UrbaSens MOVE RF Controller ZG bDW

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 60 nodes
- Digital output to control DALI compatible drivers
- Supplied via DALI compatible power supply
- Integrated light sensor
- Support for Tridonic PSensor and DALI MSensor
- Ready for Zhaga Book 18 receptacle for easy and flexible installation to luminaire
- Dedicated Thorn Outdoor configuration IDs can be selected during pairing
- Device firmware can be updated over-the-air
- Can be used as repeater to extend the coverage of the wireless signal
- Lifetime up to 100,000 h at tc = 72 °C
- 5 years guarantee (conditions at https://www.thornlighting.com)
- We will provide security updates for the next five years after the date of purchase of this product

Housing properties

- Casing: Transparent smoke grey
- Type of protection IP66
- Impact protection degree IK09

Typical applications

- Outdoor installations: parking lots, access roads, parks, etc.

Website

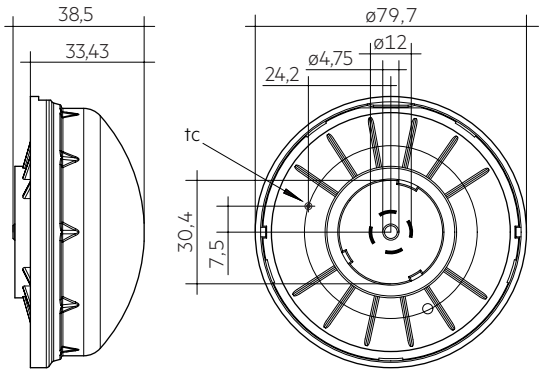
- https://www.thornlighting.com/96800093

UrbaSens MOVE RF Controller ZG bDW

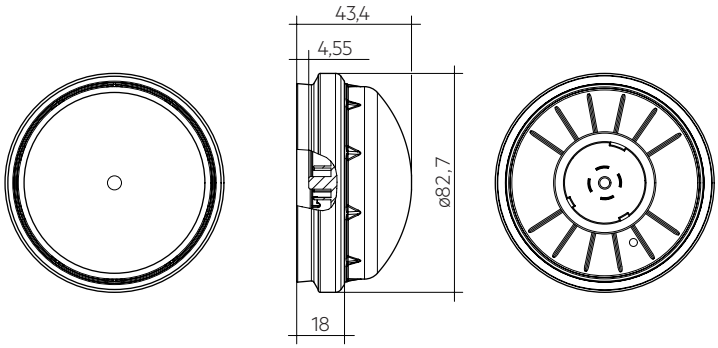
Casambi Ready wireless modules

Technical data

Supply voltage①	9.5 – 22.5 V
Current draw	13 mA (30 mA at start)
Typ. power consumption②	0.16 W
Mounting hole	acc. to Zhaga Book 18 Ed. 3
Type of installation③	Zhaga Book 18 Ed. 3 socket
Max. cable length	3 m
Detection angle for light measurement	0° – 150°
Detection range for light measurement	0.5 – 4,000 lx
Radio transceiver operating frequencies	2.4 – 2.483 GHz
Max. output power radio transceiver (E.I.R.P.)④	< +20 dBm
Typical radio range	80 m
Max. radio range⑤	100 m
Radio protocol	Bluetooth 4.0 or 5.0 Low Energy (BLE)
Capable for mesh network	Up to 60 nodes / Standard networks and Long Range
Interface	DALI
Ambient temperature ta	-40 … +70 °C
tc point	72 °C
Storage temperature ts	-40 … +85 °C
Vent humidity range	0 – 90 %
Dimensions Ø x H	ø79.7 x 38.5 mm
Diameter with dust and dirt protection	ø82.7 mm
Height with dust and dirt protection	43.4 mm
Housing material top	PC polycarbonate
Housing material body	PBT
Housing color top	Transparent smoke grey
Housing color body	Grey
UV resistance	f1
Type of protection	IP66
Impact protection degree	IK09
Lifetime	up to 100,000 h
Guarantee (conditions at www.thornlighting.com)	5 years



Dimensions without dust and dirt protection



Dimensions with dust and dirt protection

Ordering data

Type	Article number①	Packaging, carton	Weight per pc.
UrbaSens MOVE RF Controller ZG bDW	**96800093**	30 pc(s).	0.068 kg

① 28006936 UrbaSens MOVE RF Controller ZG bDW OTD

① Use only DALI compatible power supply.
② At 16 V supply voltage.
③ Device must be installed on top of the luminaire.
④ E.I.R.P.: Equivalent Isotropically Radiated Power.
⑤ With line of sight, clear sky and mounting height > 4 m.

