

# Switch Diagrams

## Switch Reference Guide - SPST, SPDT, DPST, DPDT

SP and DP refer to single pole and double pole, ST and DT refer to single throw and Double throw.

**SP:** Single Pole, one circuit controlled by the switch.

**DP:** Double Pole two independent circuits controlled by the switch which are mechanically linked.

Note: "Pole" should not be confused with "Terminal". The DPST switch, for example has four terminals however is a Double Pole (DP) and not a four pole (4P) switch.

**ST:** Single Throw, closes a circuit at only one position. The center position is off.

**DT:** Double Throw, closes a circuit in the up or down position (On-On). A Double Throw switch can also have a center position such as On-Off-On.

The following switch diagrams illustrate the most common types of toggle and rocker switch.

### SPST On-Off



### SPDT On-On

Only one of the loads can be energized at a time.



### SPDT On-Off-On

Only one of the loads can be energized at a time.



### DPST On-Off

Both load terminals can be energized at the same time. They are independent of each other and could be of different voltages.



### DPDT On-On

Functions like two separate SPDT switches operated by the same actuator. Only two loads can be On at a time.



### DPDT On-Off-On

Functions like two separate SPDT switches operated by the same actuator. Only two loads can be On at a time.



## Single-Pole (SP) & Double-Pole (DP) Switch Wiring Diagrams

Diagrams represent both momentary contact or maintained contact switches.

### Switches without Pilot Lights

SPST Off-On (2 terminals)

Diagram A

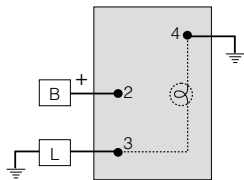
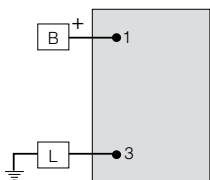
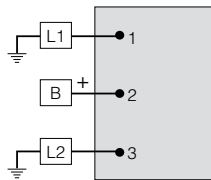


Diagram A1



SPDT On-Off-On (3 terminals)

Diagram B



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DPST Off-On (4 terminals)

Diagram C

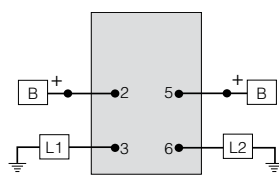
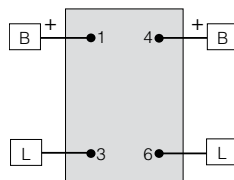
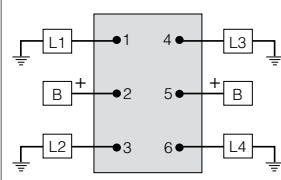


Diagram C1



DPDT On-On (6 terminals)

Diagram D

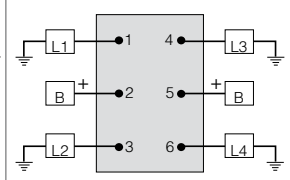


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DPDT On-Off-On (6 terminals)

Diagram E



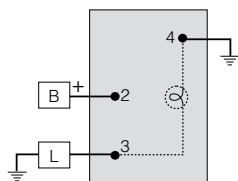
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### Switches with One Pilot Light

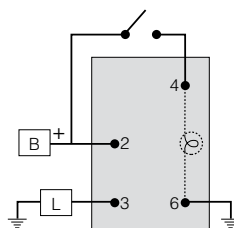
SPST Off-On – Dependent Illumination (Three terminals)

Diagram F



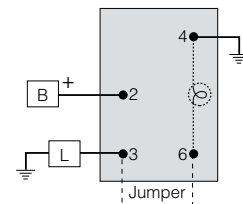
SPST Off-On – Independent Illumination (Four terminals)

Diagram G1



SPST Off-On – Independent converted to Dependent (4 terminals)  
To convert, connect jumper wire from terminal 3 to terminal 6 and connect terminal 4 to ground

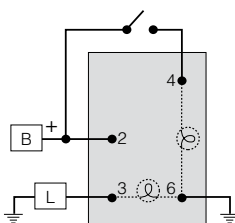
Diagram G2



### Switches with Two Pilot Lights

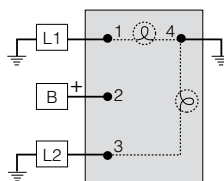
SPST Off-On Dependent & Independent (Four terminals)

Diagram H



SPDT On-Off-On or On-On dependent (Four terminals)

Diagram J



SPDT On-Off-On or On-On Independent (Four terminals)

Diagram K

