RP-C

SmartX IP Controller

Introduction

SmartX IP Controller – RP-C is a room-purpose, fully programmable, IP based field controller that suits a wide range of HVAC applications. The RP-C can either be used as a standalone BACnet/IP field controller or as part of an EcoStruxure BMS with a SmartX AS-P or AS-B server or an Enterprise Server as the parent server. The RP-C features a wireless chip that allows the mobile commissioning application to connect directly to the controller.

The RP-C has the following features:

- IP enabled with dual-port Ethernet switch
- Full range of controller models
- Versatile onboard I/O point mix
- Optional covers
- Wireless connectivity
- Highly available
- Sensor bus for living space sensors
- Room bus for future support of connected room solutions
- Mobile commissioning application
- Full EcoStruxure Building Operation software support, providing efficient engineering tools

IP connectivity and flexible network topologies

The SmartX IP controllers are based on open protocols that simplify interoperability, IP configuration, and device management:

- IP addressing
- BACnet/IP communications
- DHCP for easy network configuration

The SmartX IP controllers have a dual-port Ethernet switch, which enables flexible network topologies:

- Star
- Daisy chain
- Rapid Spanning Tree Protocol (RSTP) ring

In a star topology, the controller and the parent EcoStruxure BMS server are individually connected to an Ethernet switch. Daisy-chain multiple controllers together to reduce installation time and cost. Use an RSTP ring topology when you want a non-operational controller to be detected and recovered quickly and efficiently.

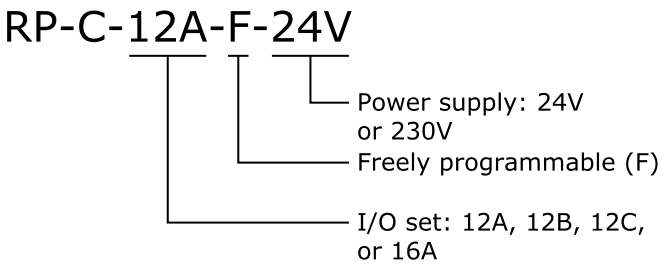
Full range of controller models

The RP-C comes in four different models, which offer four different sets of I/O point types, named 12A, 12B, 12C, and 16A. The RP-C-12A, -12B, and -12C models support 24 VAC/DC power supply, whereas the RP-C-16A model is a 230 VAC model.

03-30017-01-en, April 2019

RP-C

SmartX IP Controller



Freely programmable

The freely programmable RP-C models provide flexibility through support of both Script and Function Block programming options. The RP-C promotes efficiency and standardization through the use of standard controller applications.

Models with a versatile mix of I/O points

The RP-C-12A, -12B, -12C, and -16A models provide 12 or 16 I/O points, consisting of four different sets of I/O point types. The versatile mix of I/O point types match a wide variety of applications. The universal inputs/outputs are highly flexible and can be configured as either inputs or outputs.

I/O Point Types by RP-C Models

I/O Point Types	RP-C-12A model	RP-C-12B model	RP-C-12C model	RP-C-16A model
Universal I/O Type Ub	8	8	4	8
Solid-state relay outputs (MOSFET)	4	-	4	4
Relay outputs Form A	-	3	3	3
High power relay outputs Form C	-	1	1	1

Configurations by I/O Point Types

Configurations	Universal I/O Type Ub	Solid-state Relay Outputs (MOSFET)	Relay Outputs Form A	High Power Relay Outputs Form C
Digital inputs	yes	-	-	-
Counter inputs	yes	-	-	-
Supervised inputs	yes	-	-	-
Voltage inputs (0 to 10 VDC)	yes	-	-	-
Current inputs (0 to 20 mA)	yes	-	-	-
Temperature inputs	yes	-	-	-
Resistive inputs	yes	-	-	-
2-wire RTD temperature inputs	yes	-	-	-

03-30017-01-en, April 2019

RP-C

SmartX IP Controller

Continued

Configurations	Universal I/O Type Ub	Solid-state Relay Outputs (MOSFET)	Relay Outputs Form A	High Power Relay Outputs Form C
Voltage outputs (0 to 10 VDC)	yes	-	-	-
Digital outputs	-	yes	yes	yes
Digital pulsed outputs	-	yes	yes	yes
PWM outputs	-	yes	yes	yes
Tristate outputs	-	yes	yes	-
Tristate pulsed outputs	-	yes	yes	-

Universal inputs/outputs

The universal inputs/outputs are ideal for any mix of temperature, pressure, flow, status points, and similar point types in a building control system.

As counter inputs, the universal inputs/outputs are commonly used in energy metering applications. As RTD inputs, they are ideal for temperature points in a building control system. As supervised inputs, they are used for security applications where it is critical to know whether or not a wire has been cut or shorted. These events provide a separate indication of alarms and events in the system.

For all analog inputs, maximum and minimum levels can be defined to automatically detect over-range and under-range values.

The universal inputs/outputs are capable of supporting analog outputs of type voltage outputs. Therefore, the universal inputs/outputs support a wide range of devices, such as actuators.

Solid-state relay outputs

The solid-state relay (SSR) outputs can be used in many applications to switch 24 VAC or 24 VDC on or off for external loads such as actuators, relays, or indicators. SSRs are silent and are not adversely affected by relay contact wear.

Relay outputs

The relay outputs support digital Form A point types. The Form A relays are designed for direct load applications.

High power relay output

The high power relay output is of type Form C. The normally-open (NO) contact is ideal for switching resistive loads of up to 12 A, such as electrical heating elements. The normally-closed (NC) contact can be used to switch inductive loads of up to 3 A.

Optional covers

All RP-C models can be equipped with optional covers to reduce access to the screw terminals and wires.

RP-C with equipped with optional covers

RP-C

SmartX IP Controller

Wireless connectivity

RP-C is a Bluetooth Low Energy (BLE) enabled product. You can use this wireless connectivity option to connect the RP-C with a smartphone or tablet running the eCommission SmartX Controllers mobile application.

Highly available

The SmartX IP controllers support local trends, schedules, and alarms, enabling local operation when the controller is offline or used in standalone applications.

The battery-free power backup of the memory and real-time clock helps prevent data loss and allows seamless and quick recovery after a power disruption.

