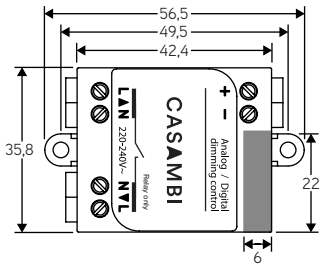
CBU-ASD-LR

Bluetooth Long-Range Control Unit for LED Drivers

Warning!

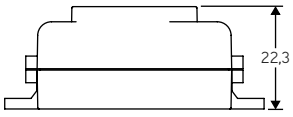
Hazardous voltages. Risk of electric shock or fire. Only qualified professionals should make the connections. Disconnect the mains power supply and verify its absence prior to installation.

DIMENSIONS (IN MM)



Dimensions are in mm.

Mounting hole diameter:
2 x 3,5 mm



Antenna location

*t_C point is on bottom side

DISPOSAL INSTRUCTIONS

In line with EU Directive 2012/19/EU for waste electrical and electronic equipment (WEEE), this electrical product must not be disposed of as unsorted municipal waste. Please dispose of this product by returning it to the point of sale or to your local municipal collection point for recycling.

PRODUCT DESCRIPTION

CBU-ASD-LR is a wireless, long-range control unit for any type of driver with 0-10V, 1-10V or DALI dimming interface. The CBU-ASD-LR is available with either analog 0-10V (and 1-10V) or digital standalone DALI control interface.

With standalone DALI output, CBU-ASD-LR acts both as a controller and power supply, making it possible to connect directly to an LED driver with DALI interface without needing an external DALI power supply. This so-called standalone DALI makes it possible to implement multi-channel lighting systems with adjustable color (RGB and RGBW) or color temperature (CCT), while keeping the wiring and number of components to a minimum.

The CBU-ASD-LR does not comply with IEC 62386 and therefore is not designed to be connected to an existing DALI network. The module can be used only in a closed system, i.e. as a part of a lighting system which is not connected to an external DALI network.

The CBU-ASD-LR is controlled wirelessly with Casambi smartphone and tablet applications using Bluetooth 5.0 protocol. The Casambi App can be downloaded free of charge from Apple App Store and Google Play Store.

Devices automatically form a secure wireless mesh network so that a large number of luminaires can be controlled from any point. No external gateway module is needed. CBU-ASD-LR can be also controlled using standard on/off wall switches.

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TECHNICAL DATA

Input

- Voltage range: 220-240 VAC
- Frequency: 50Hz
- Max. mains current: 0,6 A

Mains Output

- Output relay: SSR on phase line
- Voltage range: 220-240 VAC
- Frequency: 50 Hz

***Risk of fire. Mains output is only allowed to connect to external relay. It must not be connected to LED driver mains input.*

0-10V Output

- Voltage range: 0-10 VDC
- Maximum number of drivers connected: 1 pc

DALI Output

- Voltage range: 9-12 VDC

Radio transceiver

- Operating frequencies: 2402...2480 Mhz
- Maximum output power: +8 dBm

Operating conditions

- Ambient temperature, t_a: -20...+50°C (Iout 0 A)

***t_a max 50°C. Derate output current linearly from +40°C...+ 50°C...*

- Max. case temperature, t_c: +75 °C
- Storage temperature: -25...+75 °C
- Max. relative humidity: 0...80%, non-cond.

Connectors

- Wire range, solid & stranded: 0,75-1,5 mm2
  14-22 AWG
- Wire strip length: 6-7 mm
- Tightening torque: 0,4 Nm

Mechanical data

- Dimensions: 56,5 x 35,8 x 22,3 mm
- Weight: 48 g
- Degree of protection: IP20 (indoor use only)
- Protection class: Class II

INSTALLATION

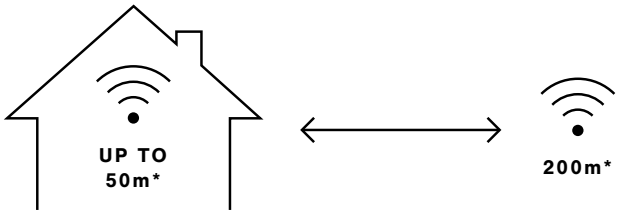
Make sure that the mains voltage is switched off when making any connections. Use 0,75-1,5 mm^2 solid or stranded conductor electrical wires. Strip the wire 6-7 mm from the end.

