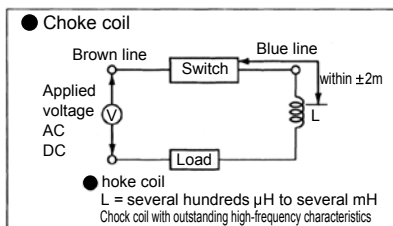
Failure to do so could lead to disconnection or blown light. The light may not light if the current is less than the rated current value.

● Contact protection

- ① When using this sensor with a conductive load such as a relay, provide the contact protection circuit shown at right. The contact could melt if this protection circuit is not provided.



- ② If DC wiring exceeds 50 m or AC wiring exceeds 10 m, the wiring capacity will be attained. A inrush current will occur, damaging the switch or shortening life.
Install a contact protection circuit if the wiring length is exceeded.





Compact mechanical pressure switch

APS-W Series

• General purpose discrete specifications (APS)

JIS symbol



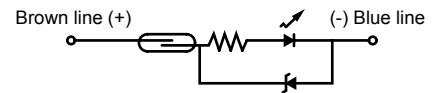
Specifications

Descriptions	APS-W
Working fluid	Compressed air
Max. working pressure MPa	1.0
Set pressure range MPa	0.1 to 0.6
Hysteresis MPa	0.08 or less
Repeatability MPa	±0.02 or less
Contact configuration	1a Note 1
Wiring	Lead wire 1m (oil resistant vinyl cabtire cable 2-conductor 0.2 mm ²)
Ambient temperature and fluid temperature	5 to 60°C
Protective structure Note 2	IP 65 equivalent

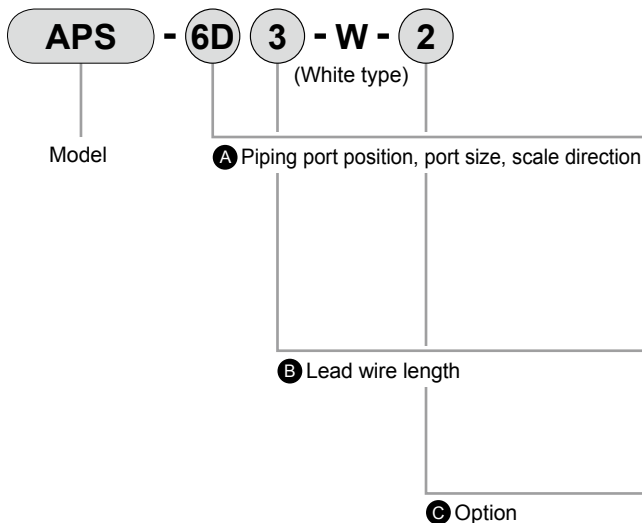
Note 1: The contact turns on if air pressure exceeding the scale setting pressure is applied.
 Note 2: However mounting direction must be vertical. When water entrains into the bleed port from bottom, connect an optional joint, and extend the tube until water does not entrain. This port can not be used outdoors.

Electric component section specification		
Load voltage	DC12/24V	AC100V
Load voltage	5 to 50mA	7 to 20mA
Internal voltage drop	3V or less	
Light	LED (ON lighting)	
Maximum shock resistance	294m/S ²	
Insulation resistance	20MΩ and over at 500 VDC megger	
Withstanding voltage	No abnormality after application of AC1000V for 1 minute.	

Internal circuit diagram



How to order



Symbol	Descriptions
A Piping port position, port size, scale direction	
6B	Rear Rc1/8, vertical Note 1
6D	Bottom Rc1/8, vertical
6F	Bottom flange, vertical
6L	Both sides Rc1/8, vertical Note 1
6Y	Rear slange, side
B Lead wire length	
Blank	1m
3	3m
5	5m
C Option	
Blank	None
1	DIN rail bracket attached (6D) only
2	Nipple attached (6D) only
4	Fitting for atmospheric release port attached (elbow for M3)

Specification for LiB production (Catalog No.CC-947)

