Schneider Electric Wiser 16 A Relay for Temperature Control Device

Schneider Electric Wiser 16 A Relay for Temperature Control Device User Guide

Contents

Schneider Electric Wiser 16 A Relay for Temperature Control Device

Product Information

Specifications

- Product Name: Wiser 16 A Relay for Temperature Control
- Features: Temperature control relay
- Maximum Current: 16 A
- Manufacturer: Schneider Electric
- Website: **www.se.com**

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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.

Wiser 16 A Relay for Temperature Control

CCTFR6700
WE714U1A0902

For your safety

NOTICE
RISK OF DAMAGE TO DEVICE
Always operate the product in compliance with the specified technical data. Failure to follow these instructions can result in equipment damage.

About the device

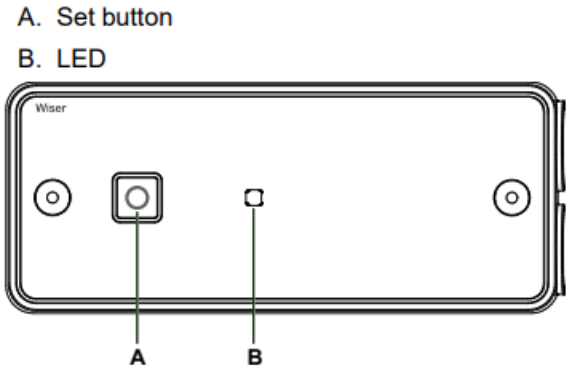
The Wiser 16A Relay (hereinafter referred to as Relay) is used to control electrical heaters or electric underfloor heating with On/Off commands or Fil Pilote commands. The fil pilote is a single control wire interface for controlling multiple heaters from a Relay. It can control heaters up to 3000 W.

TIP: Pair with Wiser Room Thermostat to control electric heaters or electric underfloor heating.

Features of the Relay:

- Remotely control electrical heating using the Wiser Home app.
- Boost the room temperature using the Wiser Room Thermostat center button.

Diagram of operating elements



Installing the device

Refer to the installation instruction supplied with this product.
See installation instructions.

Choosing Suitable Location to Install:

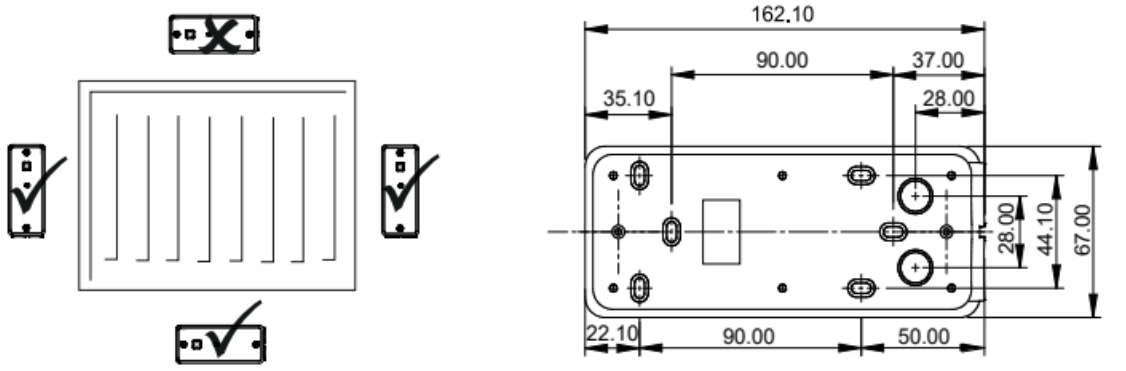
Device positioning
The Relay has to be installed below or to the side of any heat source. It should not be installed behind or above a wall-mounted heater.

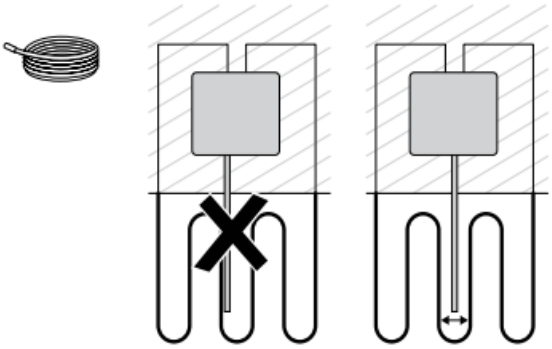
Preparation of the mounting surface

TIP: Breakout tabs can be removed to provide 4x extra mounting holes and 2x larger holes for rear cover cable entry.

Floor sensor installation
It is important that the floor sensor is fitted in the correct location in order to read an accurate floor temperature.

- Floor sensor must be 1 m from edge of the floor, halfway between pipes.
- Make sure the sensor is not sitting on top of heating pipes.
- Assemble sensor cable in a plastic conduit with inside diameter of minimum 16 mm.
- Fix tape to the end of the conduit, cut a slice in the tape to ensure condensation can come out of the conduit.



