

RP-C-EXT-BL-4-HV-PD

RP Series Expansion Blind Modules



Blind module with power distribution for high voltage

Introduction

The RP-C-EXT-BL-4-HV-PD blind module connects to the RP-C room controllers and provides I/O expansion for high-voltage blind control.

The high-voltage blind module enables control and power supply (230 VAC) of motorized window blinds and shutters.

The blind module is part of the RP Series expansion modules for connected room solution and can be combined with other modules from this product range.

Features

The high-voltage blind module has the following features:

- Power and communications through the room bus
- Four motor control outputs for control of 230 VAC powered blinds (opening, closing, positioning)
- Four digital inputs for connection of blind switches and window contacts. The digital inputs are SELV (Safety Extra-Low Voltage).
- Measurement of energy consumption per module
- Wieland connectors for quick and easy installation
- Engage mobile application for room comfort settings
- Status LED for the device
- One status LED for each blind output
- Rotary switch for address configuration

Room bus

The RP-C room bus allows RP Series expansion modules and multi-sensors to be connected to the controller for motion detection, luminosity measurements, communication with remote control (RP-C-RC-BLE), and control of electric lights and window blinds.

The RP-C room bus supports up to six connected RP Series expansion modules and multi-sensors with the following restrictions:

- Maximum of two DALI light modules
- Maximum of two SMI blind modules
- Maximum of four multi-sensors

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.

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Part Numbers

Product	Part number
RP-C-EXT-BL-4-HV-PD	SXWREB4HVPD10001
DIN-RAIL-CLIP, DIN-rail end clip package of 25 pieces	SXWDINEND10001

Specifications

Electrical

Nominal voltage.....	230 VAC
Operating voltage range.....	+/-10 %
Frequency.....	50/60 Hz
Maximum current consumption.....	8 A
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

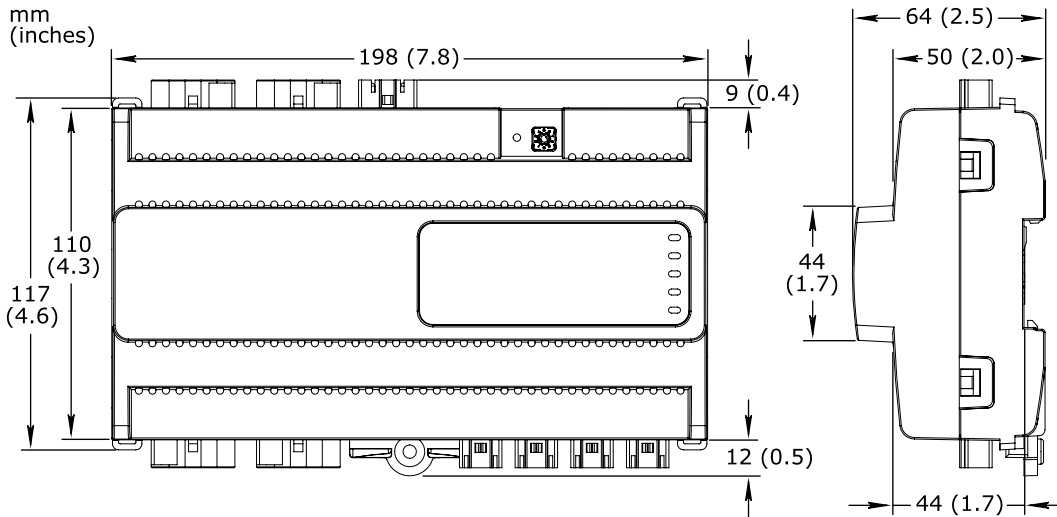
Plastic flame rating.....	UL94 V-0
Ingress protection rating.....	IP 20

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Mechanical

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



Weight 0.437 kg (0.963 lb)

Installation DIN rail or flat surface

Connectors Power input: 1 x 3-pin Wieland GST15i3 connector
 Blind outputs: 4 x 4-pin Wieland GST15i4 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; EN 61000-6-3; EN 50491-5-2; FCC Part 15, Sub-part B, Class B

Immunity EN 61000-6-2; EN 50491-5-3

Safety standards EN 60730-1; EN 60730-2-11; EN 50491-3

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

Blind status indicator One status LED (green) for each output

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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%

Blind outputs

Motor control outputs for 230 VAC powered blind motors with automatic end stop detection. An end stop at the top position is required. An end stop at the bottom position is recommended.