In WorkStation, you to update the firmware of multiple SmartX IP controllers at the same time and with minimum down time. The EcoStruxure BMS server keeps track of the installed firmware to support backup, restore, and replacement of the controllers and sensors. The server can host controllers of different firmware versions.

Sensor bus for living space sensors

The SmartX IP controllers provide an interface designed for the SmartX Sensor family of living space sensors. The SmartX Sensors offer an efficient way to sense the temperature, humidity, CO_2, and occupancy in a room. The SmartX Sensors are available with different combinations of sensor types and various covers and user interface options, such as touchscreen, setpoint and override buttons, and blank covers.

SmartX Sensors

The sensor bus provides both power and communications for up to four sensors that are daisy-chained using standard Cat 5 (or higher) cables. The maximum number of sensors that can be connected to a controller varies depending on the sensor model and the combination of cover and sensor base type:

- Blank covers: Up to four sensors of any combination of sensor base types
- 3-button and touchscreen covers:
  - Up to two sensor bases with CO_2 option
  - Up to four sensor bases without CO_2 option
- SmartX LCD temperature sensors: Up to four sensors are supported

The maximum total length of the sensor bus is 61 m (200 ft). For more information, see the SmartX Living Space Sensors Specification Sheet.

Room bus for future support of connected room solutions

The Room bus means the RP-C is hardware-prepared for future support of connected room solutions that include equipment for control of electric lights, window blinds.

Mobile commissioning application

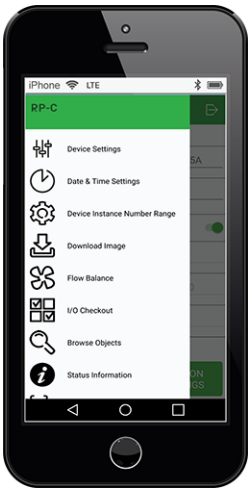
The eCommission SmartX Controllers mobile application is designed for local configuration, field deployment, and commissioning of SmartX IP controllers. The mobile application reduces the commissioning time, allows flexibility in project execution, and minimizes dependencies on network infrastructure.

The mobile application is designed for use with Android, Apple (iOS), and Microsoft Windows 10 devices. For more information, see the eCommission SmartX Controllers Specification Sheet.

03-30017-01-en, April 2019

RP-C

SmartX IP Controller



eCommission SmartX Controllers mobile app

Using the eCommission SmartX Controllers mobile application, you can connect to one or many RP-Cs. You can connect to a single RP-C using the controller's built-in Bluetooth connectivity or using the eCommission Bluetooth Adapter connected to a SmartX Sensor. Using a wireless access point or a network switch, you can connect to a network of RP-Cs on the local IP network.

Device configuration

With the eCommission SmartX Controllers mobile application, you can easily discover SmartX IP controllers on the IP network. You can change the configuration of each controller, including the BACnet and IP network settings, location, and parent server. To save engineering time, you can save common device settings and then reuse them for controllers of the same model.

Field deployment and I/O checkout

The eCommission SmartX Controllers mobile application does not require an EcoStruxure BMS server or a network infrastructure to be in place. You can use the mobile application to load the controller application directly into the local SmartX IP controller and deploy the controller. The controller application can be created offline using Project Configuration Tool or WorkStation. You can use the mobile application to change the behavior of an installed standard controller application, such as configuring temperature setpoints. You can also perform an I/O checkout to verify that the controller's I/O points are configured, wired, and operating correctly.

Full EcoStruxure Building Operation software support

The power of the RP-C controller is fully realized when it is part of an EcoStruxure BMS, which provides the following benefits:

- WorkStation/WebStation interface
- Script and Function Block programming options
- Device discovery
- Engineering efficiency
- Preconfigured HVAC applications

WorkStation/WebStation interface

WorkStation and WebStation provide a consistent user experience regardless of which EcoStruxure BMS server the user is logged on to. The user can log on to the parent EcoStruxure BMS server to engineer, commission, supervise, and monitor the SmartX IP controller and its I/O as well as its attached SmartX Sensors. For more information, see the WorkStation and WebStation specification sheets.

Script and Function Block programming options

The freely programmable RP-C controller models have both Script and Function Block programming options. Existing programs can easily be reused between the EcoStruxure BMS server and the controller.

Device discovery

The enhanced Device Discovery in WorkStation enables you to easily identify SmartX IP controllers on a BACnet network and to associate the controllers with their parent server.

Engineering efficiency

The engineering and maintenance of SmartX IP controllers can be done very efficiently using the EcoStruxure Building Operation reusability features. With these features, you can create library items (Custom Types) for a complete controller application that contains programs and all necessary objects such as trends, alarms, and schedules. The controller application in the Custom Types library is reusable across all controllers of the same model. You can use the controller application as a base for creating new controllers intended for similar applications. You can then edit the controller application, and the changes are automatically replicated to all controllers, while each controller keeps its local values.

03-30017-01-en, April 2019

RP-C

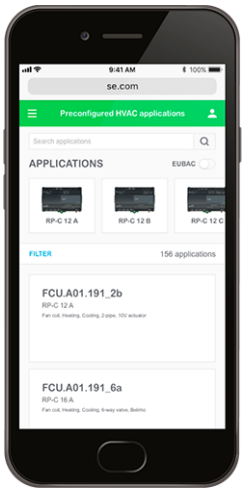
SmartX IP Controller

WorkStation supports both online and offline engineering of SmartX IP controllers. You can make the configuration changes online or use database mode to make the changes offline. In database mode, the changes are saved to the EcoStruxure Building Operation database so that you can apply the changes to the controllers later.

Project Configuration Tool enables you to perform all the engineering off site, without the need for physical hardware, which minimizes the time you need to spend on site. You can run the EcoStruxure BMS servers virtually and engineer the SmartX IP controllers before you deploy your server and controller applications to the servers and controllers on site. For more information, see the Project Configuration Tool specification sheet.