Insert the wires into the corresponding holes and tighten the connector screw. Make sure to connect the input and outputs correctly. The mains input connector is marked with letters L and N with an arrow pointing inwards, while the mains output connector is marked with letters L and N with an arrow pointing outwards. The low voltage output is marked with + and - symbols.

If you install a CBU-ASD-LR into a heat-sensitive environment (i.e. inside a luminaire or in a ceiling outlet box above a luminaire), make sure that the ambient temperature does not exceed the specified maximum value.

RANGE

The communication range in radio technology may ultimately vary depending on the design of the product in which the antenna is housed and on the environment in which it operates. In practice, this means a well-designed product from a radio point of view, with a good line of sight connection between nodes, can achieve radio coverage up to 50 meters indoors, and, in theory, up to 200 meters in the open air. Casambi uses a mesh network technology, whereby each Casambi unit, or Casambi Ready product, also acts as a repeater. Hence, longer ranges can be achieved by using multiple Casambi products within the network.



*The wireless range of a Casambi unit depends on several factors; how it has been integrated into a luminaire, where it has been installed - taking into consideration surrounding obstacles such as walls and other building materials that may block signals.

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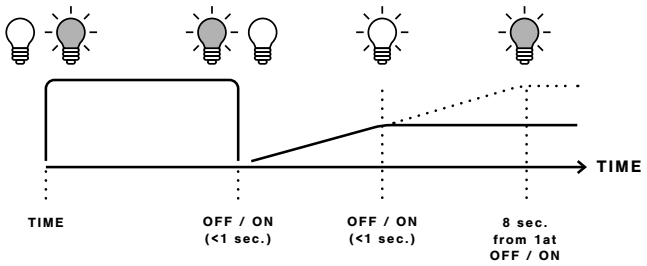
DIMMING WITHOUT APP



1. Turn lights on from a wall switch.
2. Quickly flick the wall switch off (max. 1sec.) and back on. The light level starts to increase gradually.
3. Flick the switch again at the desired dim level. The selected level is saved automatically.
4. If the second flick is not done within 8 seconds, the light intensity reaches its maximum level.
5. Flicking the switch can also be used to switch between predefined scenes.

CASAMBI MESH-NETWORK COMPATIBILITY

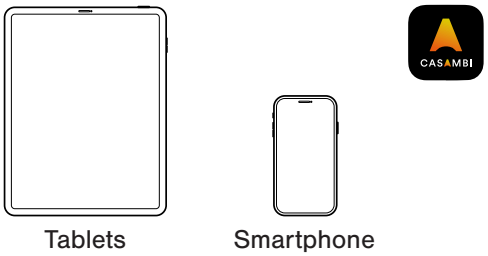
There are different radio modes that can be selected when creating a network in the Casambi App: 'Balanced', 'Better Performance' and now 'Long Range' options. The CBU-ASD-LR enables long-range capabilities only when the long-range radio mode has been selected and all the other devices within the network are long-range capable. It will revert to the shorter, standard range when deployed in networks set to 'Balanced' or 'Better Performance' modes.

COMPATIBLE DEVICES

Download on the App Store GET IT ON Google Play

Compatible devices: Android and iOS Operating Systems.

We support the latest OS versions for Android and iOS, and their last two major versions respectively.



Tablets Smartphone

PROTECTION CLASS

CBU-ASD-LR is a built-in class II device with SELV (Safety Extra-Low Voltage) output. This means that CBU-ASD-LR is a protection class II device which is designed to be used inside a light fixture. A symbol for this is two concentric circles (IEC 60417-6295):

However, if the module is connected to a device with only basic insulation, the output of CBU-ASD-LR is considered FELV, not SELV. For example, DALI and 0-10V are considered as basic insulated control interfaces, which means that even if the driver and CBU-ASD-LR are both specified as double insulated devices, the DALI or 0-10V control interface between them, by definition, is not. In such a case, the control wires between CBU-ASD-LR and the driver are considered having only a basic insulation.