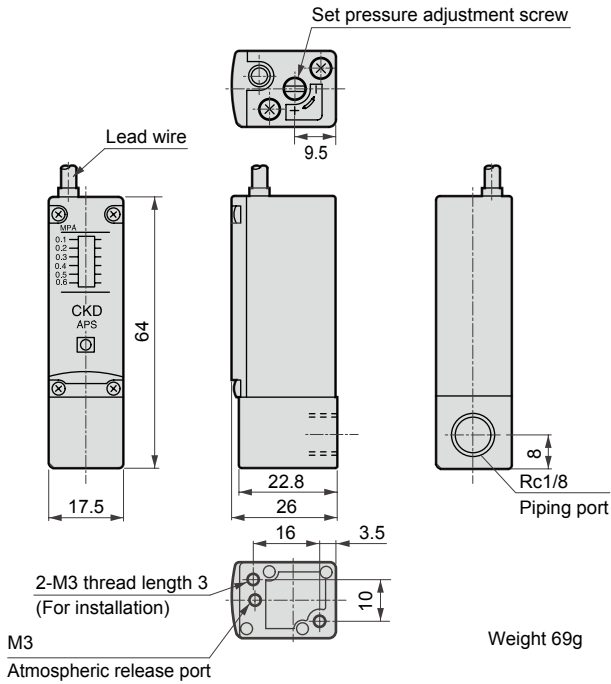
Note 1: When installing on the bottom, be careful not to block the bleed port.

● Specification for LiB manufacturing process

APS - - P4

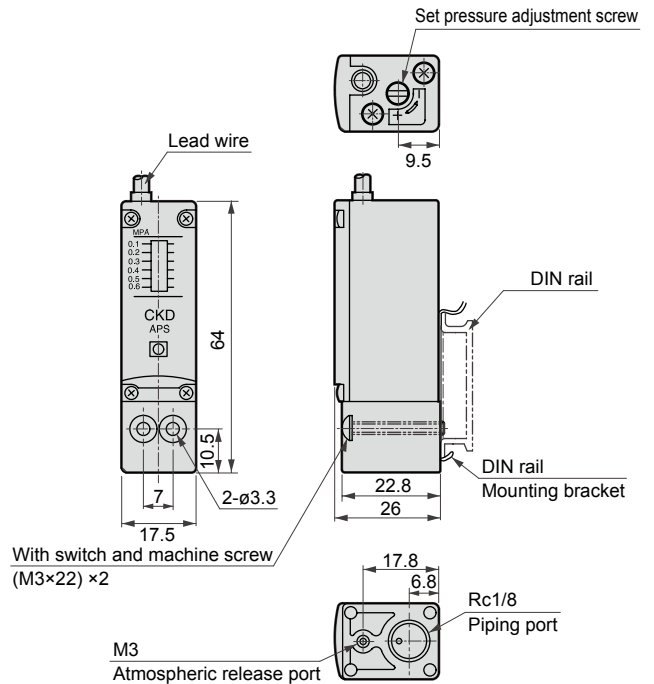


● APS-6B-W

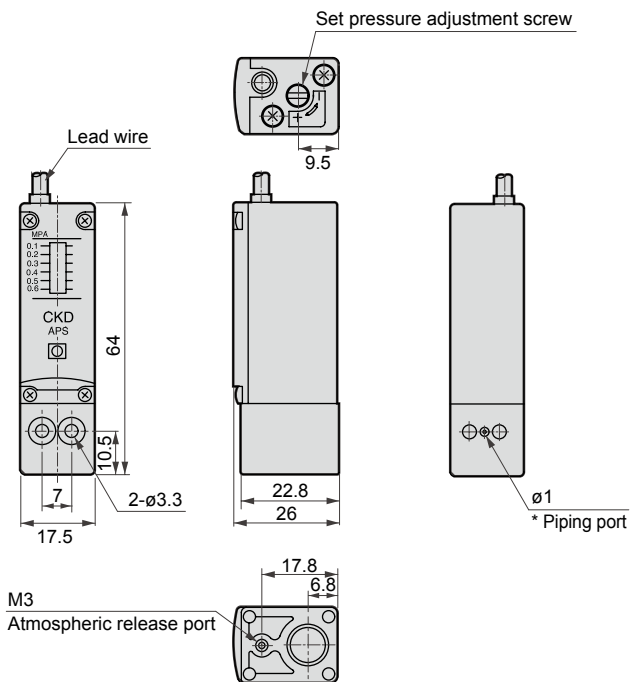


Note: When installing on the bottom, be careful not to block the bleed port.