Preconfigured HVAC applications

To improve engineering efficiency and standardize engineering practices, fully designed and tested HVAC applications are available at ecobuilding.schneider-electric.com/design/apps-selector for use with RP-C. This library contains applications for different RP-C models and application types, such as fan coil units and ceiling solutions. These preconfigured HVAC applications are packages that include all software programs, graphics, alarms, and documentation such as functional specifications and I/O wiring schedules needed for your projects. The online repository can be accessed using common web browsers on Windows PCs as well as mobile devices running Apple iOS 11.3 (or later) and Android 6.0 Marshmallow (or later). The download page provides an application selector to help you download an application that meets the needs for a specific room solution with regards to application type, actuator type, fan control type, and sensor type. You can search and view the applications without having to log on to the online repository. To download or email an application, you need to log on or have a valid subscription through single sign-on via a Schneider Electric Exchange account. Before you make your choice, you can view all assets included in the application package. You can download or email an export file, an image file, a selection of the available files, or the whole package. The export file is used when you deploy RP-C from WorkStation, while the image file is used when you deploy RP-C from the eCommission SmartX Controllers mobile app (version 1.4 or later). Subscribe to the application to get a notification when the application is updated.



Download page application selector

03-30017-01-en, April 2019

RP-C

SmartX IP Controller

Part Numbers

Product	Part number
RP-C-12A-F-24V	SXWRCF12A10001
RP-C-12B-F-24V	SXWRCF12B10001
RP-C-12C-F-24V	SXWRCF12C10001
RP-C-16A-F-230V	SXWRCF16A10002
Optional covers	SXWRPCCOV10001
DIN-RAIL-CLIP, DIN-rail end clip package of 25 pieces	SXWDINEND10001
eCommission Bluetooth Adapter	SXWBTAECXX10001

Specifications

AC input

RP-C-12A, -12B, and -12C models

Nominal voltage.....24 VAC
Operating voltage range.....+/-15 %
Frequency.....50/60 Hz
Maximum power consumption.....23 VA
Power input protection.....MOV suppression and internal fuse

RP-C-16A model

Nominal voltage.....230 VAC
Operating voltage range.....+/-10 %
Frequency.....50/60 Hz
Maximum power consumption.....65 VA
Power input protection.....MOV suppression and internal fuse
.....Separate PTC thermistor used as a resettable fuse for 24 VAC Out only
Overvoltage category.....III
Pollution degree.....2

DC input

RP-C-12A, -12B, and -12C models

Nominal voltage.....24 to 30 VDC
Operating voltage range.....21 to 33 VDC
Maximum power consumption..... 14 W
Power input protection.....MOV suppression and internal fuse

AC output

RP-C-16A model

Type.....Isolated output

03-30017-01-en, April 2019

RP-C

SmartX IP Controller

Nominal voltage.....24 VAC
Frequency..... Same frequency as the power supply (50/60 Hz)
Output power rating .....19 VA

Environment

RP-C-12A, -12B, and -12C models

Ambient temperature, operating .....0 to 50 °C (32 to 122 °F) at normal operation
.....-40 to +60 °C (-40 to +140 °F) for rooftop applications, horizontal installation only
Ambient temperature, storage .....-20 to +70 °C (-4 to +158 °F)
Maximum humidity.....95 % RH non-condensing

RP-C-16A model

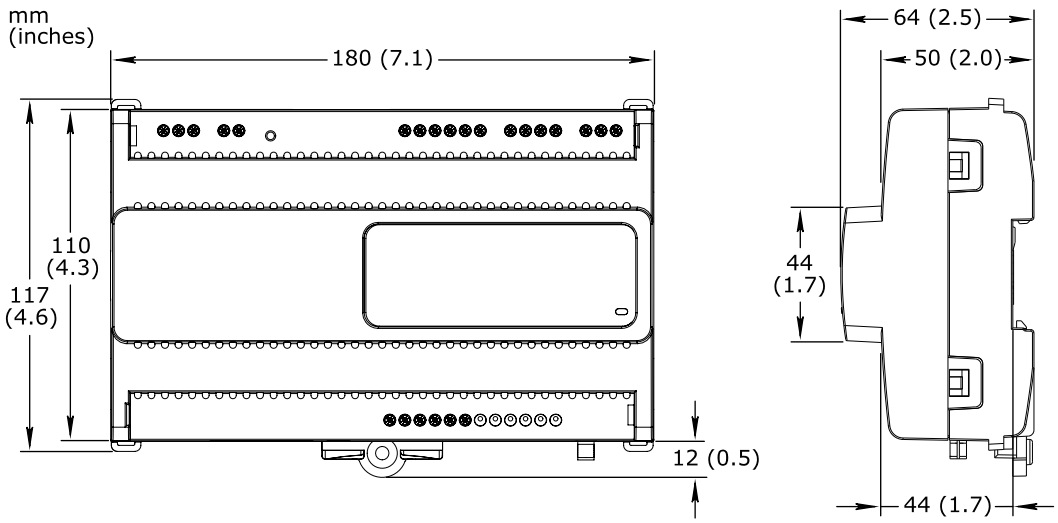
Ambient temperature, operating .....0 to 50 °C (32 to 122 °F)
Ambient temperature, storage .....-20 to +70 °C (-4 to +158 °F)
Maximum humidity.....95 % RH non-condensing

Material

Plastic flame rating.....UL94-5VB
Ingress protection rating .....IP 20

Mechanical

Dimensions..... 180 W x 110 H x 64 D mm (7.1 W x 4.3 H x 2.5 D in.)