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FIXTURE PROFILES

Profile#	Profile name / in app description	Description	Wiring
8631	DALI DT8 2xDim, TW	A tuneable white profile with two dimming sliders, one for each dimmable channel of the connected driver. A slider to control the color temperature of the connected driver. The DALI short address is automatically assigned. Relay output is always on.	**1**
8632	DALI DT8 3xDim,TW	Three dimming sliders, one for each dimmable channel of the connected driver. A slider to control the color temperature of the connected driver. The DALI short address is automatically assigned. Relay output is always on.	**1**
3213	DALI DT8 RGB	Three dimming sliders, one for each dimmable channel of the connected driver. Sliders to control the color of the RGBWAF -color type driver, and a color saturation slider. The DALI short address is automatically assigned. Relay output is always on.	**1**
4845	DALI DT8 RGB+TW 2500-7000K	Dimmable fixture with mutually exclusive RGB or color temperature sliders to control light color, color saturation and color temperature of the white color between 2500 and 7000 K. The DALI short address is automatically assigned. Relay output is always on.	**1**
3214	DALI DT8 RGBW	4-channel compatible RGBW DALI DT8 profile supporting "RGBWAF" -color type. Dimming, white, color and color saturation sliders to control light color / white. White color slider in percentage levels. The DALI short address is automatically assigned. Relay output is always on.	**1**
2808	DALI DT8 TW 2700-6500K	A tuneable white profile with a dimming slider and a slider to set the color temperature between 2700 and 6500 Kelvins. Supports TC color model. The DALI short address is automatically assigned. Relay output is always on.	**1**
4268	DALI DT8 TW 3000-5000K	A tuneable white profile with a dimming slider and a slider to set the color temperature between 3000 and 5000 Kelvins. Supports TC color model. The DALI short address is automatically assigned. Relay output is always on.	**1**
5245	DALI/BC DT8 TW	A tuneable white profile with a dimming slider and a slider to set the color temperature between 2700 and 6500 Kelvins. Supports XY color control. DALI in broadcast mode. Relay output is always on.	**1**
12892	DALI DT8 XY (EVO)	A color control profile with a dimming slider and a slider to set the color with X and Y sliders. Supports XY color control. DALI in broadcast mode. Relay output is OFF at 0% dimming level, ON at levels above 0%.	**1, 2**
12890	DALI DT8 XY,TW (EVO)	A tuneable white and color control profile with a dimming slider, a slider to set the color temperature between 2000 and 7000 Kelvins and X and Y sliders to control the color. Supports XY color control. DALI address is automatically assigned. Relay output is OFF at 0% dimming level, ON at levels above 0%.	**1, 2**

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Profile#	Profile name / in app description	Description	Wiring
3111	DALI Broadcast NO RELAY (log)	A basic DALI broadcasting dimmer for one one-channel DALI driver. Dimming curve is logarithmic. No addressing required. Relay is always on.	**1**
93	DALI 1xDIM (AO)	A basic DALI broadcasting dimmer for one one-channel DALI driver. Preconfiguration of the connected driver is needed. Driver having address #0 is controlled. Dimming curve is logarithmic. Relay is OFF at 0% and ON at levels above 0%	**1, 2**
90	DALI Broadcast (min)	A basic DALI broadcasting dimmer for one one-channel DALI driver. No preconfiguration of the driver is needed. DALI configuration mode is minimal, only light control commands are used. Dimming curve is logarithmic. Relay is OFF at 0% and ON at levels above 0%	**1, 2**
11773	DALI Broadcast (new) (lin)	A basic DALI broadcasting dimmer for one one-channel DALI driver. No preconfiguration of the driver is needed. Dimming curve is linear, relay is OFF at 0% and ON at levels above 0%	**1, 2**
3100	DALI Broadcast (new) (log)	A basic DALI broadcasting dimmer for one one-channel DALI driver. No preconfiguration of the driver is needed. Dimming curve is logarithmic, relay is OFF at 0% and ON at levels above 0%	**1, 2**
1000	CBU-ASD (0/1-10)	A basic 0-10 V or 1-10 V dimmer. Wiring diagram 2 depicts the relay operation for 0-10 V aplication.	**1, 2**
9335	DALI/ BC+Sensors	A dimmer for a DALI driver and a DALI sensor (lux and presence) combination. Driver is broadcast controlled. Relay is always on.	**3**
8642	CBU-ASD DALI Sensors (Daylight control, Presence)	A fixture for one DALI sensor providing presence and/or daylight sensing in the Pass-Through mode - delivering control commands observed on DALI bus. Sensor is using DALI levels to control the dimming output.	**4**
5002	CBU-ASD DALI Sensors (Lux, Presence)	A fixture for one DALI sensor providing presence and/or daylight sensing in the Pass-Through mode - delivering control commands observed on DALI bus. Sensor provides LUX values.	**4**
8800	DALI 2CH Dim Up/Down	A fixture for a two-channel up/down luminaire where the vertical ratio is selected with a slider. Both channels are dimmed with an another slider as sum of the channels. DALI addresses of the driver/drivers have to be preconfigured as A0=Up and A1=Down. DALI dimming curve is logarithmic. Relay is always on.	**5, 6**
8699	DALI 2CH TW (G0,G1)	A two channel warm/cool mixer for preconfigured two DALI groups, G0=Warm, G1=Cool. A slider to control light level and colour temperature between 2700 and 6500 K. Dimming curve is logarithmic. Relay always on.	**5, 6**

