

# CASAMBI



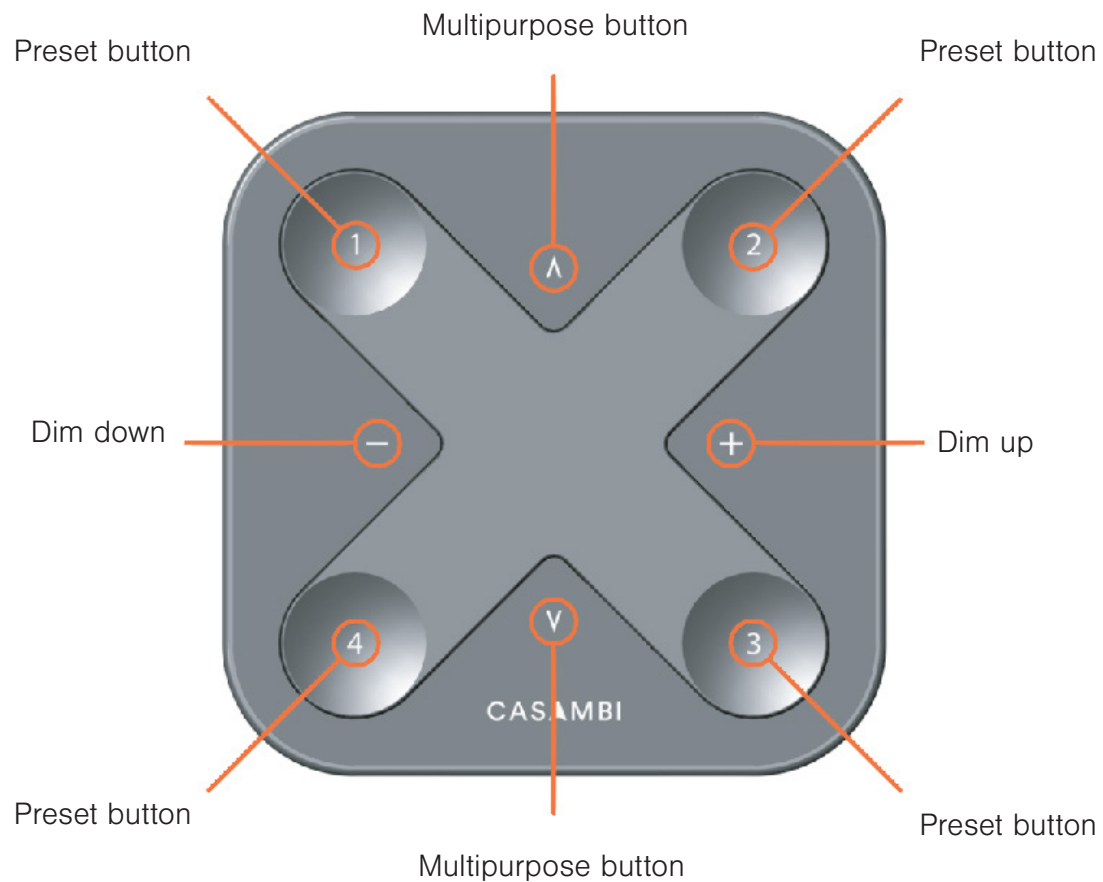
## Product Description

# Xpress



Xpress is a wireless user interface that brings huge flexibility to interior design as furniture can be replaced or even walls can be rebuilt without having to take wiring of switches or switch placement into account. The switch can be kept wherever the user needs it and it gives direct access to all the important Casambi lighting control functionalities.

# Basic Functions



The Preset buttons of Xpress can be configured via the Casambi app. A light indicates the selected preset.