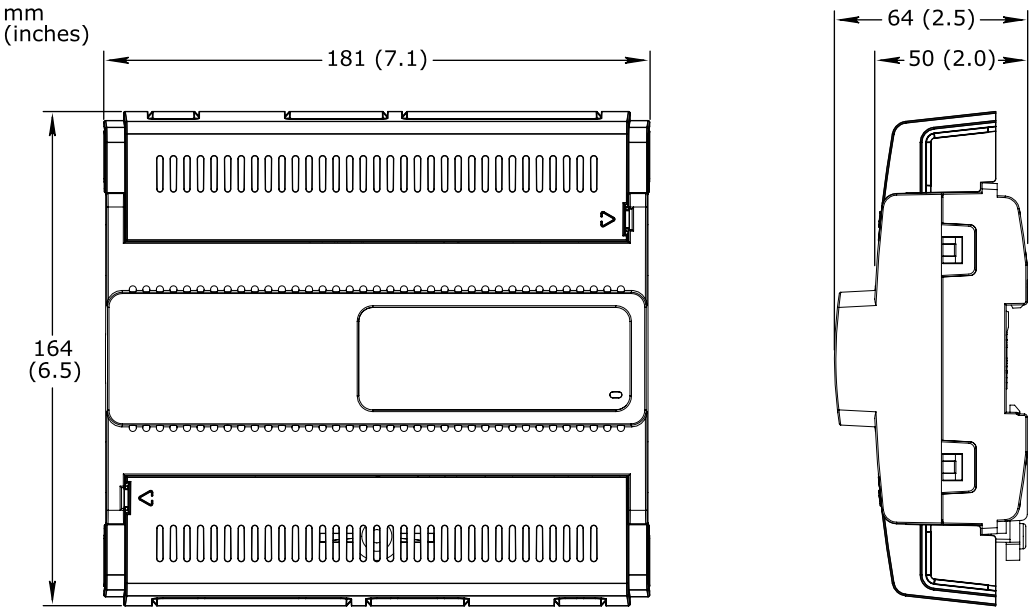
Weight, RP-C-12A model.....0.370 kg (0.816 lb)
Weight, RP-C-12B and -12C models .....0.390 kg (0.860 lb)
Weight, RP-C-16A model.....0.720 kg (1.587 lb)
Weight, optional covers .....0.070 kg (0.154 lb)
Installation .....DIN rail or flat surface
Terminal blocks.....Fixed

RP-C

SmartX IP Controller

Optional covers

Dimensions..... 181 W x 164 H x 64 D mm (7.1 W x 6.5 H x 2.5 D in.)



Software compatibility

EcoStruxure Building Operation software .....version 3.0 or later

Agency compliances

RP-C-12A, -12B, and -12C models

Emission .....RCM; EN 61000-6-3; EN 50491-5-2; FCC Part 15, Sub-parts A and C, Class B

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

Radio.....EN 300 328 V2.1.1

Safety standards.....EN 60730-1; EN 60730-2-11; EN 50491-3; UL 916 C-UL US Listed[a]
a) RP-C-12A is marked “Energy Management Equipment”. RP-C-12B and -12C are marked “Open Energy Management Equipment”.

FCC ID.....DVE-RPC24

ISED certification number .....IC: 24775-RPC24

Fire performance in air-handling spaces[a] ..... UL 2043
a) The RP-C-12A, -12B, and -12C models are approved for plenum applications.

RP-C-16A model

Emission .....RCM; EN 61000-6-3; EN 50491-5-2

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

Radio.....EN 300 328 V2.1.1

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

Energy .....eu.bac Certified Product (Pending); EN 15500

Real-time clock

Accuracy, at 25 °C (77 °F) .....+/-1 minute per month

03-30017-01-en, April 2019

RP-C

SmartX IP Controller

Backup time, at 25 °C (77 °F) ..... 7 days

Communication ports

Ethernet ..... Dual 10/100BASE-TX (RJ45)
USB ..... 1 USB 2.0 device port (mini-B)
..... 1 USB 2.0 host port (type-A), 5 VDC, 2.5 W
Sensor Bus ..... 24 VDC, 2 W, RS-485 (RJ45)
Sensor Bus protection ..... Transient voltage suppressors on communication and power signals
Room Bus ..... 24 VDC, 3 W, RS-485 (RJ45)
Room Bus protection ..... Transient voltage suppressors on communication and power signals

Communications

BACnet ..... BACnet/IP, port configurable, default 47808
..... BTL B-AAC (BACnet Advanced Application Controller)[a]
a) See the BTL Product Catalog for up-to-date details on BTL listed firmware revisions on BACnet International's home page.

Wireless connectivity

Bluetooth Low Energy

Communication protocol ..... Bluetooth® 5.0 Low Energy compliant
Frequency ..... 2.402 to 2.480 GHz
Maximum output power ..... 10 dBm
Maximum communication distance ..... Line-of-sight: 100 m (328 ft)
Antenna ..... Integrated antenna
RF connector for optional external antenna ..... SMA connector
External antenna (optional) ..... Restricted to the approved antenna type listed below (used in certification)

Manufacturer	Model (Part number)	Gain	Type	Impedance
Linx Technologies	ANT-2.4-WRT-MON-SMA	0.8 dBi	Monopole	50 ohm

CPU

Frequency ..... 500 MHz
Type ..... ARM Cortex-A7 single-core
Internal SRAM ..... 6 MB
NOR flash memory ..... 32 MB
Memory backup ..... 128 kB, FRAM, non-volatile

Universal inputs/outputs

Channels, RP-C-12A model ..... 8 Ub, Ub1 to Ub8
Channels, RP-C-12B model ..... 8 Ub, Ub1 to Ub8
Channels, RP-C-12C model ..... 4 Ub, Ub1 to Ub4
Channels, RP-C-16A model ..... 8 Ub, Ub1 to Ub8
Absolute maximum ratings ..... -0.5 to +24 VDC
A/D converter resolution ..... 16 bits

03-30017-01-en, April 2019

RP-C

SmartX IP Controller

Universal input/output protection.....Transient voltage suppressor on each universal input/output

Digital inputs

Range.....Dry contact switch closure or open collector/open drain, 24 VDC, typical wetting current 2.4 mA
Minimum pulse width.....150 ms

Counter inputs

Range.....Dry contact switch closure or open collector/open drain, 24 VDC, typical wetting current 2.4 mA
Minimum pulse width.....20 ms
Maximum frequency.....25 Hz

Supervised inputs

5 V circuit, 1 or 2 resistors
Monitored switch combinations.....Series only, parallel only, and series and parallel
Resistor range.....1 to 10 kohm
For a 2-resistor configuration, each resistor must have the same value +/- 5 %

Voltage inputs

Range.....0 to 10 VDC
Accuracy.....+/-(7 mV + 0.2 % of reading)
Resolution.....1.0 mV
Impedance.....100 kohm

Current inputs

Range.....0 to 20 mA
Accuracy.....+/-(0.01 mA + 0.4 % of reading)
Resolution.....1 µA
Impedance.....47 ohm

Resistive inputs

10 ohm to 10 kohm accuracy.....$+/-(7 + 4 \times 10^{-3} \times R)$ ohm
R = Resistance in ohm

10 kohm to 60 kohm accuracy.....$+/-(4 \times 10^{-3} \times R + 7 \times 10^{-8} \times R^2)$ ohm
R = Resistance in ohm

