TRIDONIC

basicDIM Wireless PWM CV 4CH
Casambi Ready wireless modules

Product description
_ Can be integrated in Casambi systems (Casambi Ready)
_ Wireless controllable with an Android / iOS smart device
_ No need for an external gateway device
_ Forms automatically a wireless communication network with up to 250 nodes
_ Small form factor for luminaire installation
_ 4 PWM outputs
_ Easily implemented RGB and colour temperature controls
_ Device firmware can be updated over-the-air
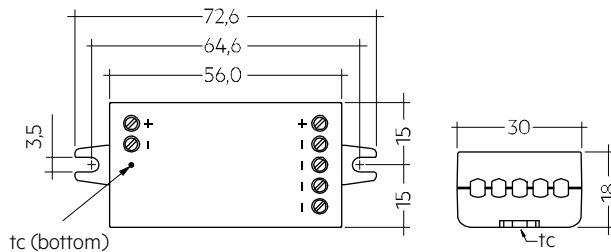_ 5 years guarantee (conditions at https://www.tridonic.com/manufacturer-guarantee-conditions)

Website
http://www.tridonic.com/28002575

basicDIM Wireless PWM CV 4CH

Casambi Ready wireless modules

Ordering data

Type	Article number	Packaging, carton	Weight per pc.
basicDIM Wireless PWM CV 4CH	**28002575**	120 pc(s).	0.023 kg

Technical data

Supply voltage DC	12 – 24 V
Max. input current	6,000 mA
Typ. power consumption on stand-by	< 0.3 W
Output voltage DC	12 – 24 V
Output power (24 V DC)	144 W
Output power (12 V DC)	72 W
Max. output current (free allocation to channels)	6,000 mA
Radio transceiver operating frequencies	2.4 – 2.483 GHz
Max. output power radio transceiver (E.I.R.P.) [1]	< + 20 dBm
Ambient temperature ta	-20 … +45 °C
Max. casing temperature tc	75 °C
Storage temperature ts	-25 … +75 °C
Lifetime	100,000 h
Guarantee (conditions at www.tridonic.com)	5 Year(s)
Dimensions L x W x H	72.6 x 30 x 18 mm
Type of protection	IP20

Approval marks

Standards

EN 55022, EN 55032, EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6, EN 61000-4-29, EN 61347-1, EN 61347-2-11, EN 61347-2-13, FCC PART 15

[1] E.I.R.P.: Equivalent Isotropically Radiated Power.
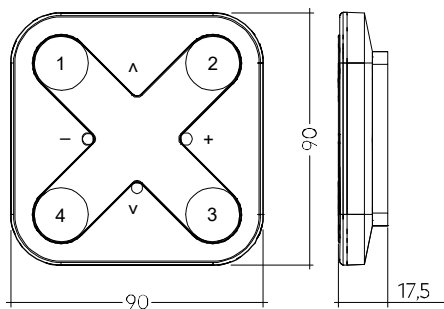
basicDIM Wireless User Interface

Product description
_ Can be integrated in Casambi systems (Casambi Ready)
_ Battery powered, wireless wall switch
_ Forms automatically a wireless communication network with up to 250 nodes [1]
_ Controls all types of basicDIM Wireless devices
_ 4 scenes
_ Dim up / down
_ Colour temperature control
_ 5 years guarantee (conditions at https://www.tridonic.com/manufacturer-guarantee-conditions)

[1] Depends on production number, see data sheet basicDIM Wireless User Interface.

Website
http://www.tridonic.com/28002213

Ordering data

Type	Article number	Colour	Packaging, carton	Weight per pc.
basicDIM Wireless User Interface	28002213	Black	50 pc(s).	0.078 kg
basicDIM Wireless User Interface white	28002420	White	50 pc(s).	0.078 kg

Approval marks

1. Standards

EN 55022
EN 55032
EN 61000-4-2
EN 61000-4-3/A2
EN 61000-4-4
EN 61000-4-5
EN 61000-4-6
EN 61000-4-29
EN 61347-1
EN 61347-2-11
EN 61347-2-13
FCC 47CFR Part 15 Class B Sub part C

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

1.1 Glow wire test

according to EN 61347-2-11 with increased temperature of 850 °C passed.

2. Common

2.1 Description

The basicDIM Wireless PWM CV 4CH module is a Bluetooth controlled, four channel PWM dimmer for constant voltage LED loads, such as LED strips and constant voltage LED modules.
The basicDIM Wireless PWM CV 4CH must be supplied with 12 – 24 V DC drivers / sources, which do not output any PWM signals or similar.
The LED load is connected to the output.

The basicDIM Wireless PWM CV 4CH module 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 into 1 – 4 channels.

All basicDIM wireless devices can be controlled with the Tridonic app „4remote BT". The app can be downloaded for free from the Apple App Store or Google Play Store.

2.2 Operation

The basicDIM Wireless PWM CV 4CH module is fully compatible with networks which support up to 250 nodes (Evolution networks). If the module is used with different types of basicDIM Wireless devices in an Evolution network, their compatiblity has to checked before. If a device is not compatible with Evolution networks, it can be only used in networks which support up to max. of 127 devices (Classic networks).

