PowerTag Energy

Device user guide

Information about features and functionality of the devices.
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Schneider Electric

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Safety information

Important information

Read these instructions carefully and look at the equipment to become familiar with the device before trying to install, operate, service, or maintain it. The following special messages may appear throughout this manual 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 accompany this symbol to avoid possible injury or death.

⚡⚠ DANGER

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

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

⚠ WARNING

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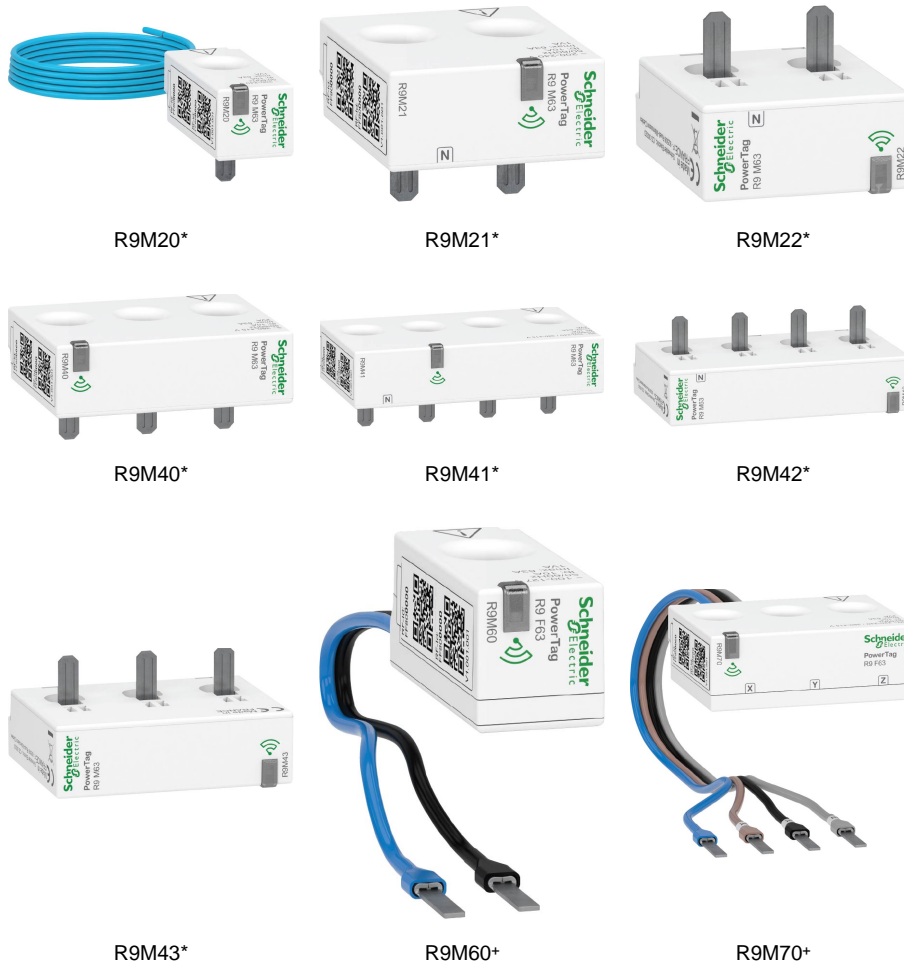

⚠ CAUTION

CAUTION indicates a hazardous situation which, if not avoided, **could result in** minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to physical injury.

PowerTag Energy

R9M20*

R9M21*

R9M22*

R9M40*

R9M41*

R9M42*

R9M43*

R9M60+

R9M70+

* Monoconnect series
+ Flex series

For your safety

⚡⚠ **DANGER**
HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH
Safe electrical installation must be carried out only by qualified electrical personnel. Qualified electrical personnel must prove profound knowledge in the following areas: • Connecting to installation networks • Connecting several electrical devices • Laying electrical cables • Safety standards, local wiring rules, and regulations **Failure to follow these instructions will result in death or serious injury.**

About the device

PowerTag E (hereinafter referred as PowerTag) is a compact, robust, and easy-to-install wireless communication energy sensor. It is used together with the **Gateway/Hub** to collect information from every equipped circuit to identify the energy consumption of each connected load. It is designed specifically to manage energy consumption for new and existing residential installations. It monitors and measures energy and power in real-time, and also provides complete visibility of power transfer between power source and loads.

Features of PowerTag:

- Easily mounted with top or bottom position directly on circuit breaker.
- Measures energy consumption and real-time power.
- Sends real-time notifications and alarms to the Wiser app in case of consumption limit set by user in automation exceeds.

Benefits of PowerTag:

- Easy accessibility and fastest installation.
- Energy Class 1: accurate measurement.
- Compact and cost effective.

Installing the device

It is recommended to place the **Gateway/Hub** within 3 meters where PowerTag is installed for best results. This provides good network signal strength and helps to prevent online/offline issues, which might result in corrupt data.
Refer to the installation instruction supplied with this product.

