



Quick Start Guide



DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, ARC FLASH, AND FIRE

This document is in addition to, and incorporates by reference, the relevant product manuals for InsightHome. Before reviewing this document, you must read the relevant product manuals. Unless specified, information on safety, specifications, installation and operation is as shown in the primary documentation received with the product. Ensure you are familiar with that information before proceeding. **Failure to follow these instructions will result in death or serious injury.**

Conventions Used

A Section **1** Step **!** Safety **→** Direction **↗** Expand **A** Label

Contact Information

Schneider Electric
70 Mechanic Street Foxborough, Massachusetts 02035 United States
Contact your local Schneider Electric Sales Representative or visit the Schneider Electric website at: <https://se.com/>

Important Safety Information

Read and Save These Instructions. Do NOT discard.

This Guide is intended for any qualified personnel who need to install, operate, configure, and troubleshoot the InsightHome. Certain configuration tasks should only be performed by qualified personnel in consultation with your local utility and/or an authorized dealer. Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. Qualified personnel have training, knowledge, and experience in:

- Installing electrical equipment
- Applying applicable installation codes
- Installing and configuring batteries
- Connecting communication devices into a network

- Selecting and using Personal Protective Equipment (PPE)
- Analyzing and reducing the hazards involved in performing electrical work

The following special messages may appear throughout this document or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.



The addition of either symbol to a "Danger" or "Warning" safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



This symbol alerts you to read the manual, including the InsightHome Owner's Guide (document number 990-91410) for additional information

DANGER

DANGER indicates a hazardous situation which, if not avoided, **will result in death or serious injury.**

WARNING

WARNING indicates a hazardous situation which, if not avoided, **could result in death or serious injury.**

1.0 Introduction

The InsightHome is a multi-function communication device that provides an overall view of system performance for residential power monitoring systems. It also provides a communications gateway between a network of Xanbus™-enabled devices and Modbus devices. Operators can configure the InsightHome system and monitor performance with third party software packages and building management systems.

DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, AND FIRE

- All wiring must be done by qualified personnel to ensure compliance with all applicable installation codes and regulations.
- For Indoor Use Only.
- Do not disassemble. No user serviceable parts inside.
- Do not dispose of the internal battery in a fire or hot oven. Do not crush or cut the internal battery. Follow proper disposal procedures as outlined by your local codes.
- Do not subject the InsightHome to extremely high ambient temperatures or extremely low air pressure as flammable liquid or gas may leak from the battery.

Failure to follow these instructions will result in death or serious injury.

WARNING

HAZARD OF ELECTRIC SHOCK AND FIRE

Connect only to Safety Extra Low Voltage (SELV) circuits and limited power sources.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

Other features of the InsightHome include: a real-time clock, a non-volatile memory, firmware storage and upgrade capability, and cloud storage capability. For more information, see the Owner's Guide (go to <https://solar.schneider-electric.com> > **InsightHome and InsightFacility Edge Devices > Downloads**).

2.0 Material List

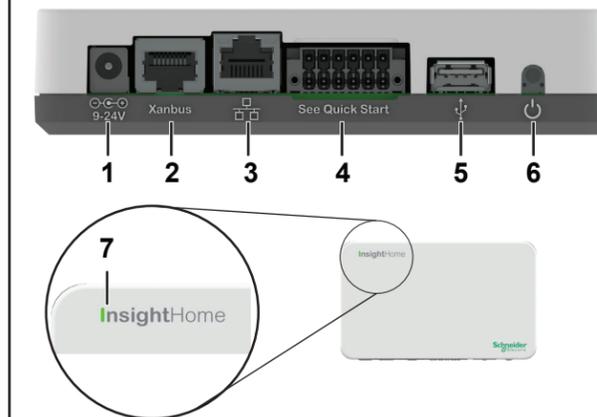


InsightHome unit	
not shown	12-pin connector (see 12-Pin Connector Pinouts)
not supplied	Ethernet cable (CAT5e)
not supplied	Power adapter: Manufacturer: CUI P/N: SMI18-12-V-P5 Description: AC-DC Power Supply, 12Vdc Output Voltage, 1.6A dc Output Current

NOTES:

- Recycle the packaging box.
- The Wi-Fi password is printed on the InsightHome unit.