## **Dim up, Dim down:**

- Smooth dimming of last chosen preset

## **Multipurpose buttons:**

- Change of colour temperature in steps of 25 Kelvin
- Change of the indirect/direct ratio

## **Preset Buttons:**

- Individual luminaire control
- Group control
- Control of all lamps
- Recall scenes
- Recall animations

# Smart Functions

## Dimming

### **Hold the Dim down or Dim up button:**

- Smooth dimming of last chosen preset, cycle takes 5 seconds

### **Tap the Dim down button:**

- Chosen preset goes to 0%

### **Tap the Dim up button:**

- Chosen preset goes to 100%

## Preset Buttons

### **Tap:**

- The chosen preset (lamp control, group control, all lamps, scene recall or animation recall) will turn on

### **Tap again:**

- The chosen preset (lamp control, group control, all lamps, scene recall or animation recall) will turn off

## Colour Temperature

### **Hold the Multipurpose button:**

- Changes colour temperature smoothly, cycle takes 5 seconds

### **Tap the upper Multipurpose button:**

- Changes to the warmest colour temperature

### **Tap the lower Multipurpose button:**

- Changes to the coldest colour temperature

## Indirect/Direct Ratio\*

### **Hold the upper Multipurpose button:**

- Dims up smoothly the indirect lighting, cycle takes 5 seconds

### **Hold the lower Multipurpose button:**

- Dims up smoothly the direct lighting, cycle takes 5 seconds

### **Tap the upper Multipurpose button:**

- The indirect part goes to max level

### **Tap the lower Multipurpose button:**

- The direct part goes to max level

\*sum of indirect/direct in all cases 100%

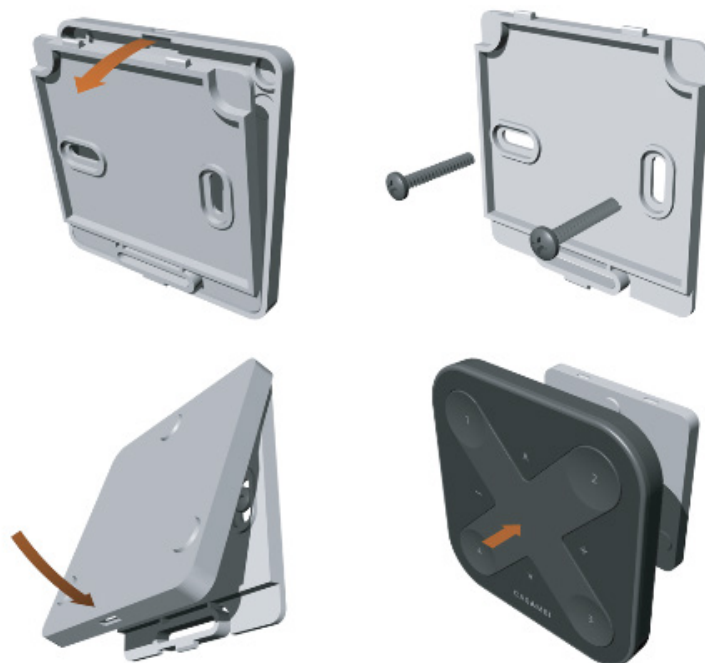
## Turn Off

### **Press the Dim down and Dim up button for more than 1 second**

- Turns all lights off in selected network

# Mounting

Xpress is equipped with magnets for easy attachment to a mounting bracket. The mounting bracket is included.



## Technical Facts

### Size

90 x 90 x 12 mm

### Colours

white and black

### Range

up to 60 meters in open air

### Battery (included)

CR2430 Lithium coin cell

### Battery Lifetime

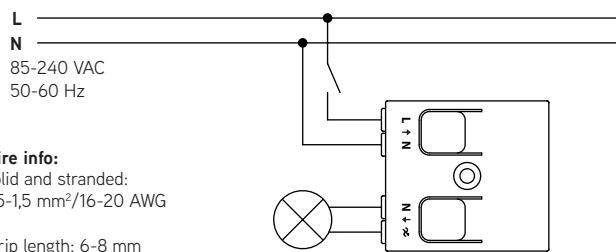
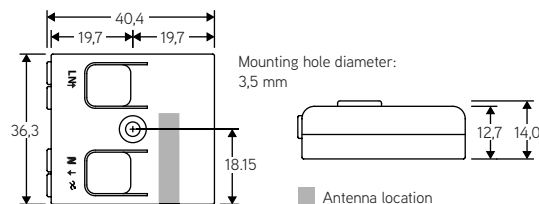
2-5 years, depending on usage