ACCES-SORIES

ACU Z18 G2 Set

Product description

- Set consisting of receptacle, lock washer and mounting nut (ACU Z18 REP 4PIN G2)
- Designed for street lighting control
- Compliant with Zhaga Book 18 Ed. 3
- UL UV-f1 rated for outdoor use
- IK09 high impact resistant

Housing properties

- Colour: dark grey
- Casing receptacle: PBT
- Type of protection IP66

Note

- Please consider correct placing of the gasket lip in the gasket seat. For details refer to data sheet chapter „Gasket varification“

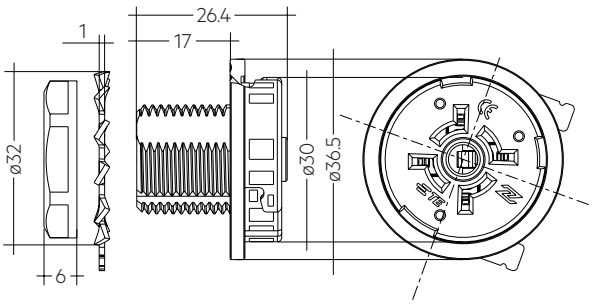
Interfaces

- Supplies Zhaga Book 18 Ed. 3 contact system

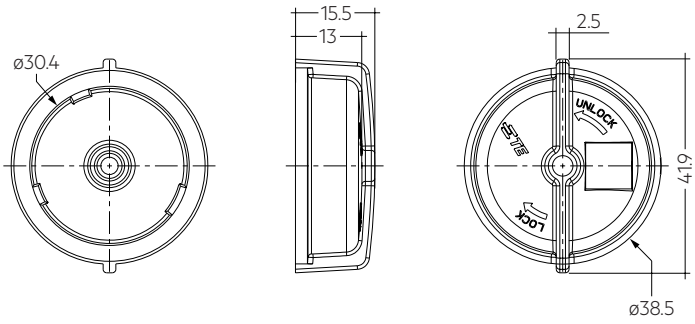
ACU Z18 REP 4PIN G2

ACU Z18 CAP IP66 G2

ACU Z18 REP 4PIN G2 + ACU Z18 CAP IP66 G2



ACU Z18 REP 4PIN G2



ACU Z18 CAP IP66 G2

Ordering data

Type	Article number	Packaging bag	Weight per pc.
ACU Z18 REP 4PIN G2	**28005366**	–	0.027kg
ACU Z18 CAP IP66 G2	**28005374**	100 pc(s).	0.009 kg

ACCES-SORIES

ACU Z18 Set

Product description

- Set consisting of receptacle, lock washer and mounting nut (ACU Z18 REP 4PIN)
- Designed for street lighting control
- Compliant with Zhaga Book 18 Ed. 3
- Optional IP66 with sealing cap (ACU Z18 CAP IP66)
- UL UV-f1 rated for outdoor use
- IK09 high impact resistant
- For more details see data sheet ACU Z18 Set

