

# Pressure Switch/Reed Switch Type

## IS10 Series

**16% lighter**

**Weight: 62 g**

\*Previous type 74 g  
Compared with IS1000  
(Made by SMC)

**11% smaller**

**Overall height: 52 mm**

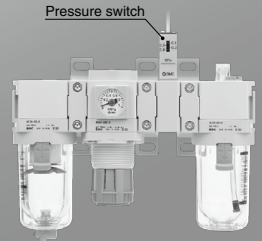
\*Previous type 58.5 mm  
Compared with IS1000  
(Made by SMC)

- 100 V AC/DC specifications
- Set pressure range  
**0.1 to 0.4 MPa**
- Service life: **5 million cycles**



**RoHS**

- Can be connected to Modular type F.R.L. units.



### Specifications

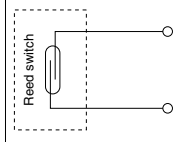
Model	IS10-01
Fluid	Air/Inert gas
Proof pressure	1.0 MPa
Max. operating pressure	0.7 MPa
Set pressure range	0.1 to 0.4 MPa Option: 0.1 to 0.6 MPa
Ambient and fluid temperature	-5 to 60°C (No freezing)
Contacts	1a
Error of scale	±0.05 MPa or less
Hysteresis	Fixed 0.08 MPa or less
Repeatability	±0.05 MPa or less
Wiring specifications	Grommet, Lead wire length: 0.5 m Option: 3 m, 5 m
Enclosure	Equivalent to IP40
Port size	1/8
Weight	62 g

### Switch Characteristics

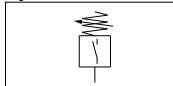
Max. contact capacity	AC 2 VA, DC 2 W		
Voltage AC/DC	24 V or less	48 V	100 V
Max. operating current and range	50 mA	40 mA	20 mA

### Electrical Circuit

Up to 100 V AC/DC

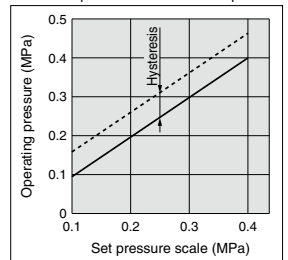


### Symbol



### Set Pressure Range

----- ON pressure    ——— OFF pressure



### How to Order

**IS10-□ 01 □ - □**

	Symbol	Description		
①	Nil	R		
	N	NPT		
②	Nil	None		
	S	With seal		
③	a	Set pressure range	Nil + 0.1 to 0.4 MPa	
		6 Note(1)	0.1 to 0.6 MPa	
	b	Lead wire length	Nil	0.5 m
			L	3 m
			Z	5 m
	c	Scale plate pressure unit	Nil	MPa
P Note(2)			Both MPa and psi	

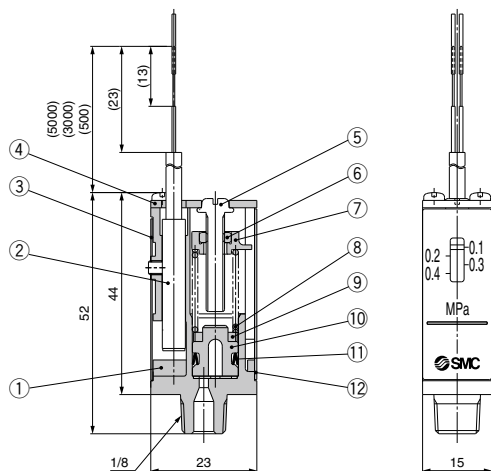
Semi-standard: Select one option each in a through c. Place them in alphabetical order.

Example) IS10-N01-6PZ

Note 1) Set pressure range of 6P(L, Z) is 0.2 to 0.6 MPa (30 to 90 psi).

Note 2) This product is for overseas use only according to the new Measurement Law. (The SI unit type is provided for use in Japan.)

## Dimensions/Construction



## Component Parts

No.	Description	Material
1	Body	ZDC
2	Switch assembly	—
3	Shield plate	Steel sheet
4	Cover	Steel sheet
5	Adjusting screw	Brass
6	Hexagon nut	Brass
7	Indicator	PBT
8	Spring	Stainless steel
9	Magnet	—
10	Piston	POM
11	Seal piston	NBR
12	Scale plate	PC

## Wiring

### ⚠ Warning

1. Connect load before connecting with power source.

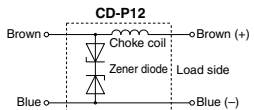
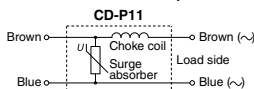
The switch will break instantly if no load is connected.

2. Make the wiring length as short as possible. When the load which is operated by the pressure switch is an inductive load, or the lead wire is 5 m or longer, use the contact protection box shown in the table below.

Otherwise, damage to the switch can result.

Part no.	Voltage	Lead wire length
CD-P11	100 VAC	Switch side: 0.5 m Load side: 0.5 m
CD-P12	24 VDC	Load side: 0.5 m

#### • Internal circuit of contact protection box



- How to connect contact protection box  
Connect the lead wires from the body and the contact protective box side indicated "SWITCH." Make the lead wire as short as possible, within 1 m.

