Pressure Switch/Reed Switch Type

Series IS10

Weight: 62 g *Previous type 74 g Compared with IS1000

(Made by SMC)

16% lighter 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





Can be connected to Modular type F.R.L. units. Pressure switch Lubricator Regulator

ZSE10 ISE70 ZSE80 ISE80

ISE **ZSP**

ZSE40

ISE40

PS ISA₂

PSE IS ISG

ZSM1

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		

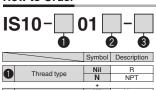
Electrical Circuit



Symbol

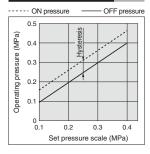


How to Order



0				Seal	Nil	None			
4				Seal	S With seal				
	+								
		П	а	Set pressure	Nil	0.1 to 0.4 MPa			
		Ш	а	range	6 Note1) 0.1 to 0.6 MF				
a					+				
Semi-standard	Ъ	П		Lead wire	Nil	0.5 m			
	sta	Ш	b	length	L	3 m			
<u> </u>		Ш		lengui	Z	5 m			
	ē	ľ			+				
	0)	П	_	Scale plate	Nil	MPa			
		П	С	pressure unit	P Note2)	Both MPa and psi			

Set Pressure Range

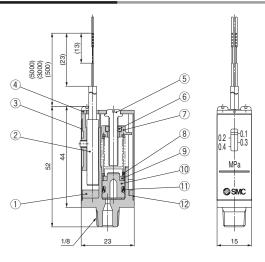


Semi-standard: Select one option each in a through c. Place them in alphanumerical Example) IS10-N01-6PZ

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

Connect load before connecting with power source.

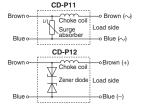
The switch will break instantly if no load is connected.

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		
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: ø 3.4 Insulator: ø 1.1 Conductor: ø 0.64

For details, refer to the operation manual.

Mounting

- 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.
- 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





Mounting direction is available in either horizontal or perpendicular.

Operating Environment

⚠ Warning

- Avoid using a switch in a magnetic environment.
 It may cause a malfunction.
- 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

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.

- Not applicable to corrosive gas and liquid.
 Otherwise, damage to the body or liquid leakage can result.
- Avoid use in vacuum applications. Switch may be imploded.
- 4. This product (Series IS10) 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

 Set within the display pressure range of the scale plate.

⚠ Caution

 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.

- Use a screwdriver of a size suitable for the groove of the adjustment screw.
- Scale of switching set display is the set value at the pressure drop.
- 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 quideline only.

Measure the accurate pressure with the pressure gauge.



ZSE30 ISE30 ZSE40 ISE40

ZSE10

ISE10

ISE70 ZSE80

ISE80

ZSE□

ISE

ZSP

PS

ISA2

PSE

IS

ISG

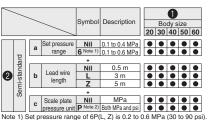
ZSM1

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

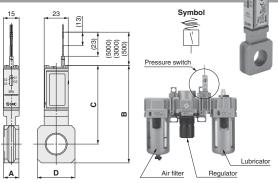
Pressure Switch with Spacer



Semi-standard: Select one option each in **a** through **c**. Place them in alphanumerical order. Example) IS10M-6LP



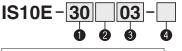
Note 1) Set pressure range of 6P(L, Z) is 0.2 to 0.6 MPa (30 to 90 psi).
Note 2) This product is for overseas use only according to the new Measurement Law. (The SI unit type is provided for use in Japan.)



Model	Α	В	С	D	Applicable model
IS10M-20	11	74	64	28	AC20□
IS10M-30	13	85	71	30	AC25□, AC30□
IS10M-40	15	93	75	36	AC40□
IS10M-50	17	97	77	44	AC40□-06
IS10M-60	22	91	67	53	AC50□. AC55□. AC60□

Note) Prepare a spacer separately for modular connection.

Pressure Switch with Piping Adapter



Semi-standard: Select one option each in **a** through **d**. Place them in alphanumerical order. Example) IS10E-30N03-6PRZ

			-,		D	Juy Si		
						20	30	40
				Nil	Rc	•	•	•
2		Thre	ad type	N	NPT	•	•	•
				F	G	•	•	•
				+				
				01	1/8	•	_	_
				02	1/4	•	•	•
(3)	3 Port size			03	3/8	•	•	•
	M				1/2		•	•
				06	3/4	_	_	•
				+				
	a Set press		Set pressure	Nil	0.1 to 0.4 MPa	•	•	•
		a	range	6 Note 1)	0.1 to 0.6 MPa		•	•
				+				
	2		Lead wire	Nil	0.5 m	•	•	•
	g	b	length	L	3 m	•	•	•
4	l a		icrigar	Z	5 m		•	•
•	Semi-standard			+				
	ᇤ	С	Scale plate	Nil	MPa	•	•	•
	(v)	_	pressure unit	P Note 2)	Both MPa and psi		•	•

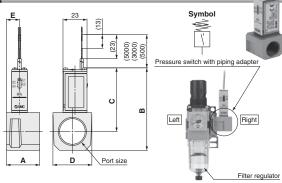
Symbol Description

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

Note 2) For thread type: NPT only.

d

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



Model Note 1)	Port size	Α	В	С	D	Е	Applicable model
IS10E-20□01	1/8						AC20□
IS10E-20□02	1/4	30	66	66 55 28 1	16	AR20□, AW20□	
IS10E-20 □ 03	3/8						AWM20, AWD20
IS10E-30 □ 02	1/4						AC25□. AC30□
IS10E-30 □ 03	3/8	32 73	59	30	13	AR25□, AR30□, AW30□	
IS10E-30 □ 04	1/2						AWM30, AWD30
IS10E-40 □02	1/4						Note 2)
IS10E-40 □03	3/8	32 79				40	AC40□
IS10E-40 □04	1/2		61	37	13	AR40□, AW40□	
IS10E-40□06	3/4						AWM40, AWD40

Note 1) ☐ in the model numbers indicates a thread type. No indication is necessary for Rc; however, indicate N for NPT, and F for G.

Note 2) Cannot be mounted to the AC40□-06 and AW40□-06.

Note 3) Prepare a spacer separately for modular connection.

* The pressure switch can be mounted on the AC401-16 and above and the pressure switch can be mounted on the AC401-16 and above and the pressure switch can be mounted on the AC401-16 and above and the pressure switch can be mounted on the AC401-16 and above and the pressure switch can be mounted on the AC401-16 and above and the pressure switch can be mounted on the AC401-16 and above and the pressure switch can be mounted on the AC401-16 and above and the pressure switch can be mounted on the AC401-16 and above and the pressure switch can be mounted on the AC401-16 and above and the pressure switch can be mounted on the AC401-16 and above and the pressure switch can be mounted on the AC401-16 and above and the pressure switch can be mounted on the AC401-16 and above and the pressure switch can be mounted on the AC401-16 and above and the pressure switch can be mounted on the AC401-16 and above and the pressure switch can be mounted on the AC401-16 and above and the pressure switch can be mounted on the AC401-16 and above and the pressure switch can be mounted on the AC401-16 and above and the pressure switch can be more than the pressure switch can be

The pressure switch can be mounted on the AC40□.06 and above and the AW40□.06 by screwing the IS10-01 into the piping adapter E500□.00-X051 or E600□.00-X051 to E600□.010-X501 (Rc1/8 threaded on top surface). Products with a premounted switch are available as a special order. Please contact SMC beforehand.

For details, refer to "Modular/F.R.L. Units, Series AC" in Best Pneumatics No.5.

a