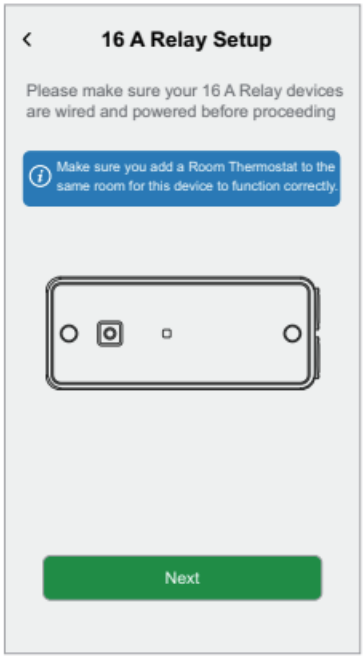


Pairing the device

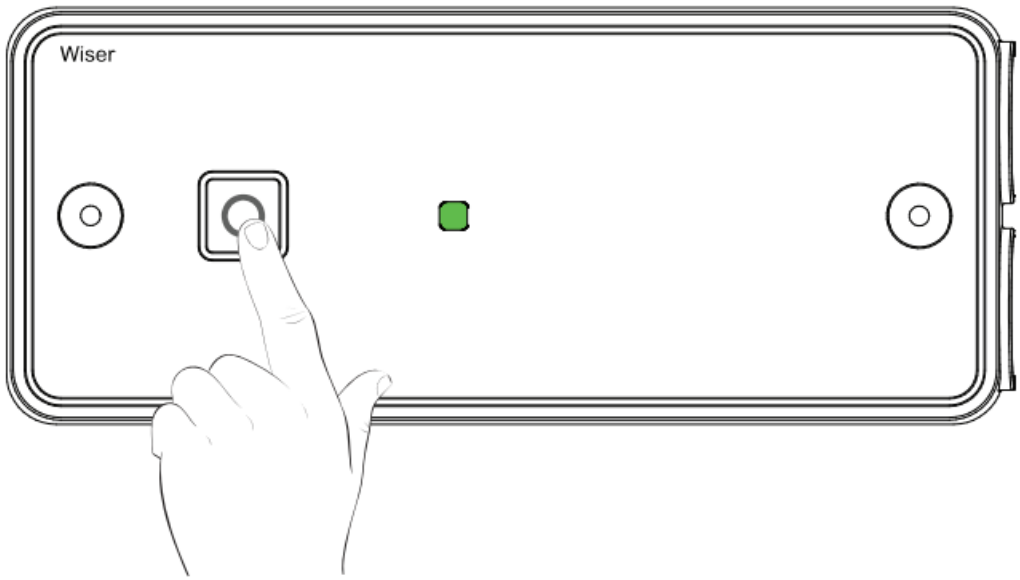
Using the Wiser Home app, pair your Relay with the Wiser Hub to access and control the Relay.

To pair the Relay:

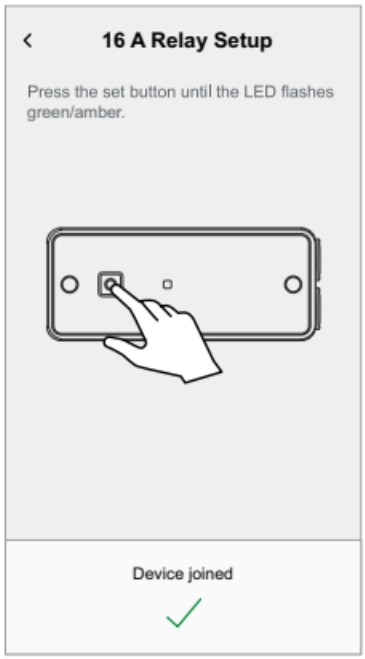
1. On the Home page, tap .
2. Tap Devices > and tap Climate > 16A Relay.
3. Tap Next.



4. Press the Set button until the LED flashes green/amber.



5. Please wait for a few seconds until the Relay is successfully joined.
   In the app, you can see the Relay is successfully joined



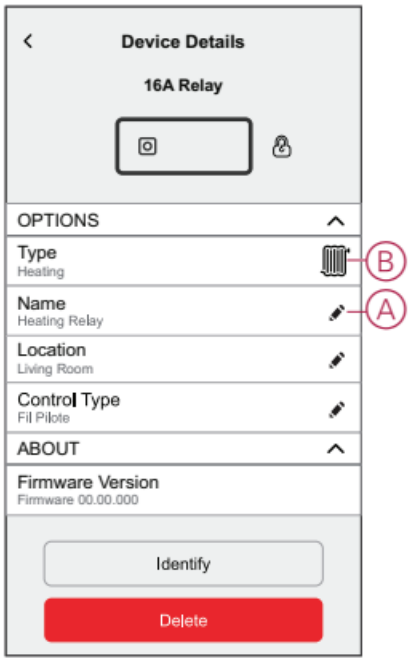
6. On the 16 A Relay Setup page, select the control type Relay or Pilot wire.
7. Tap Next to enter the Relay name and assign it to an existing room or a new room.
   You can see the added the Relay on the Home page under the room tab or under ALL devices.