3.0 Physical Features



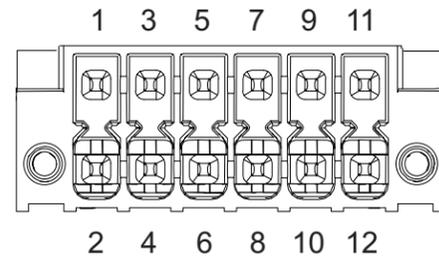
Item	Description
1	Power port
2	Xanbus port
3	Ethernet port
4	12-pin port (see 12-Pin Connector Pinouts)
5	USB port
6	Power button
7	The "I" in InsightHome is an LED indicator used for signaling device status.

LED	STATE	Description
Green	Solid	The InsightHome is powered on.
Green	Blink	Device is booting up or logging data to internal memory when flashing.
Orange	Solid	Devices on the Power system have events to report.

4.0 12-Pin Connector Pinouts

Connect Modbus wires to pins 7, 9, and 11, and then complete the following steps using InsightLocal:

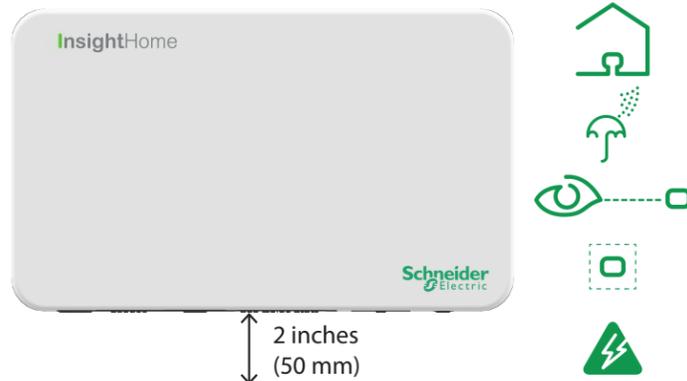
1	Do Not Connect	3	GND	5	Do Not Connect
7	GND ISO	9	RS485 A ISO	11	RS485 B ISO



2	Do Not Connect	4	Digital input 2 (12VDC)	6	Do Not Connect
8	GND ISO	10	CAN L ISO	12	CAN H ISO

5.0 Choosing a Location

Figure 1 Location choices



- Choose a clean, dry, easily accessible location indoors.
- If you mount the InsightHome on a wall, the recommended height is at eye-level so that you can clearly see the LED indicator and have easy access to the data and communication ports.
- All of the ports on the InsightHome are accessible from the bottom of the device when mounted on a wall. Clearance of at least 2 inches (50 mm) below the device is needed to allow for the bending radius of cables that connect to the InsightHome.
- You should not run cables through conduits that can be exposed to lightning strikes. The following are recommended maximum cable lengths in a InsightHome system:
 - 131 feet (40 m) Total Xanbus network
 - 328 feet (100 m) Router to InsightHome
 - 164 feet (50 m) Modbus Master (RS 485) to InsightHome

6.0 Mounting the InsightHome

- Using the mounting diagram that shipped with your product, mark the mounting holes on the wall with a pencil.
- Insert the two anchors and mounting screws supplied in the marked locations on the wall, leaving a space of about ¼ inch (6 mm) between the wall and screw head.
- If you are mounting the InsightHome on concrete, the supplied anchors and mounting screws are not suitable. Use two mounting screws that are equivalent to #6 screws.
- Place the InsightHome on the mounting screws, and confirm a snug fit.
Note: Before placing the InsightHome, you may want to take a photograph of the label on the back, as it includes important password information.



7.0 Connecting the InsightHome to the Xanbus Network

7.1 Network Sizing Guidelines

	InsightHome
Xanbus Networks	1
Maximum Total Connected XW Pro and MPPT Charge Controllers*	6

7.2 Xanbus Installation Rules

- Connect the InsightHome to the Xanbus network using daisy chain configuration.
- Xanbus components can be arranged in any order.
- The InsightHome must be one end of the network. See illustration in the next column.