Instruction manual links:

- PowerTag Resi9 M63
- PowerTag Resi9 F63

Supported mounting positions

Mounting position	PowerTag Energy	Model number
Primary models		
Top or Bottom	PowerTag Energy R9 M63 3P	R9M40
Top or Bottom	PowerTag Energy R9 F63 1PN	R9M60
Top or Bottom	PowerTag Energy R9 F63 3PN	R9M70
Other models		
Top or Bottom	PowerTag Energy R9 M63 1PW	R9M20
Top	PowerTag Energy R9 M63 1PN	R9M21
Bottom	PowerTag Energy R9 M63 1PN	R9M22
Top	PowerTag Energy R9 M63 3PN	R9M41
Bottom	PowerTag Energy R9 M63 3PN	R9M42
Top or Bottom	PowerTag Energy R9 M63 3P 230V LL	R9M43

Monoconnect series
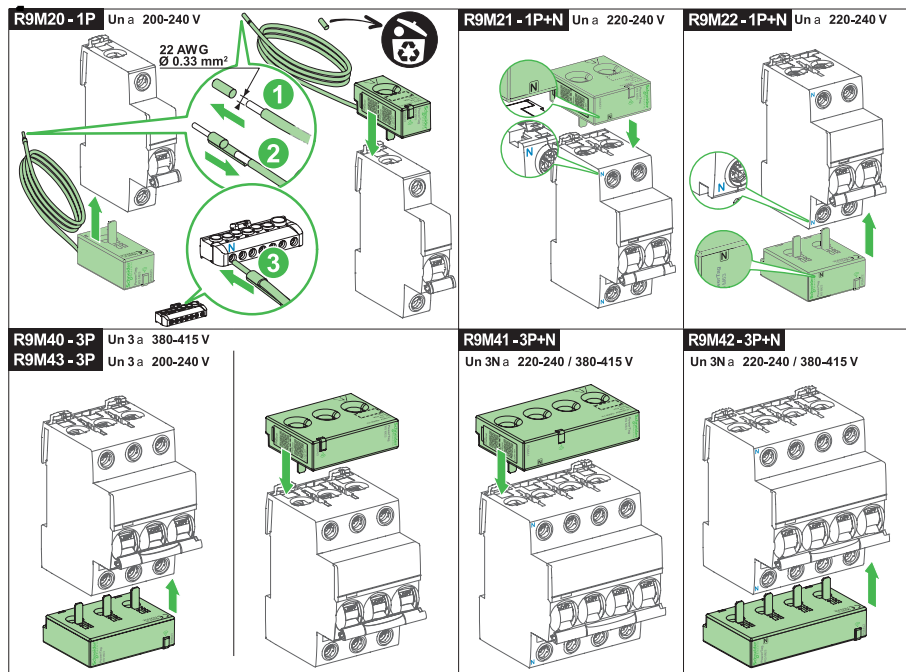
Flex series
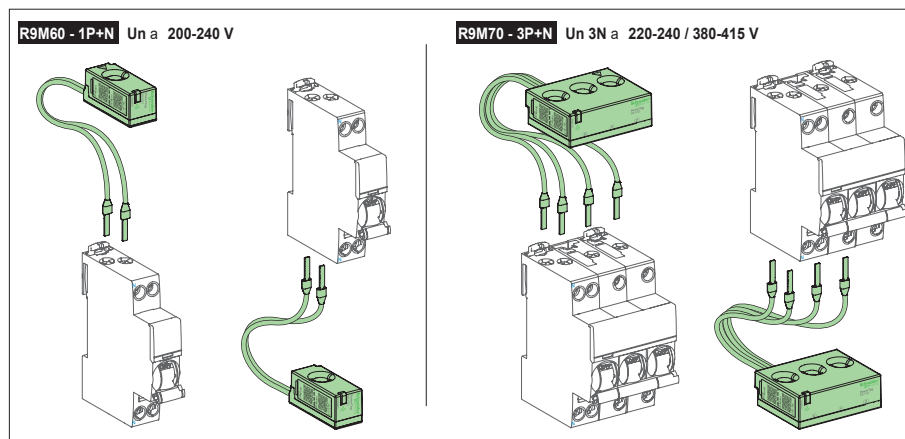
Pairing the device

Pair your PowerTag with the **Gateway/Hub** to access and control the PowerTag using the Wiser app.

- We recommend to configure your main PowerTag as **Grid** on the main incomer of the house. This helps to record the overall consumption.

    NOTE:

    ◦ **Grid:** main supply (referred as **Grid** in the app) of the house.

    ◦ **Load:** power consumed from the Grid or a production source by electrical devices such as light, water heater, and fridge.

- If you have more than one PowerTag installed, it is recommended to pair the main PowerTag first and set it as Grid.

    NOTE:

    ◦ Main PowerTag is connected to the Grid.

    ◦ Additional PowerTag are connected to the loads.

    IMPORTANT: PowerTag must be installed by qualified professional.

Pairing device manually

To pair the device manually:

1. On the **Home** page, tap **+**.

2. Tap ⬚, select the required **Wiser Hub** on the slide-up menu.

3. Select an option to add the device (A):

   – **Add Device with Install Code**

   – **Add Device without Install Code**
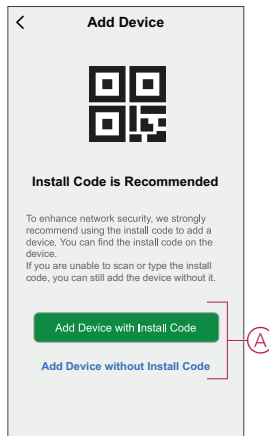
TIP: It is recommended to add the device with install code.

4. To pair the device with install code, tap **Add Device with Install Code** to display the slide-up menu. Select any one of the options (B):

   – **Scan Install Code**: you can scan the device for the install code. Position your camera to scan the QR code or barcode available on the PowerTag.

   – **Enter Install Code Manually**: you can manually enter the install code on the device.
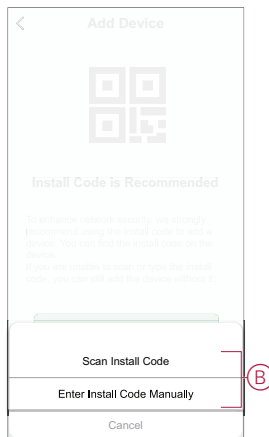
After adding the device with Install Code, proceed to **Step 6**.

