

Technical Resource:

switchDIM INTELLIGENT LIGHTING CONFIGURATION GUIDE

Looking for information on how to wire up SwitchDIM, or for a SwitchDIM configuration guide?

You're in the right place!

WHAT IS SWITCHDIM LIGHTING?

Sometimes known as Touch Dim, **SwitchDIM** is a brand of Tridonic. Cost-effective, easy to use, and effective in a wide variety of situations, it offers simple yet powerful lighting control options for small to medium-sized projects.

This is the simplest option for digital dimming and is operated via a 'push to make' or retractive switch, which is then wired to each luminaire in the circuit via a 4-core cable consisting of switched live, neutral, earth and permanent live. The switch controls the switching on and off of the luminaire, and also the dimming. When the switch is pressed and held it will dim down. Another press and hold will dim back up. A momentary push will switch it off and also bring it back on.

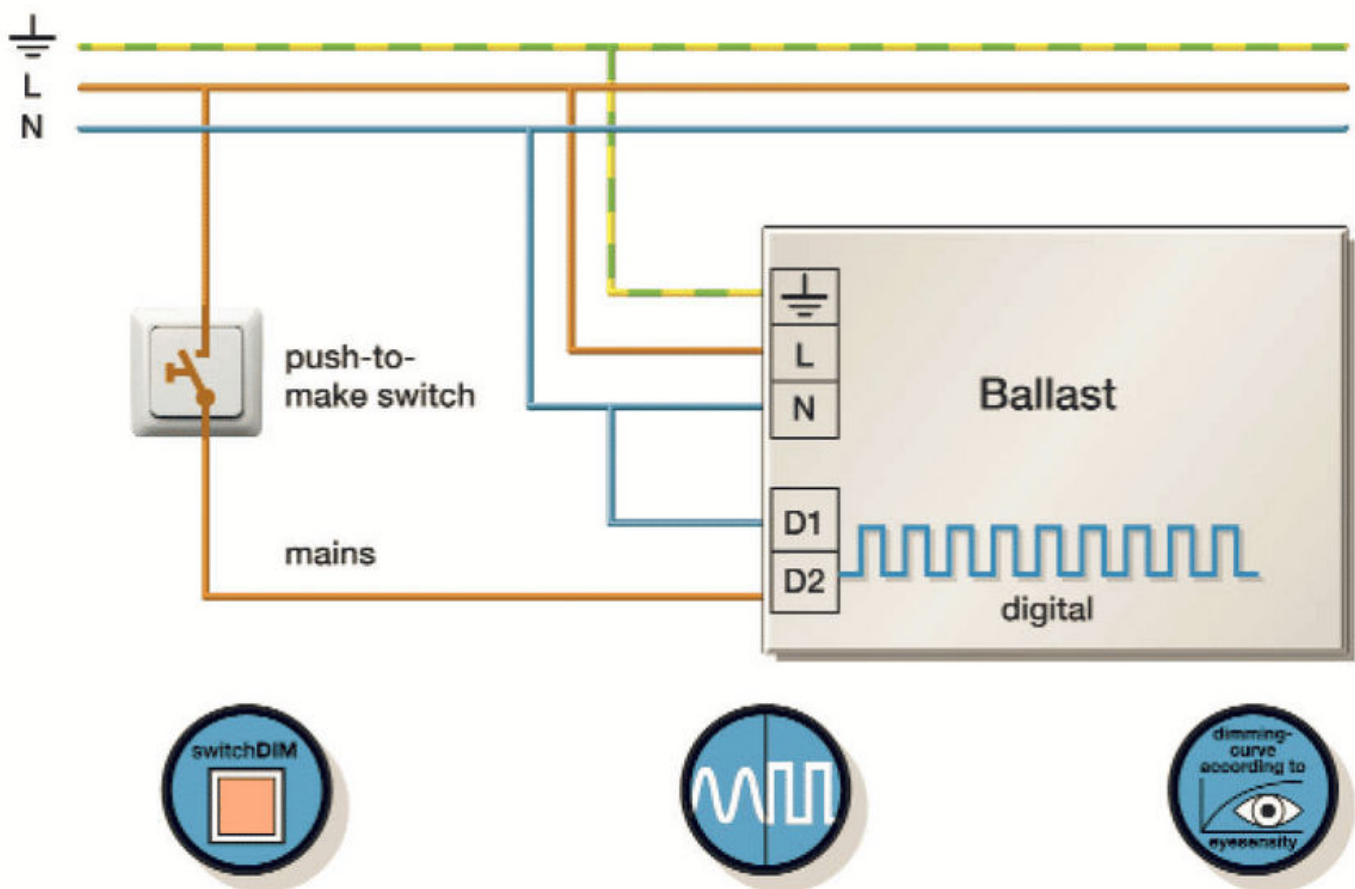
SwitchDIM utilises DSI technology, cleverly using mains frequency as a signal transmitter to the luminaire. This allows fingertip dimming control from multiple control points, selectable fade rates depending on the ballast, power-free switching options and protection against control-wire interferences. There are no issues with interference from the switching and the dimming of the luminaire which can affect the switch on. DSI is wired using a dimming pair, run around to each luminaire in the circuit.