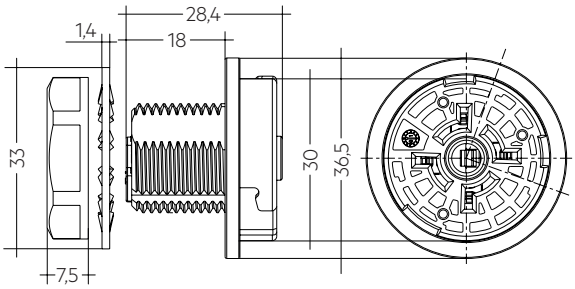
Housing properties

- Casing receptacle: PBT
- Type of protection IP20

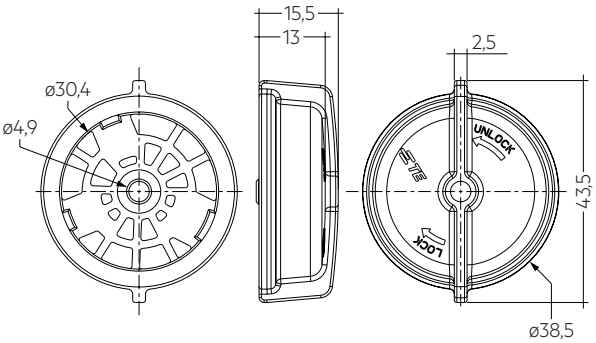
Interfaces

- Supplies Zhaga Book 18 Ed. 3 contact system

ACU Z18 REP 4PIN + ACU Z18 CAP IP66



ACU Z18 REP 4PIN



ACU Z18 CAP IP66

Ordering data

Type	Article number	Packaging bag	Weight per pc.
ACU Z18 REP 4PIN	**28003209**	100 pc(s).	0.008 kg
ACU Z18 CAP IP66	**28003208**	100 pc(s).	0.020 kg

ACCES-SORIES

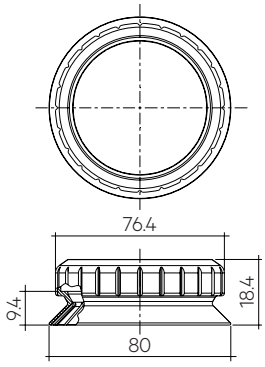
ACU Z18 SKIRT 80mm

Product description

- Accessory to protect the Zhaga book 18 Ed.3 connection between socket and node from dust and dirt
- Accessory is included in the product, but if it get lost or damaged it can be ordered separately

ACU Z18 SKIRT BLACK 80MM

ACU Z18 SKIRT GREY 80MM



Ordering data

Type	Article number	Colour	Diameter	Packaging bag	Weight per pc.
ACU Z18 SKIRT GREY 80MM	**28005593**	Grey	80 mm	500 pc(s).	0.008 kg
ACU Z18 SKIRT BLACK 80MM	**28005594**	Black	80 mm	500 pc(s).	0.008 kg

1. Standards

EN 55015
EN 55022
EN 55032
EN 61347-1
EN 61347-2-11
EN 61547
EN 62479
EN 62493
ETSI EN 300 328
ETSI EN 301 489-1
ETSI EN 301 489-17

1.1 Glow wire test

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

2. Common

2.1 Description

The UrbaSens MOVE RF Controller ZG bDW is a Bluetooth device with integrated light sensor.
The module is powered by a DALI compatible power supply.

The module is connected to one or more compatible drivers.
A combination with a Tridonic push-button interface (DALI XC G3) or the Tridonic PSensor for simple integration of daylight control and motion detection is possible.

Use of the module with a wired DALI line with wireless luminaires, sensors and push-buttons is feasible when using the UrbaSens MOVE RF Controller ZG bDW as a Gateway.
The processing of the digital commands is done by a application controller (e.g. sceneCOM evo or seceneCOM s). The transfer of these commands takes place from the Bluetooth network through the Gateway to the wired bus line. In both cases, the controlling capabilities and restraints of the used device profiles has to be checked before.

All basicDIM Wireless devices 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 UrbaSens MOVE RF Controller ZG bDW module is fully compatible with networks which support up to 60 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.

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 needed.

basicDIM Wireless devices have an integrated 2.4 GHz antenna.
For optimum RF-performance, a special attention will have to be given when the device is integrated into a luminaire.
See chapter 6.2 Placement for further instructions.

basicDIM Wireless devices can be used very flexible for different use cases.
The operating modes (profiles) can be changed in the 4remote BT app.