5. To pair the device without install code, tap **Add Device without Install Code**.

6. Select **Confirm LED is blinking amber > Start Configuration** (C).
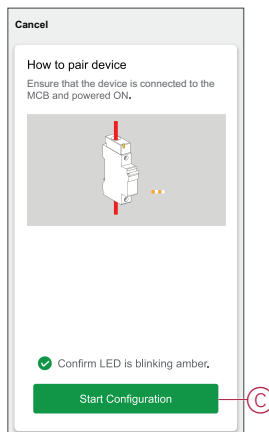

NOTE: PowerTag must be connected to the MCB and powered ON.

7. Wait for a few minutes for the app to connect with your PowerTag. Once PowerTag is added, tap **Done**.

8. On the configuration page, tap on the PowerTag to configure.

9. Tap **Upgrade**, to update to the latest version and unlock the respective features.

> **NOTE:** By default, the first two steps will be completed for new users.
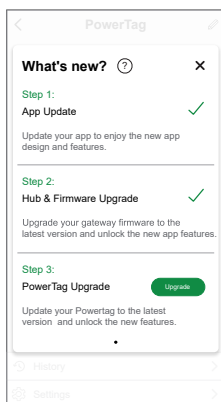
10. Once all upgrade steps are completed, you will get a pop-up notification. Tap **Confirm**, to open settings page.

11. On the settings page, tap (D) to select the type.
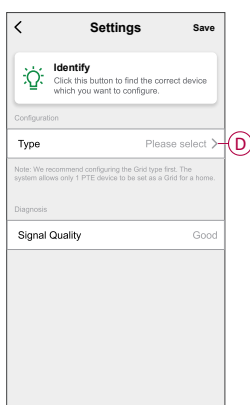
12. Select the type from the list based on the usage and appliance, then tap **Confirm**.

> **IMPORTANT:** It is mandatory to configure a PowerTag as **Grid** on the main incomer of the house.

13. Tap **Name** (E), enter the name then tap **Save**.

> **TIP:** You cannot add the same name twice, and use the name Grid. By default name will be taken from the type selected.
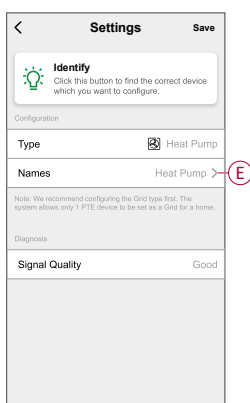
14. On setting page, tap **Save > Confirm > OK**.on pop-up notification.

    NOTE: Once you configure, you will not be able to change the load type you are monitoring.
    To monitor another load type in the future, you have to remove and re-configure the PowerTag.

15. Once all PowerTag are configured, tap **Done**.
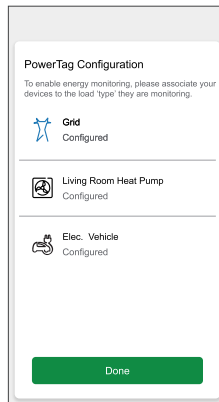
On successful pairing, PowerTag will appear on the home screen.

Pairing device with auto scan

Pairing the device with auto scan automatically discovers the device when the corresponding device is powered on.

1. On the **Home** page, tap **+ > Auto scan > Confirm**.

2. Enable permissions to **Access location** and **Wi-Fi** for scanning device and tap **Start scanning**.

    NOTE: If you have multiple hubs, do Step 3 or proceed to Step 4.

3. Tap **Select hub** and select the **Wiser Hub** from the slide-up menu.
   Wait for a few seconds until the device search is complete.

4. Tap **Next** and select **PowerTag**.
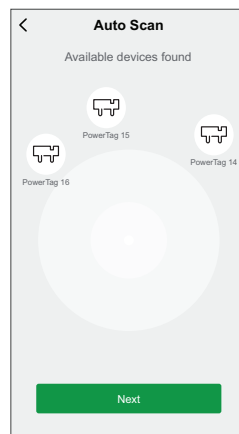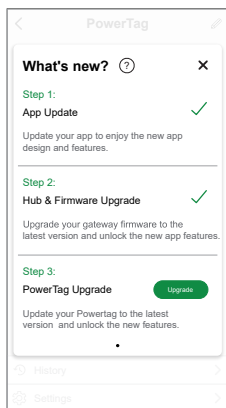
5. Tap **Done** for slide up menu.
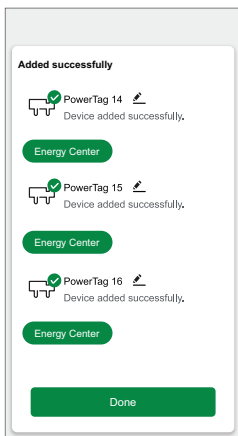
NOTE: Tap ✏ to rename the PowerTag.

6. On the configuration page, select the PowerTag from the list to configure.

7. Tap **Upgrade**, to update to the latest version and unlock the respective features.

> NOTE: By default, the first two steps will be completed for new users.

8. Once all upgrade steps are completed, you will get a pop-up notification. Tap **Confirm**, to open settings page.

9. On the settings page tap (A) to select the type.
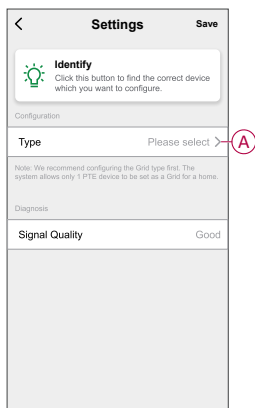
10. Select the type from the list based on the usage and appliance, then tap **Confirm**.

> IMPORTANT: It is mandatory to configure a PowerTag as **Grid** on the main incomer of the house.