● APS-6D-W

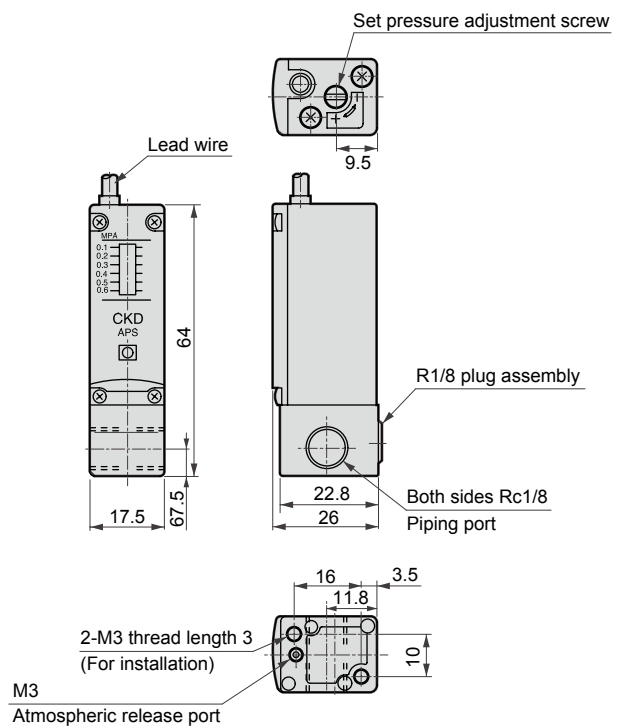


● APS-6F-W



* CAUTION: The I.D. of the sealing O ring is ϕ 1.2.
Drill a ϕ 1 or less pressure outlet hole on the mounting face.

● APS-6L-W

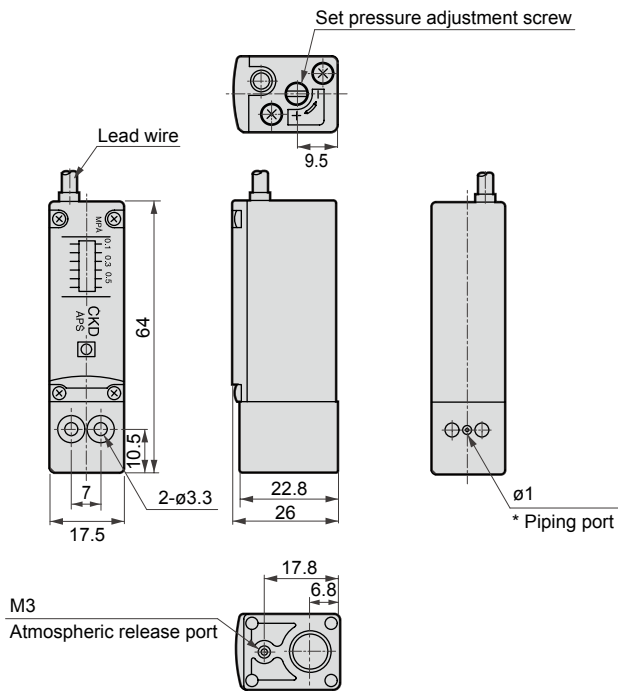


Note: When installing on the bottom, be careful not to block the bleed port.

Dimensions



● APS-6Y-W



* CAUTION: The I.D. of the sealing O ring is ϕ 1.2.
 Drill a ϕ 1 or less pressure outlet hole on the mounting face.