basicDIM Wireless Passive module
Casambi Ready wireless module

Product description

- Wireless controllable with a 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
- Digital output: Standalone DALI (compatible)
- Easily implemented RGB and colour temperature controls
- Device firmware can be updated over-the-air
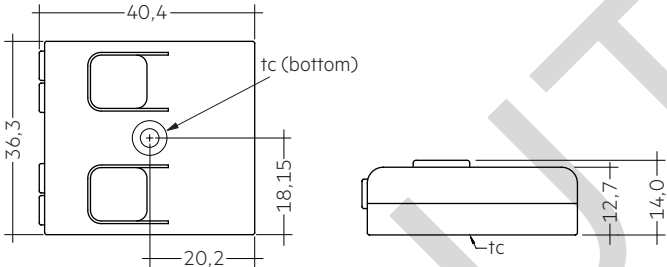- 5 years guarantee

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basicDIM Wireless Passive module

Casambi Ready wireless module

Technical data

Supply voltage DC	9.5 – 22.5 V
Max. input current when idle (approximately 3 DALI loads)	5 mA
Max. DALI bus current	250 mA
Typ. power input on stand-by	< 0.1 W
Radio transceiver operating frequencies	2.4 – 2.483 GHz
Max. output power radio transceiver (E.I.R.P.)[①]	< +20 dBm
Operating temperature	-20 ... +55 °C
tc point	65 °C
Storage temperature	-25 ... +75 °C
Dimensions LxWxH	40.4 x 36.3 x 14.0 mm
Type of protection	IP20

Ordering data

Type	Article number	Packaging, carton	Weight per pc.
basicDIM Wireless passive module	**28002574**	160 pc(s).	0.014 kg

[①] E.I.R.P.: Equivalent Isotropically Radiated Power.

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basicDIM Wireless User Interface

Product description

- 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

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

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

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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 Passive module is a Bluetooth DALI controller.
The module is powered by the DALI bus - no additional mains supply is needed.
Typical use cases for the basicDIM Wireless Passive module are to act as a DALI to Bluetooth gateway for an existing DALI network, or to be connected to a DALI sensor, or to be used directly with a DALI controlled LED driver with an integrated or external DALI power supply.
All basicDIM Wireless Passive modules can be controlled with the Tridonic app "4remote BT". The app can be downloaded free of charge from the Apple App Store and Google Play Store.

2.2 Operation

The basicDIM Wireless Passive 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 compatibility has to be 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.
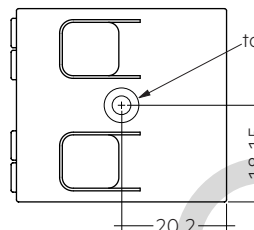
basicDIM Wireless has an integrated 2.4 GHz antenna. For optimum RF-performance, a special attention will have to be given when the device is integrated to a luminaire. See chapter 5.4 Placement for further instructions.
The settings and modes can be configured using the 4remote app.
They are automatically stored in the Tridonic cloud service. This way the same settings are available for everyone who is connected to the network.

3. Thermal details and lifetime

3.1 Expected lifetime

Expected lifetime

Type		ta	50 °C
basicDIM Wireless passive module		tc	65 °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 %.
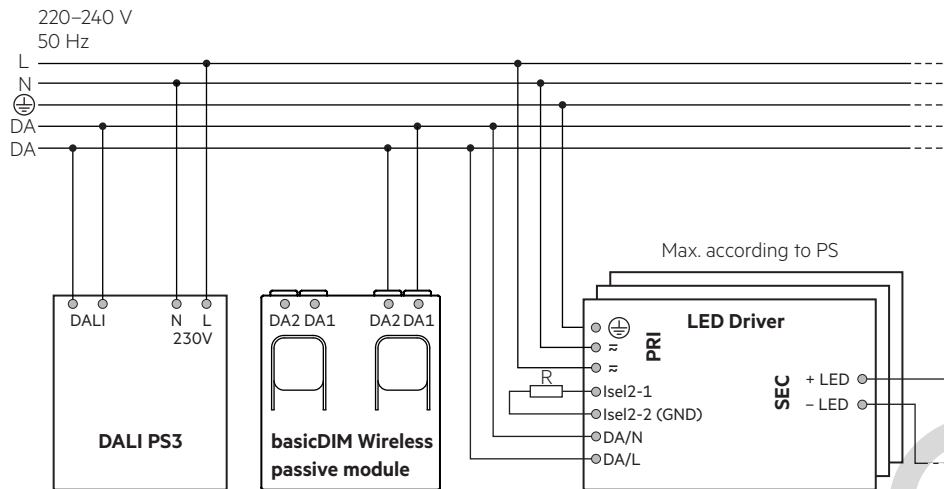

