EcoStruxure™
Innovation At Every Level

RP-C-EXT-ZB-DALI

SpaceLogic™ RP Controller Expansion Modules

EcoStruxure™ Building

Introduction

SpaceLogic* RP-C-EXT-ZB-DALI Zigbee DALI module communicates with the SpaceLogic RP room controller over the Zigbee™ wireless protocol and provides I/O expansion for lighting control with DALI (Digital Addressable Lighting Interface).

The Zigbee DALI module enables control of different types of lights equipped with DALI electrical ballasts for 220–240 VAC line voltage. The Zigbee DALI module can distribute power (220–240 VAC) from an external power supply to the lights (DALI control gear).

The Zigbee DALI module supports LED lamp control gear (LED drivers) of Device Type 6 (DT6) and fluorescent lamp control gear of Device Type 0 (DT0).

Lighting can be controlled by the RP-C through motion detection and light intensity measurement provided by the Multi-sensor or by SpaceLogic Sensors connected to the RP-C.

* Formerly known as SmartX.

Features

The Zigbee DALI module has the following features:

- Wireless communication with the RP-C room controller
- Broadcast addressing of DALI devices

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- One DALI channel for power and control of 230 VAC powered lights (see output specification for limitations on inrush current)
- Power consumption monitoring per module
- Suitable for mounting in ceilings
- Integrated 2.4 GHz antenna
- Configuration through EcoStruxure Building Operation software
- Status LED for the device

DALI lighting control

The light output is connected to the power supply network via the Zigbee DALI module. For the DALI bus wires, you may use the standard installation equipment permitted for ELV (Extra-Low Voltage) installations. The DALI bus meets SELV (Safety Extra-Low Voltage) requirements.

The DALI interface has the following features:

- Using the DALI broadcast command, all lights connected to the output are controlled simultaneously for switching on/off and dimming.
- Management of ballast and lamp alarms
- Automatic addressing of lights

Part Numbers

Product	Part number
RP-C-EXT-ZB-DALI	SXWREZBDALI110001

Specifications

RP-C-EXT-ZB-DALI	
AC input	
Nominal voltage	230 VAC
Rated voltage range	220 to 240 VAC
Frequency	50/60 Hz
Maximum load current	5 A
Maximum power consumption	<1 W
Power input protection	MOV suppression and internal fuse
AC output	
Rated voltage range	220 to 240 VAC (same as power supply)
Maximum load current	5 A
Maximum inrush current	30 A (<5 ms)
Wireless connectivity	
Communication protocol	Zigbee 3.0
Frequency band	2.4 GHz (ISM band), compliant with IEEE Standard 802.15.4
Maximum output power	7 dBm
Effective indoor radio signal range	30 m (98 ft)
Antenna	Integrated antenna

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Environment	
Ambient temperature, operating	-20 °C to +50 °C (-4 °F to +122 °F)
Case temperature, maximum	75 °C (167 °F)
Ambient temperature, storage	-30 to +65 °C (-22 to +149 °F)
Humidity	Maximum 85 % RH non-condensing
Material	
Plastic flame rating	UL94 V-0
Ingress protection rating	IP 20
Mechanical	
Dimensions	155 W x 44 H x 30 D mm (6.1 W x 1.7 H x 1.2 D in.)
Weight	0.126 kg (0.278 lb)
Installation	Ceiling Indoor use only
Output terminals	Fixed Left side: 1 x 6-pin terminal block Right side: 1 x 2-pin terminal block
Compatibility	
EcoStruxure Building Operation	version 4.0.1 and later
Agency compliances	
EMC	ETSI EN 301 489-1 V2.1.1 (2017); ETSI EN 301 489-17 V3.1.1 (2017); BS/EN 61000-3-2:2014; BS/EN 61000-3-3:2013; BS/EN 55015:2013; BS/EN 61547:2009
Radio	ETSI EN 300 328 V2.1.1 (2016)
Safety standards	BS/EN 62493:2015; BS/EN 62479:2010; BS/EN 61347-1:2015; BS/EN 61347-2-11:2001
Power consumption monitoring	BS/EN 61010-1:2010
Hardware	
Main microcontroller	
CPU type	ARM Cortex-M4 single-core
Frequency	40 MHz
SRAM (embedded)	64 KB
Flash memory (embedded)	512 KB
Memory	
NOR flash memory	1 MB
DALI microcontroller	
CPU type	ARM Cortex-M0 single-core
Frequency	32 MHz