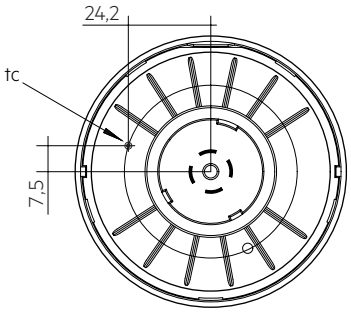
3. Thermal details and lifetime

3.1 Expected lifetime

Expected lifetime

Type	**ta**	**70 °C**
UrbaSens MOVE RF Controller ZG bDW	tc	72 °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

4.1 Digital output

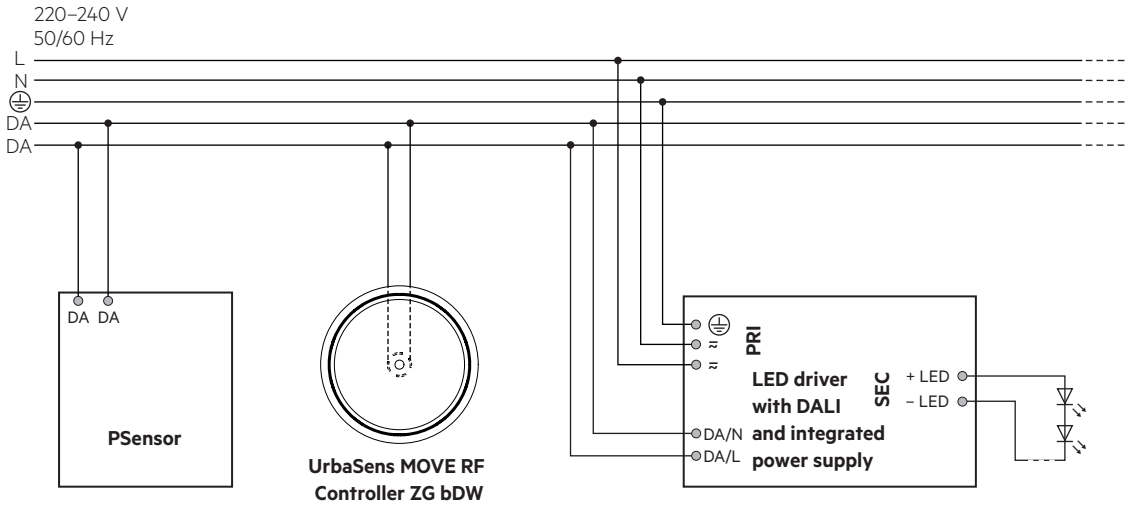
The UrbaSens MOVE RF Controller ZG bDW module draws its operating power directly from the bus. Ensure the supply of the external bus with a DALI compatible power supply.

4.2 Status LED

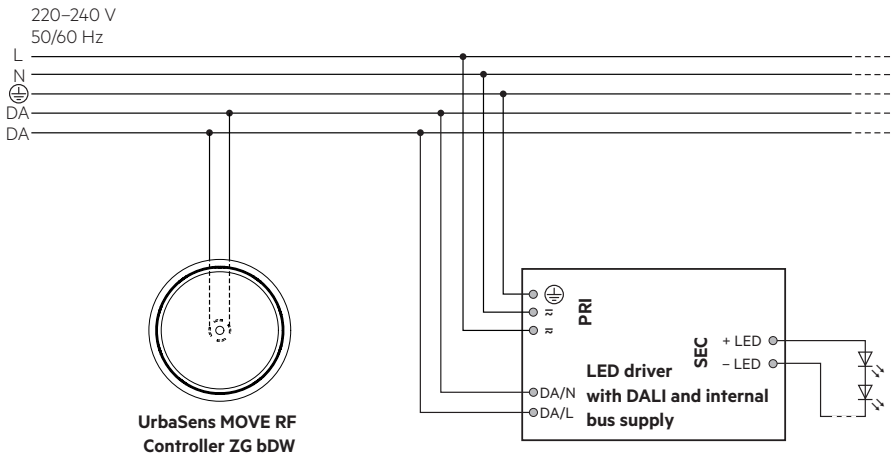
Orange LED lights permanently during operation.
Green LED flashes when „Identify“ is activated in the Tridonic app “4remote BT“.

