

Proximity switchesOperating and installing

REED SWITCH TYPE

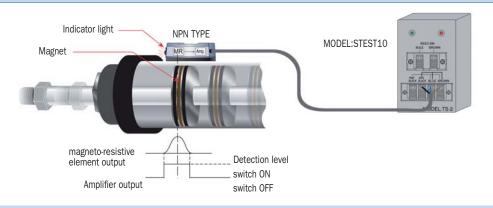
When the piston's magnet approaches the proximity switch, the internal reed switch will detect the change of magnetic field and close the contacts.



SOLID STATE TYPE

When the piston's magnet approaches the proximity switch, the internal magneto-resistive element can detect the change for magnetic field and cause a tiny voltage change.

Switching output is achieved when this signal is amplified by the operation amplifier circuit in the proximity switch.



HOW TO INSTALL THE PROXIMITY SWITCH

> END OF STROKE DETECTION

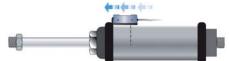
> STEP 1 Set the piston to the end of stroke position.



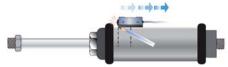
> STEP 2 Slide the proximity switch forward and keep it close to the cylinder wall. Make a mark at the proximity switch turn-on point.



> STEP 3 Slide the proximity switch forward continuously until the switch turns off.



> STEP 4 Slide the proximity switch backward until the switch turns back on and make a mark.



> STEP 5 The intermediate position between the 2 marks will be the most ideal position.

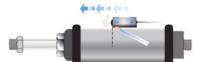


> INTERMEDIATE STROKE POSITION

> STEP 1 Set the piston to the required position.



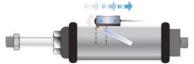
> STEP 2 Slide the proximity switch forward and keep it close to the cylinder wall. Make a mark at the proximity switch turn-on point.



> STEP 3 Slide the proximity switch forward continuously until the switch turns off.



> STEP 4 Slide the proximity switch backward until the switch turns back on and make a mark.

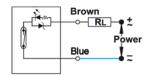


> STEP 5 The intermediate position between the 2 marks will be the most ideal position.





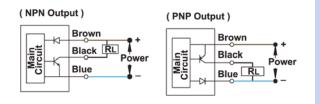
- > 1 Do not exceed specification, permanent damage to the proximity switch may occur.
- > 2 For reed switch type, polarity must also be observed for the proper function of LED. Connect the brown wire in series with load positive (+) and the blue wire to negative (-) of power source. If the polarity is reversed, reed switch remain functional but LED will remain in "OFF" state.



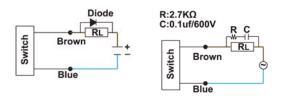
> 3 For solid-state type, polarity must also be observed. Connect brown wire to the positive (+) and the blue to the negative (-) of DC power source.

The black wire must connect to the load only.

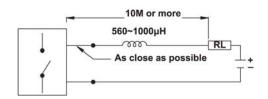
If the black wire is accidentally connected to the power source, permanent damage to the proximity switch may occur.



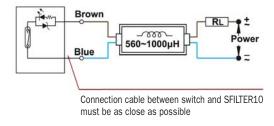
> 4 An external protection circuit may be required if the reed switch is used with inductive load, such as relay or solenoid. For DC inductive load, attach an external diode parallel to the load and use R-C circuit parallel with AC inductive load as illustrated below.

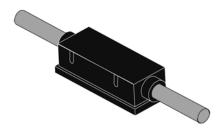


- ${\bf > 5}$ Keep proximity switchs away form strong magnetic field to prevent malfunctions.
- **> 6** When using reed switch with capacitive load or if the lead wire lenght exceed 10-meter, an inductor ($560 \sim 1000 \ \mu H$) or SFILTER10 (surge suppressor) must be installed in series with the proximity switch to prevent damage (Sticking effect).



Model: SFILTER10 (Surge Suppressor)





Dimension (unit mm)