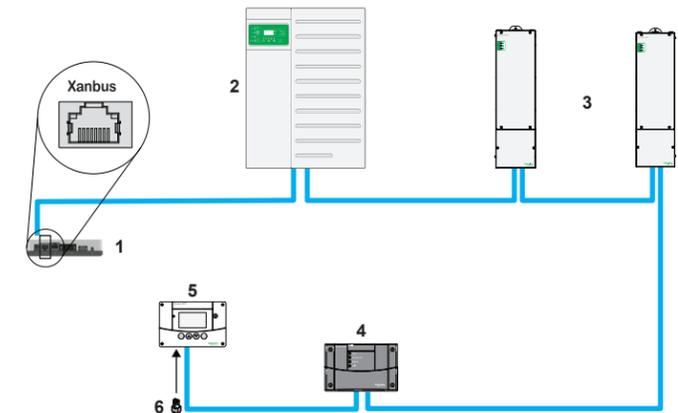
NOTICE

EQUIPMENT DAMAGE

- Do not connect a Xanbus cable plug into the ethernet port on the InsightHome.
- Connect only to Xanbus ports and use a network terminator on the end device in the daisy chain.

Failure to follow these instructions can result in equipment damage.

Figure 2 Sample Xanbus network



NOTE: This Xanbus 1 network is for illustration purpose only.

1	InsightHome unit	4	Conext AGS (automatic generator start)
2	XW Pro	5	Conext SCP (system control panel), discontinued
3	MPPT 80 600	6	Network terminator

8.0 Turning the InsightHome On (or Off)

Before turning on the InsightHome, you must connect it to a power source - either:

- by using an (A) AC/DC adapter (not supplied, see Material List for specifications)
- by connecting it to a (B) Xanbus network

⚠️ WARNING

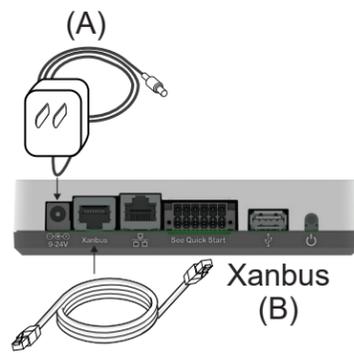
HAZARD OF ELECTRIC SHOCK AND FIRE

Connect only to Safety Extra Low Voltage (SELV) circuits and limited power sources.
Failure to follow these instructions can result in death, serious injury, or equipment damage.

⚠️ WARNING

UNINTENDED OPERATION HAZARD

Xanbus is a valid power source for the InsightHome, however, if you use Xanbus for the first time set-up the InsightHome clock will override the other Xanbus devices' clocks and could trigger unintentional time-based events, such as a generator starting.
Ensure that you set the InsightHome clock and time zone before performing any other commissioning steps, refer to the Owner's Guide for instructions.
Failure to follow these instructions can result in death, serious injury, or equipment damage.



1. Select a power source **(A)** or **(B)**.
2. Connect **(A)** or **(B)**'s connector to InsightHome's Power port for **(A)** or Xanbus port for **(B)**, respectively.
3. Connect **(A)**'s power plug to an AC wall outlet or **(B)**'s other Xanbus cable connector to a Xanbus port on a Xanbus device. Make sure the Xanbus device is turned on.
4. Observe the LED indicator and wait for the LED to light up solid green. The InsightHome is now turned on.
5. Proceed to Logging in to InsightLocal.
6. Press the Power button to shut down the unit and turn it off.



9.0 Connecting the InsightHome to the Internet via Ethernet

Before connecting a computer and router to the InsightHome, make sure it meets the following prerequisites.

- Microsoft® Windows® 7 or later, Mac OS® X 10.4.8. or later
- Internet Explorer® 11.476 or later, Google Chrome™ 78.x or later, Safari® 5.x or later
- JavaScript and cookies must be enabled in your web browser.
- Router - the network router must be able to supply DHCP addresses automatically to connected devices. If your network router does not support automatic DHCP, refer to your network router's user guide or contact your system administrator.