Temperature inputs (thermistors)

Range.....-50 to +150 °C (-58 to +302 °F)

Supported thermistors

Honeywell.....20 kohm
Type I (Continuum).....10 kohm
Type II (I/NET).....10 kohm
Type III (Satchwell).....10 kohm
Type IV (FD).....10 kohm
Type V (FD w/ 11k shunt).....Linearized 10 kohm
Satchwell D?T.....Linearized 10 kohm
Johnson Controls.....2.2 kohm

03-30017-01-en, April 2019

RP-C

SmartX IP Controller

Xenta.....1.8 kohm
Balco.....1 kohm

Measurement accuracy

20 kohm.....-50 to -30 °C: +/-1.5 °C (-58 to -22 °F: +/-2.7 °F)
.....-30 to 0 °C: +/-0.5 °C (-22 to +32 °F: +/-0.9 °F)
..... 0 to 100 °C: +/-0.2 °C (32 to 212 °F: +/-0.4 °F)
.....100 to 150 °C: +/-0.5 °C (212 to 302 °F: +/-0.9 °F)

10 kohm, 2.2 kohm, and 1.8 kohm.....-50 to -30 °C: +/-0.75 °C (-58 to -22 °F: +/-1.35 °F)
.....-30 to +100 °C: +/-0.2 °C (-22 to +212 °F: +/-0.4 °F)
.....100 to 150 °C: +/-0.5 °C (212 to 302 °F: +/-0.9 °F)

Linearized 10 kohm .....-50 to -30 °C: +/-2.0 °C (-58 to -22 °F: +/-3.6 °F)
.....-30 to 0 °C: +/-0.75 °C (-22 to +32 °F: +/-1.35 °F)
..... 0 to 100 °C: +/-0.2 °C (32 to 212 °F: +/-0.4 °F)
.....100 to 150 °C: +/-0.5 °C (212 to 302 °F: +/-0.9 °F)

1 kohm .....-50 to +150 °C: +/-1.0 °C (-58 to +302° F: +/-1.8 °F)

RTD temperature inputs

Supported RTDs .....Pt1000, Ni1000, and LG-Ni1000

Pt1000

Sensor range.....-50 to +150 °C (-58 to +302 °F)

SmartX IP Controller device environment	Sensor range	Measurement accuracy
0 to 50 °C (32 to 122 °F)	-50 to +70 °C (-58 to +158 °F)	+/-0.5 °C (+/-0.9 °F)
0 to 50 °C (32 to 122 °F)	70 to 150 °C (158 to 302 °F)	+/-0.7 °C (+/-1.3 °F)
-40 to +60 °C (-40 to +140 °F)	-50 to +150 °C (-58 to +302 °F)	+/-1.0 °C (+/-1.8 °F)

Ni1000

Sensor range.....-50 to +150 °C (-58 to +302 °F)

SmartX IP Controller device environment	Sensor range	Measurement accuracy
0 to 50 °C (32 to 122 °F)	-50 to +150 °C (-58 to +302 °F)	+/-0.5 °C (+/-0.9 °F)
-40 to +60 °C (-40 to +140 °F)	-50 to +150 °C (-58 to +302 °F)	+/-0.5 °C (+/-0.9 °F)

LG-Ni1000

Sensor range.....-50 to +150 °C (-58 to +302 °F)

SmartX IP Controller device environment	Sensor range	Measurement accuracy
0 to 50 °C (32 to 122 °F)	-50 to +150 °C (-58 to +302 °F)	+/-0.5 °C (+/-0.9 °F)
-40 to +60 °C (-40 to +140 °F)	-50 to +150 °C (-58 to +302 °F)	+/-0.5 °C (+/-0.9 °F)

RTD temperature wiring

Maximum wire resistance.....20 ohm/wire (40 ohm total)
Maximum wire capacitance.....60 nF

03-30017-01-en, April 2019

RP-C

SmartX IP Controller

The wire resistance and capacitance typically corresponds to a 200 m wire.

Voltage outputs

Range ..... 0 to 10 VDC
Accuracy ..... +/-60 mV
Resolution ..... 10 mV
Minimum load resistance ..... 5 kohm
Load range ..... -1 to +2 mA

Relay outputs, DO

Channels, RP-C-12A model 0
Channels, RP-C-12B model ..... 3, DO1 to DO3
Channels, RP-C-12C model ..... 3, DO5 to DO7
Channels, RP-C-16A model ..... 3, DO5 to DO7
Contact rating ..... Pilot Duty (C300)
..... Resistive load: 250 VAC/30 VDC, 4 A (cos phi = 1)
..... Inductive load: 250 VAC/30 VDC, 4 A (cos phi = 0.4)
Switch type ..... Form A Relay
..... Single Pole Single Throw
..... Normally Open
Commons ..... COM1 for DO1, DO2, and DO3 (on RP-C-12B model)
..... COM3 for DO5, DO6, and DO7 (on RP-C-12C and RP-C-16A models)
Isolation contact to system ground ..... 3,000 VAC
Cycle life ..... At least 100,000 cycles
Minimum pulse width ..... 100 ms

High power relay outputs, DO

Channels, RP-C-12A model 0
Channels, RP-C-12B model 1, DO4
Channels, RP-C-12C model 1, DO8
Channels, RP-C-16A model 1, DO8
Contact rating ..... Pilot Duty (B300)
..... Minimum current: 100 mA (5 VDC)
..... Normally Open contact, resistive load: 250 VAC/24 VDC, 12 A (cos phi = 1)
..... Normally Closed contact, inductive load: 250 VAC/24 VDC, 3 A (cos phi = 0.4)
Switch type ..... Form C Relay
..... Single Pole Double Throw
..... Normally Open and Normally Closed
Isolation contact to system ground ..... 5,000 VAC
Cycle life ..... At least 100,000 cycles
Minimum pulse width ..... 100 ms

Solid-state relay outputs, DO

Channels, RP-C-12A model ..... 4, DO1 to DO4
Channels, RP-C-12B model 0
Channels, RP-C-12C model ..... 4, DO1 to DO4

03-30017-01-en, April 2019

RP-C

SmartX IP Controller

Channels, RP-C-16A model ..... 4, DO1 to DO4

Output rating.....Maximum 2 A load per output
.....Maximum 4 A total load for the 4 outputs

AC voltage range .....24 VAC +/-20 %

DC voltage range.....Maximum 30 VDC

Commons .....COM1 for DO1 and DO2 (on RP-C-12A, -12C, and -16A models)
.....COM2 for DO3 and DO4 (on RP-C-12A, -12C, and -16A models)
When the SSR outputs are used to switch AC, the common terminals can be connected to 0 to 30 VAC. When the SSR outputs are used to switch DC, the common terminals can be connected to -30 VDC to +30 VDC.

