

RP-C-EXT-0-10V-4-PD

SpaceLogic™ RP Controller Expansion Modules

EcoStruxure™ Building



0-10V light module with power distribution

Introduction

SpaceLogic* RP-C-EXT-0-10V-4-PD light module connects to the SpaceLogic RP room controllers and provides I/O expansion for 0-10V lighting control.

The 0-10V light module enables power supply and control of lights equipped with 0-10V ballasts.

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.

The 0-10V light module is part of the RP controller expansion modules for connected room solution and can be combined with other modules from this product range.

* Formerly known as SmartX.

Features

The 0-10V light module has the following features:

- Power and communications through the room bus
- Four light control outputs (the maximum number of lights per output is determined by the maximum inrush current)

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- Four digital inputs for connection of light switches and window contacts. The digital inputs are SELV (Safety Extra-Low Voltage).
- Measurement of energy consumption per module
- Suitable for mounting in ceilings
- Wieland connectors for quick and easy installation
- Engage mobile application for room comfort settings
- Status LED for the device
- One status LED for each light output
- Rotary switch for address configuration

0-10V lighting control

The light outputs are connected to the power supply network through the 0-10V light module. For the 0-10 VDC control signal wires, you may use the standard installation equipment permitted for ELV (Extra-Low Voltage) installations. The 0-10 VDC control signal meets SELV (Safety Extra-Low Voltage) requirements.

The analog interface has the following features:

- Independent control of each of the four outputs.
- The lights on each output belong to the same group and are thus controlled simultaneously (same ON / OFF / Dimming setpoint).
- Power to the ballasts is cut off when the lights are switched off.

Room bus

The RP controller room bus allows RP controller expansion modules to be connected to the controller for people counting, motion detection, luminosity and sound pressure level

measurements, Bluetooth Low Energy based applications, and control of electric lights and window blinds.

The RP-C Pro controller room bus supports up to nine connected RP controller expansion modules with the following restrictions:

- Maximum of two DALI light modules
- Maximum of two SMI blind modules
- Maximum of seven Multi-sensor or Insight-Sensor devices

The RP-C Advanced controller room bus supports up to six connected RP controller expansion modules with the following restrictions:

- Maximum of two DALI light modules
- Maximum of two SMI blind modules
- Maximum of four Multi-sensor or Insight-Sensor devices

Maximum total length of the room bus is 72 m (236 ft).

Engage mobile application

The Engage mobile application enables control of room temperature, fan speed, lights, and blinds/shades directly from a smartphone. A user can manage these settings when the application is connected to the RP-C controller.

The Engage mobile application is free and available for download from Google Play and Apple App Store.

For more information, see the Engage Specification Sheet.

Part Numbers

| Product | Part number |
|---|------------------|
| RP-C-EXT-0-10V-4-PD | SXWRE0104PD10001 |
| DIN-RAIL-CLIP, DIN-rail end clip package of 25 pieces | SXWDINEND10001 |

Specifications

| RP-C-EXT-0-10V-4-PD | |
|-----------------------------|----------|
| Electrical | |
| Nominal voltage | 230 VAC |
| Operating voltage range | +/-10 % |
| Frequency | 50/60 Hz |
| Maximum current consumption | 10 A |

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Room bus power consumption

0.3 W (24 VDC)

Protection

Maximum 16 A external fuse (circuit breaker) is needed

Overvoltage category

III

Environment

Ambient temperature, operating

0 to 50 °C (32 to 122 °F)

Ambient temperature, storage

-20 to +70 °C (-4 to +158 °F)