5. Installation / wiring

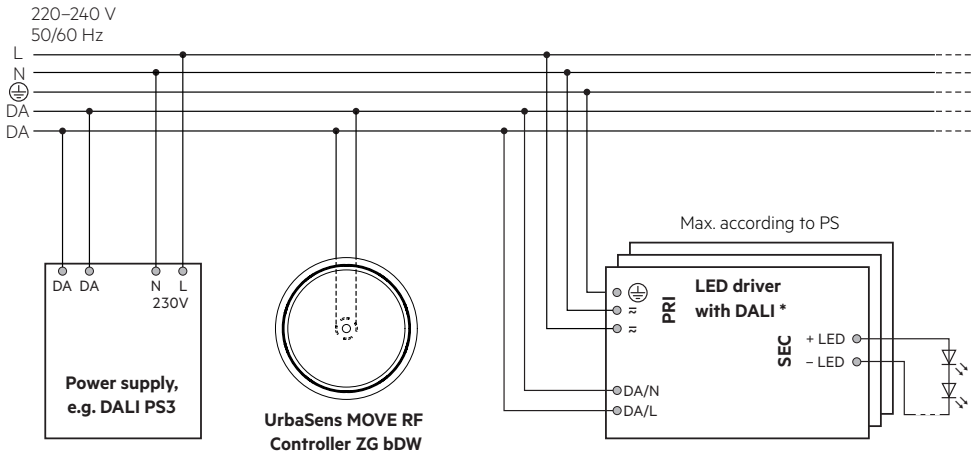
5.1 Wiring diagram with PSensor and internal bus supply



5.2 Wiring diagram with an internal bus supply



5.3 Wiring diagram with an external bus supply



* 2 single addresses / 4 group addresses (A0 … A3 / G0 … G3) controllable,
depending on the device profile of the basicDIM Wireless module.
The rest of the connected drivers can be controlled via broadcast – depending on the device profile.

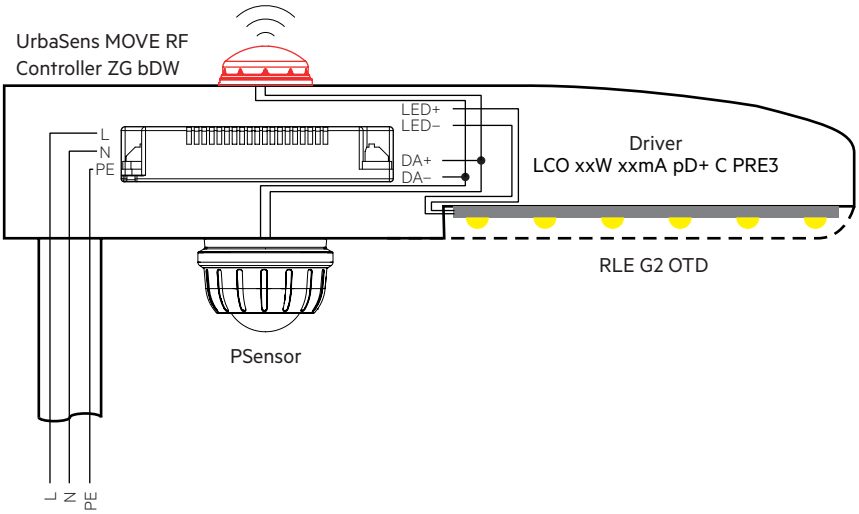
6. Installation UrbaSens MOVE RF Controller ZG bDW

It is supplied directly via the bus.
- The digital interface is not SELV.
  The installation instructions for mains voltage therefore apply.
- For a correct UrbaSens MOVE RF Controller ZG bDW operation use the device only within the ta window.
- Ensure correct assembly and locking of the UrbaSens MOVE RF Controller ZG bDW.
- Other RF signals may cause disturbances to the UrbaSens MOVE RF Controller ZG bDW communication.

System overview:

The UrbaSens MOVE RF Controller ZG bDW is optimized to be used in combination with Tridonic PSensor and the Streetlight LED driver PRE3 with internal power supply.
Following illustration visualizes the wiring of the components inside the luminaire.

Maximum allowed wire-length for the bus is 3 m.