Common voltage range (AC) .....0 to 30 VAC

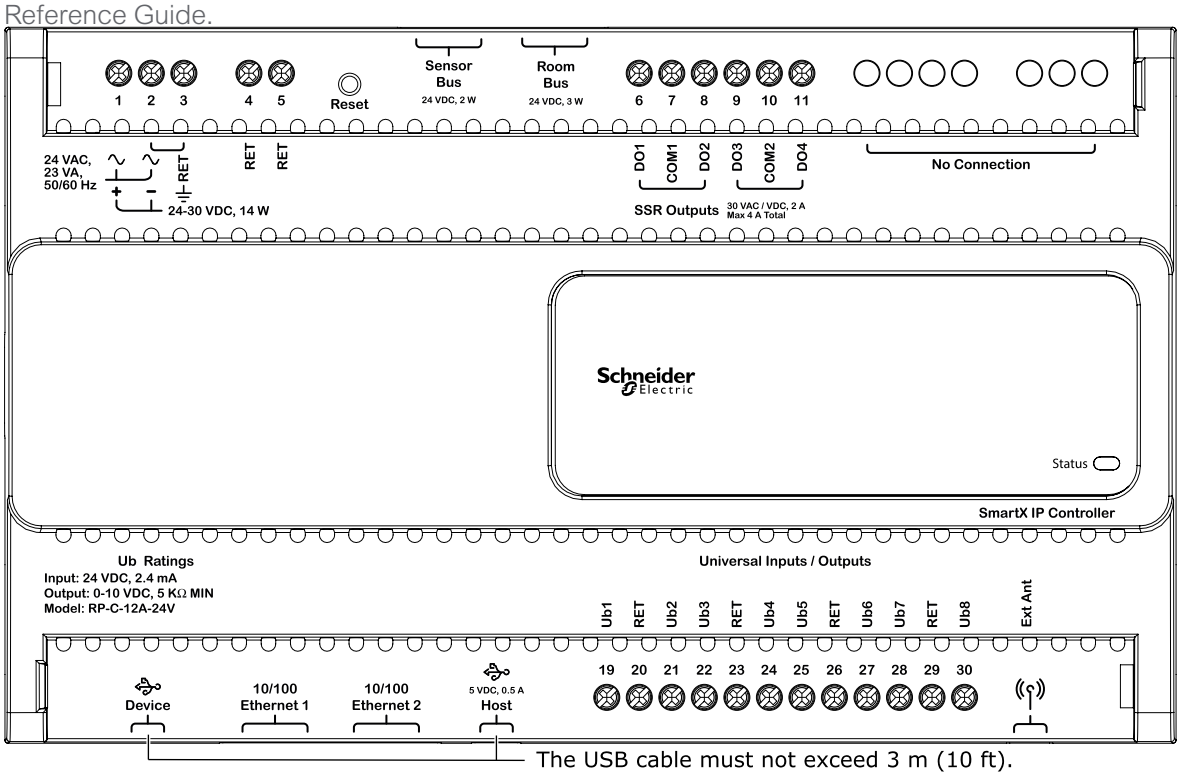
Common voltage range (DC) .....-30 to +30 VDC

Minimum pulse width .....100 ms

Solid-state relay output protection .....Transient voltage suppressor across each solid-state relay (SSR) output

Terminals

For more information on wiring, see Hardware Reference Guide.

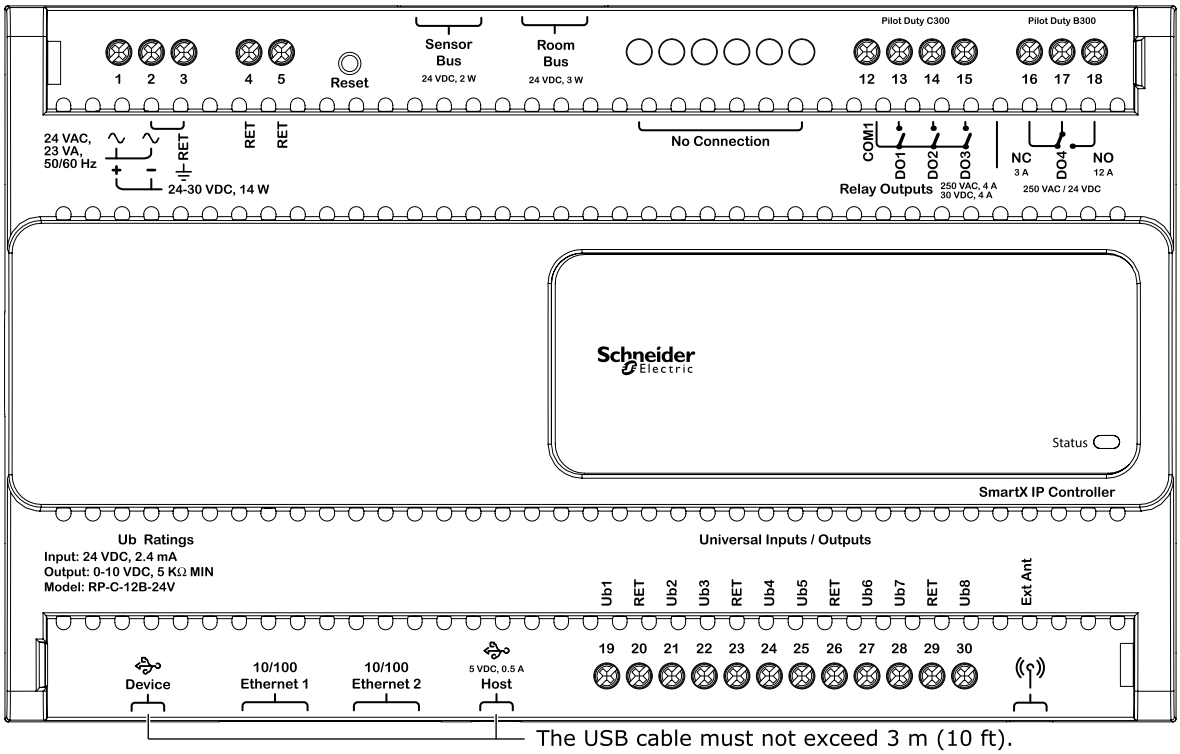


RP-C-12A model (24 VAC/DC)

