

Digital Display Pressure Switch



PS41

Waterproof Digital Display Pressure Switch



Product Features

- Waterproof housing design, protection class IP65;
- 2 way switching output, NPN/PNP adjustable;
- 7 kinds of pressure units can be converted;
- Support analog voltage or analog current;
- Dual screen, 3 color display (red, green, orange);
- "Current value" and "reference value" are displayed at the same time, and the reference value can be set directly;
- Compact size, easy to install;
- Digital display, easy to recognize;

How to Order?

Series No.	Pressure Type	Output Type	Port Size
PS41: Waterproof Type	P: Positive pressure (-0.1MPa~1.0MPa) C: Continuous pressure (-100kPa~100kPa)	2NPV: 2-way switching (NPN/PNP adjustable, factory default NPN) +1 analog voltage output (1~5V) 2NPA: 2-way switching (NPN/PNP adjustable, factory default NPN) +1 analog current output (4~20mA)	01: PT1/8(M5) 02: G1/8 (M5) Note: Connectors are made of copper

Installation Accessories: Sold Separately

Panel Installation bracket	MS-PS-01	PS41 CATEGORICAL
Front protective cover	MS-PS-02	
Front protective cover	MS-PS-03	
PS41-shaped bracket 1	MS-PS41-01	
PS41-shaped bracket 2	MS-PS41-02	

Product Profile

Style	Positive pressure	Continuous pressure
Type	PS41P	PS41C
1000kPa—		
100kPa—		
-100kPa—		
Rated pressure range	-0.1MPa~1.0MPa	-100kPa~100kPa
Set pressure range	-0.1MPa~1.0MPa	-100kPa~100kPa

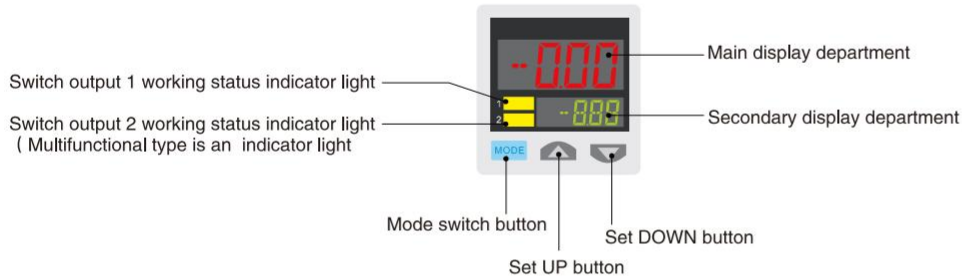
Specifications

Models	Positive Pressure	Continuous Pressure
Type of pressure	Standard pressure	
Rated pressure range*	-0.1MPa~1.0MPa	-100kPa~100kPa
Set pressure range*	-0.1MPa~1.0MPa	-100kPa~100kPa
Pressure resistance	1.5MPa	500kPa
Applicable fluid	Non corrosive gas	
Supply voltage	12~24V DC ± 5%	
Consumption current	24V 30mA Max	12V 60mA Max
Switch output	NPN O.C output:80mA/24VDCMax or PNP O.C output :80mA/24VDC	
Repetitive accuracy	±0.2%F.S. ±1 digit	±0.5%F.S. ±1 digit
Reaction time	Select through key operation:2.5ms,5ms,10ms,25ms,50ms,100ms,250ms,500ms,1000ms,5000ms	
Analog output	Voltage output	0.6V~5V (or slightly lower) Linearity: ± 1%F.S. Output impedance: 1KΩ
	Current output	2.4mA~20mA(or slightly lower) Linearity: ± 1%F.S. Maximum load impedance, when the supply voltage is 12V :300Ω ; 24V power supply: 600Ω minimum load impedance :50Ω
Range of temperature	Working temperature :0~50℃ Storage temperature : -10~60℃(no condensation, no icing)	
Range of humidity	35~85%RH	
Temperature characteristics	± 3%F.S. (25℃)	
Protection level	IP65	
Material	Outer shell: Nylon + glass fiber	Keys: Silicone rubber Seal ring: H-NBR
	Pressure port: External thread POM+ inlaid N5 copper	LCD display: Propylene
Overall dimensions	30 x 30 x 27.2mm(plastic part) / 30 x 30 x 42.6mm (including connectors)	
Weight	Appro 115g (barometer body + user interface connector)	

※1: Note: Due to the influence of temperature and linear compensation, there may be slight fluctuation near the upper/lower range of the barometer, which is positivePanel description
 ※2: Factory default NPN output.