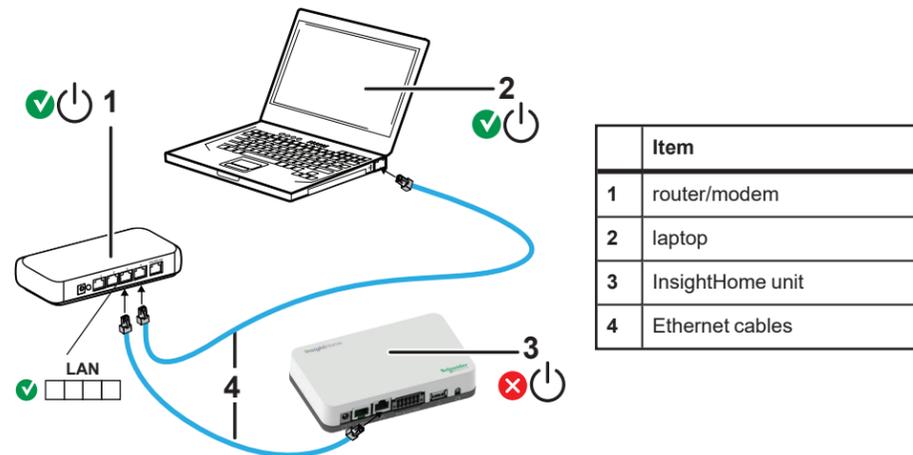
NOTICE

EQUIPMENT DAMAGE

- For a complete list of prerequisites, see the Owner's Guide.
- Do not connect an Ethernet cable from the InsightHome to the MODEM port on the network router.
- Do not connect an Ethernet cable plug into a Xanbus port on the InsightHome.

Failure to follow these instructions can result in equipment damage.

1. Make sure the computer and network router are turned on and the InsightHome is not turned on. Make sure the network router selected has DHCP enabled.
2. Connect an Ethernet cable between the computer's network port and a LAN port on the router.
3. Connect an Ethernet cable between a LAN port on the router and the Ethernet port on the InsightHome.



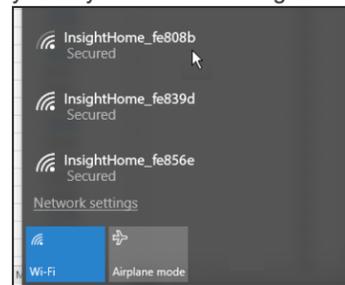
Item	
1	router/modem
2	laptop
3	InsightHome unit
4	Ethernet cables

10.0 Connecting via Wi-Fi Access Point (AP)

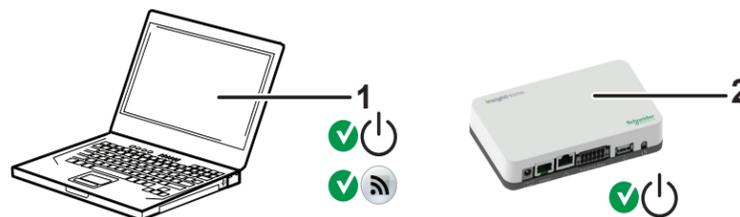
NOTE: This procedure is not about connecting to a local area network (LAN) via Wi-Fi. It is possible to connect to the InsightHome web app via its Wi-Fi Access Point. The following are the pre-requisites:

- Laptop with Microsoft® Windows® 7 or later, Mac OS® X 10.4.8. or later
- Wi-Fi setting for the laptop is enabled
- Web browser such as Google Chrome™ 78.x or later, Microsoft® Windows® Internet Explorer® 11.476 or later, Safari® 5.x or later, Firefox 110.0.1 (64-bit) or later
- JavaScript and cookies must be enabled in your web browser.

1. Make sure the laptop and InsightHome are turned on.
2. Enable Wi-Fi on the laptop, if not already.
3. Open Wi-Fi Settings, then look for and connect to the InsightHome SSID. For example, you may look for something similar to **InsightHome_fe808b** below.