11. Tap **Name** (B), enter the name then tap **Save**.

> **TIP:** You cannot add the same name twice, and use the name Grid.
> By default name will be taken from the type selected.
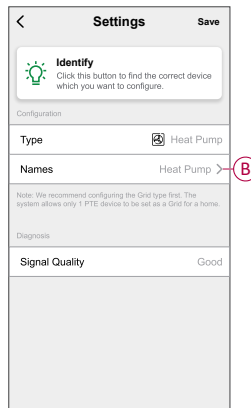
12. On setting page, tap **Save > Confirm > OK**.on pop-up notification.

> **NOTE:** Once you configure, you will not be able to change the load type you are monitoring.
> To monitor another load type in the future, you have to remove and re-configure the PowerTag.

13. Once all PowerTag are configured, tap **Done**.
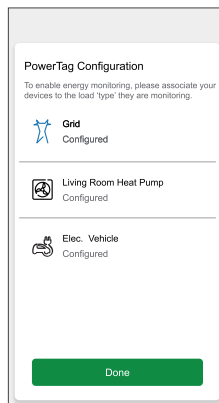
On successful pairing, PowerTag will appear on the home screen.

Configuring the device

Tariff information

You can view and update tariff information in the Wiser app to access your energy cost and billing data.

To access tariff information:

1. Tap ☰ on the home page.

2. Select **Home Management** and select your home where the energy device is installed, to view **Home Settings**.

3. On Home Settings page, select **Tariff > Electricity**.

   You can view and update the following in electricity menu:

   A. Contract options, page 15

   B. Subscription type, page 16

   C. Rates

   D. Schedules, page 17 (Only available for time of use contract option)
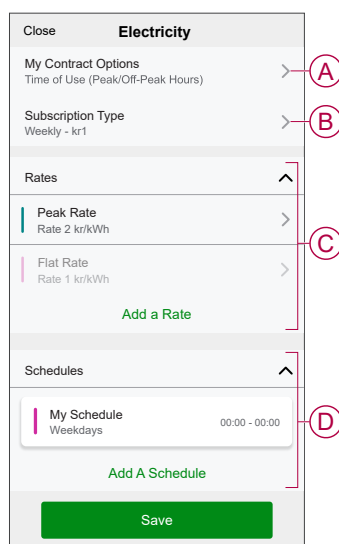
4. Once all the settings are updated, tap **Save**.

Setting contract options

You can update flat and peak rate based on your contract option in the Wiser app.

1. Tap **My Contract Options** on Electricity page.

2. In the slide-up menu, select any one of the following (A):

   – **Time of Use (Peak/Off-Peak Hours)**: rate set to a specific period of time at which consumption is at its highest. It is the amount you pay for each unit of electricity consumed for the time period set.

   – **Flat Rate**: fixed rate for the entire time period of electricity consumption.

   – **No Contract**: electricity rate is not set, no information related to bill will be shown in the app.
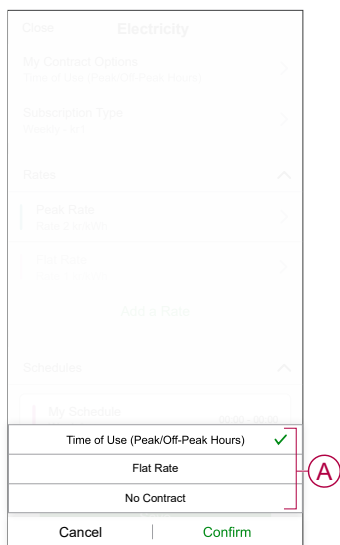
NOTE: By default, **No Contract** option is set.

3. After selecting an option, tap **Confirm**.

Setting subscription type

Based on your electricity subscription, you can update subscription period and price in the Wiser app.

1. Tap **Subscription Type** on Electricity page.

2. Select the subscription period (A).
   – **Yearly**
   – **Monthly**
   – **Weekly**
   – **Daily**

3. Enter **Subscription Price** (B), then tap **Set**.

Adding tariff rate

You can add flat and peak rate value in the Wiser app.

1. Tap **Add a Rate** on Electricity page.

2. Enter name and rate per kWh (A).

3. Tap **Add** (B).

TIP: You can set the highest tariff rate as a peak rate and other tariff rates as an off-peak rate.

Adding schedule to tariff rate

You should add a scheduled time period for which a tariff rate will be active.

1. Tap **Add A Schedule** on electricity page.

2. Enter a schedule **Name** (A).

3. Select the number of **Days** (B).

4. Tap **Start Time** and **Finish Time** to set the time period (C).

5. Tap **Rate** (D) and select the type of rate (Flat or Peak rate).

6. Tap **Set** to save the schedule.

Checking currency type

You can view the currency type in the Wiser app.

> **NOTE:** Default currency is set based on the home location.

To view currency type:

1. Tap ☰ on the home page.

2. Select **Home Management** and select your home where the energy device is installed, to view **Home Settings**.

3. On Home Settings page, you can view the currency type.

   Following currency are available based on home location:

   • **Kr NOK**: Norway

   • **Kr SEK**: Sweden

   • **Kr DKK**: Denmark

   • **€ EUR**: Finland and Spain

Identifying the device

Using the Wiser app, you can identify the PowerTag.

1. On the **Home** page, select the desired equipment PowerTag from the list of available devices.

2. Tap **Settings** and then tap **Identify** (A).
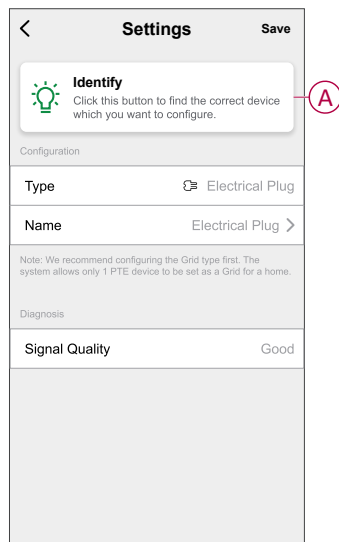
3. Tap **OK** on the pop-up notification panel when the PowerTag is identified.