4. Interfaces / communication

The basicDIM Wireless Passive module draws its operating power directly from the DALI bus. For this reason, it is important to make sure that the DALI bus is externally powered. If the module is connected directly to a DALI sensor or a DALI driver, these products must have an integrated DALI power supply.
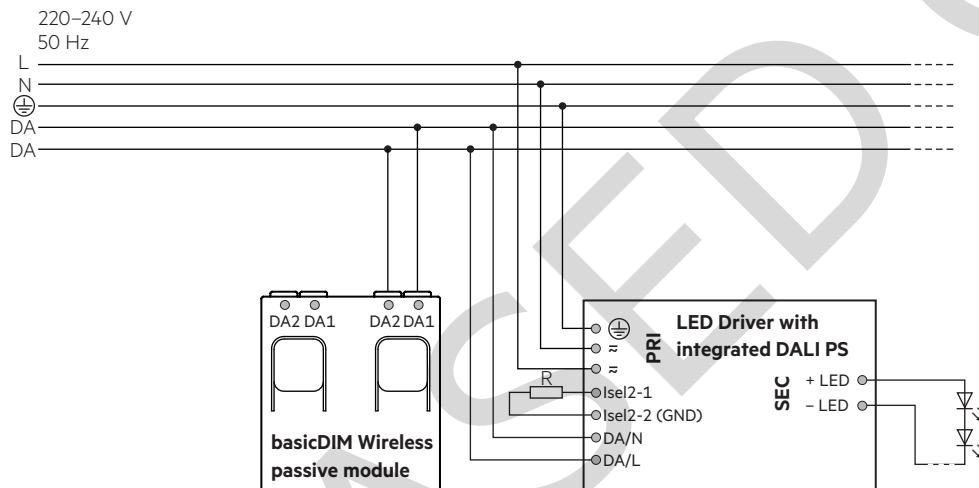The basicDIM Wireless Passive module has two sets of connectors. These connectors are internally connected in parallel with each other. This way the DALI bus can be routed through the product for easy installation.

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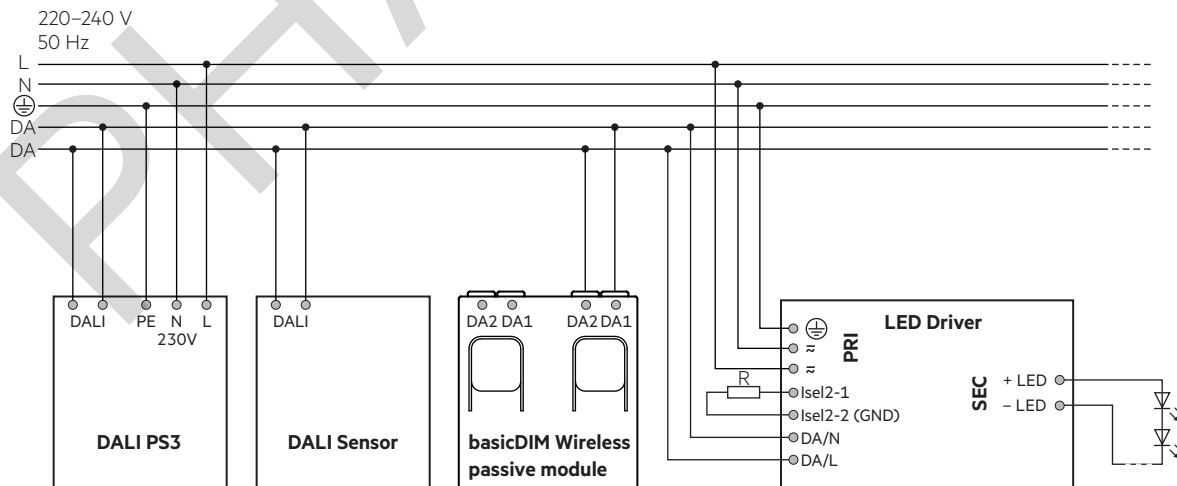
5. Installation / wiring

5.1 Wiring diagram with external PS

5.2 Wiring diagram with integrated DALI PS

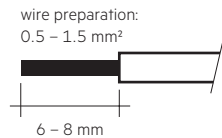### 5.3 Wiring diagram with DALI Sensor and DALI PS

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5.4 Wiring type and cross section

The wiring can be in stranded wires with ferrules or solid with a cross section of 0.5–1.5 mm² (16–20 AWG).
Strip 6–8 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.

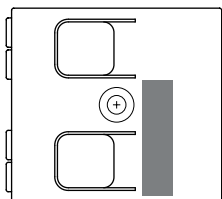wire preparation:
0.5 – 1.5 mm²

6 – 8 mm

5.5 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. In this case, a cut-out underneath the antenna may be needed for the RF signal to exit the structure. The cut-out area should be as large as possible. Also the device should be placed as far away from any vertical metal structures as possible.

■ Antenna location

⚠ 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!

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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Guarantee conditions at www.tridonic.com → Services

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