Humidity

20 to 90 % RH non-condensing

Pollution degree

2

Material

Plastic flame rating

UL94 V-0

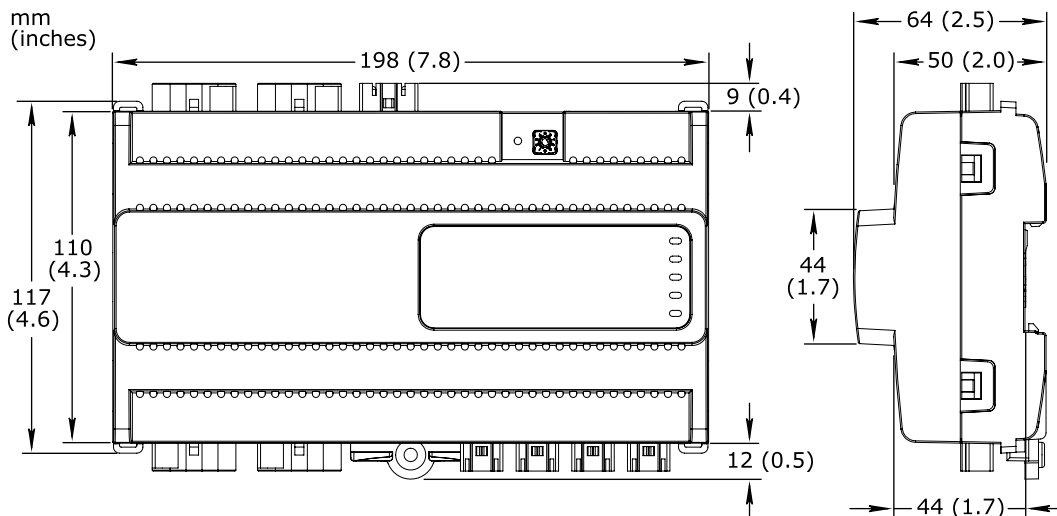
Ingress protection rating

IP 20

Mechanical

Dimensions

198 W x 110 H x 64 D mm (7.8 W x 4.3 H x 2.5 D in.)



Weight

0.418 kg (0.922 lb)

Installation

DIN rail or flat surface

Connectors

Power input: 1 x 3-pin Wieland GST15i3 connector
Light outputs: 4 x 5-pin Wieland GST15i5 connector
Digital inputs: 4 x 2-pin Wieland GST15i2 connector

Software compatibility

EcoStruxure Building Operation software

version 3.1 and later

Agency compliances

Emission

RCM; BS/EN 61000-6-3; BS/EN 50491-5-2; FCC Part 15, Sub-part B, Class B

Immunity

BS/EN 61000-6-2; BS/EN 50491-5-3

Safety standards

BS/EN 60730-1; BS/EN 60730-2-11; BS/EN 50491-3

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Communication ports

| | |
|----------|--|
| Room bus | RS-485 Dual RJ45 ports for daisy-chain configurations Use a Cat 5 (or higher) cable Maximum total length of the room bus: 72 m (236 ft) |
|----------|--|

| | |
|---------------------|--|
| Room bus protection | Transient voltage suppressors on communication and power signals |
|---------------------|--|

Hardware

| | |
|-------------------------|---|
| CPU type | ARM Cortex-M4 single-core |
| Frequency | 80 MHz |
| SRAM (embedded) | 320 KB |
| Flash memory (embedded) | 512 KB |
| NOR flash memory | 16 MB |
| Status indicator | LED (green and red) that shows the status of the device |
| Light status indicator | One status LED (green) for each output |
| Address switch | Rotary switch 0 to 9 |
| Set button | Push-button switch |

Energy metering

Energy consumption measurement

The energy consumption is measured in Wh, shared by the four outputs.

| | |
|--|--------------------------------------|
| Accuracy class (according to IEC 61557-12) | Active energy measurement: Class 1 |
| Typical measurement accuracy at room temperature | 20 to 100 W: 5% 100 to 3000 W: 1% |

0-10V light outputs

| | |
|-----------------------------|---|
| Outputs | 4, Light 1 to Light 4 |
| Output terminals | N, PE, L, AOn (n: 1 to 4), and COM |
| Analog output voltage | 0 to 10 VDC |
| Maximum source/sink current | 10 mA per output |
| Power distribution | 230 VAC (same voltage as power supply) Maximum 5 A load per output Maximum 10 A total load for the 4 outputs Maximum 165 A inrush current (<20 ms) per output Maximum 800 A inrush current (<200 µs) per output |