WHAT ARE THE TYPICAL APPLICATIONS FOR SWITCHDIM LIGHTING?

Cases where Mount Lighting recommends SwitchDIM controls

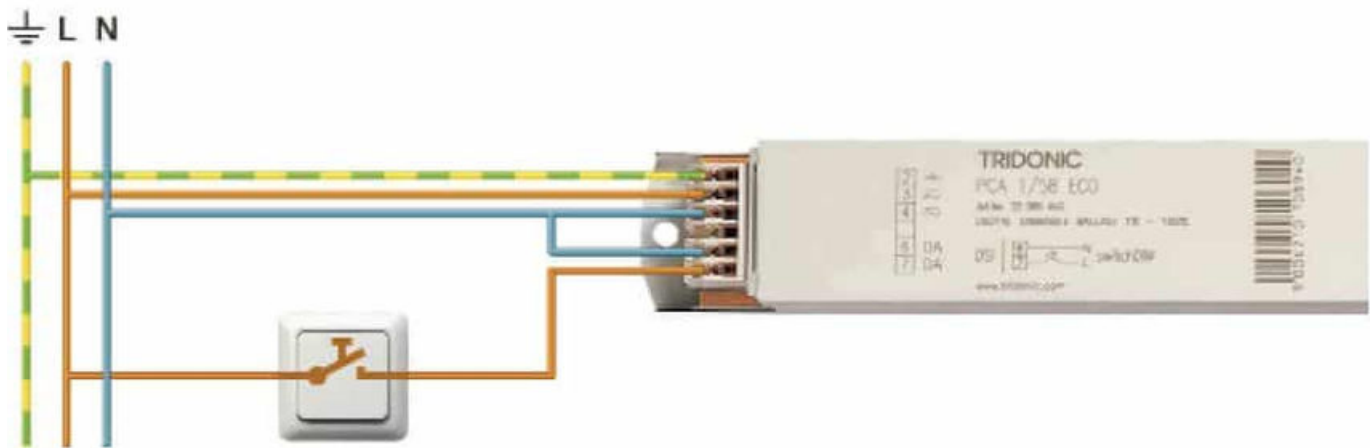
- **Small to medium size projects**
- **Offices**
- **Single luminaire applications (e.g. Downlights)**
- **Warehousing and storage areas**
- **Staircases, corridors, walkways**

