

# Product Notes for M2100 LED Circuits



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#### What is an M2100 switch and how to add wires to it?

The M2100 series is unique because it has the both isolated and synchronous LED control options. This is to give maximum flexibility for design.

#### Isolated LED

The isolated LED is independent both mechanically and electrically of the switch circuit. Move the toggle/rocker and the LED does not change.



#### • Synchronous LED

The synchronous LED is electrically isolated from the switch but is mechanically dependent to the position of the toggle/rocker. This is represented by the horizontal dotted line in the schematic.



The M2100 series also has a bicolor LED option available for both the isolated and synchronous circuits. The bicolor LED is bi-terminal, meaning that the direction of the current determines the color of the LED.



For the isolated bicolor LED, the externally supply current must be reversed. There are many circuits that can do this; for instance, a microprocessor can do this with two general purpose input/output pins (GPIO). Amber is also possible by alternating the current fast enough that the eye sees the LED as a single color of amber.



For the synchronous circuit the current is automatically reversed as the switch moves the contacts between the red circuit and the green circuit.



The wires in blue are external to the switch and must be supplied by the customer.

Below are three common wiring arrangements for the M2100 circuits.







The double pole versions of the M2100 are the same except for the additional switching pole.

The M2100 series of switches comes as both toggle and rocker variants.



### Conclusion

The M2100 series has several options for LED wiring. This diversity allows for flexibility of design and for active information of the switch state to be presented to the user through the use of the LEDs. The synchronization of the LED to the switch movements reduces external design complexity. In conclusion the M2100 series is a great way to energize any design.