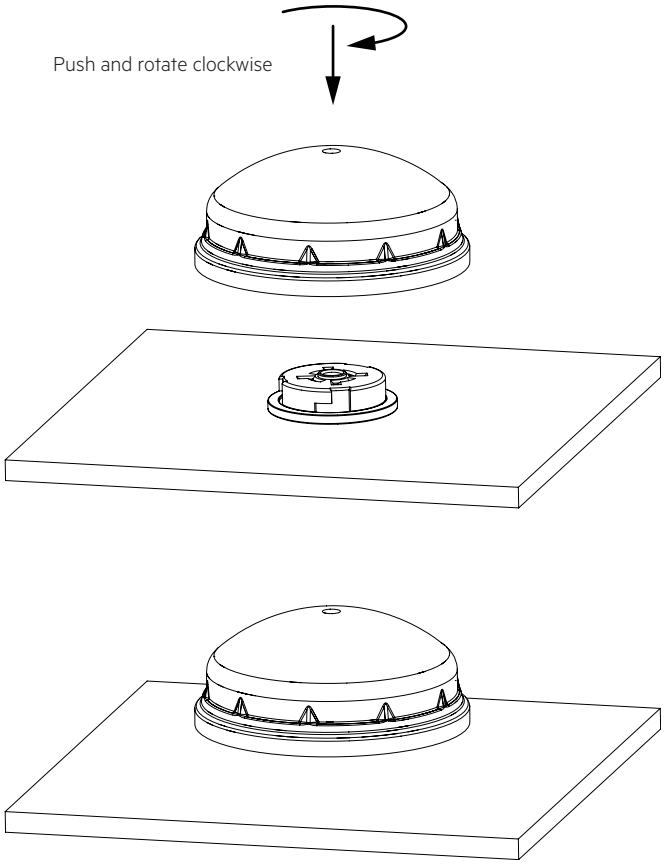
The UrbaSens MOVE RF Controller supports the Zhaga connectivity standard for Plug&Play luminaire extensions. This allows a toolless and flexible integration in luminaires.
The connection interface is designed according to Zhaga Book 18 Ed. 3.

Pin assignment RFNode

Pins	Assignment
Pin 1	not connected
Pin 2*	DA-
Pin 3*	DA+
Pin 4	General I/O, not connected

Use the same pin assignment for the Zhaga connector pins mounted in the luminaire.

6.1 Mounting on luminaire:

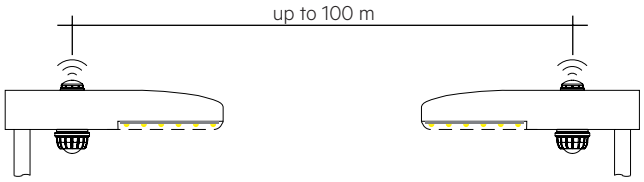


The UrbaSens MOVE RF Controller must lock.
Make sure that the dust and dirt protection, is not bent, no foreign parts between the seal and the fixture housing are located and that the protection fits the fixture.

6.2 Placement

Maximum radio range may be reduced if objects are located between the RFNodes or the RFNode is covered with dirt, dust, foliage and other impurities.

Max. radio range:



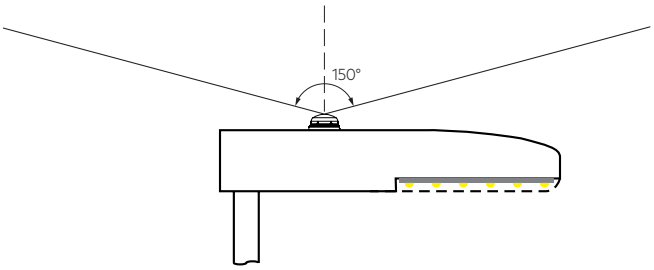
The range of the radio signal depends on the environment, weather conditions and installation height.
The influence of e.g. buildings, trees or bridges between the individual RFNodes as well as specific weather conditions such as rain and snow must be checked and accepted on site.

To ensure a good radio connection, do not cover the UrbaSens MOVE RF Controller with any materials!

7. Sensor function

7.1 Light measurement

The light measurement is detected in an angle of 150°.
The light sensor is located in the middle of the module.



8. Miscellaneous

8.1 Disposal of equipment

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

8.2 Conditions of use and storage

Humidity:	0 % up to max. 90 %, not condensed
Storage temperature:	-40 °C up to max. +85 °C

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

8.3 Additional information

The Bluetooth® word mark and logos are registered trademarks owned by the Bluetooth SIG, Inc. and any use of such marks by Zumtobel Group AG is under license.

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

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