   NOTE: The green LED on the identified PowerTag blinks for 30 s.

Changing the device icon

You can change the device icon using the Wiser app.

1. On the **Home** page, select the device for which you wish to change the icon.

2. At the top-right corner of the screen, tap 🖉 .

3. Tap edit ✏ next to the device name.

4. Tap **Icon** to view the menu.

5. In the slide-up menu, select any one of the following (A) to change the device icon:

 – **Take photo** - allows you to take a photo with your device camera.
 – **Select from Icon Library** - allows you to select an icon from the app library.
 – **Select from Album** - allows you to select a photo from the mobile gallery.
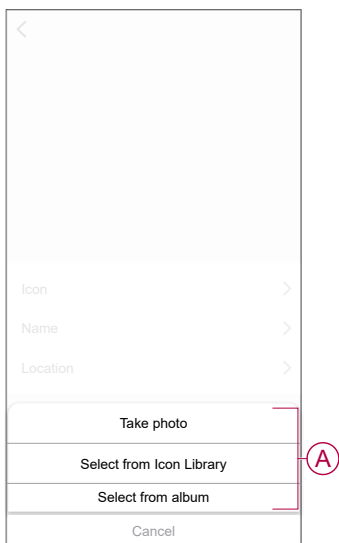
Renaming the device

You can rename the device using the Wiser app.

1. On the **Home** page, select the device for which you wish to rename.

2. At the top-right corner of the screen, tap ✎ .

3. Tap edit ✎ next to the device name.

4. Tap **Name**, enter the new name (A) and then tap **Save**.
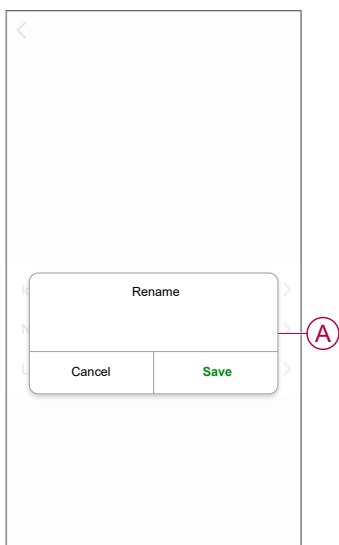
Using the device

Identifying the signal strength

The signal strength is an indicator of the wireless range that is received by the device.

1. On the **Home** page, select the **PowerTag** for which you want to check the signal strength.

2. Tap **Settings** to check the **Signal Quality** which represents the signal strength of the wireless signal that is received by the device.
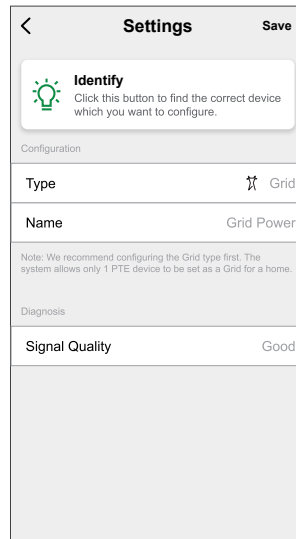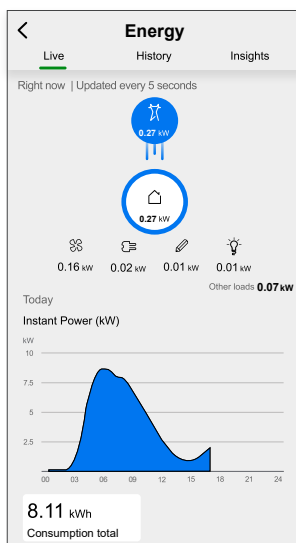
Checking energy consumption

Using the Wiser app, you can monitor the live and history data of the PowerTag.

- **Live**: provides live data of the energy consumption.
- **History**: provides history of power consumed over the required duration (hours, days, months and years).
- **Insights**: provides annual bill for the tariff set.

Live

Using the Wiser app, you can view the live energy consumption.
To view live data, on **Home** page, tap **Energy Dashboard** > **Live**.

History

Using the Wiser app, you can monitor the energy consumption by accessing the history.

History of energy consumption:

To view the overall energy consumption.

1. On **Home** page, tap **Energy Dashboard** > **History**.

2. On the **History** page, select a required time frame (A):

   • **Hours**: to view the hourly consumption.

   • **Days**: to view the daily consumption.

   • **Months**: to view the monthly consumption.

   • **Years**: to view the yearly consumption.

   NOTE: ⚠ (B) indicates the missing data for a specific duration, when the PowerTag was offline/disconnected.

   NOTE: Tap on the required hour/day/month/year in the bar graph to view the energy consumption.

History of load consumption:

To view the breakdown of energy consumption based on loads.

NOTE: Users with multiple Powertag configurations can view the history of load consumption.

