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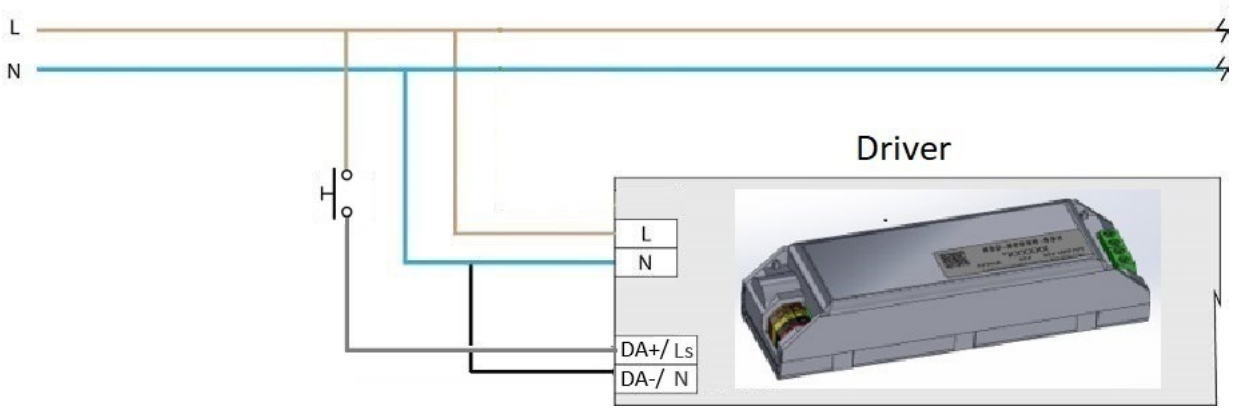
Pulse dimming installation and operation

Introduction

With Pulse dimming it is possible to create lighting systems that can be easily switched and smoothly dimmed from multiple control points at low cost. Pulse dimming uses standard push to make (momentary) mains voltage switches for lighting control. The different switching and dimming functions are initiated by pressing and holding the momentary switch for varying lengths of time. A short press on the switch turns the connected LED drivers on or off while holding down the switch will fade the connected LED drivers up or down.

Installation requirements for Pulse dimming control

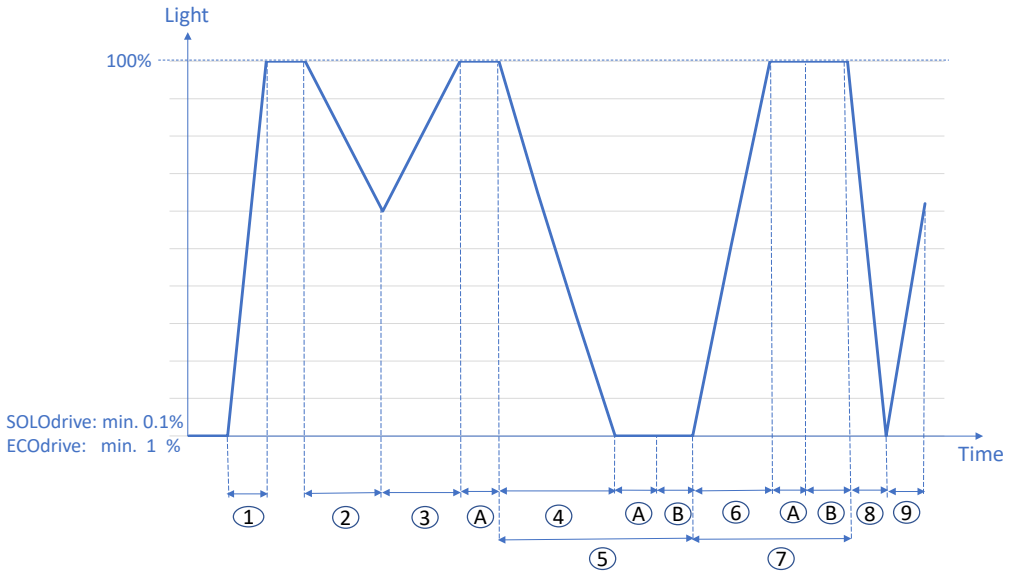
1. Pulse dimming operates by connecting the mains voltage to the DALI input terminals. Connecting live via a push to make switch (momentary switch) to the control terminal DA+ and the neutral to the control terminal DA-, offers the on/off function and smooth dimming control (dim-to-dark with SOLOdrive) without any digital device.
   The end-user functionality, synchronization and reset of all drivers in an installation, is explained in the next chapter of this guide.



2. All the components connected in this line are mains rated and protected according to all applicable safety requirements.
3. The DALI interface is a non-polarity control interface as is Pulse dimming. The switched Line (Ls) and Neutral (N) can be connected to either DALI terminal.
4. DALI support is disabled while Pulse dimming is operational and can be re-enabled with a mains reset.
5. If the lighting system is upgraded from Pulse dimming operation to DALI operation, commissioning of the DALI system is required to ensure all DALI parameters are properly setup.
6. In an installation using Pulse dimming, LEDcode functionality cannot be used with a Bluetooth radio, sensor, or other LEDcode devices.
7. Emergency Lighting is not supported during Pulse dimming operation.
8. The maximum number of drivers per switch is 25.
9. All drivers and other loads are connected to the same mains phase.
10. The maximum wire length from the switch to the driver is 25 meters.

AcuityBrands.

End-user Functionality of Pulse dimming control



All timing is based on mains frequency of 50Hz and subject to at least 50ms or 5% tolerance.

	Action	Duration	Function
1	Button push-on	60 to 640ms	Switch-on time
2	Partial fade-out Button push-and-hold	0.64 to < 6.4s	Time during which the luminous intensity faded from 100% to certain luminous intensity higher than minimum level.
3	Partial fade-on Button push-and-hold	0.64 to < 6.4s	Push-and-hold again, after partial fade-out to maximum level (when light level < 50%), or to minimum level (when light level > 50%).
4	Maximum fade-out Button push-and-hold	0.64 to 6.4s	Time during which the luminous intensity is faded from maximum level to minimum.
5	Maximum fade-out and remaining at minimum level	0.64 to > 6.4s	Push-and-hold > 6.4s during fade-out remains at minimum level until button is released.
6	Maximum fade-on Button push-and-hold	0.64 to 6.4s	Push-and-hold again, after button-release starts fade-on to maximum level.
7	Maximum fade-on and remaining at maximum level	0.64 to > 6.4s	Push-and-hold again, after button-release, starts fade-on to maximum level and remains at maximum level until button is released.
8	Button push-off	60 to 640ms	Switch-off time.
9	Button push-on	60 to 640ms	Switch-on time; luminous intensity same as before switching off

A	Small delays at maximum and minimum levels	300ms	Small delays allow user to release the button when targeting maximum or minimum intensity.
B	Synchronization with long button push-end-hold at minimum and maximum levels	> 10s	With a push-and-hold longer than 10 seconds, all LED drivers connected to the same push button switch will synchronize at a uniform (minimum/maximum) light level, when having the same direction of fading. This process can be applied at any time during normal operation if any individual driver is unsynchronized.
C	Reset with long button push-end-hold at minimum and maximum levels	> 25s	With a push-and-hold longer than 25 seconds, all LED drivers connected to the same push button switch will reset to factory settings. This may be required when the direction of fading is not the same after synchronization.

Power-up conditions:

- During power-up with mains-switch connected to DALI-input, Pulse dimming commands are not accepted.
- During power-up with DALI control-lines connected to DALI-input, DALI-commands are accepted.
- After power cycle: power on level will be the last light level before power cycle.

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