

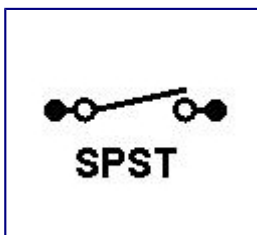
Switch Based on Contact (SPST, SPDT, DPST, DPDT)

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Understanding switch types is very important when developing an electronic circuit. Below is just several example of switches (not a complete list) classified by pole(s) and throw(s).

SPST



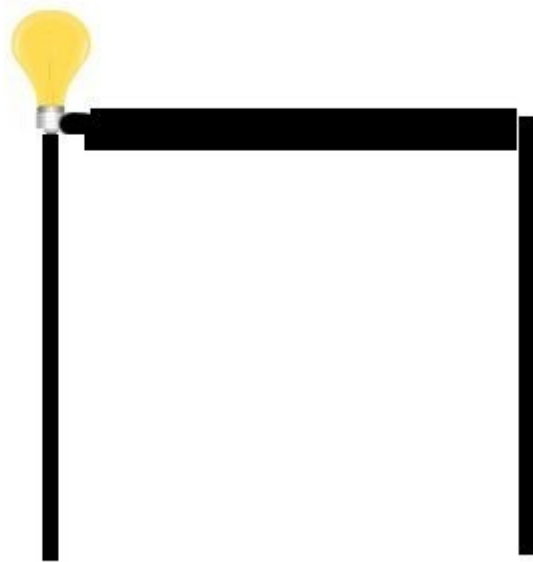
SPST stands for single pole single throw. Pole means how many circuit(s), a switch can control. Throw means how many conducting position for a switch. This one is the basic form of a switch, where this switch has only 2 terminals. When the throw is closed means current can flow, meanwhile when the throw is open, current is break.

In order to understand more, let's take a look here (sorry for bad drawing skills)



For example here we have a gate when the gate is open, means the electrical flow is break.

SPST CLOSED - LIGHT ON

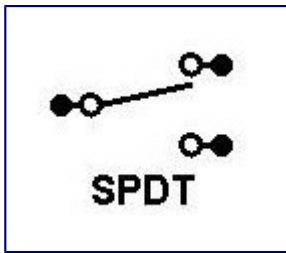


When the gate is closed means current can flow and the lamp is on. Since this only has 1 circuit (the lamp in this case), and only 1 throw (only 1 conducting position that will turn the light on, so this switch is called SPST).

Real life example:

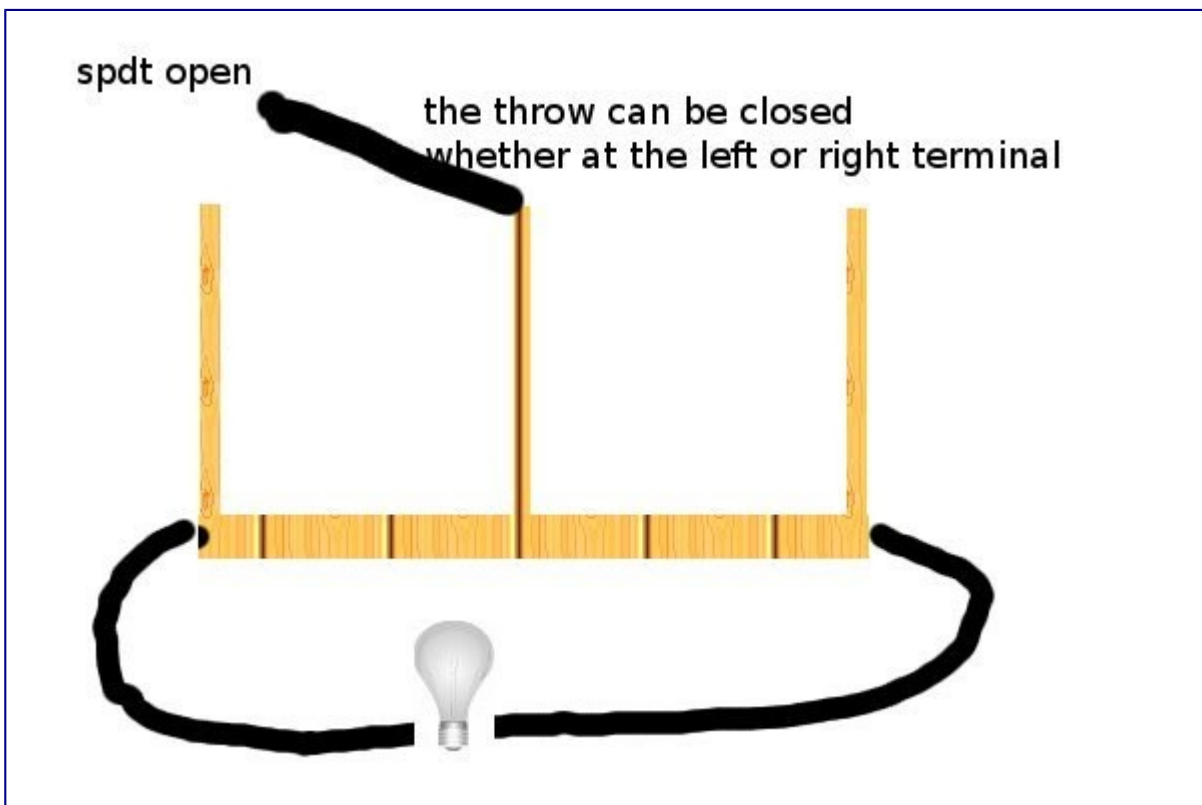


SPDT



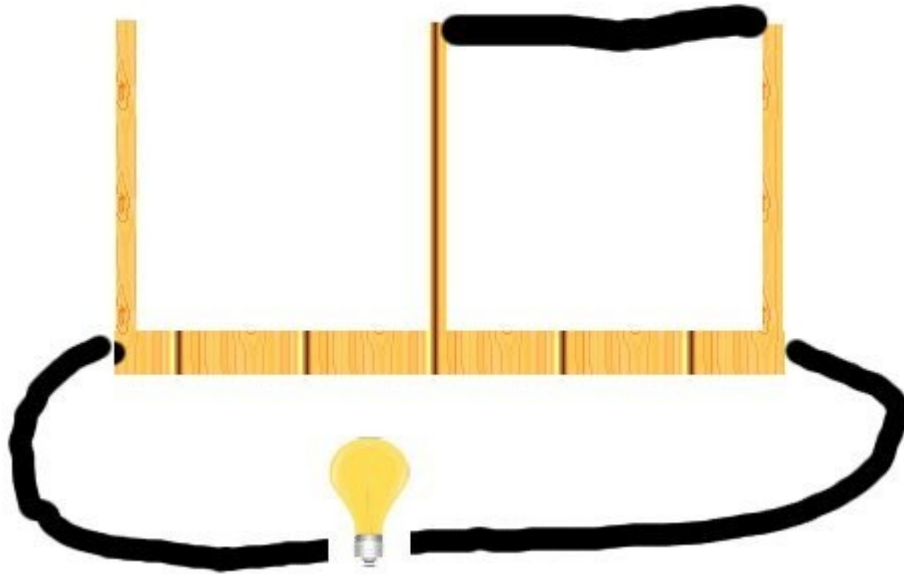
SPDT stands for single pole double throw. As we can see from the symbol, a single pole double throw switch has 3 terminals.

In order to understand more, let's take look at below example:

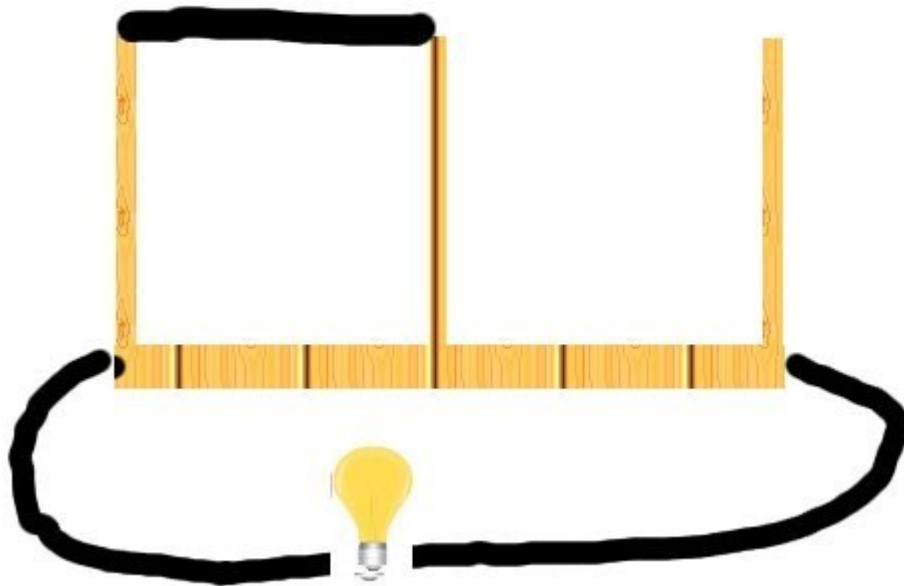


This one is similar to knife switch model, where the condition is open (current can not flow). The throw can be connected whether on right or left terminal.

spdt closed - current can flow



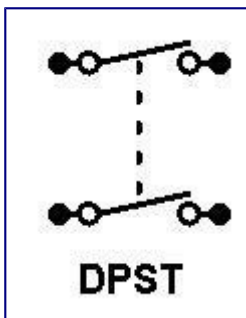
spdt closed - current can flow



Real life example

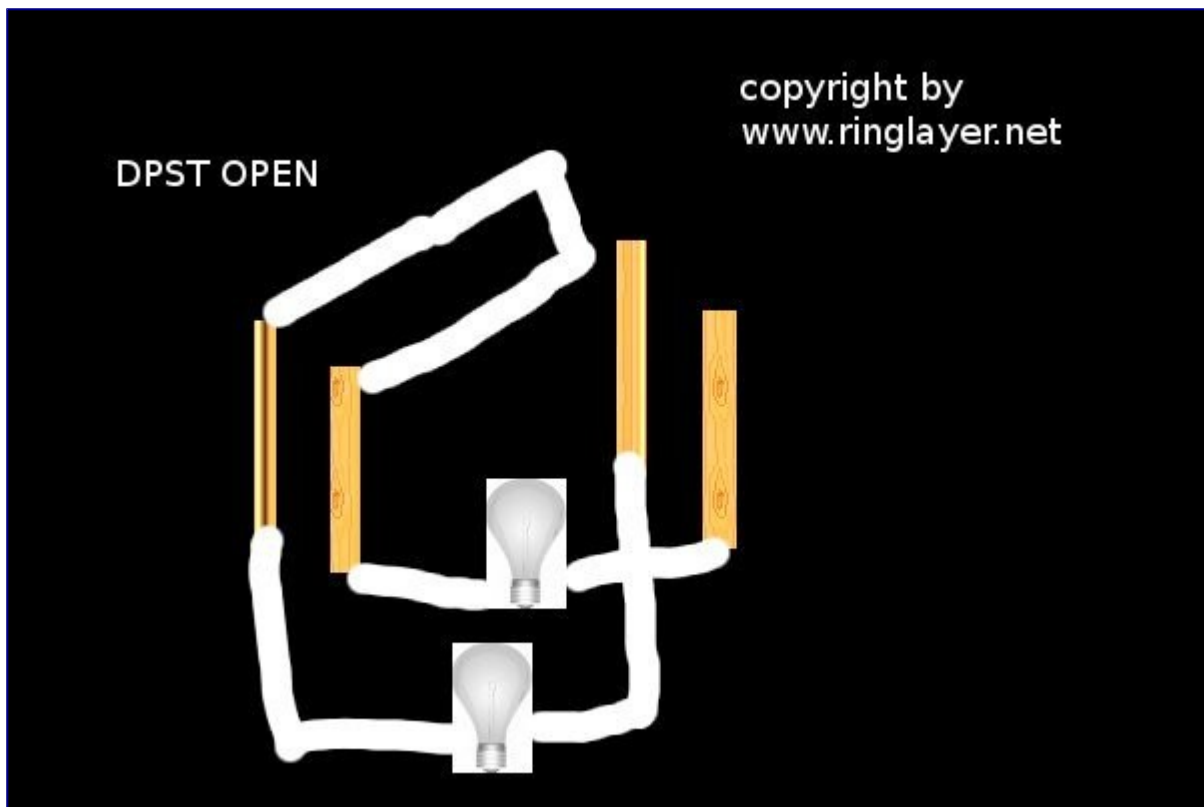


DPST



DPST stands for double pole single throw.