1. On the **History** page, tap ▽ and select **Load consumption**.

2. Tap (A) and select a required time frame:

- **Hours**: to view the hourly consumption.
- **Days**: to view the daily consumption.
- **Months**: to view the monthly consumption.
- **Years**: to view the yearly consumption.
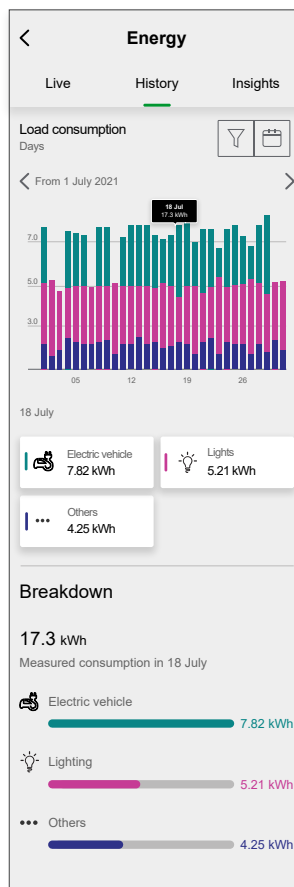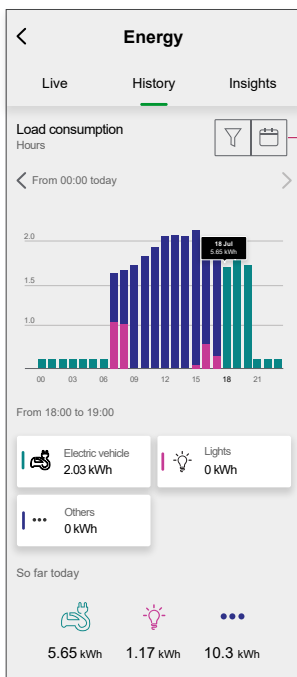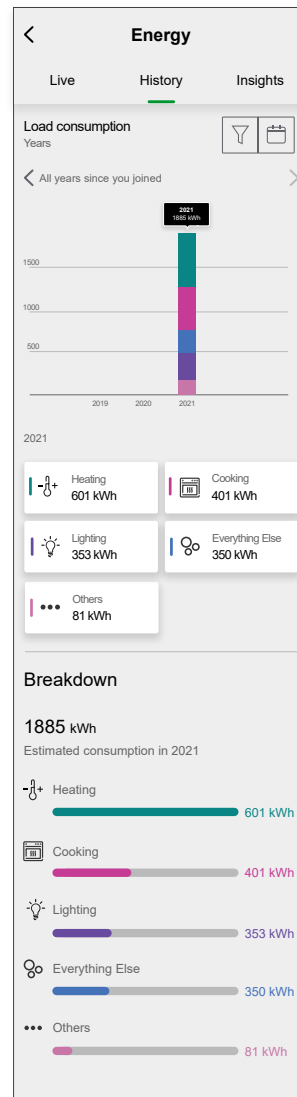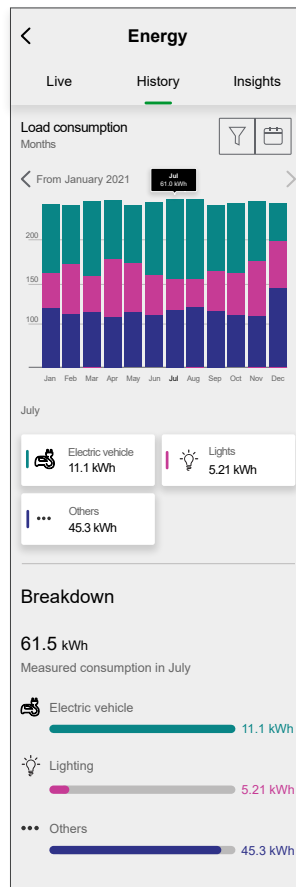
**TIP:** Select the desired load, for example Lighting, Heating etc. to view the load consumption data.

NOTE: Select the required hour/day/month/year in the bar graph to view the respective breakdown.

Insights

Using the Wiser app, you can check the annual bill for a specific tariff.

1. On **Home** page, tap **Energy Dashboard** > **Insights**.

2. On the **Insights** page, you can see the annual bill as per the tariff set (A).
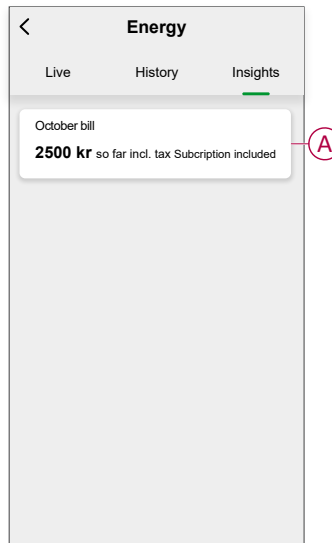
Creating an automation

An automation allows you to group multiple actions that are usually done together, triggered automatically or at scheduled times. By using the Wiser app , you can create automations based on your needs.

**NOTE:** Automation is only possible with the PowerTag assigned as **Grid**.

To create an automation:

1. On the **Home** page, tap on ⊞.

2. Go to **Automation** > **+** to create an automation.

3. Tap **Edit Name** ✎, enter the name of the automation (A) and tap **Save**.

   TIP: You can choose the cover image that represents your automation by tapping 🖾.
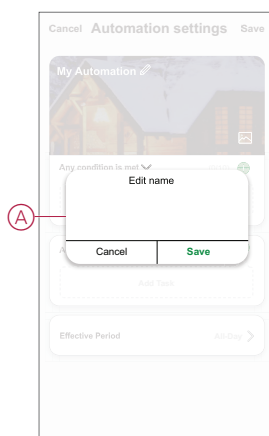

4. Tap **Any condition is met** to select any one of the condition type (B):

   – **All conditions are met**: the automation is triggered when all the conditions are met.