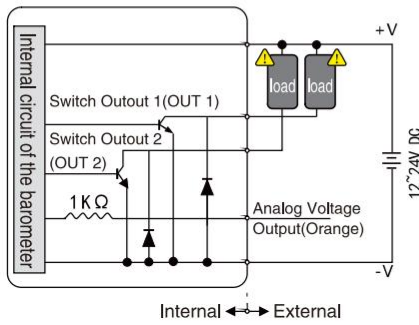
5
Pressure Switch

Panel Description

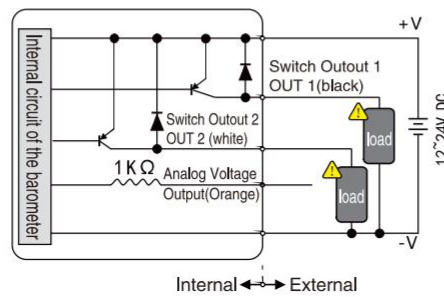


Circuit diagrams and wiring diagrams

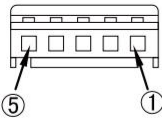
Outout type PNP



Outout type PNP



Terminal arrangement diagram



Connector Pin NO	Terminal name
① Brown	+V
② Black	OUT1
③ White	OUT2
④ Orange	Analog Output
⑤ Blue	0V

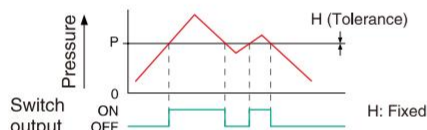


Please be sure to pay attention!
Be sure to connect the load in series before use, other wise it will cause the air pressure gauge to burn out!

Input Mode and Output Mode

① EASY mode

Mode for switch output ON/OFF control

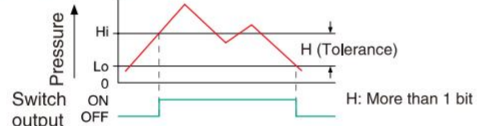


(Note 1): The stress can be fixed at level 8.

(Note 2): The auxiliary display unit displays "P-1" when the switch outputs 1
Displayed "P-2" when switching output 2

② Lag mode

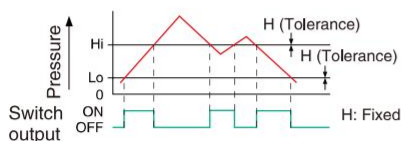
Arbitrary setting of switching output tolerance (hysteresis) and ON/OFF control mode.



(Note 1): The auxiliary display unit displays "Hi-1", "Lo-1" when the switch outputs 1
Displayed "Hi-2", "Lo-2" when switching output 2

③ Window comparison mode

Set the switch to ON or OFF mode according to the pressure within the set range



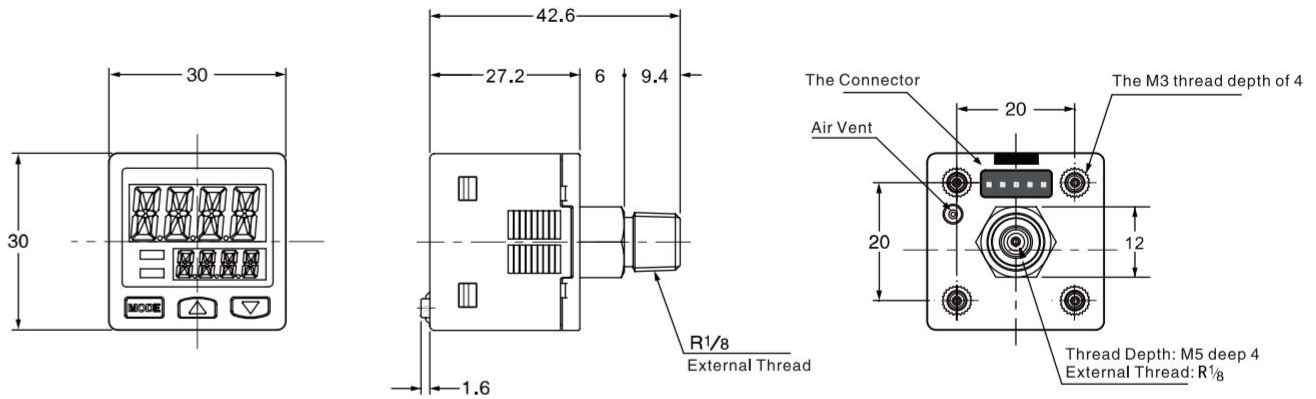
(Note 1): The stress can be fixed at level 8.