**CBU-TED**

Bluetooth controllable dimmer

**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.

**Wiring diagram****Dimensions****Load suitability**

Type of load	Max. load
Incandescent and high voltage halogens (R)	150 VA
High quality dimmable LED bulbs (C) <sup>1)</sup>	150 VA
High quality dimmable CFL bulbs (C) <sup>1)</sup>	150 VA
Trailing edge dimmable LED drivers (C) <sup>1)</sup>	150 VA
Low voltage halogens with electronic transformers (C) <sup>1)</sup>	150 VA
High voltage AC LED modules (R) <sup>2)</sup>	150 VA
Luminescent lamps, non-dimmable LED and CFL bulbs (C)	Not allowed
Wire wound transformers, electric motors and other inductive loads (I)	Not allowed

**Never connect inductive loads, such as iron core transformers. This could cause permanent damage to the dimmer. Do not mix different types of loads.**

<sup>1)</sup> Dimming quality depends solely on the load electronics. Do not mix different types of bulbs or loads.

<sup>2)</sup> Some LED modules may flicker at low dimming levels.

**Description**

CBU-TED is a Bluetooth controllable, Casambi enabled trailing-edge dimmer for operation of incandescent lamps, dimmable LED lamps and dimmable LED control gear. It can be installed behind a traditional wall switch, inside a luminaire or into a ceiling outlet box. Maximum allowable ambient temperature must be observed.

CBU-TED is able to control up to 150 VA at 230 VAC. It features an overcurrent and over temperature protection.

CBU-TED can be controlled with Casambi app, available for iOS and Android devices, as well as with traditional wall switches. The Casambi app can be downloaded free of charge from Apple App Store and Google Play Store.

Different Casambi enabled products can be used as a simple one luminaire direct control to a complete and full featured light control system where up to 127 units form automatically an intelligent mesh network.

**Installation**

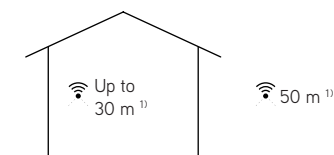
Make sure that the mains voltage is switched off when making any connections. Use 0,5-1,5 mm<sup>2</sup> solid or stranded conductor electrical wires. Strip the wire 6-8 mm from the end.

Press the buttons on top of the dimmer case and insert the wires to the corresponding holes. Make sure to connect the input and output correctly. Input connector is marked with letters L and N, while the output connector is marked with letter N and a symbol with a wave and an arrow (⚡).

If you install the dimmer 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. Using the dimmer in a heat sensitive environment may limit the maximum output power.

**WARNING!**

Using CBU-TED with maximum load can make it operate very hot. Make sure to place the product in a well-ventilated space and away from any flammable materials.

**Range**

Casambi uses mesh network technology so each CBU-TED acts also as a repeater. Longer ranges can be achieved by using multiple Casambi units.

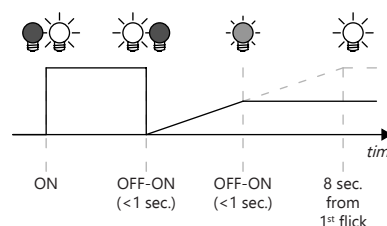
<sup>1)</sup> Range is highly dependant on the surrounding and obstacles, such as walls and building materials.