   – **Any condition is met**: the automation is triggered when at least one condition is met.
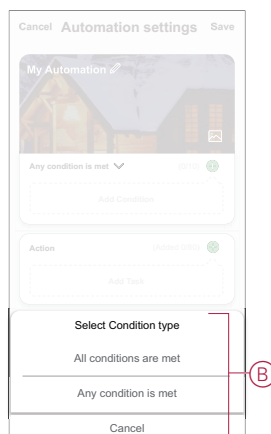

5. Tap **Add Condition** to display the slide-up menu.

6. In the **Add Condition** menu, you can do either or all of the following options (C):

   – **When weather changes**: select various weather settings.

   – **Schedule**: set the time and day.

   – **When device status changes**: select the device and its function.

   > **NOTE:** You can add one or more conditions using ⊕.
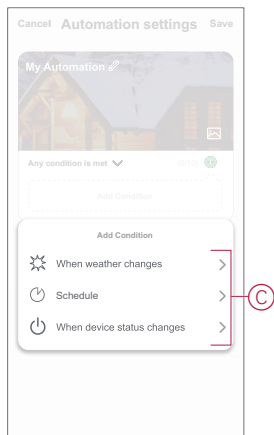
7. Tap **When device status changes** > **Grid** and select any of the following function (D):
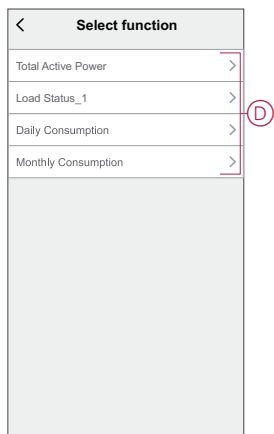

   – **Total Active Power**: to set the real-time energy consumption (kW).

   – **Load Status**: to turn on/off the load.

   – **Daily Consumption**: to set the daily energy consumption.

   – **Monthly Consumption**: to set the monthly energy consumption.

8. Tap **Add task** to display the slide-up menu.

9. In the **Add task** menu, you can do either or all of the following options (E):

   – **Run the device**: select the devices that you want to trigger.

   – **Moment or Automation**: select the moment which you want to trigger or select the automation that you want to enable or disable.

   – **Send notification**: turn on notification for the automation.

   – **Delay**: set the delay time.

   NOTE: You can add one or more actions using ➕.
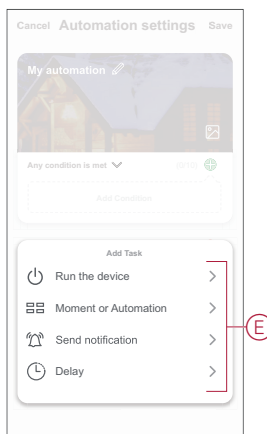
10. Tap on Effective period to set the time range for the automation. You can select any one of the following (F):

    – **All-day**: 24 hours

    – **Daytime**: From sunrise to sunset

    – **Night**: From sunset to sunrise

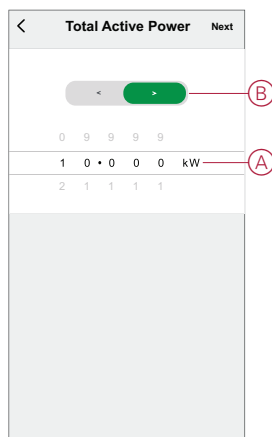   – **Custom**: User defined time period
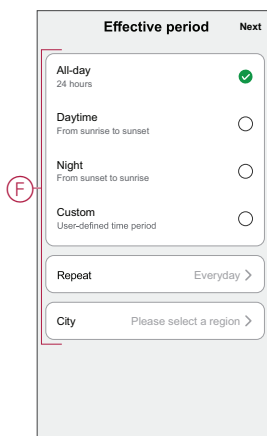
11. Once all the actions and conditions are set, tap **Save**.

    Once the automation is saved, it is visible on the **Automation** tab. You can tap the toggle switch to enable/disable.

Example of an Automation

This demonstration shows you how to create an automation to switch off the load and receive notification when total active power consumption is more than set value.

1. Go to **Automation** > **+** to create an automation.

2. Tap ✐, enter the name of the automation and tap **Save**.

   TIP: You can choose the cover image that best represents your automation by tapping 🖼.

3. Tap **Add Condition** > **When device status changes** > **Grid** > **Total Active Power**.

4. Enter a target value (A), tap **>** (B) and then tap **Next**.

5. Tap **Add task** > **Run the device** > **Light**.

6. On **Select function** window, tap **Switch** from the slide-up menu and select **Off** > **Save** > **Next**.

7. Tap **Add task** > **Send Notification** select **Notification** then tap **Next**.

8. In the **Automation Settings** page, tap **Save**.

   Once the automation is saved, it is visible on the **Automation** tab. You can tap the toggle switch on the automation to enable it.

Editing an automation

1. On the **Automation** tab, locate the automation you want to edit and tap ●●●.

2. On the **Edit** page, you can tap each item (such as dimmer, shutter, delay, temperature, etc.) to change the settings.

    TIP:

    -   You can add one or more condition or actions using ⊕.

    -   To delete an existing condition or action, slide each item towards left and tap **Delete**.

Deleting an automation

1. On the **Automation** tab, locate the automation that you want to delete and then tap ●●●.

2. Tap **Delete** and then tap **Ok**.

    NOTE: After deleting an automation, the device action can no longer be triggered.

Removing the device

Using the Wiser app, you can remove a device from the device list.
To remove a PowerTag:
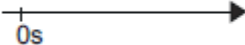
1. On the **Home** page, tap **All devices** and select the **PowerTag** to be removed.