(Note 2): The auxiliary display unit displays "Hi-1", "Lo-1" when the switch outputs 1
Displayed "Hi-2", "Lo-2" when switching output 2

Digital Display Pressure Switch



Dimensional

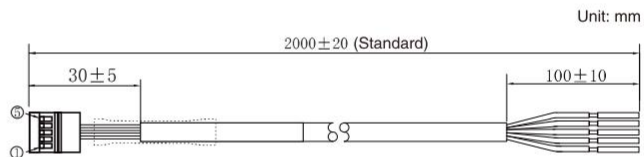
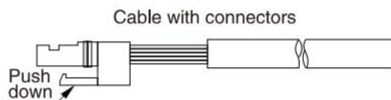


Accessories

Cables



Please use the connecting cable with plug provided in the accessories.

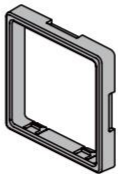


Plugging and unplugging

- To insert the plug, grasp the lever and the plug body with your hand and insert it straight into the socket, then press the jaws of the lever into the groove of the housing to lock it in place.
- To pull out the plug, press the lever down with your thumb and pull the jaws straight out of the groove.

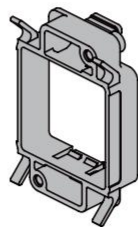
Mounting bracket (sold separately)

Mounting Bracket

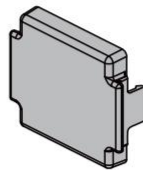


Panel Mounting Bracket
MS-PS-01

Used in conjunction with both, the sensor can be mounted on a panel with a thickness of 1-6mm, or multiple sensors can be mounted close together.



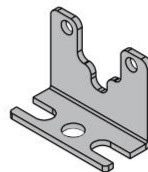
Panel Mounting Bracket
MS-PS-02



Panel Mounting Bracket
MS-PS-03

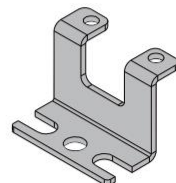
Protects the adjustment surface of the sensor.

Metal brackets



Type 41 Metal brackets 1
MS-PS41-01

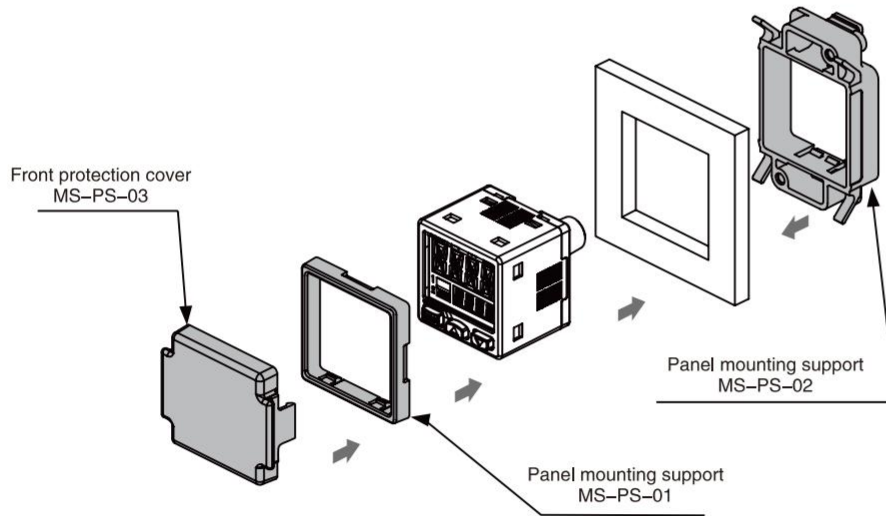
Sensors can be mounted in the bottom or top direction, or multiple sensors can be mounted in close proximity.