Compatible devices:  
iPhone 4S or later  
iPad 3 or later  
iPod Touch 5th gen or later  
Android 4.4 KitKat or later devices  
produced after 2013 with full BT 4.0 support

**Dimming without app**

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

**Technical data****Input**

Voltage range:	85-240 VAC
Frequency:	50-60 Hz
Max. mains current:	0,65 A
No-load standby power:	< 0,3 W

**Output**

Dimming method:	trailing-edge phase control
Max. output power:	150 VA @ 230 VAC 75 VA @ 120 VAC
Max. output current:	0,65 A
Min. load requirement:	1 W
Max. inrush current:	10 A, 100 ms

**Radio transceiver**

Operating frequencies:	2,4...2,483 Ghz
Maximum output power:	+4 dBm

**Operating conditions**

Ambient temperature, ta:	-20...+45°C
Max. case temperature, tc:	+75°C
Location of tc point:	bottom side, underneath output connector
Storage temperature:	-25...+75°C
Max. relative humidity:	0...80%, non-cond.

**Connectors**

Wire range, solid & stranded:	0,5-1,5 mm <sup>2</sup> 16-20 AWG
Wire strip length:	6-8 mm

**Mechanical data**

Dimensions:	40,4 x 36,3 x 14,0 mm
Weight:	15 g
Degree of protection:	IP20 (indoor use only)

**Disposal Instructions**

In line with EU Directive 2002/96/EC 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.

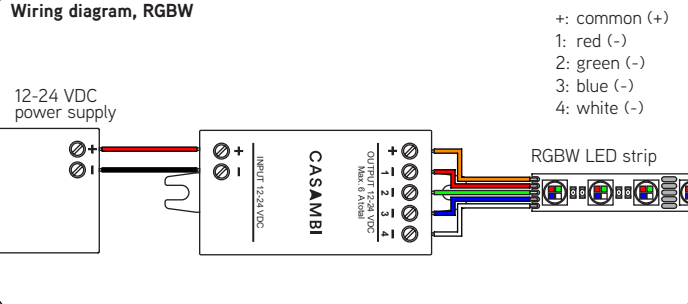
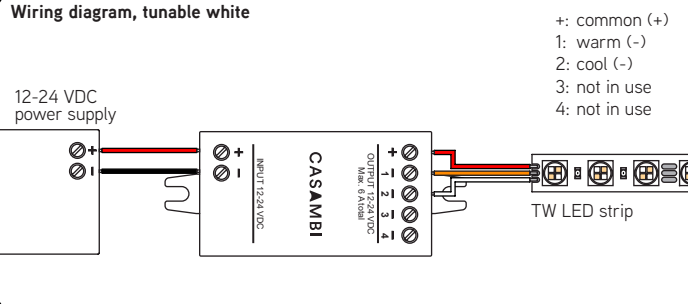
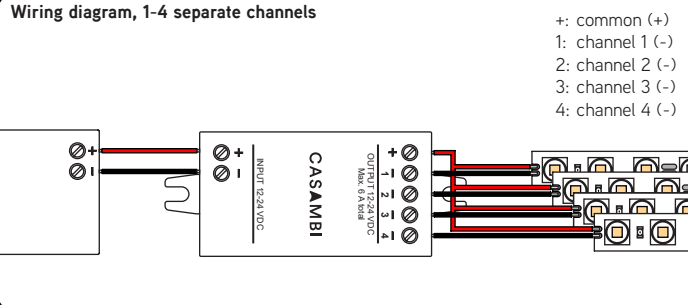
# CASAMBI

## Lighting control for the Modern World

Casambi Technologies Oy  
Bertel Jungin aukio 1 E, 02600 Espoo, Finland

**CBU-PWM4**

Bluetooth controllable 4ch PWM dimmer


**Wiring diagram, RGBW**

**Wiring diagram, tunable white**

**Wiring diagram, 1-4 separate channels**

**Description**

CBU-PWM4 is a Bluetooth controllable, Casambi enabled four channel PWM dimmer for constant voltage LED loads, such as LED strips and constant voltage LED modules. It is connected between a 12-24 VDC power supply and the constant voltage LED load.