2. Tap ✎ to display more details.

3. Tap **Remove and Factory Reset Device** (A) > **Confirm**.
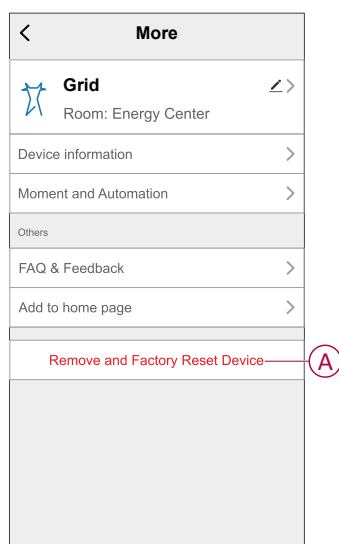
TIP: On the **Home** page, tap and hold the **PowerTag** to remove the device.

All the historical data will be deleted in the app and cloud.

LED indications

Behavior	Communication indicator light
	PowerTag switched off.
	PowerTag is searching a Gateway in pairing mode.
	PowerTag is in identification mode.
	PowerTag is in network. Normal communication with the Gateway.
	Occasional loss of communication.
	Loss of communication with the Gateway.
	Internal error detected.

Troubleshooting

Symptom	Possible cause	Solution
Currency or the cost related information is not appearing correct.	User has not configured the tariff plan.	Configure the tariff plan correctly by setting the consumption and production target.
Signal strength is bad.	Poor signal between the Wiser Gateway and PowerTag.	Move the Wiser Gateway closer to the PowerTag.
Dashboard is blank and the user unable to see the PowerTag.	User has not set any PowerTag as Grid.	Set a PowerTag as Grid.
Individual PowerTag data is not available in dashboard.	• Device is offline. • System/Gateway is unable to receive data. • Ethernet connection is incorrect.	Restart the device. Also, ensure to correct the Ethernet connection.
The hourly data is incorrect against real local time.	Incorrect time configuration as per the user's country.	Set correct time zone as per your country.
The Wiser Gateway LED blinks amber continuously.	• IP address not assigned by the router. • There is no internet router yet.	• Check for a proper internet connection. • The Wiser Gateway switches to Discovery mode and tries to capture unmatched components. **NOTE:** Discovery mode lasts no longer than 10 minutes.
The PowerTag LED blinks red rapidly.	PowerTag has lost connection with the Wiser Gateway.	• Do a power cycle by switching OFF and ON the PowerTag. • Ensure that the LED starts blinking amber and try adding again. **NOTE:** If the LED still blinks red, replace with a new device and try adding again.
The PowerTag LED stays red continously.	The PowerTag is not working permanently.	Replace with a new PowerTag and try adding again.
The PowerTag LED is OFF	PowerTag is probably not powered ON.	Recheck the wiring and power connection of the PowerTag and see if gets powered ON. Try adding the device after it is powered ON. If the above mentioned method do not work, replace the PowerTag and retry.
The PowerTag LED blinks orange.	PowerTag is in discovery mode and is ready to be connected.	Perform any of the methods: • Reduce the distance between the Gateway and the device if possible. Try adding again. • Power OFF any other Gateways in the area which have wireless devices and try adding again. • Replace with a new device and try adding again.

Technical data

Features

Rated Voltage	R9M20	1P	Phase-to-phase	200 - 240 V AC ± 20 %
	R9M21	1P+N	Phase-to-neutral	220 - 240 V AC ± 20 %
	R9M22	1P+N	Phase-to-neutral	
	R9M60	1P+N	Phase-to-neutral	200 - 240 V AC ± 20 %
	R9M40	3P	Phase-to-phase	200 - 240 V AC ± 20 %
	R9M43	3P	Phase-to-phase	380 - 415 V AC ± 20 %
	R9M41	3P+N	Phase-to-neutral	220 - 240 V AC ± 20 %
	R9M42	3P+N	Phase-to-phase	380 - 415 V AC ± 20 %
	R9M70	3P+N	Phase-to-neutral	220 - 240 V AC ± 20 %
			Phase-to-phase	380 - 415 V AC ± 20 %
Frequency	50/60 Hz			
Maximum current	Imax		63 A	
Basic current	Ib		10 A	
Saturation current			130 A	
Starting current	Ist		40 mA	

Environment

Operating temperature		-25 °C to +60 °C
Storage temperature		-40 °C to +85 °C
Overvoltage category	As per IEC 61010-1	Cat. III
Measuring category	As per IEC 61010-2-030	
Altitude		≤ 2000 m
Degree of protection	Device only	IP20
	IK	05

Radio-frequency communication

ISM band 2.4 GHz		2.4 GHz to 2.4835 GHz
Channels	As per IEEE 802.15.4	11 to 26
Isotropic Radiated Power	Equivalent (EIRP)	0 dBm
Maximum transmission time		< 5 ms
Channel occupancy	Messages sent every	5 seconds (approx.)

Characteristics of measuring functions

Function		Performance category as per IEC 61557–12 PMD-I/DD/K55/1	Device measuring range	
Active energy (delivered and received)	Ea	Class 1	Total and partial 0 to 99999999.9 kWh	
Power	P	Class 1	1P+N	≤ 1 VA
			3P/3P+N	≤ 2VA

Weight

Please refer below table based on your commercial reference.

Commercial reference	Type	Weight (g)
R9M20	1P + Wire	16.4
R9M21	1P + N	17.5
R9M22		
R9M40	3P	28
R9M43		
R9M41	3P + N	35
R9M42		
R9M60	1P + N	16
R9M70	3P + N	40

Compliance

Compliance information for Green Premium products

Find and download comprehensive information about Green Premium products, including RoHS compliance and REACH declarations as well as Product Environmental Profile (PEP) and End-of-Life instructions (EOLI).

https://checkaproduct.se.com/

General information about Green Premium products

Click the link below to read about Schneider Electric's Green Premium product strategy.

https://www.schneider-electric.com/en/work/support/green-premium/

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