Type 41 Metal brackets 2
MS-PS41-02

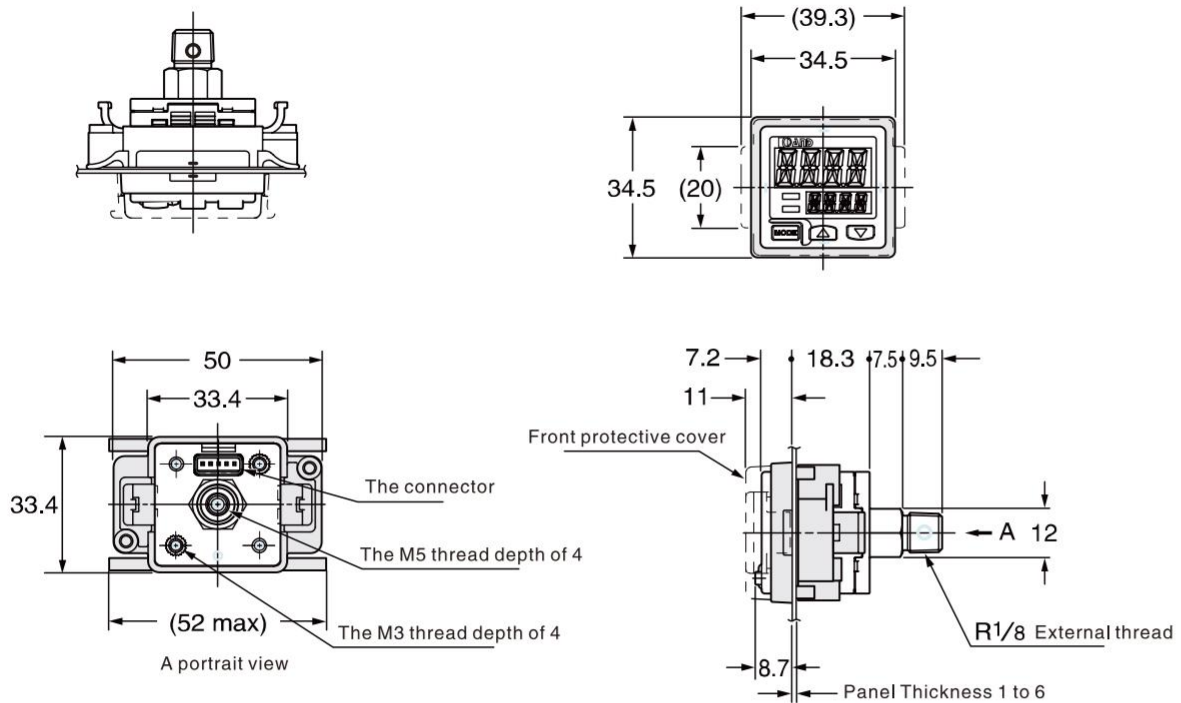
Sensors can be mounted in the back direction or in close proximity to each other.

Installation Instruction



Panel Mount Bracket, Front Protective Cover

Mounting effect and bracket size



Material:
 POM panel mounting support
 Polycarbonate (front protection cover)

Digital Display Pressure Switch

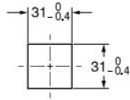


Panel Mount Bracket, Front Protective Cover

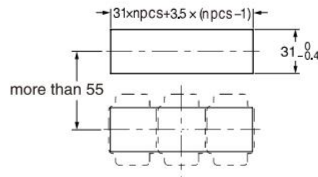
Panel processing size

Note: The thickness of the panel should be 1~6mm.

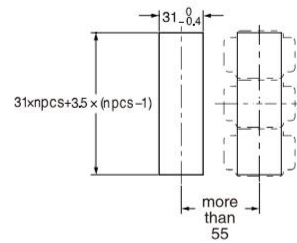
When installing one panel



When continuous installing n Horizontally



When continuous installing n Longitudinally



Mounting Bracket

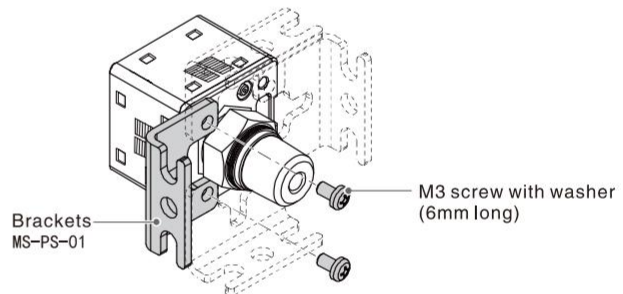
Sensor Mounting Bracket

- Use the optional special bracket or panel mount connector for mounting.
- When using the unit in a place where water, dust, etc. may adhere to the body, insert the separately sold hose into the atmospheric opening and connect the hose to a place free of water and dust.