CBU-PWM4 can control up to four channels making it an ideal partner for RGBW and tunable white (TW) applications. The maximum combined output current is 6 A which can be freely divided between 1 -4 channels. CBU-PWM4 is protected against overvoltage, overcurrent and short circuit situations.

CBU-PWM4 can be controlled with Casambi app which can be downloaded free of charge from Apple App Store and Google Play Store.

Different Casambi enabled products can be used from a simple one luminaire direct control to a complete and full featured light control system where up to 127 units form automatically an intelligent mesh network.

**Installation**

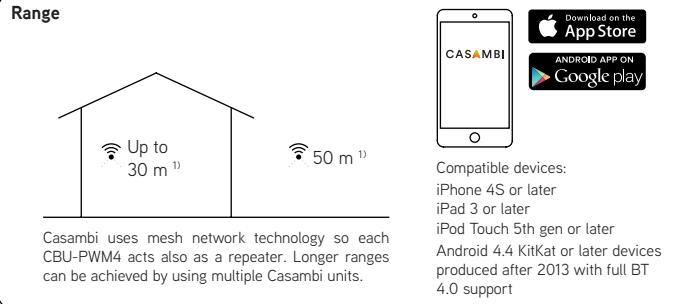
Connect a constant voltage 12-24 VDC power supply to the input connector. Make sure not to use a constant current LED driver and make sure that the cable polarity is correct.

The product has one shared positive output connector (+) and each of the four channels have its own negative connector (-). This is the most typical case with multichannel LED strips. Connect the LED load wires accordingly.

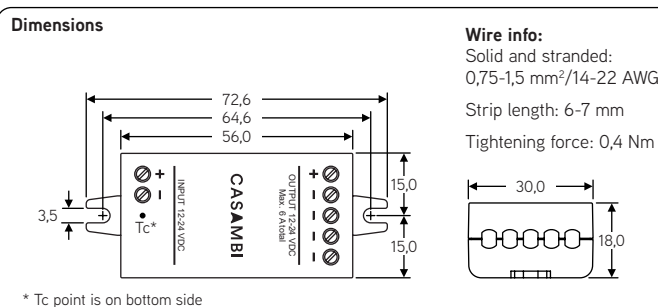
CBU-PWM4 can be configured having different types of outputs, such as 4 channel RGBW, 3 channel RGB and 2 channel TW. Also, it is possible to configure 1-4 jointly and individually dimmable channels. These configurations can be made by the end user from Casambi App.

As default, CBU-PWM4 is delivered with RGBW configuration.

CBU-PWM4, as any other Casambi product, should not be placed in a metal enclosure or next to large metal structures. Metal will effectively block all radio signals which are crucial to the operation of the product.

**Range**


<sup>1)</sup> Range is highly dependant on the surrounding and obstacles, such as walls and building materials.

**Dimensions**

**Technical data**
**Input**

Voltage range:	12-24 VDC
Max. input current:	6 A
No-load standby power:	< 0,3 W

**Output**

Output voltage:	same as input voltage
Max. output power:	144 W @ 24 VDC 72 W @ 12 VDC
Max. output current:	6 A (can be freely divided between the channels)
Min. load requirement:	0 W
Dimming method:	Pulse Width Modulation (PWM)

**Radio transceiver**

Operating frequencies:	2,4...2,483 Ghz
Maximum output power:	+4 dBm

**Operating conditions**

Ambient temperature, ta:	-20...+45°C
Max. case temperature, tc:	+75°C
Storage temperature:	-25...+75°C
Max. relative humidity:	0...80%, non-cond.

