

Type SMWB  
Pressure Switch

Instruction Manual

MEIYO Electric Co.,Ltd.



## Safety Precautions

Be sure to follow the precautions given below before starting inspection or servicing. An accident may result due to electric shock or short circuit.

- (1) Be sure to turn off the power.
- (2) Using a tester, make sure no voltage is applied before starting the work.
- (3) Do not perform live-line work, except as required in emergency.

## General Information on Electric Shock

There are the following three cases where people suffer from electric shock:

- (1) Brought into contact with something electrically hot, his/her body makes a path of a ground-fault current.
- (2) Brought into contact with two lines under voltage, his/her body makes short circuit the lines.
- (3) Brought into a path of electricity, such as an electric wire and a switch, his/her body is inserted into the path of load current.

## General Information on Electric Shock

- (1) Eliminate insufficient insulation in wiring and electrical machinery and apparatus.
- (2) Completely execute grounding work for electrical machinery and apparatus.
- (3) Provide electric leak preventive measures for cables to electrical machinery and apparatus operated in wet places.
- (4) Be sure to turn off the power before starting inspection or repair work.

## 1. Outline

SMWB type pressure switch is used in the combination with test valve. This switch uses the method of diaphragm, and high response speed, lightweight small size. This pressure switch is no including the electric circuit, and only has a switching part.

## 2. Cross section

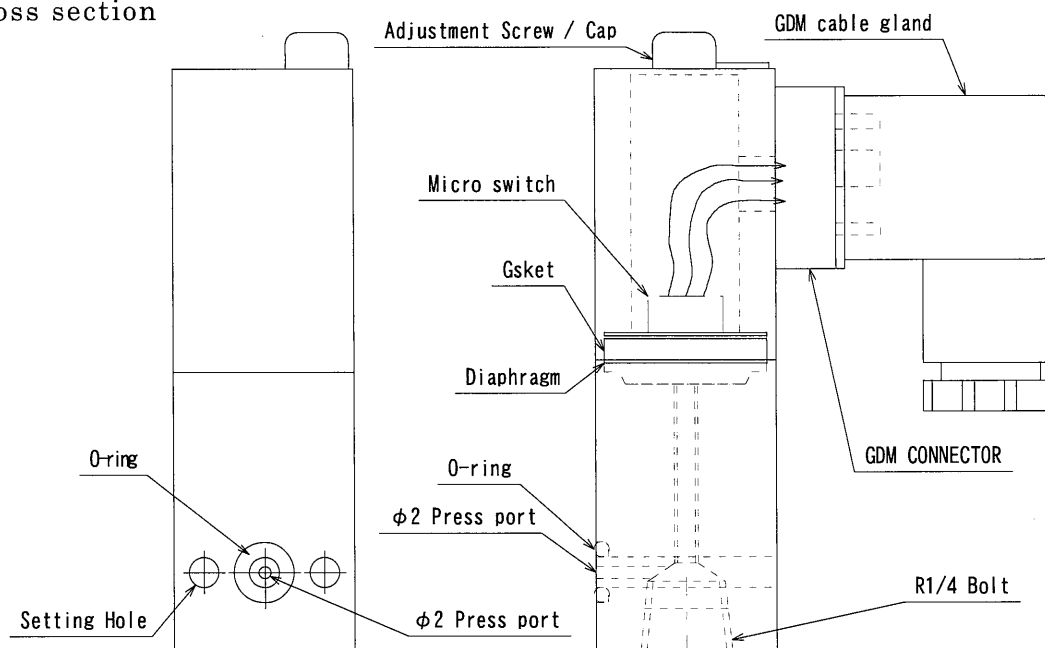


Fig 1 .

## 3. Operation theory

When pressure increases, diaphragm is warped in proportion to pressure. Then, when this warp exceeds the power of the adjustment spring, the contact point of micro-switch is operated.

## 4. The wiring

The connection of the electric wire connects it after removes a cable gland body. ( Please refer to the item 6 of manual ) Please refer to the Fig.2, connection diagram, for each use connecting wiring. Please be careful about the following matters;

- Please refer to the contact constitution for the contact movement
- Please use it within the electric rating ( table 1 ) of contact

CONNECTOR PIN NO.

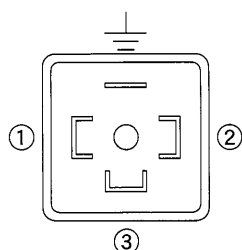


Fig2.

TYPE OF CONTACT

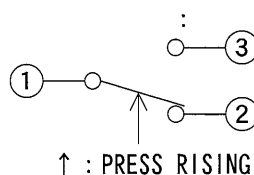


Fig.3

Table1.

	RATED VOLTAGE (V)	
	250 AC	30 DC
RESISTANCE (A)	0.2	0.2
INDUCTIVE (A)	0.2	0.2

## 5 . Installation

- The switch should be installed at the place where it is easy to do maintenance and the check.
- Two attachment holes of a switch are used and attached.
- Anti vibration rubber is used at the place with vibration and big shock for installation.

