

RP-C-EXT-KNX

SpaceLogic™ RP Controller Expansion Modules

EcoStruxure™ Building



Introduction

SpaceLogic* RP-C-EXT-KNX KNX Modbus gateway connects to the SpaceLogic RP controllers and provides an interface between the controller and KNX devices such as push-buttons, sensors, and control units for lights, blinds, and room temperature.

The KNX Modbus gateway allows bi-directional control and monitoring of all parameters and functions of the connected KNX devices, which can be used to control lights and blinds in a room.

The KNX Modbus gateway is a Modbus to KNX interface that connects to one of the RP-C controller's configurable RS-485

ports. The KNX Modbus gateway provides a galvanic isolation between the KNX bus and the RP-C Modbus (RS-485) network.

The KNX Modbus gateway can be programmed through the ETS® software for installation, configuration, and commissioning of KNX devices. The assignment of KNX objects to Modbus registers is configured through parameters in the ETS product database.

The KNX Modbus gateway supports KNX long frames.

The KNX Modbus gateway is designed for installation on a DIN rail with a width of 1 unit (18 mm or 0.7 inch).

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The KNX Modbus gateway has two push-buttons and three LEDs on the front to enable local operation of the device and status indication.

The KNX Modbus gateway can be used with a standard Schneider Electric KNX power supply to power the KNX devices on the KNX bus.

* Formerly known as SmartX.

Features

The KNX Modbus gateway has the following features:

- Up to 250 KNX data points (10 KNX devices) can be connected to the KNX Modbus gateway
- Power and data communication through the RP-C Modbus (RS-485) network
- Configuration through EcoStruxure Building Operation software
- Programming through ETS© software
- KNX long frames are supported

- Designed for DIN rail installation
- Push-buttons for synchronization (write) and read of all KNX group objects
- Status LEDs for device mode, KNX bus, and Modbus communication

Modbus network

The RP-C controller has two RS-485 ports, which can be configured for different types of networks. When configured for Modbus communications, the RP-C controller also provides 24 VDC power supply to the KNX Modbus gateway through the RS-485 interface.

The Modbus RTU protocol is used for the RP-C Modbus network. RS-485 is the electrical interface.

The KNX Modbus gateway has two 3-position pluggable screw terminal blocks for connection to the RP-C Modbus (RS-485) network. The RP-C controller's RS-485 ports are RJ45 ports.

Maximum one KNX Modbus gateway can be connected to each RP-C controller.

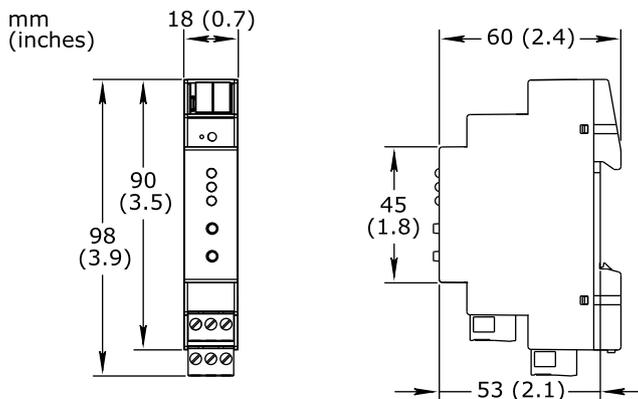
Part Numbers

Product	Part number
RP-C-EXT-KNX	SXWREKNX10001

Specifications

RP-C-EXT-KNX	
Electrical	
DC input supply voltage	24 VDC Powered by the RP-C
Maximum power consumption	<0.24 W from the KNX bus <0.24 W from the RP-C
Environment	
Ambient temperature, operating	-5 °C to +45 °C (23 °F to +113 °F)
Ambient temperature, storage	-25 to +70 °C (-13 to +158 °F)
Humidity	5 to 93 % RH non-condensing
Material	
Ingress protection rating	IP 20
Mechanical	
Dimensions	18 W x 90 H x 60 D mm (0.7 W x 3.5 H x 2.4 D in.)

