

## **EPL1010 and EPL1012 Technical Description**

The EPL1010 and EPL1012 dimmer circuits consist of a square-wave generator with a variable duty-cycle coupled to a MOSFET switch. By turning the power on and off at a rapid rate, 300 - 600 Hz, it adjusts the amount of power delivered to the lamp or load. In this way, the circuit is full on or full off at any given time and delivers power for the percent of time the user sets the control to. This is a very efficient way to operate since there is little heat generated. Under normal operation, the dimmer runs cool to the touch and will only get slightly warm when used at its maximum rated output.

The EPL1010 is a two-wire device that gets its power by drawing a small amount of current through its load, the incandescent lamp it is connected to. Its output is adjustable such that it provides power from 2 to 96% 'on time.'

The EPL1012 is a three-wire device that is connected directly to the power leads and has a separate output for the load. As such, it does not get its power from the load and is adjustable from 2 to 100% 'on time.' This device will operate both incandescent lamps and LEDs and is designed for LED bulbs that are made to replace incandescent bulbs that have built-in current limiting.

Both dimmer circuits are identical in that they use the same circuit. The main difference is that the three-wire EPL1012 device has a separate output that does not go through the internal mechanical on-off switch. For this reason, it will drive considerably higher wattage loads than the two-wire EPL1010 device.

The EPL1012 device is about 20% smaller than the EPL1010 and is designed for fixtures where the mounting space is too small for the EPL1010 or it is for use with LEDs.