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FIXTURE PROFILES

Profile#	Profile name / in app description	Description	Wiring
141	DALI 2xDIM	A fixture with two dimming sliders to control either one two-channel driver or two one-channel drivers. Dimmer #1 controls A0, dimmer #2 controls A1. DALI configuration is done automatically if not preconfigured, DALI dimming curve is logarithmic. Relay is constantly on.	**5, 6**
8670	DALI 2xDIM (G0,G1)	A fixture with two dimming sliders to control either one two-channel driver or two one-channel drivers. Dimmer #1 controls G0, dimmer #2 controls G1. DALI groups have to be preprogrammed into driver/drivers. DALI dimming curve is logarithmic. Relay is constantly on.	**5, 6**
8799	DALI 2xDIM (preconfigured)	A fixture with two dimming sliders to control either one two-channel driver or two one-channel drivers. Dimmer #1 controls A0, dimmer #2 controls A1. DALI addresses have to be preconfigured. DALI dimming curve is logarithmic. Relay is constantly on.	**5, 6**
165	DALI Tuneable White	A two channel warm/cool mixer for two preconfigured DALI addresses between 2700 K and 6000 K. Address A0 is the warm channel, A1 is the cool channel. Driver has to be preconfigured. DALI dimming curve is logarithmic. Relay is always on.	**5, 6**
10001	DALI 2xDim, TW(NoMix) shared	A two channel warm/cool profile where preconfigured A0 is the channel to be dimmed, A1 is the color temperature channel between 2700 and 6000 K. DALI dimming curve is logarithmic. Relay is always on.	**5**
8624	DALI Tuneable White (G0,G1)	A two channel warm/cool profile where preconfigured group G0 is the warm channel, G1 is the cool channel. Color temperature between 2700 and 6000 K. DALI dimming curve is logarithmic. Relay is always on. DALI configuration is minimal.	**5, 6**
3548	DALI Tuneable White (auto)	A two-channel warm/cool profile where ASD configures A0 for the warm channel and A1 for the cool channel. Color temperature between 2700 and 6000 K. DALI dimming curve is logarithmic. Relay is always on.	**5, 6**
176	DALI 3xDIM	A three-channel profile with three separate slider per each channel. The driver is programmed with addresses A0, A1 and A2 to correspond with the dimmable channels. Dimming curve is logarithmic. Relay is always on.	**7, 8**
91	DALI RGB	A RGB profile with dimmer, color and color saturation sliders. Driver/drivers need to be preprogrammed with DALI channels: A0 to correspond RED color, A1 to Green and A2 to Blue. Dimming curve is logarithmic. Relay is off at 0% and on at levels above 0%.	**7, 8**
2872	DALI RGB (auto)	A RGB profile with dimmer, color and color saturation sliders. Driver/drivers automatically programmed with DALI channels: A0 to correspond RED color, A1 to Green and A2 to Blue. Dimming curve is logarithmic. Relay is always on.	**7, 8**