**Connectors**

Wire range, solid & stranded:	0,75 - 1,5 mm <sup>2</sup> 14 - 22 AWG
Wire strip length:	6 - 7 mm
Tightening force:	0,4 Nm
Maximum input cable length:	3 m

**Mechanical data**

Dimensions:	72,6 x 30,0 x 18,0 mm
Weight:	23 g
Degree of protection:	IP20 (indoor use only)

**Disposal Instructions**

In line with EU Directive 2002/96/EC 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.

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Bertel Jungin aukio 1 E, 02600 Espoo, Finland



# CBU-ASD

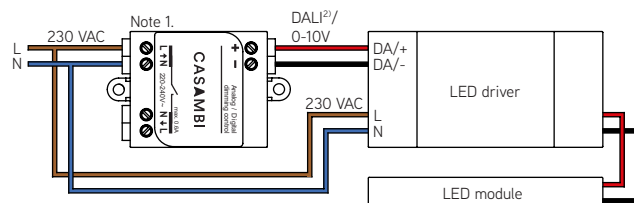
Bluetooth control unit for LED drivers



**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.

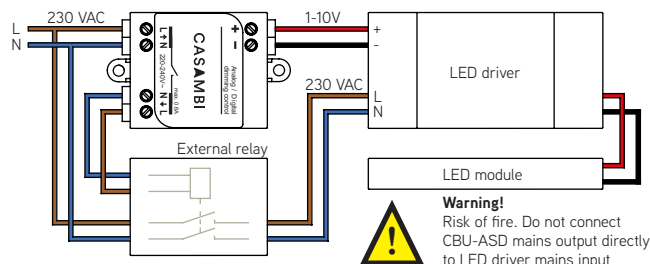
## Wiring diagram, directly powered DALI or 0-10V drivers

Suitable for drivers that can be switched off via control interface

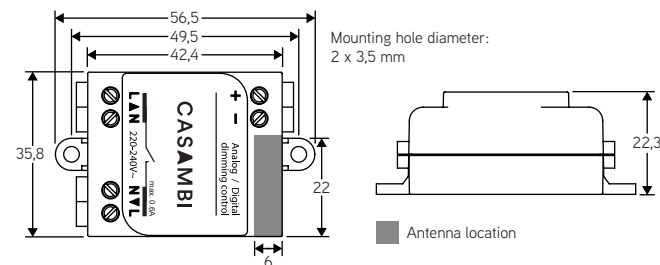


## Wiring diagram, 1-10V drivers powered through external relay

Suitable for drivers that cannot be switched off via control interface



## Dimensions



Note 1. CBU-ASD is a built-in class II device. Use double insulated wires or an external mounting box if the device is not mounted inside another insulated device.

Note 2. CBU-ASD and its DALI interface do not meet the requirements of IEC 60929. Connect only directly to a DALI controllable LED driver. Not to be connected to an existing DALI network. Connect only one LED driver (DALI or 0/1-10V driver) to one CBU-ASD.

## Description

CBU-ASD is a wireless control unit for LED and halogen drivers with 0-10V, 1-10V or DALI dimming interface. CBU-ASD is available with either analog 0-10V (and 1-10V) or digital Standalone DALI control interface.

With Standalone DALI output, CBU-ASD acts both as a controller and as a power supply making it possible to connect directly to an LED driver with DALI interface without the need for 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 at their minimum.

CBU-ASD does not comply with IEC 60929 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.

CBU-ASD is controlled wirelessly with Casambi smartphone and tablet applications using Bluetooth 4.0 protocol. The Casambi app can be downloaded free of charge from Apple App Store and Google Play Store.

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

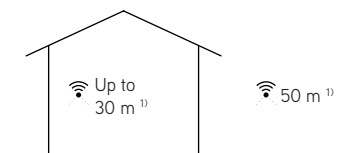
## Installation

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

Insert the wires to the corresponding holes and tighten the connector screw. Make sure to connect the input and outputs correctly. 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 CBU-ASD 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



Casambi uses mesh network technology so each CBU-ASD acts also as a repeater. Longer ranges can be achieved by using multiple Casambi units.

