RF-Controller ZG SIM 10y PR166203

Luminaire controller

Art. no. 96635511

Application

The RF-Controller ZG SIM 10y is a wireless lighting controller designed for managing lighting fixtures equipped with a Zhaga book 18 interface and Zhaga-D4i certified luminaires. It comes with a built-in prepaid SIM card offering 10 years of connectivity and a maximum data package of 500Mb. The controller can connect to any available mobile network, including the latest M2M networks like NB-IoT and LTE CAT-M1, with fallback support to EGPRS. The RF-Controller ZG SIM 10y is an integral part of the THORN UrbaSens CIVIC CONNECT system, making it ideal for remote locations or projects where a local mesh network with a gateway is not optimally suited. Additionally, it is well-suited for large-scale deployments due to its in-built connectivity and GNSS (Global Navigation Satellite System) chip, significantly reducing the commissioning steps.

Design notes

Type A as per DALI part 351 and equipped with a DALI power supply.
Can be combined with a motion sensor Type B as per DALI part 351.
Only reacts to motion sensor parts of the same DALI-2 network and cannot use neighbor triggering.
Can be remotely updated 'on-the-air,' and in case the mobile network or cloud server is inaccessible, the controller will continue to operate on its stored schedule.
Equipped with a tilt sensor.
Availability and quality of the mobile network must be checked prior to installation to ensure the best user experience.
The RF-Controller ZG SIM 10y must be installed outdoors with a direct sky orientation to optimize mobile and GNSS connectivity.
Features a QR-Code and a readable serial number for easy and fast registration of the device to its target CMS (Central Management System) organization and group.

Functional description

Pulls data from available memory banks of DALI part 251 "OEM info luminaire," DALI part 252 "Energy monitoring," and DALI part 253 "Diagnostic and Maintenance" from a Zhaga-D4i luminaire.
Controls soft switching on & off using an in-built light sensor or based on an Astro clock with settable shifts.
Supports up to 6 dimming steps per night and a weekly calendar.
Ability to assign or use DALI short addresses and assign an individual profile to each short address.
The RF-Controller ZG SIM 10y sends and receives data from THORN CMS. However, a separate license must be purchased in addition to use this feature. THORN UrbaSens CMS is a web application accessible from any browser with an internet connection. The user-friendly interface allows users to edit all controller parameters, analyze data such as power consumption, energy savings, and motion sensor trigger information, as well as receive system notifications.
UrbaSens CITY CONNECT and CIVIC CONNECT both utilize the same CMS, making it possible to manage everything from a single point.
For complete functionality and connectivity, make sure to use the RF-Controller ZG SIM 10y in conjunction with THORN UrbaSens CMS and its respective licenses

Mounting and installation instructions

Availability and quality of the mobile network must be checked prior to installation to ensure the best user experience.
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Technical data

Supply	.
Nominal input voltage	24 V DC
Permitted input voltage	18 - 30 V DC
Current consumption	Max. 125 mA
Power dissipation	< 2 W
Interface	.
Outputs	1 DALI compliant output with integrated bus supply (DA+ / DA-) Guaranteed supply current: 60mA for a maximum of 30 DALI loads maximum supply current 250 mA
LSI (Logical System Input)	0 - 30 V DC
LSI supply current	max. 10 mA
LSI low level	0 - 6 V DC or open
LSI high level	7 - 30 V DC or closed
Environmental conditions	.
Permissable ambient temperature	-30 - 60°C
Permissible relative humidity	10 - 90%, non-condensing
Storage	-40 - 60°C, 5 - 95% relative humidity, non-condensing
Housing	.
Material	Polycarbonate (PC), flame-retardent (UL94V0)
Dimensions	Ø84 x 48 mm
Weight	120 g
Port	Compatible with Zhaga Book 18
Degree of protection	IP 66
Impact resistance	IK 09
Wireless communication	.
Network	LTE Cat M1 / Cat NB2 / EGPRS
Frequency ranges	GSM / EDGE: 850 / 900 / 1800 / 1900 MHz Cat M1: B1 / B2 / B3 / B4 / B5 / B8 / B12 / B13 / B18 / B19 / B20 / B25 / B26 / B27 / B28 / B66 / B85 Cat NB2: B1 / B2 / B3 / B4 / B5 / B8 / B12 / B13 / B18 / B19 / B20 / B25 / B28 / B71 / B85
SIM card	Micro SIM or MFF2 eSIM (permanently installed)
Integrated twilight sensor	.
Default setting	Active Luminaire switches on at 30 lx Luminaire switches off at 45 lx
Further functions	.
Location	GPS, GLONASS, Galileo, QZSS
Accuracy	< 2.5m in the open air
Real time and astro clock	Battery capacity: 24 hours for real time clock Astro clock function to switch on at sunset / off at sunrise (summer and winter time is supported)
Data backup	Data is backed up in the event of a power failure
Other built-in sensors	Ambient light sensor (photocell), mast tilt sensor, temperature sensor