4. Enter the **Password** when prompted.
NOTE: The password is printed on a label on the back panel of the InsightHome unit.
5. Proceed to Logging in to InsightLocal (IP address: 192.168.100.1).



1	Laptop	2	InsightHome unit. Wi-Fi password label is on the back panel.
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11.0 Logging in to InsightLocal

NOTE: The gateway device's internal wireless access point uses the 192.168.100.x subnet. If the local area network uses the same subnet, a conflict will occur when trying to access the Internet.

1. If you have connected the InsightHome via Wi-Fi Access Point, go to the IP address <https://192.168.100.1> to access the web user interface.
2. If you have connected the InsightHome via Ethernet or Wi-Fi Station, use the following steps:
 - a. Insert a blank USB drive into the InsightHomeUSB port. **NOTE:** Ensure there are no firmware upgrade files on this USB drive.
 - b. After the InsightHome beeps twice, remove the USB drive.
 - c. Insert the USB drive into your laptop USB port.
 - d. Copy the HTML file to your laptop.
 - e. Remove the USB drive from your laptop.
 - f. Open the HTML file and click the link to the IP address of the InsightHome.
3. Bookmark this address. **Important:** The web address is a locally and privately assigned (LAN) device address.
4. Select your username. Select **Admin**.
NOTE: A maximum of two Admin users can be logged in to one InsightHome at the same time. For more information, see *InsightHome Owner's Guide (document number 990-91410)*.
5. Enter your Password. The initial password is **Admin123**.
6. **Important:** When prompted, it is required that you change the initial password immediately to protect the device from unauthorized users and to enable changes to device settings.

Passwords must:

- Be between 10-12 characters in length
- Contain at least one upper case character
- Contain at least one lower case character
- Contain at least one digit
- Contain at least one symbol

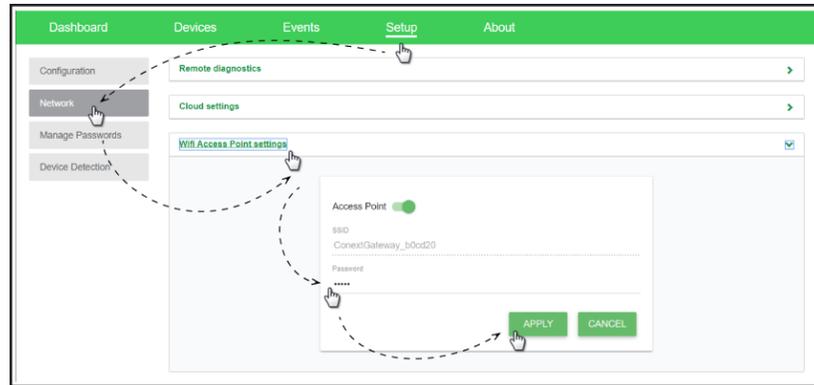
NOTE: To perform administrative functions such as a firmware update, set User Name to **Admin**. Settings are disabled until the initial password is changed.

7. Change the InsightHome SSID and network password:
 - a. Go to **Setup > Network > Wifi Access Point Settings**
 - b. (Optional) Replace the current Wi-Fi network name under the **SSID** field with an appropriate name. You are limited to 64 alphanumeric characters including symbols.
 - c. Replace the current password under the **Password** field with your own password.

Passwords must:

- Be between 10-12 characters in length
- Contain at least one upper case character
- Contain at least one lower case character
- Contain at least one digit
- Contain at least one symbol

- d. Click **Apply** to save the new password and/or SSID.

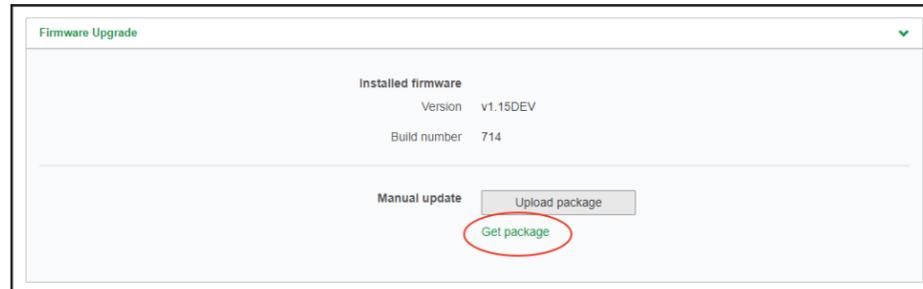


12.0 Using InsightMobile and InsightCloud

Refer to the Owner's guide for information about using InsightCloud or connecting to your system with the Insight Mobile App.