#### 3. Dimensions of lead wire

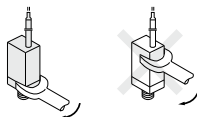
Enclosure:  $\phi$  3.4  
Insulator:  $\phi$  1.1  
Conductor:  $\phi$  0.64

For details, refer to the operation manual.

## Mounting

### ⚠ Warning

1. When handling the product, hold the body and do not apply tensile stress to the power supply cable. Otherwise, damage may occur to the product.
2. Avoid repeatedly bending or stretching the lead wire.  
Wiring which applies repeated bending and tensile stress to the lead wire can break the circuit. If the lead wire is damaged, causing operation failure, replace the product with a new one.
3. Do not drop or bump the product when handling the product.
4. Apply a wrench to the bottom of the product when screwing.  
Turning it by applying a wrench on the top of the main body may cause damage to the product.  
Recommended tightening torque: 7 to 9 N·m



5. Mounting direction is available in either horizontal or perpendicular.

## Operating Environment

### ⚠ Warning

1. Avoid using a switch in a magnetic environment. It may cause a malfunction.
2. Do not use in such an environment, where water or oil is splashed.  
Since it is the open type construction, if water or oil make an ingress into the internal parts, the electric circuit will be corroded and may result in a malfunction or damage.
3. Avoid vibration.  
Vibration may cause a malfunction or may cause setting to be incorrect.

## Pressure Source

### ⚠ Warning

1. Operating fluids are either air or inert gas exclusively.  
Never use other fluids. Never use in an environment where flammable fluid or gas is used. Since this is not an explosion-proof construction, it may lead to an explosive disaster.
2. Not applicable to corrosive gas and liquid.  
Otherwise, damage to the body or liquid leakage can result.
3. Avoid use in vacuum applications.  
Switch may be imploded.
4. This product (IS10 series) uses a reed switch. If the chattering of the output signal is a problem, choose a solid state type pressure switch or adjust by PLC.

## Pressure Setting

### ⚠ Warning

1. Set within the display pressure range of the scale plate.





### ⚠ Caution

1. The pressure can be adjusted by rotating the adjustment screw. The red indicator goes up and down according to the adjustment. Rotate the screw clockwise for high pressure.
2. Use a screwdriver of a size suitable for the groove of the adjustment screw.
3. Scale of switching set display is the set value at the pressure drop.
4. The ON signal is output through the pressure set on the scale plate, to which the hysteresis is added for detecting the ON-pressure signal.
5. The pressure displayed on the scale plate is a guideline only.  
Measure the accurate pressure with the pressure gauge.

**Pressure Switch for Connecting to Modular/F.R.L. Units**

**Pressure Switch with Spacer**



**AC-D Series**

<p><b>Pressure Switch with T-Spacer</b> IS10T Series</p> <p>The OUT side piping can be branched downward.</p> 	<p><b>Pressure Switch with L-Shaped Piping Adapter</b> IS10L Series</p> <p>The OUT side piping direction is downward.</p> 
<p><b>Pressure switch</b> IS10M Series</p>  <p><b>Slim type</b></p>	<p><b>Pressure Switch with Piping Adapter</b> IS10E Series</p> 

For details, refer to "Modular/F.R.L. Units, AC-D series"

[Click here for details.](#)

**AC-A, AC-B Series**

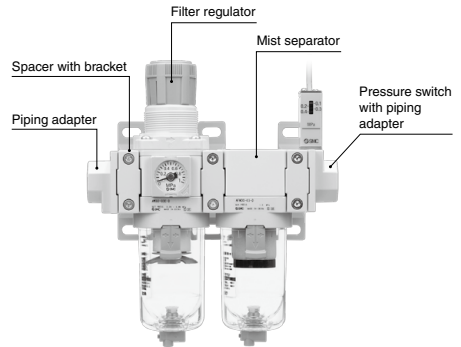
<p><b>Pressure Switch</b> IS10M Series</p> 	<p><b>Pressure Switch with Piping Adapter</b> IS10E Series</p> 
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For details, refer to "Modular/F.R.L. Units, AC-A/-B series"

[Click here for details.](#)

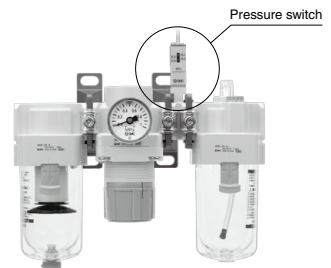
**Combination Example**

Piping adapter E300-03-D	1 pc.
Spacer with bracket Y300T-D	3 pcs.
Filter regulator AW30-03E-D	1 pc.
Mist separator AFM30-03-D	1 pc.
Pressure Switch with Piping Adapter IS10E-30-03-D	1 pc.



**Combination Example**

Air filter AF40-04-A	1 pc.
Spacer with bracket Y400T-A	2 pcs.
Regulator AR40-04G-B	1 pc.
Pressure switch IS10M-40-A	1 pc.
Spacer Y400-A	1 pc.
Lubricator AL40-04-A	1 pc.



ZSE20
ISE20
ZSE30
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ISE70
ZSE80
ISE80
PS
ISA3
ISA2
ISE35
PSE
IS
ISG
ZSM1