In order to understand about double pole single throw, take a look on below example.

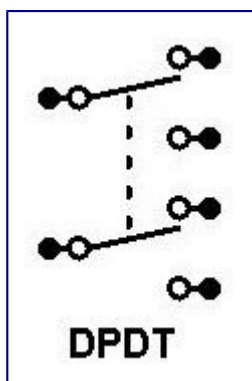


in dpst , the throw only have one possible conducting, meanwhile it has 2 separate poles.



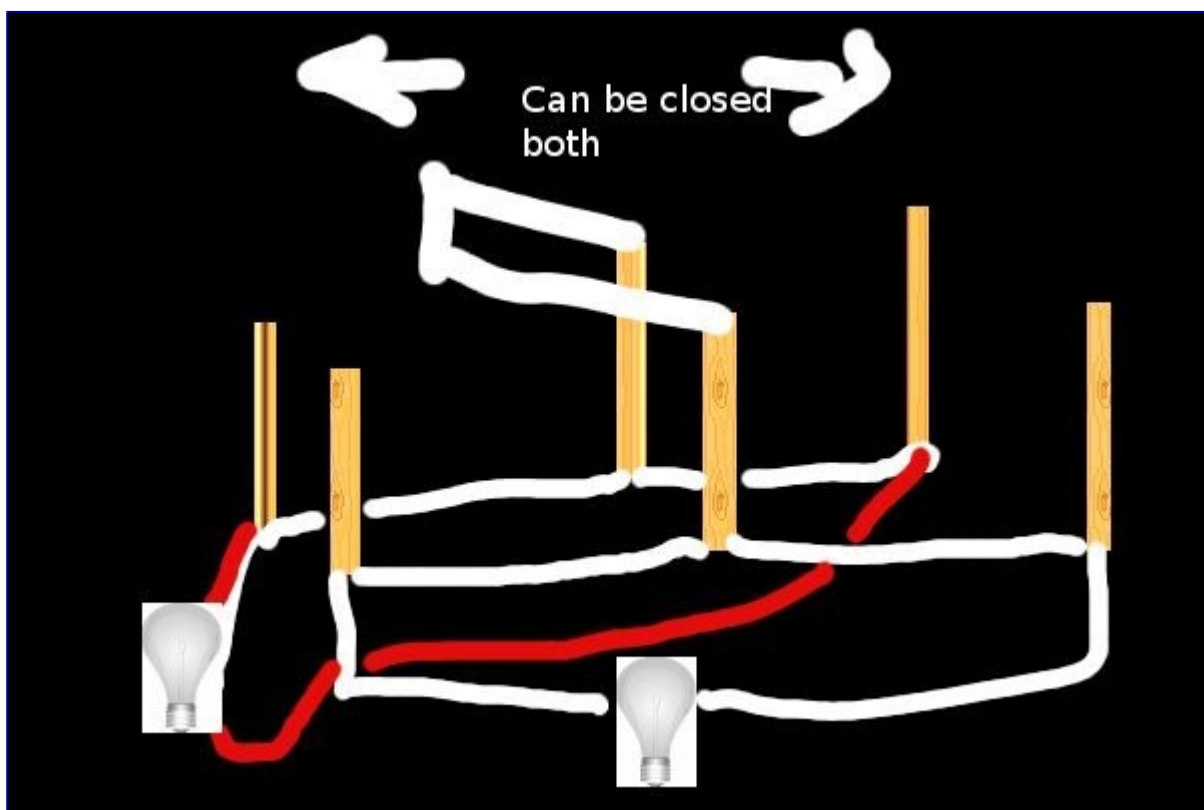
When the condition is closed the current can flow to light both 2 circuits. The while lines are any conducting materials.

DPDT



DPDT stands for double pole double throw. This one has 2 poles and 2 throws. This one has 6 terminal(s).

Check out below example:



Real life example:



Reference:

<http://en.wikipedia.org/wiki/Switch>

http://www.colehersee.com/home/spst_spdt_dpst_dpdt

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