13.0 Installing Upgrades Remotely

- Go to **Setup > Configuration > Firmware Upgrade**.



- Download the firmware package.
 - Click **Get package**. This will take you to the InsightHome product webpage.
 - From the product webpage, go to **DOWNLOADS > Firmware**.
 - Search for the latest firmware package from the list and click it to begin downloading.
 - Unzip the firmware package.
 - Save the .epkg file to a local directory.
- Go back to the **Setup > Configuration > Firmware Upgrade** page.
- Click **Upload package**.
- Search and select the firmware package (.epkg file) you saved in a local directory from the InsightHome product webpage.
- Click **Open** from the Windows dialog. The upgrade begins automatically.
- As the firmware package is transferred to the InsightHome, progress is indicated in percentage, and a message screen indicates when the file transfer has been completed successfully.
- When prompted, restart the InsightHome.

14.0 Connecting and Configuring Modbus Devices

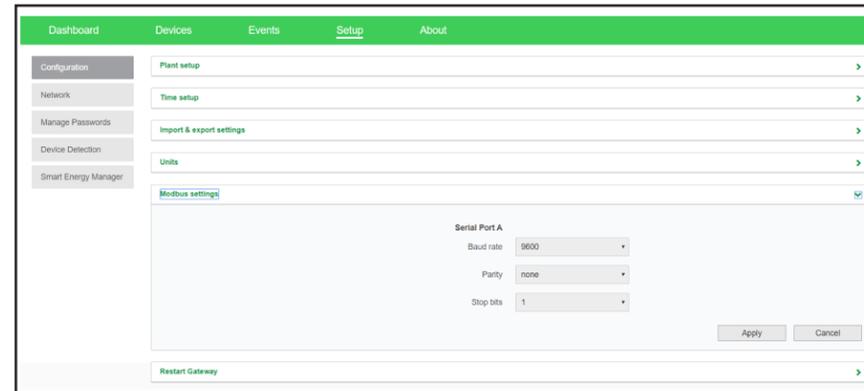
NOTE: For Modbus map information, contact Schneider Electric.

Connect Modbus wires to pins 7, 9, and 11 (see Physical Features), and then complete the following steps using InsightLocal:

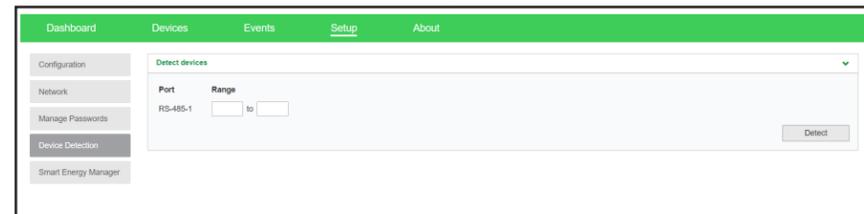
For more informatin about connecting a power meter, see Power Meter Connection (optional) on page 1 and *Power Meter Configuration* on page 1.

To connect a Modbus device:

- Go to **Setup > Configuration > Modbus Settings**.
- Complete the **Serial Port** setup and then click **Apply**.



- Go to **Home > Setup > Device Detection**.
- Under **Range**, enter a Modbus address range and then click **Detect**.



- Go to **Devices** and then click the device image to select the device.
- Go to **Configuration** and configure the device settings under *Basic* and *Advanced*. Each device type will have different settings to configure. Refer to the device's Installation and Operation manuals for configuration information. Repeat steps 5 and 6 for each device.



FCC Compliance

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

For Modbus settings, see "Modbus Settings" on page 1 and "Default Settings" on page 1.

15.0 Electrical Specifications

NOTE: Specifications subject to change without prior notice.