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Profile#	Profile name / in app description	Description	Wiring
9308	DALI 2xDim,TW	A tunable white profile with dimming and color temperature slider between 2700 and 6500 K. Driver/drivers are automatically programmed with a DALI address. Dimming curve is linear. Relay is always on.	**9, 10**
1272	DALI 4xDIM	A fixture containing four dimming sliders for four channels. Driver/drivers has/have to be preprogrammed with DALI channels: A0 to correspond with Dimmer1, A1 to Dimmer2, A2 to Dimmer3 and A3 Dimmer4. Dimming curve is logarithmic. Relay is always on.	**9, 10**
8386	DALI 4xDIM (G0..G3)	A fixture containing four dimming sliders for four groups. Drivers have to be programmed with Group addresses in DALI as G0 Dimmer1, G1 Dimmer2, G2 Dimmer3, G3 Dimmer4. Dimming curve is logarithmic. Relay is always on.	**9, 10**
8789	DALI 4xDIM (new)	A fixture containing four dimming sliders for four groups. Drivers are programmed automatically to have addresses A0 for Dimmer1, A1 Dimmer2, A2 Dimmer3 and A3 Dimmer4. Dimming curve is logarithmic. Relay is always on.	**9, 10**
1166	DALI RGB White	A fixture with dimmer, white color adjustment, color and color saturation sliders. Drivers and/or channels have to be preconfigured as A0 Red, A1 Green, A2 Blue and A3 White. Dimming curve is logarithmic. Relay is always on.	**9, 10**
3251	DALI RGB White (auto)	A fixture with dimmer, white color adjustment, color and color saturation sliders. Drivers and/or channels are programmed, if not preconfigured, as A0 Red, A1 Green, A2 Blue and A3 White. Dimming curve is logarithmic. Relay is always on.	**9, 10**
12645	DALI RELAY 1CH Dim	A DALI-controllable relay profile where a slider in app controls the DALI relay on or off. ASD unit´s own relay also follows the control.	**11**
5678	CBU-ASD Relay	A DALI-controllable relay profile where a slider in app controls the DALI relay on or off. The ASD unit´s own relay also follows the control.	**11**
3174	ASD/Presence	ASD acts as a presence trigger. Powering on ASD causes a sensor trigger. ASD appears under "sensors" in the Casambi App.	**12**
6552	CBU-ASD Relay+PB	ASD unit´s solid state relay output is connected with a momentary button in the Casambi App.	**13**
1031	Push Button	ASD operates as a push button. Powering on the ASD acts as a button press.	**14**

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WIRING DIAGRAMS

Each CBU product can operate in various roles according to the chosen profile. It is possible to change the profile of an unpaired device using the Casambi App. Above are listed the fixture profile options for the CBU-ASD-LR.

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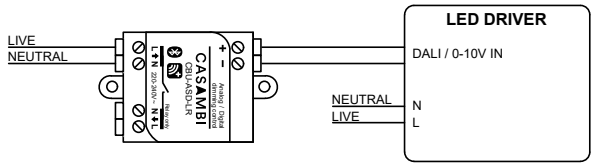

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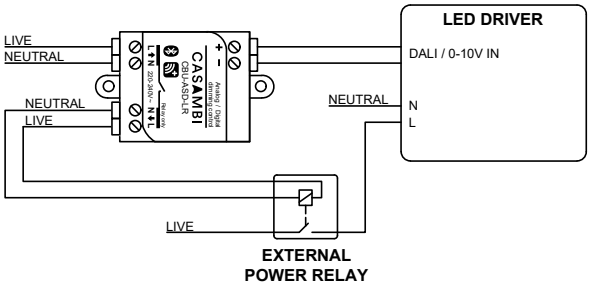

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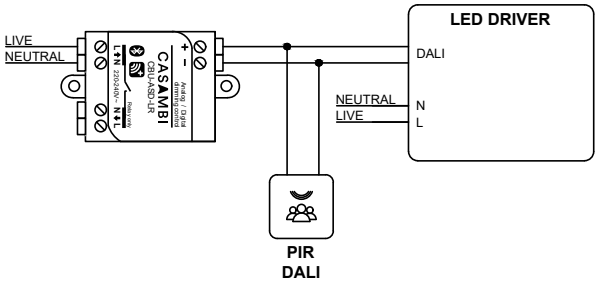

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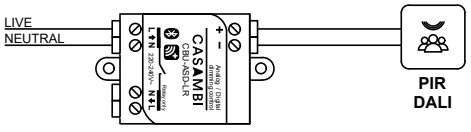

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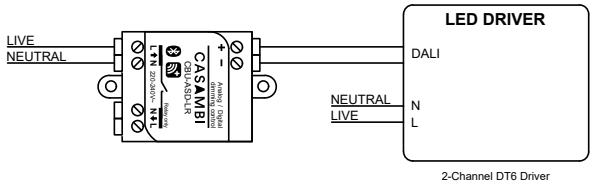

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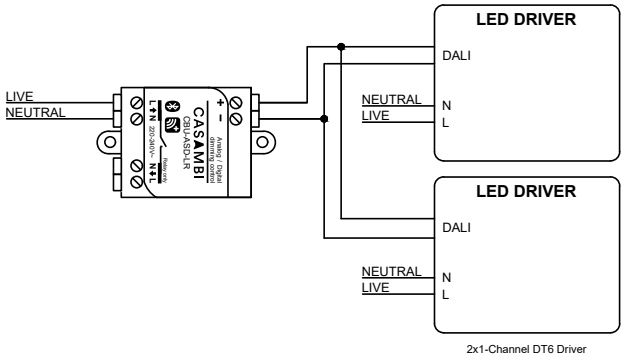