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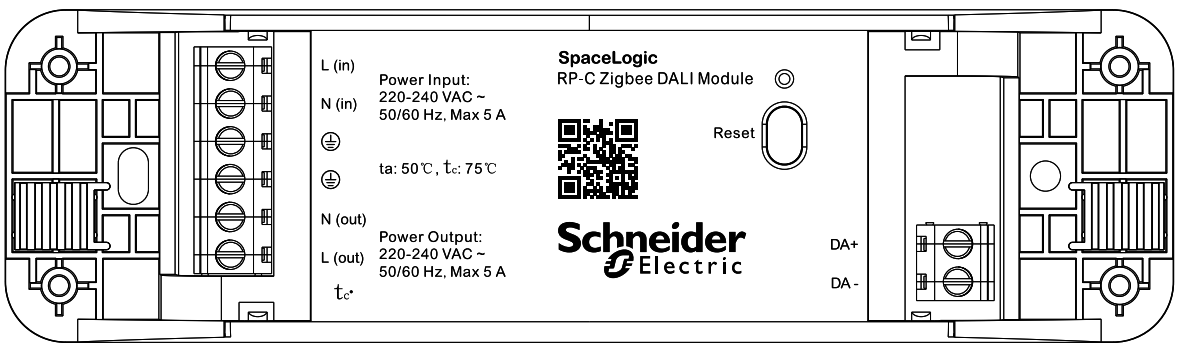
SRAM (embedded)	16 KB
Flash memory (embedded)	32 KB
Additional hardware	
Status indicator	LED (green and red) that shows the status of the device
Reset button	Push-button switch
Energy metering	
Measurement accuracy	See table below.

Measurement range	Measurement accuracy
< 50 W	+/-2 W
>= 50 W	+/-2 %

DALI light output	
Outputs	1 (1 DALI channel), terminals DA+ and DA-
DALI bus voltage	17 VDC
Maximum supply current	250 mA
Guaranteed supply current	90 mA
Maximum cable length	See the SpaceLogic Hardware Reference Guide
DALI devices	
Supported control gear	See table below.

Device type number	Type of control gear	Supported
Device Type 0 (DT0)	Fluorescent lamp control gear	Yes
Device Type 6 (DT6)	LED lamp control gear (LED drivers)	Yes

Terminals



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Regulatory Notices

Regulatory Compliance Mark (RCM) - Australian Communications and Media Authority (ACMA)
This equipment complies with the requirements of the relevant ACMA standards made under the Radiocommunications Act 1992 and the Telecommunications Act 1997. These standards are referenced in notices made under section 182 of the Radiocommunications Act and 407 of the Telecommunications Act.

UK Conformity Assessed
S.I. 2017/1206 - Radio Equipment Regulations 2017
S.I. 2016/1101 - Electrical Equipment (Safety) Regulations 2016
S.I. 2012/3032 - Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012
S.I. 2013/3113 - Waste Electrical and Electronic Equipment Regulations 2013
This equipment complies with the rules, of the UK regulations, for governing the UKCA Marking for the United Kingdom specified in the above directive(s).

CE - Compliance to European Union (EU)
2014/53/EU Radio Equipment Directive (RED)
2014/35/EU Low Voltage Directive
2011/65/EU Restriction of Hazardous Substances (RoHS) Directive
2015/863/EU amending Annex II to Directive 2011/65/EU
This equipment complies with the rules, of the Official Journal of the European Union, for governing the Self Declaration of the CE Marking for the European Union as specified in the above directive(s).

WEEE - Directive of the European Union (EU)
This equipment and its packaging carry the waste of electrical and electronic equipment (WEEE) label, in compliance with European Union (EU) Directive 2012/19/EU, governing the disposal and recycling of electrical and electronic equipment in the European community.

Zigbee Certified Product

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