Outputs 4, Blind 1 to Blind 4
 Output terminals N, PE, ↑ (UP), and ↓ (DOWN)
 Power distribution 230 VAC (same voltage as power supply)
 Maximum 2 A load per output
 Maximum 8 A total load for the 4 outputs

Digital inputs

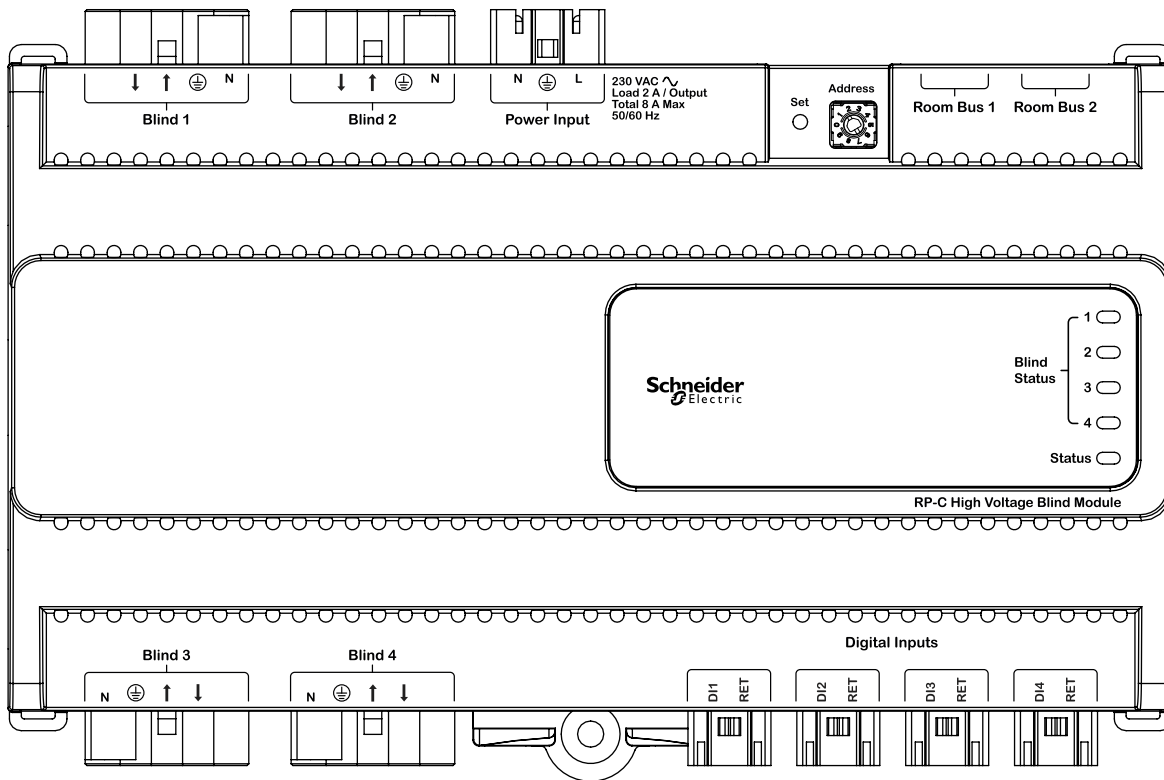
Inputs 4, DI1 to DI4
 Range Dry contact, 0 to 5.0 VDC, 2.2 mA, SELV (Safety Extra-Low Voltage)

Connections

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

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Required External Connectors

Use	Part number	Reference	Connector type	Suitable for cable diameters mm (inches)	Marking	Color of coding /housing	Minimum order quantity
Power supply input	SXWRPCCONW WPOW	91.931.4053.1	Female	5.6–11 (0.22–0.43)	L, PE, N	Black /Black	100
Blind outputs	SXWRPCCONWB LHV	91.942.4053.1	Male	8.5–12.5 (0.34–0.49)	N, PE, 1, 2 1: ↑ (UP) 2: ↓ (DOWN)	Black /Black	50
Digital inputs	SXWRPCCONW DI	91.921.2353.0	Female	3.4–5.5 (0.14–0.21)	1, 2 1: DI1..4 2: RET	Light blue /White	100

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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.

Compatibility with the type and characteristics of the blind motors should be verified at an early stage in your project. In case of uncertainty, additional testing may be required.

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) per the provisions of the following standards: EN 60730-1, EN 60730-2-11, and EN 50491-3 Safety Standards.



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.