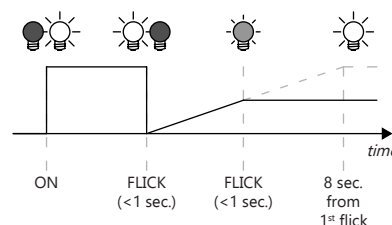
<sup>1)</sup> Range is highly dependant on the surrounding and obstacles, such as walls and building materials.



Compatible devices:  
iPhone 4S or later  
iPad 3 or later  
iPod Touch 5th gen or later  
Android 4.4 KitKat or later devices produced after 2013 with full BT 4.0 support

## Dimming without app

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



## Technical data

### Input

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

### Mains Output

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

### 0-10V Output

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

### DALI Output

Voltage range:	9-12 VDC
Maximum number of drivers connected:	1 pc

### Radio transceiver

Operating frequencies:	2,4...2,483 Ghz
Maximum output power:	+4 dBm

### Operating conditions

Ambient temperature, ta:	-20...+50°C (Iout 0 A) -20...+40°C (Iout 0,6 A)
Max. case temperature, tc:	+70 °C
Storage temperature:	-25...+75 °C
Max. relative humidity:	0...80%, non-cond.

### Connectors

Wire range, solid & stranded:	0,75-1,5 mm <sup>2</sup> 14-22 AWG
Wire strip length:	6-7 mm
Tightening torque:	0,4 Nm/4 Kgf.cm/2,6 Lb-In

### Mechanical data

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

## Disposal Instructions

In line with EU Directive 2002/96/EC 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.

# CASAMBI

Lighting control  
for the Modern World

Casambi Technologies Oy  
Bertel Jungin aukio 1 E, 02600 Espoo, Finland



# Wall Switch

Single / Double

## CASAMBI



### Features

- Universal energy harvesting wireless switches in the European 55 x 55 mm form factor
- Casambi Wall Switches are transmitting the button status based on the 2.4 GHz Bluetooth Low Energy radio standard
- Casambi Wall Switches are based on the maintenance free, self-powered Bluetooth Low Energy (BLE) pushbutton transmitter module PTM 215B.
- The PTM 215B module within contains an electro-dynamic energy transducer which is actuated by the rocker movement
- When a rocker is pushed down or released, electrical energy is created and a set of BLE advertising frames is transmitted identifying the rocker status (pushed or released)
- A Long or Short rocker press can be calculated by the receiver. This enables switching, dimming control or jalousie control including slat action.

### Technical Specifications

Radio Transmitter	PTM 215B pushbutton module with integrated antenna
Energy Source	Electro-dynamic energy generator, maintenance free
Frequency / Protocol	2.4 GHz / Bluetooth Low Energy (BLE)
Range	Within one room (up to 10m line of sight)
Channels	2 or 4 (single or double rocker with medial position, pressed/released)
Dimensions of Rocker	50 x 50 mm
Dimensions of Frame Insert	55 x 55 mm
Dimensions of Central Plate	71 x 71 mm
Dimensions of Frame	81 x 81 mm
Total Installation Height	14 mm (frame lies directly against wall)
Mounting	Gluing (double-sided mounting film enclosed), Screwing to flat surface
Operating Conditions	Temperature: -25°...+65°C Humidity: 0...95% r.h., non-condensing (dry environment only)
Lifetime	> 50,000 actuations (switching cycles) according to EN 60669 / VDE 0632
Approvals	RED, FCC, ISED, ACMA
Packaging	Each unit packed in a bag, 10 units packed in a card box

### Order Code

**EWSDB WALL SWITCH 2.4GHz BLE DOUBLE ROCKER-W/O PRINT-WHITE**  
**EWSSB WALL SWITCH 2.4GHz BLE SINGLE ROCKER-W/O PRINT-WHITE**