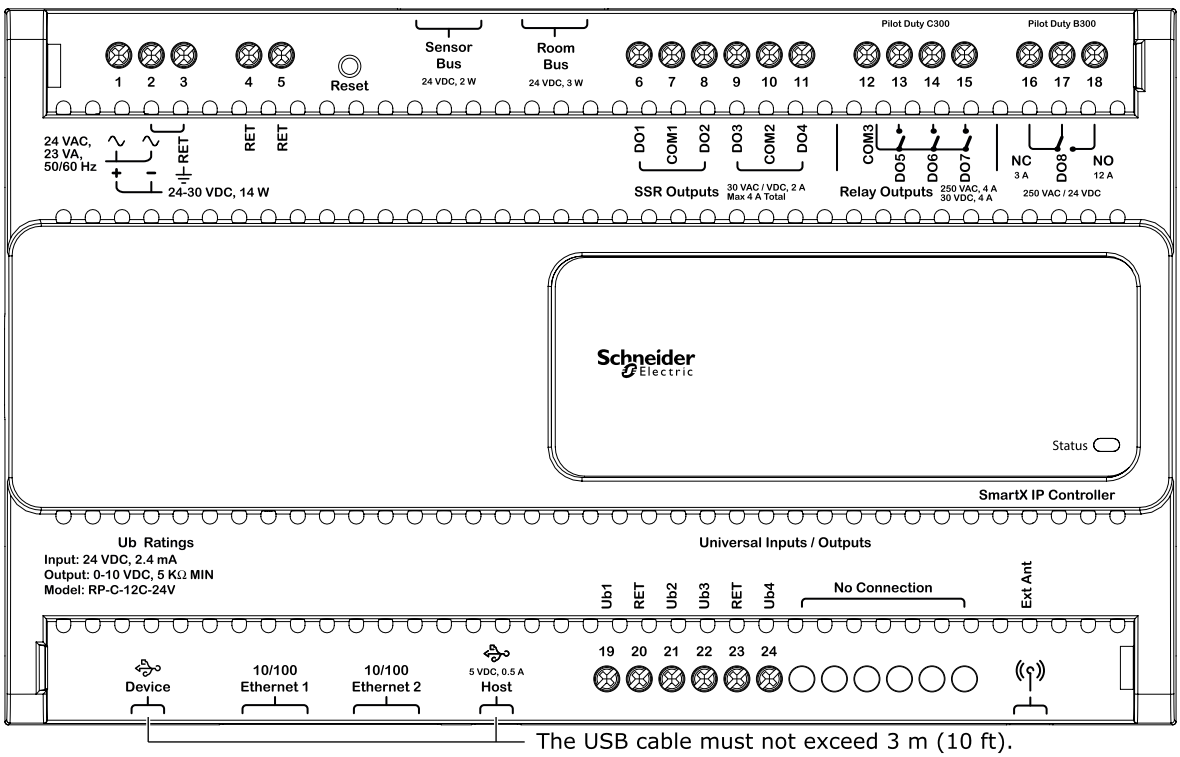
Life Is On Schneider Electric

RP-C

SmartX IP Controller



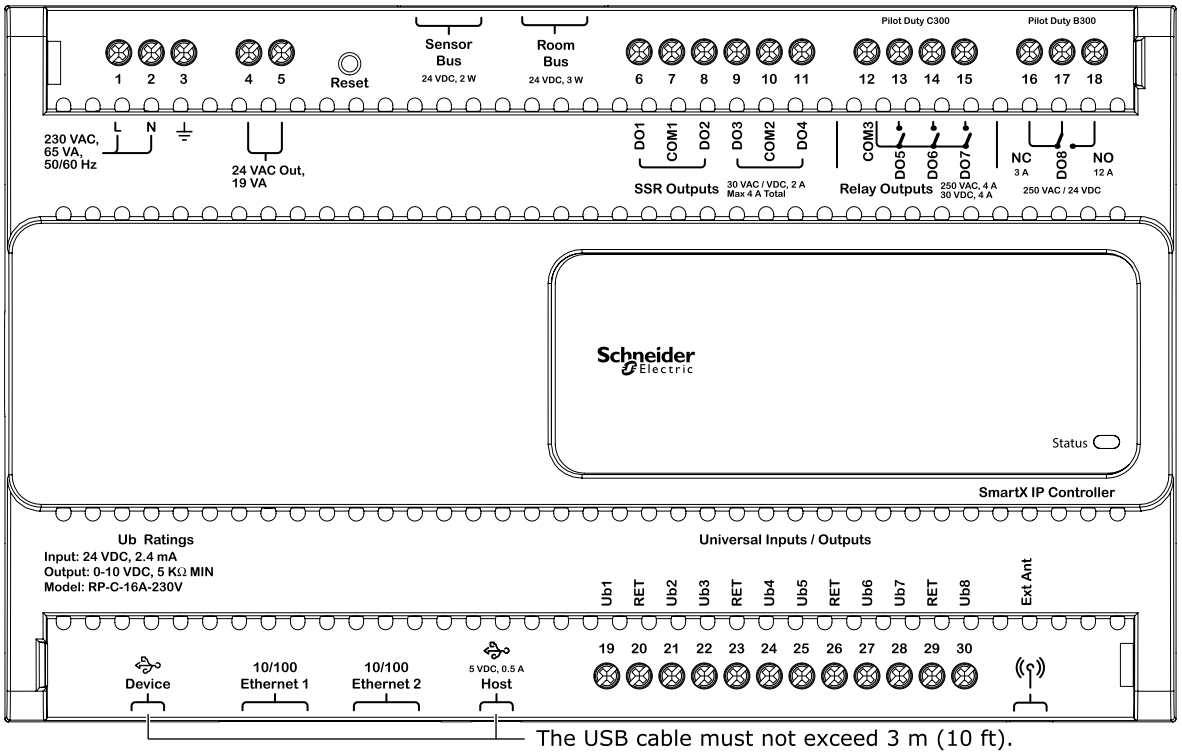
RP-C-12B model (24 VAC/DC)