### Attention for installation

- The switch should be installed at the place where it is easy to do maintenance and the check.
- The receiving – pressure hole of the switch should be downward vertically.
- The switch should not be installed in the corrosive gas area.
- Anti vibration rubber is used at the place with vibration and big shock for installation.
- Remove the dust and alien substances of inner pipe, before install the pressure switch to the plumbing line.
- Use this switch within its maximum range. In addition, avoid the place with shock pressure, an excessive pressure change, and pulsation for installation.
- Performance temperature is  $-10\sim 85^{\circ}\text{C}$
- Please do not operate the parts except adjusting and terminal screw.

## 6 . Connections

- (1) Remove the cable gland part from the body of the switch after loosening the top screw of the cable gland.
- (2) Put out the terminal inside the cable gland with a small minus driver (lift arrow position).
- (3) Pass the wire through the cable gland hole and connect it to the terminal inside the cable gland.
- (4) Reform the terminal into the cable gland and push until it sounds. Be careful not to mistake the position of terminal.

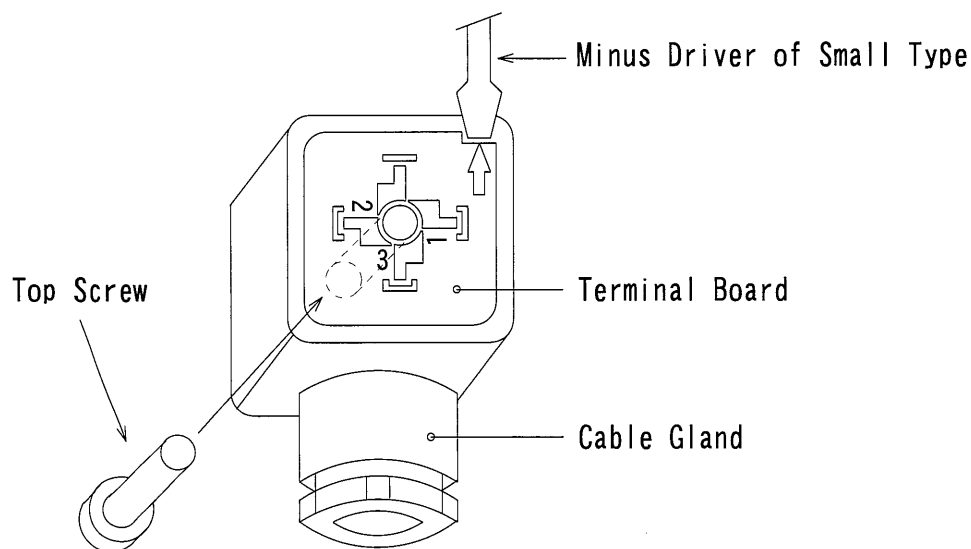


Fig. 5

Attention: Since incorrect connection causes damage, the connecting or wiring should be done carefully. Also it should be surely tightened.

## 7. Adjustment Method

There are tow methods of adjusting setting value.

One is the increasing pressure method that adjust upper limit pressure value.

One is the decreasing pressure method that adjust low limit pressure value.

It is adjusting method of setting low limit pressure value as follows.

Decrease pressure from the adjustment range's largest pressure by the decreasing pressure method which shows table 2. In addition, pressure is returned by the increasing pressure method of table 2.

Shift the cap of the back of pressure switch (see fig. 1 and 2), turn a screw using minus screwdriver.

Table 2 is showing the direction of rotation of adjustment screw and the fluctuation of setting pressure value.

Table 2 decreasing pressure method / increasing pressure method

型 式	減 圧 方 法	加 圧 方 法
SMWB-A	Decrease pressure from +0.001MPa of setting maximum pressure value.	Add pressure from around setting pressure value.
SMWB-B		
SMWB-C		
SMWB-D	Decrease pressure from +0.05MPa of setting maximum pressure value.	Add pressure from around setting pressure value.
SMWB-F		

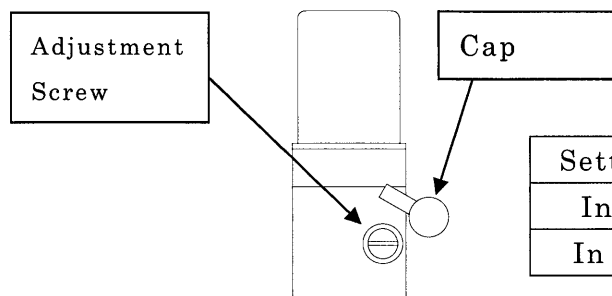


Fig. 6

Table 3: fluctuation of setting

Setting pressure value	Direction of rotation
In case of low value	Turn Right (tighten)
In case of high value	Turn Left (loosen)

## 8. Confirm of Setting Pressure Value

After adjustment, confirm the setting pressure value by the same way of adjustment method, repeat 2 or 3 times.

## 9 . Flow-Chart of Trouble Treatment.

