

# Caution for safety

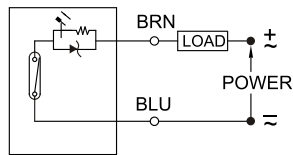
## ⚠️ SENSOR SWITCH

### Technical information :

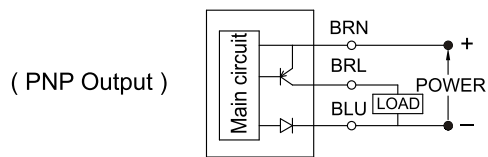
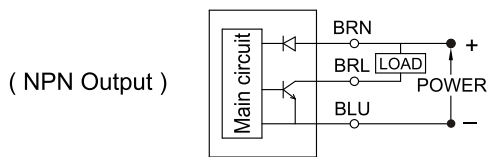
#### ⚠️ WARNING

Do not exceed specification, permanent damage to the sensor may occur.

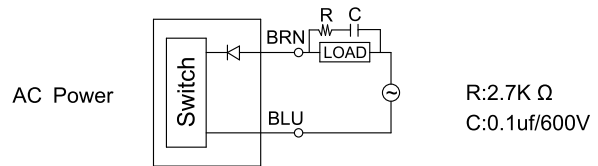
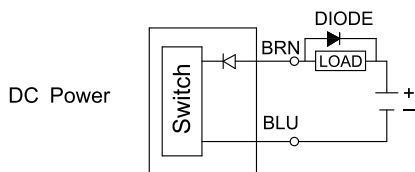
- For reed switch type sensors, polarity must also be observed for the proper functioning of LED. Connect the brown wire in series with load positive (+) and the blue wire to negative (−) of power source. If the polarity is reversed, reed switch remains functional but LED will remain in "OFF" state.



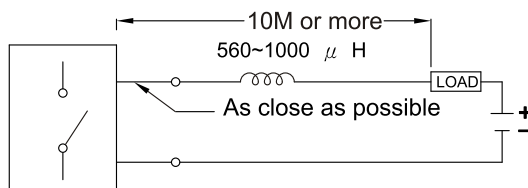
- For solid-state type sensors, polarity must also be observed. Connect brown wire to the positive (+) and the blue to the negative (−) of DC power source. The black wire must connect to the load only. If the black wire is accidentally connected to the power source, permanent damage to the sensor may occur.



- 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.



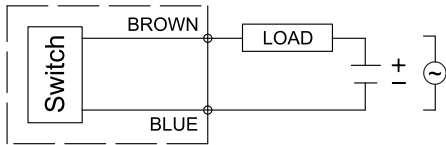
- Keep sensors away from stray magnetic field to prevent malfunctions.
- When using reed switch with capacitive load or if the lead wire length exceed 10-meter, an inductor must be installed in series with the sensor to prevent damage (Sticking effect).



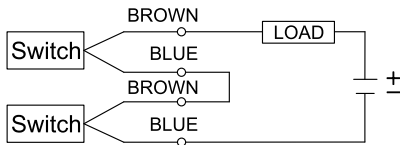
## Connection method :

### 2 wire S.W. connection

#### ► General connection

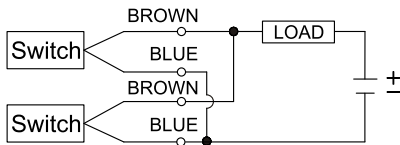


#### ► Series connection (AND)



❶ When connecting 2-wire switches in series (AND), don't exceed more than two switches due to the internal voltage drop (Typical  $V_{drop}=2.5\sim 4V$  per switch). Excessive Voltage drop will cause non-operation of the load.

#### ► Parallel connection (OR)

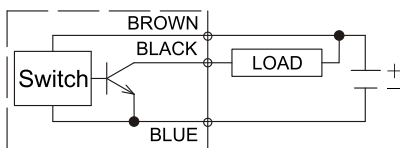


❶ When connecting non-contact 2-wire switches in parallel (OR), leakage current will increase and cause improper load operation.

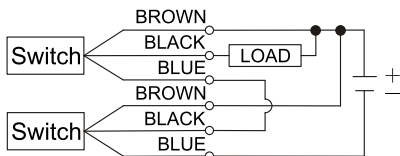
❷ When connecting 2-wire reed switches in parallel(OR), possible concurrent operation will cause dim LED illumination due to lower current distribution.

### 3 wire NPN connection

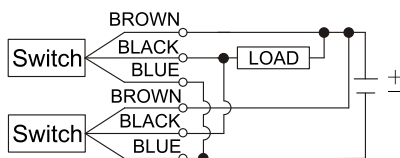
#### ► General connection



#### ► Series connection (AND)



#### ► Parallel connection (OR)



### 3 wire PNP connection