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**SKSLIGHTING.COM.AU**

ABN 17 006 659 294  
ASX: ENE



FS665083

# Ceiling Detector

Flush Mount Occupancy Detector CEFL

## CASAMBI

### Features

- Flush mounted suitable for easy mounting through 73-75mm diameter hole
- Ceiling void min 78mm deep
- Configure any room via free Casambi App on Google Play or App Store.
- Product Code CBU-CEFL

### Technical Details

#### Input

Voltage	220-240VAC	Operating frequencies	2.4... 2,483 GHz
Frequency	50Hz	Max. output power	+4 dBm
Max. mains current	0.05A		
Standby current	0.05A		

#### Radio Transceiver

#### Operating Conditions

Note: The temperature difference between the detection target and background must be at least 4°C.

Ambient temperature	-20°C...+40°C (Iout 0.05A)
Max. case temperature	+70°C
Storage temperature	-25°C...+75°C
Max. relative humidity	0...80%, non cond.

#### Connectors

Terminal block wire size	0.5mm <sup>2</sup> - 2.5mm <sup>2</sup> solid or standard
Wire strip length	6-7mm
Tighting torque	0,4 Nm/4 Kgf.cm

#### Mechanical Data

Dimension	79mm x 85mm x 85mm
Weight	95g
Degree of protection	IP20
Protection class	Built-in Class 2
Material (casing)	Flame retardant polycarbonate
Finish / Colour	Matt /White (RAL 9033)

#### Conformity and Standards

EMC emission and immunity	EN60669-2-1:2004 inc. A12:2010
Safety	EN60669-2-1:2004 inc. A12:2010
Environment	Complies with WEEE and RoHS directives

#### Precautions

Do not place the CBU-CEFL near heat sources, fans or in ventilation ceiling voids.

CBU-CEFL can be wired in a parallel (sharing the same Live and Neutral).

Do not place close to or positioned such that, any light source points directly into the CBU-CEFL.

Ensure wires and cables are securely held within the connection terminals.

The CBU-CEFL should be protected by a 5 or 6 Ampere mcb or fuse.

**Disconnect the CBU-CEFL from the circuit before performing installation testing of the wiring circuit.**

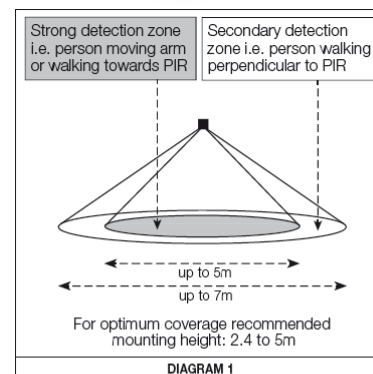


DIAGRAM 1

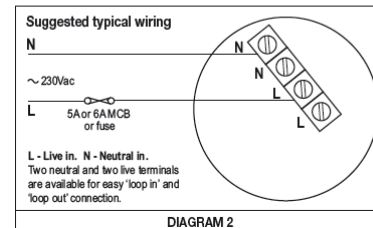


DIAGRAM 2

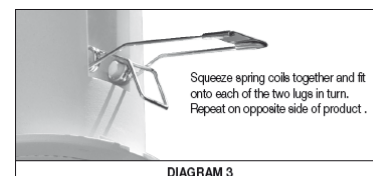


DIAGRAM 3

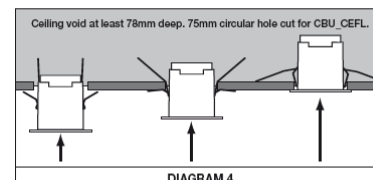


DIAGRAM 4

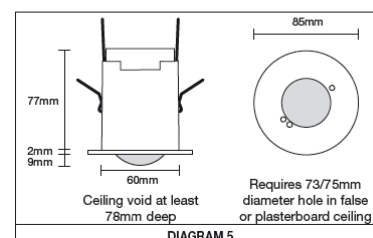


DIAGRAM 5



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FS665083