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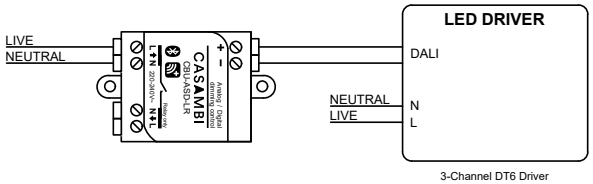

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WIRING DIAGRAMS

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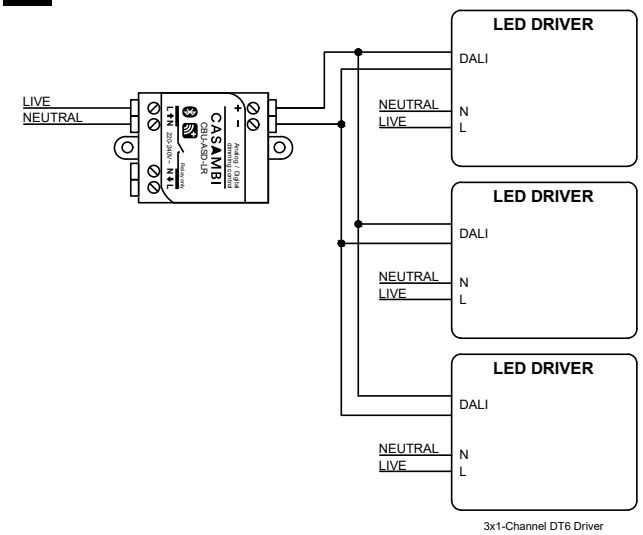

3x1-Channel DT6 Driver

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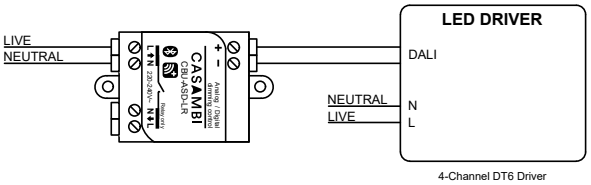
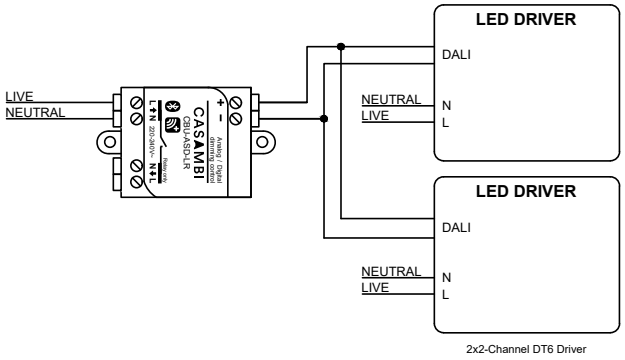


4-Channel DT6 Driver

10.



2x2-Channel DT6 Driver

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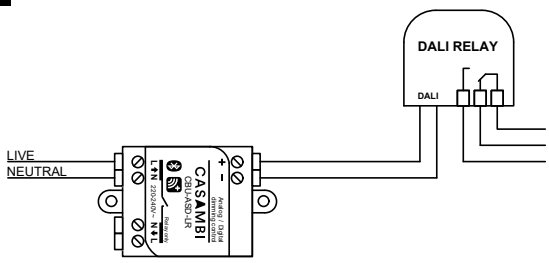

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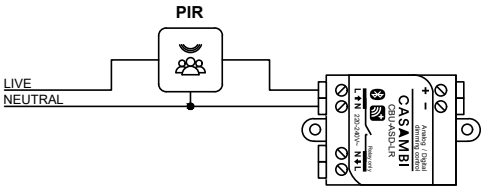

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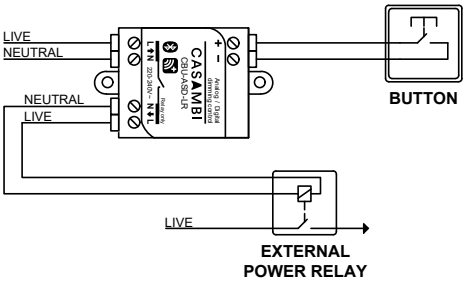

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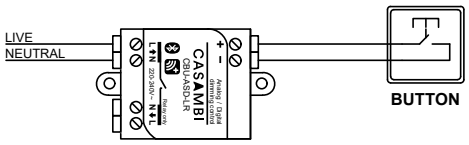

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