Multiple devices automatically form a mesh network that can be controlled from any point. These networks communicate wirelessly directly with the smartphone or tablet. Therefore, an external gateway or wireless LAN network is not required.

basicDIM wireless devices have an integrated 2.4 GHz antenna. For optimum RF performance, special attention is required if the device is to be integrated into a luminaire. See also chapter 5.4 Placement for further instructions.

The settings and operating modes can be configured using the 4remote BT app. They are automatically stored in the Tridonic Cloud Service. This way, the same settings are available to everyone connected to the network.

3. Thermal details and lifetime

3.1 Expected lifetime

Expected lifetime		
Type	**ta**	**50 °C**
basicDIM Wireless PWM CV 4CH	tc	75 °C
	Lifetime	100,000 h

The device is designed for a lifetime stated above under reference conditions and with a failure probability of less than 10 %.


tc (bottom)
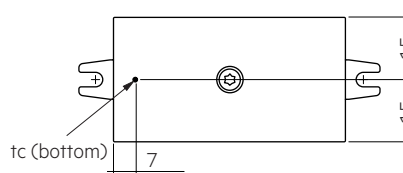
4. Interfaces / communication

The basicDIM Wireless PWM CV 4CH module has a common positive output connector (+) and each of the four channels has its own negative connector (-). This is the most typical case with multi-channel LED strips.
Connect the LED load cables accordingly.

The outputs of the basicDIM Wireless PWM CV 4CH can be configured for different applications, such as 4-channel RGBW, 3-channel RGB and 2-channel TW. It is also possible to configure the individual dimmable channels together and individually. These configurations can be made by the end user from the Tridonic 4remote BT App.

5. Installation / wiring

5.1 Wiring diagram

220–240 V
50 Hz
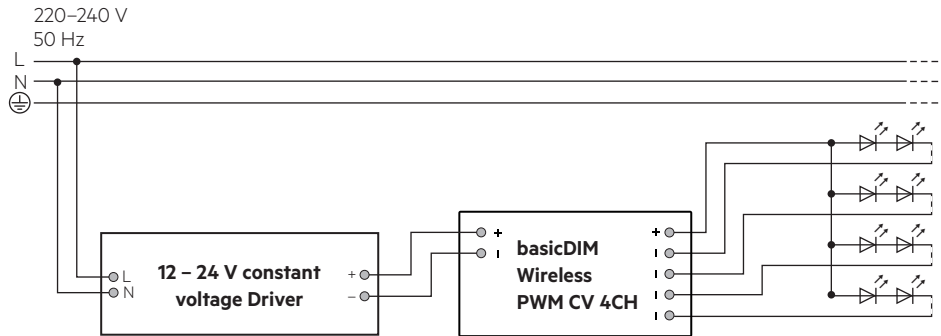
5.2 Wiring type and cross section

For wiring use stranded wire with ferrules or solid wire from 0.75–1.5 mm²
(14–22 AWG).
Strip 6–7 mm of insulation from the cables to ensure perfect operation of the push-wire terminals.
Use one wire for each terminal connector only.
Use each strain relief channel for one cable only.

wire preparation:
0.75 – 1.5 mm²

6 – 7 mm
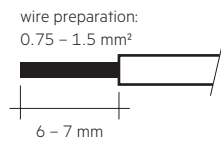
5.3 Placement

basicDIM Wireless devices have an integrated antenna for easy integration.
In order to maximize the range in every direction some design guidelines should be taken into consideration when mounting the device.
The antenna is located on the corner of the enclosure. It is on the top side of the internal PCB (Printed Circuit Board).
When the device is mounted on a metal plate (e.g. frame of a luminaire), it may efficiently block the radio frequency signal. Also the device should be placed as far away from any vertical metal structures as possible.
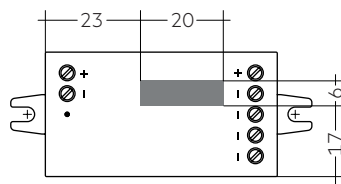
■ Antenna cutout on bottom of device

⚠ The range of the communication signal is depending on the environment e.g. luminaire, construction of the building, furnitures or humans and needs to be tested and approved in the installation.

⚠ To ensure a good radio connection, do not cover the basicDIM Wireless completely with metal!

5.4 Installation note

Max. torque at the clamping screw: 0.4 Nm / M3.

6. Miscellaneous

6.1 Disposal of equipment

Return old devices in accordance with the WEEE directive to suitable recycling facilities.

6.2 Conditions of use and storage

Environmental conditions: 0 % up to max. 80 %,
not condensed

Storage temperature: -25 °C up to max. +75 °C

The devices have to be acclimatised to the specified temperature range (ta) before they can be operated.

6.3 Additional information

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Additional technical information at www.tridonic.com → Technical Data

Guarantee conditions at www.tridonic.com → Services

Lifetime declarations are informative and represent no warranty claim.
No warranty if device was opened.