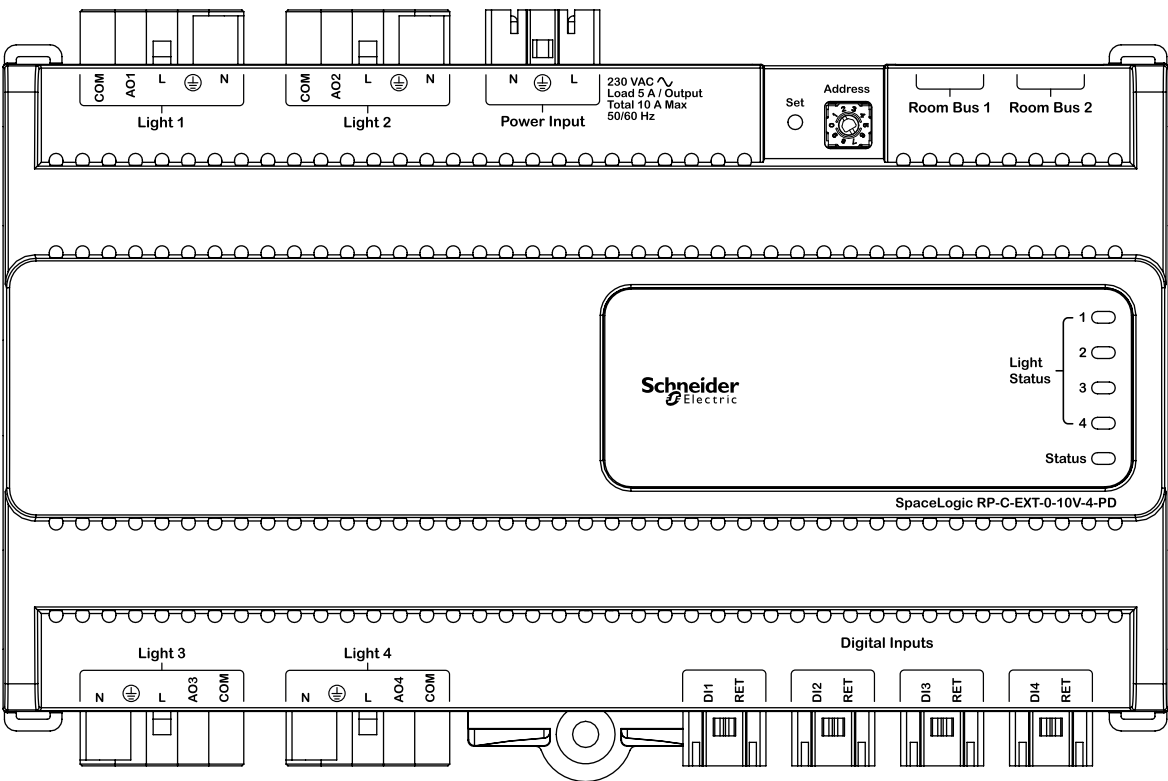
Digital inputs

| | |
|--------|--|
| Inputs | 4, DI1 to DI4 |
| Range | Dry contact, 0 to 5.0 VDC, 2.2 mA, SELV (Safety Extra-Low Voltage) |

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Connections

Follow proper installation wiring diagrams and instructions. For more information on wiring, see the SpaceLogic Hardware Reference Guide.



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Required External Connectors

| Use | Part number | Reference | Connector type | Suitable for cable diametersmm (inches) | Marking | Color of coding /housing | Minimum order quantity |
|--------------------|---------------------|---------------|----------------|---|----------------------------------|--------------------------|------------------------|
| Power supply input | SXWRPCCON WWPOW | 91.931.4053.1 | Female | 5.6–11 (0.22–0.43) | L, PE, N | Black /Black | 100 |
| Light outputs | SXWRPCCON WWLIGHTPD | 91.952.4453.0 | Male | 8.5–12.5 (0.34–0.49) | N, PE, L, D2, D1: AO1..4 D1: COM | Pastel blue /White | 50 |
| Digital inputs | SXWRPCCON WDI | 91.921.2353.0 | Female | 3.4–5.5 (0.14–0.21) | 1, 2 1: DI1..4 2: RET | Light blue /White | 100 |

The external connectors need to be ordered separately. The connectors can be ordered in quantities of 50 or 100 from Schneider Electric using the above part numbers. The

connectors can also be ordered directly from Wieland using the above reference numbers. For more information, see the Wieland Electric web site.

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Regulatory Notices



Federal Communications Commission

FCC Rules and Regulations CFR 47, Part 15, Class B

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. (2) This device must accept any interference received, including interference that may cause undesired operation.

Industry Canada

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.



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.



CE - Compliance to European Union (EU)

2014/30/EU Electromagnetic Compatibility Directive

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.



UK Conformity Assessed

S.I. 2016/1091 - Electromagnetic Compatibility Regulations 2016

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).

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