Power Consumption	2 W average / 10 W peak
AC/DC adapter	Input: 100-240 V AC, 50-60 Hz, 0.48 A, Output: 12 V DC, 1.6 A, 5.5 mm outer, 2.1 mm center-positive jack. NOTE: Required when used with the Conext SW.
Xanbus	When connected to XW Pro, XW+, Conext SW, or MPPT providing network power
Operation Frequency	2412–2472 MHz (Europe) 2414–2462 MHz (N. America)
Max. radio frequency power transmitted	17.06 dBm (E.I.R.P., Declaration for EU)

16.0 Features

Web-based user interface	Google Chrome 78.x or later, Microsoft Windows Internet Explorer 11.476 or later, Safari 5.x or later Microsoft Windows 7 or later, Mac OS X 10.4.8. or later, Firefox 110.0.1 (64-bit) or later
Remote firmware upgrades	Yes (InsightHome and connected Xanbus devices)

17.0 Physical Specifications

Weight (device only)	220 g (0.5 lb)
IP rating / Mounting Location	IP 20, NEMA 1, Indoor only
Status Display	1 x LED
Temperature	Operating: 32 to 113 °F (0 to 45 °C) Storage: -40 to 185 °F (-40 to 85 °C) Maximum case temperature: 140 °F (60 °C)
Humidity	Operating: < 95%, non-condensing Storage: < 95%

18.0 Regulatory

Safety	EN 62368-1
EMC emissions	EN61000-6-3 EN 55032 EN 62311 EN 300 328 EN 301 489-1, -17 FCC part 15B ICES-003
EMC immunity	EN61000-6-1 EN 55035 EN 301 489-1, -17
Substances / environmental	RoHS
FCC ID	Contains 2AODL-CONEXTGTWY
IC ID	Contains 24209-CONEXTGTWY
Part number	865-0330

18.1 FCC Regulatory Compliance

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

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Note: changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

18.1.1 RF Exposure Compliance

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

18.1.2 Supplier's Declaration of Conformity

47 CFR § 2.1077 Compliance Information

Trade Name/Model Number: InsightHome

Part No.: 865-0330

Responsible Party – U.S. Contact Information

Schneider Electric

70 Mechanic Street

Foxborough, Massachusetts 02035

United States

<https://se.com>

FCC Compliance Statement

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

18.2 ISED Regulatory Compliance

This device contains licence-exempt transmitter(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s).

Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

1. L'appareil ne doit pas produire de brouillage;
2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This equipment should be installed and operated with minimum distance 20 cm between the radiator and your body.

Cet équipement est conforme aux limites d'exposition aux radiations IC CNR-102 établies pour un environnement non contrôlé. Cet émetteur ne doit pas être situé ou fonctionner conjointement avec une autre antenne ou un autre émetteur. Cet équipement doit être installé et utilisé avec une distance minimale de 20 cm entre le radiateur et votre corps.

CAN ICES-3 (B)/NMB-3(B)

18.3 Simplified EU Declaration of Conformity

Hereby, Schneider Electric declares that the radio equipment type 865-0329 is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address:

<https://se.com>

LEGAL INFORMATION

TO THE EXTENT PERMITTED BY APPLICABLE LAW, NO RESPONSIBILITY OR LIABILITY IS ASSUMED BY SCHNEIDER ELECTRIC AND ITS SUBSIDIARIES FOR ANY ERRORS OR OMISSIONS IN THE INFORMATIONAL CONTENT OF THIS MATERIAL OR CONSEQUENCES ARISING OUT OF OR RESULTING FROM THE USE OF THE INFORMATION CONTAINED HEREIN. IF THIS MANUAL IS IN ANY LANGUAGE OTHER THAN ENGLISH, ALTHOUGH STEPS HAVE BEEN TAKEN TO MAINTAIN THE ACCURACY OF THE TRANSLATION, THE ACCURACY CANNOT BE GUARANTEED. APPROVED CONTENT IS CONTAINED WITH THE ENGLISH LANGUAGE VERSION WHICH IS POSTED AT <https://se.com>