0-10V DIMMING

0-10V dimming has been used as an early fluorescent dimming system and still used today. 0-10V dimming has been adapted to become a reliable LED dimming control protocol and more commonly used within our industry.

0-10 V is one of the earliest and simplest electronic lighting control systems which uses the control signal is a DC voltage that varies between zero and ten volts. The controlled lighting should scale its output so that at 10 V, the controlled light should be at 100% of its potential output, and at 0 V it should at the lowest possible dimming level.

DMX DIMMING

A non-traditional though highly effective method for dimming and color tuning, DMX (Digital Multiplex) is a highly configurable protocol that offers control by individual sections or entire global systems. Consisting of 512 channels of data per stream, each stream in a system is referred to as its own Universe. The fixtures in each Universe receive channel data sent from a controller at a designated refresh rate.

PHASE DIMMING

Phase-cut dimmers work by taking the line input power (typically Mains Voltage) and modulating the signal to reduce the power to the load. By chopping the signal, the load experiences a lower voltage, resulting in a lower light output. The two most common phase-cut controls are forward phase and reverse phase controls.

FORWARD PHASE DIMMING (TRIAC)

Forward phase-cut dimming (commonly referred to as incandescent or TRIAC dimming) is the most common dimming method. It is designed for resistive or magnetic low-voltage (MLV) loads, including incandescent and halogen, but certain models allow for more usage with LED loads. It usually uses a TRIAC dimmer that phase cuts the leading edge of the AC sine wave. Forward phase dimmers are often more affordable and simpler in terms of design than other types of dimmers.

REVERSE PHASE DIMMING

Reverse phase-cut dimming is very similar to Forward phase in which it phase cuts the AC sine wave but on the trailing edge of the it, allows it to dim according to the cut. ELV dimmers are generally very compatible with LED loads, offering smoother dimming to low levels. This dimming almost always requires the use of a neutral wire.