CBU-ASR

Bluetooth controllable dimmer

Dimensions
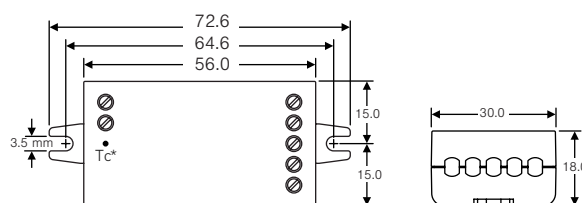
Dimensions are in mm.   * Tc point is on bottom side

Description

CBU-ASR is a Bluetooth controllable, Casambi enabled two channel 0-10V controller for dimmable LED loads and luminaires. It is powered by an external 12-24 VDC Class 2 power supply.

CBU-ASR can control two channels making it an ideal partner for tunable white (TW) applications. The two channels can be configured also to operate individually. The device also has a control port for an external relay and a sensor input.

CBU-ASR is an ideal partner for power packs with line voltage relays. It is protected against overvoltage, overcurrent and short circuit situations.

CBU-ASR together with other 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 250 units form automatically an intelligent mesh network. Casambi supports nearly unlimited number of mesh networks in an installation site.

The Casambi system can be controlled with Casambi app which can be downloaded free of charge from Apple App Store and Google Play Store. Other controlling methods are, for example, timers, Casambi enable sensors, such as PIR/occupancy and lux sensors, as well as Casambi Xpress and EnOcean switches.
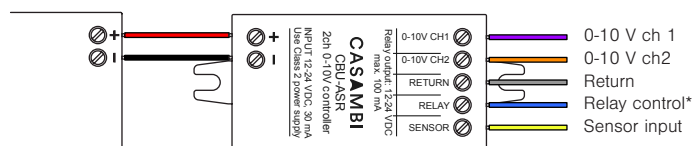
Installation

The product has one return line which is shared between the two 0-10V outputs, relay control output and sensor input. The two 0-10V outputs can be configured for different functions, such as 2 channel tunable white, or 1-2 jointly and individually dimmable channels. The standard configuration when delivered is 2 channel dimming, but the configuration can be changed by the end user from the Casambi App.

Do not connect a typical PCB relay to the Relay output. The connected relay must have a flyback diode in place to protect the CBU-ASR against overvoltage spikes.

CBU-ASR, as any other Casambi product, should not be placed in a metal enclosure, such as metal junction boxes. Metal will attenuate radio signals which are crucial to the operation of the product. If the product will have to installed into a junction box, make sure to use a plastic junction box.

Wiring diagram

12-24 VDC Class 2
power supply

0-10V CH1	0-10 V ch 1
0-10V CH2	0-10 V ch2
RETURN	Return
RELAY	Relay control*
SENSOR	Sensor input

CASAMBI
CBU-ASR
2ch 0-10V controller
INPUT 12-24 VDC, 30 mA
Use Class 2 power supply
Relay output: 12-24 VDC
max. 100 mA

* The relay must be protected against inductive over voltage spikes, i.e. it must have a flyback diode. Do not connect relay without the diode.
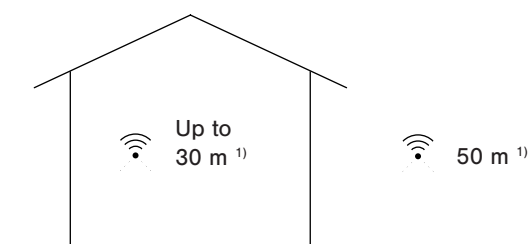
Range

The range between two CBU-ASR units or between a CBU-ASR and a smart phone can vary a lot depending on obstacles and surrounding material. In open air the range between two CBU-ASRs can be in excess of 50m, but if the unit is encapsulated into a metal structure, the range can be only few metres. Therefore, thorough testing is highly suggested.

Casambi uses mesh network technology so each CBU-ASR acts also as a repeater. When testing the network, it is important to test that each unit can be controlled from any point of the network covered area.

Compatible devices:
iPhone iOS 10 and later are supported
iPad iOS 10 and later are supported
Android 4.4 version (KitKat) and later are supported

Up to
30 m [1]

50 m [1]

Casambi uses mesh network technology so each Casambi unit, or Casambi Ready product, acts also as a repeater. Longer ranges can be achieved by any using Casambi unit as a repeater.

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

Technical Data

Input

Voltage range	12-24 VDC, Class 2
No-load input current:	30 mA

0-10V output (both channels)

Output voltage:	0-10 VDC, adjustable
Max. output current per channel::	5 mA, sinking and sourcing

Relay control output

Output voltage:	12-24 VDC, same as input
Max. output current:	100 mA

Sensor input

Input voltage:	Max. 24 VDC
Input resistance:	>80 kΩ

Radio transceiver

Operating frequencies:	2400-2480 MHz
Maximum output power:	typ. +0 dBm, +/-3dBm

Operating conditions

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

Connectors

Wire range, solid & stranded:	0,5-1,5 mm^2 / 14-22 AWG
Wire strip length:	6-7m
Tightening force:	0,4 Nm

Mechanical data

Dimensions:	72,6 x 30,0 x 18,0 mm
Weight:	23 g
FCC ID:	2ALA3-CBUASR
UL:	ListedUL /. UL Plenum Rated (UL 2043)

Fixture profile

Profile #	Profile	Description
3438	1xDIM	Basic one channel PWM dimmer.
4423 *	2xDIM	Two channel PWM dimmer.
5049	2xDIM (Lux)	Two channel PWM dimmer.
10515	2xDIM (Presence)	Two channel PWM dimmer.
12354	TW	Two channel warm/cool mixer.
7652	TW/NoMix	Dimmer with tuneable white. Note that this mode does not perform warm/cool mixing, it directly sends dimmer value to output 0 and temperature value to output 1.

*Default profile

Notes

Information in this document is subject to change.
CBU-ASR Data Sheet V2.0

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