

1-10V DIM ADJUSTING

Characteristics of 1-10V Dim Adjusting

- In 1-10V dim adjusting, the driver generates an analogue signal of 1V (minimum) to 10V maximum, which reaches the dimmer switch which modulates it.
- It is possible to do it with different types of dimmer switch (possibility of using PUSH).
- It is possible to connect different types of sensors.
- Dim adjustment is done in a smooth way reducing the chance of flickering occurring. This chance is always very slim when compared to other types of dim adjustment, such as phase cutting, for example.
- DOES NOT generate noise.

Conditions for Use

- Needs L and N power plus two additional cables with "+" and "-" polarity for the analogue signal.
- The dimmer switch must be compatible with LED without indicator lights. The characteristics of the dimmer switch must be taken into account in order to know the maximum number of devices to be connected.
- It is possible to reuse old technology 1-10V dimmers, as long as the manufacturer recommends it.
- Dim adjusts from 1 to 100%. If no dimmer switch with ON/OFF function is added it will NEVER turn off.
- It is NOT possible to dim adjust using a rotary dimmer switch from several points when a direct dimmer switch is in place. Several switches in parallel connected to a dim adjustment panel for 1-10V driver control via switch WOULD BE possible.
- Allows for appropriate use with a variety of twilight sensors, presence detectors, motion detectors, etc.

Recommendations for use

- New or existing installations, in which it is possible to install the control wiring.
- When smooth dim adjustment is needed, generally controlled with rotary dimmer switch, without the presence of flickering.
- When dim adjustment connected to twilight sensors or detectors of presence, movement, etc. is required (educational use, offices...)
- Professional installations.

Installation diagrams 1-10V (BOKE driver)

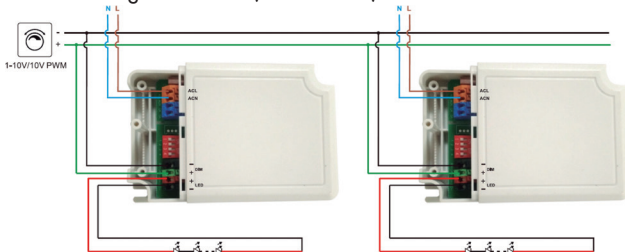


Image 9. Connection diagram 1-10V

Frequently asked questions (FAQ)

To which driver terminals does the 1-10V controller connect?

(See 1-10V installation diagram)

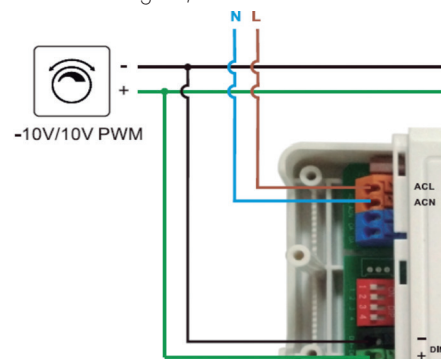


Image 10. Example connection with driver 3042-47MmA

The drivers supplied with 1-10V controllable luminaires have two terminals labelled 1-10V: "+" and "-". These terminals are the ones that must be connected with the control cables coming from the 1-10V controller. Through these cables the controller increases or decreases the light intensity from 1% - 100%.

Depending on the type of controller chosen, to handle the 1-10V control, it will be possible to perform power on and off as well as dimming.

It should be noted that each luminaire will have four cables connected to it, one phase (L), one neutral (N), one "+" and one "-" (for 1-10V control).

Can I control using a 1-10V dimmer from several points?

NO.

This type of control can only be carried out from one point. The only thing that is possible, depending on the type of dimmer, is commuting the ON/OFF with a conventional switch, so that from one point it can be turned on, turned off and dimmed but from the other points, you can only turn it on and off at the last setting.

Is it possible to adjust 1-10V dimmable luminaires with a switch via a dim adjustment panel?

It depends.

As long as the panel is compatible with 1-10V dim adjustment for LED loads, it is possible to adjust by means of a switch connected to these panels that allow you to control the 1-10V drivers by means of two control cables plus two power cables and, in addition, to power on and off by means of internal or external relay.

The conditions indicated by the manufacturer of the dim adjustment panels must be respected, ensuring that the proper dim adjustment mechanism is put in place and that no panels of one type are mixed with luminaires of another type.

Can I control 1-10V dimmable luminaires by means of KNX?

It depends.

It is possible as long as a KNX-1_10V gateway for 1-10V dimmable LED loads is added in the installation.