Mounting method of the bracket:

Please use the mounting screws to mount the bracket to the body.

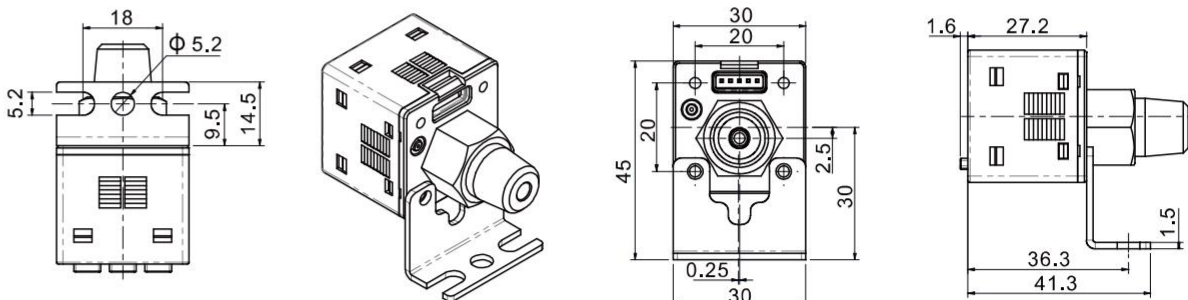
※: The tightening torque of the bracket mounting screws is $\leq 0.5\text{N}\cdot\text{m}$.



Note: The bracket is an optional accessory and must be ordered separately.

Bracket mounting dimensions

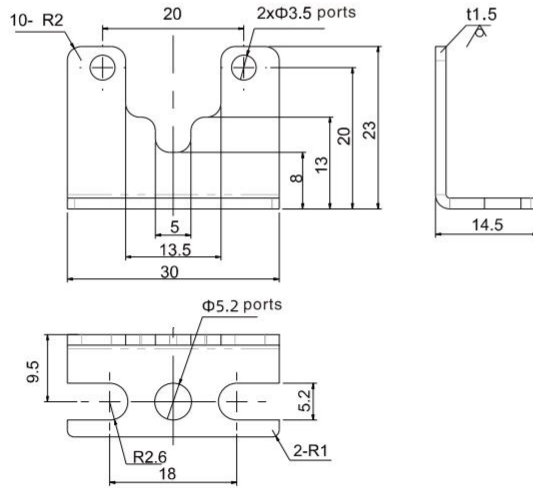
Bracket Model: MS-PS41-01



Mounting Bracket

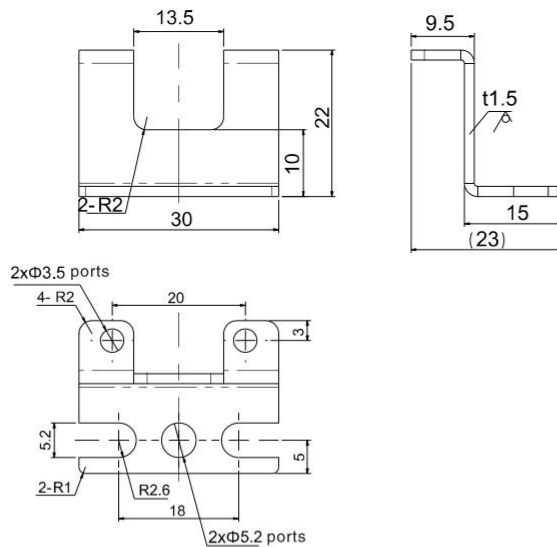
Sensor Mounting Bracket Dimensions

Bracket Model: MS-PS41-01



Bracket size

Bracket Model: MS-PS41-02



Hose installation

- If the switch's atmospheric vent may become clogged with water, dust, etc., use a separately sold hose inserted into the atmospheric opening up to the bottom, with the other end connected to a location free of water and dust. (Refer to the figure on the right.)

※:Please Verify that the hose is inserted into the atmospheric opening up to the bottom.