SWITCHDIM CONFIGURATION GUIDE



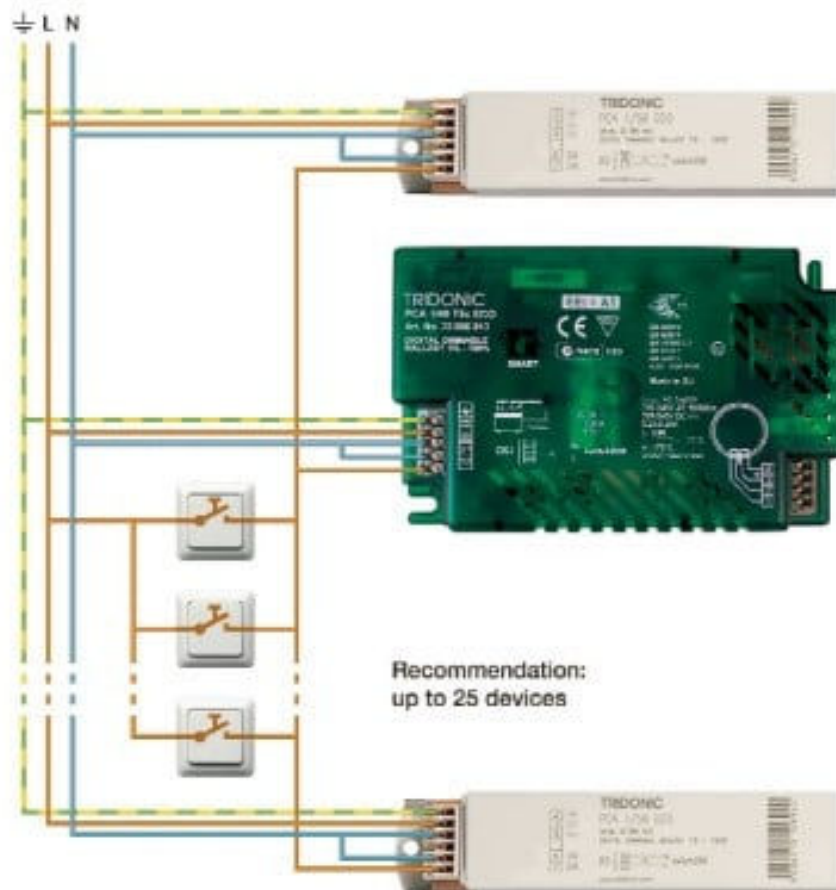
The easiest method of switching and dimming Tridonic Atco control gear is by using the mains as a control signal. Internal conversion of the mains voltage into digital signals with a logarithmic dimming curve enables eye-optimised control. Thus, SwitchDIM perfectly meets the demands of the most sophisticated lamp management solutions.