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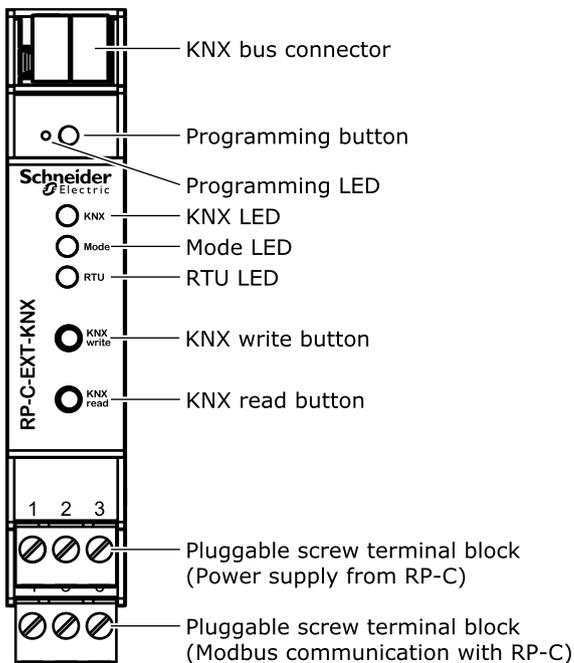


Weight	50 g (1.76 oz)
Installation	DIN rail
Software requirements	
EcoStruxure Building Operation software	version 3.2 and later
ETS® software	version 5 and later
RP controller firmware	version 3.02 and later
Agency compliances	
Emission	BS/EN 61000-6-3:2007 + A1:2011; BS/EN 50491-5-2:2010
Immunity	BS/EN 61000-6-2:2005; BS/EN 50491-5-3:2010
Safety standards	IEC/BS/EN 63044-3:2018
RP-C Modbus communications	
Communication protocol (configurable)	Modbus RTU
Electrical interface	RS-485 Maximum total length of the RP-C Modbus (RS-485) network: 72 m (236 ft)
KNX bus communications	
Transmission media	Twisted pair (TP)
Maximum APDU length	55
Device model	System B
Hardware	
CPU type	ARM Cortex-M0+ single-core
Frequency	14.7456 MHz
SRAM (embedded)	32 KB
Flash memory (embedded)	256 KB
Status indicator	LED (green and red) that shows the KNX communication status LED (green and red) that shows the Modbus RTU communication status LED (green and red) that shows the device mode (operating or programming mode) One LED (red) for programming mode

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Buttons	One push-button for synchronization of KNX objects (writing all KNX group objects) One push-button for reading all KNX group objects One button for programming mode
Connectors	4-conductor KNX connectors with PUSH WIRE® connection, 2-pole, dark gray/red
Terminal blocks	3-position pluggable screw terminal block for power supply from the RP-C 3-position pluggable screw terminal block for Modbus communication with the RP-C Wire cross-sectional area: 0.34 to 2.5 mm ² (22 to 14 AWG)

Connections, LEDs, and Buttons



RP-C-EXT-KNX connections, LEDs, and buttons

Supported KNX Push-buttons

Product	Part number
KNX Push-button PRO ^a	MTN6180
KNX Multitouch PRO ^a	MTN6215
KNX Push-button	MTN617XXX MTN625XXX MTN627XXX MTN628XXX
KNX Push-button with room temperature control unit	MTN6212 MTN6214

a) Limited functionality supported.

Supported KNX Sensors

Product	Part number
KNX ARGUS 180, flush-mounted	MTN6318..
KNX ARGUS 180/2.20 m, flush-mounted	MTN6317..

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Continued

Product	Part number
KNX ARGUS 220, surface-mounted	MTN6325..
KNX ARGUS Presence 180/2.20 m, flush-mounted	MTN6304..
KNX High Bay presence detector, flush-mounted	MTN6304-0019
KNX High Bay presence detector, surface-mounted	MTN6354-0019
KNX Mini presence detector, flush-mounted	MTN6303-0019
KNX ARGUS Presence Basic, flush-mounted	MTN6307..
KNX ARGUS Presence, flush-mounted	MTN6308..
KNX ARGUS Presence with light control and IR receiver, flush-mounted	MTN6309..

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Regulatory Notices

CE

CE - Compliance to European Union (EU)

2014/30/EU Electromagnetic Compatibility Directive (EMCD)
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
CA**

UK Conformity Assessed

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



KNX Certified Product.

This product has been registered and certified by the KNX Association.
All KNX registered and certified devices are listed on the KNX Association website www.knx.org.

www.se.com/buildings

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