RP-C-12C model (24 VAC/DC)

RP-C

SmartX IP Controller



RP-C-16A model (230 VAC)

Part Numbers in AMER Region for Network Connectivity Accessories

Product description[a]	Part number (AMER region)
Cat 6 field-term plug, UTP	ACTPG6TLU001
Cat 6 pass-through plug, UTP, 100-pack	ACTPG6PTU100
Actassi crimping tool	ACTTLCPT
Cat 6 cable, UTP, 1000 ft (305 m), CMP, green	ACT4P6UCP1ARXGR
Cat 6 patch cord, UTP, 30 ft (9 m), CMP, green	ACTPC6UBCP30AGR
Cat 6 patch cord, UTP, 50 ft (15 m), CMP, green	ACTPC6UBCP50AGR
Cat 6 patch cord, UTP, 70 ft (21 m), CMP, green	ACTPC6UBCP70AGR
Cat 6 patch cord, UTP, 90 ft (27 m), CMP, green	ACTPC6UBCP90AGR
Cat 5e pass-through plug, UTP, 100-pack	ACTPG5EPTU100
Cat 5e cable, UTP, 1000 ft (305 m), CMP, green	ACT4P5EUCP1ARXGR
Cat 5e patch cord, UTP, 30 ft (9 m), CMP, green	ACTPC5EUBCP30AGR
Cat 5e patch cord, UTP, 50 ft (15 m), CMP, green	ACTPC5EUBCP50AGR
Cat 5e patch cord, UTP, 70 ft (21 m), CMP, green	ACTPC5EUBCP70AGR
Cat 5e patch cord, UTP, 90 ft (27 m), CMP, green	ACTPC5EUBCP90AGR

a) For more information, see the Product Selection Guide (SmartX IP Controllers - Accessories). Abbreviations: UTP (Unshielded Twisted Pair), CMP (Plenum-rated cable)

03-30017-01-en, April 2019

RP-C
SmartX IP Controller

Part Numbers in EMEA Region for Network Connectivity Accessories

Product description[a]	Part number (EMEA region)
Cat 6 field-term plug, UTP	ACTPG6TLU001
Cat 6 pass-through plug, UTP, 100-pack	ACTPG6PTU100
Actassi crimping tool	ACTTLCPT
Cat 6 cable, UTP, 305 m (1000 ft), Euroclass D, green	VDICD116118
Cat 6 patch cord, UTP, 10 m (32 ft), LSZH, green	ACTPC6UBLS100GR
Cat 6 patch cord, UTP, 15 m (49 ft), LSZH, green	ACTPC6UBLS150GR
Cat 6 patch cord, UTP, 20 m (65 ft), LSZH, green	ACTPC6UBLS200GR
Cat 6 patch cord, UTP, 25 m (82 ft), LSZH, green	ACTPC6UBLS250GR
Cat 5e pass-through plug, UTP, 100-pack	ACTPG5EPTU100
Cat 5e cable, UTP, 1000 ft (305 m), Euroclass D, green	VDICD115118
Cat 5e patch cord, UTP, 10 m (32 ft), LSZH, green	ACTPC5EUBLS100GR
Cat 5e patch cord, UTP, 15 m (49 ft), LSZH, green	ACTPC5EUBLS150GR
Cat 5e patch cord, UTP, 20 m (65 ft), LSZH, green	ACTPC5EUBLS200GR
Cat 5e patch cord, UTP, 25 m (82 ft), LSZH, green	ACTPC5EUBLS250GR

a) For more information, see the Product Selection Guide (SmartX IP Controllers - Accessories). Abbreviations: UTP (Unshielded Twisted Pair), CMP (Plenum-rated cable), LSZH (Low Smoke Zero Halogen)

Part Numbers in Pacific Region for Network Connectivity Accessories

Product description[a]	Part number (Pacific region)
Cat 6 field-term plug, UTP	ACTPG6TLU001
Cat 6 pass-through plug, UTP, 100-pack	ACTPG6PTU100
Actassi crimping tool	ACTTLCPT
Cat 6 cable, UTP, 305 m (1000 ft), PVC, green	2D4P6IPV3B-GR
Cat 6 patch lead, UTP, 10 m (32 ft), PVC, green	RJ6_100PL-GR
Cat 6 patch lead, UTP, 15 m (49 ft), PVC, green	RJ6_150PL-GR
Cat 6 patch lead, UTP, 20 m (65 ft), PVC, green	RJ6_200PL-GR
Cat 6 patch lead, UTP, 25 m (82 ft), PVC, green	RJ6_250PL-GR
Cat 5e pass-through plug, UTP, 100-pack	ACTPG5EPTU100
Cat 5e cable, UTP, 305 m (1000 ft), PVC, green	2D4P5IPV3B-GR
Cat 5e patch lead, UTP, 10 m (32 ft), PVC, green	RJ5_100PL-GR
Cat 5e patch lead, UTP, 15 m (49 ft), PVC, green	RJ5_150PL-GR
Cat 5e patch lead, UTP, 20 m (65 ft), PVC, green	RJ5_200PL-GR
Cat 5e patch lead, UTP, 25 m (82 ft), PVC, green	RJ5_250PL-GR

a) For more information, see the Product Selection Guide (SmartX IP Controllers - Accessories). Abbreviations: UTP (Unshielded Twisted Pair), PVC (Polyvinyl chloride)

03-30017-01-en, April 2019

RP-C

SmartX IP Controller

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.
FCC ID: DVE-RPC24

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.
IC: 24775-RPC24

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.

eu.bac - European Building Automation and Controls Association. Certified Product (Pending).
This product is certified by eu.bac and conforms to the quality and energy performance criteria outlined by the following European product standard: EN 15500.
All eu.bac certified products are found on the eu.bac web site www.eubaccert.eu

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) 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.

UL 916 Listed products for the United States and Canada. UL file E80146.

03-30017-01-en, April 2019