Multi-point control with push-to-make switches



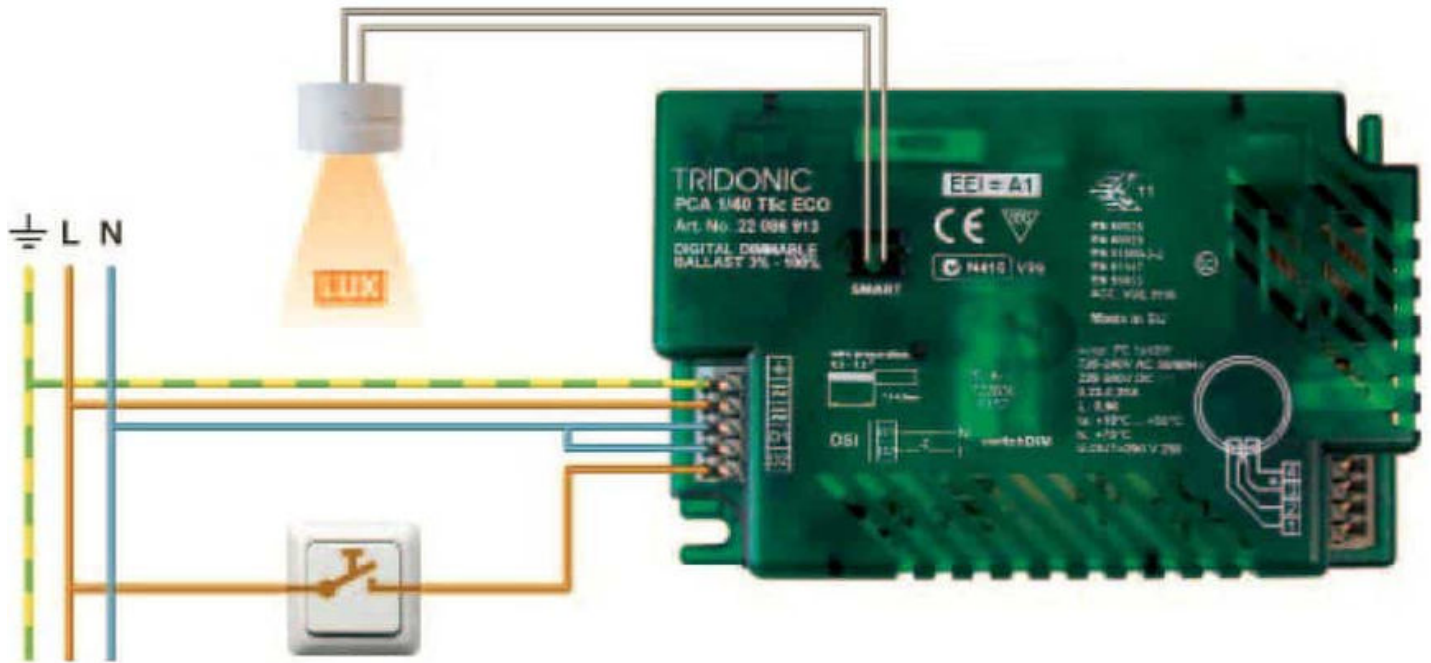
Picture 1: switchDIM with one operation point

A range of commands can be programmed by simply adjusting the timing of the push interval. For example, a short push-interval will switch on/off all connected PCA, TE one4all or LED one4all depending on the actual operation state. A longer push interval enables the dimming feature which follows a predefined alternating dimming cycle.



Picture 2: switchDIM with several operation points

When an additional ambient light sensor SMART LS II is connected to the PCA ballast the light level or operating range of the ballast can be adjusted to provide ambient light control. Therefore, SwitchDIM provides the perfect solution for intelligent luminaires (picture 3).



Picture 3: switchDIM with ambient light control; as on picture 2 several “intelligent” luminaires can be networked with different operation points

A SwitchDIM application can be synchronised with a longer push interval greater than 10s, e.g. after commissioning. All luminaires then synchronise and dim to 50% and at the same time harmonise the dimming direction.

Simple wiring that requires a bridge from the Neutral terminal to one of the interface outputs (D1/D2) The switched line is then connected to the second interface terminal. To upgrade the system to DSI or DALI control involves no major wiring other than to remove the Neutral link.

SWITCHDIM TECHNICAL DATA

- Works with any number of commercially available push-to-make switches.
- Control-signal corresponding to line-voltage.
- Dimming rate 3s (from 1% to 100%).
- Theoretically unlimited control-wire length.
- Theoretically, an unlimited number of ballasts may be operated on a single SwitchDIM circuit. (However, we recommend a circuit limit of 25 ballasts per SwitchDIM installation).
- Dimming across multiple phases is possible.

To reduce voltage stress across input terminals, neutral from mains and to the SwitchDIM input should run adjacent to each other (picture 1) – in this kind of application. It is especially important to ensure the right polarity.

SWITCHDIM TECHNICAL DATA

- K4885 WHI – single retractive grid switch grid switching option
- K3631 – single white plate
- K3701 – single yoke
- Alternative – K4878P WHI – single retractive switch marked 'press'

SwitchDIM Lighting controls are popularly used with many of our products such as:

- [Linear LED Lighting Range](#)
- [Our Suspended Linear LED Lighting](#)
- [Our LED Recessed Lighting Range](#)