Configuring the device

Renaming the device

You can rename the device using the Wiser Home app.

1. On the Home page, tap .
2. Tap Devices > Climate > 16A Relay > Name (A) to rename the device.
   NOTE: Type and icon (B) are both assigned automatically based on whether you have radiators or floor heating.
   You will be able to view this only after the pairing is completed.



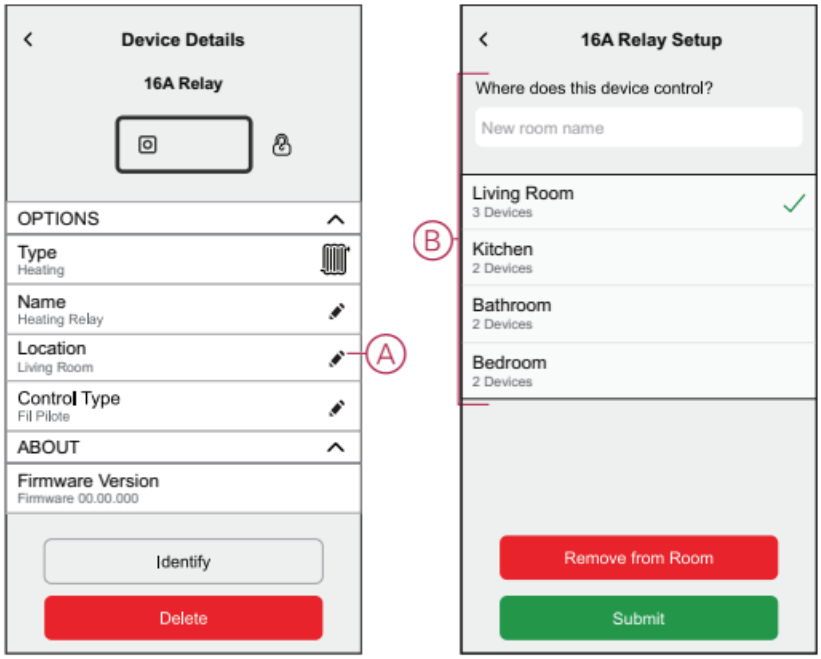
Setting the device location

Using the Wiser Home app, you can assign the Relay in the room (such as bedroom, living room, dining room etc.).

To assign the Relay location:

1. On the Home page, tap .
2. Tap Devices > Climate > 16A Relay > Location (A) to assign the Relay to the existing room or a new room (B) and tap Submit.

   NOTE: You can configure up to 4 Relays in the same room.

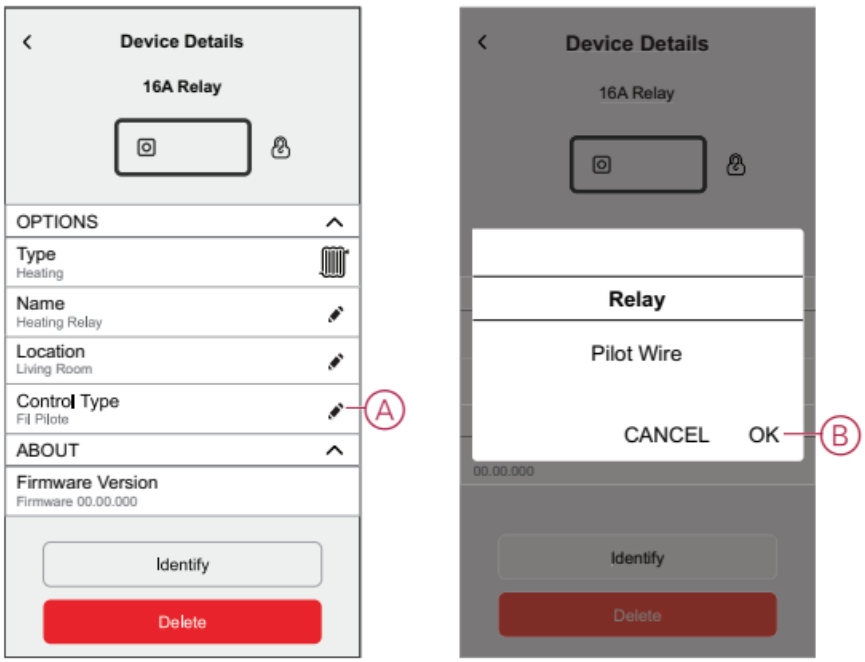


Setting the device control

Using the Wiser Home app, you can control the electrical heaters or electric underfloor heating by selecting Relay or Pilot Wire.

To set the Relay control:

1. On the Home page, tap .
2. Tap Devices > Climate > 16A Relay > Control type (A) and select Relay or Pilot Wire.
3. Tap OK (B).



Selecting the floor sensor

Using the Wiser Home app, you can select the type of floor sensor that you have installed in case of using electric underfloor heating. The floor sensor measures the floor temperature and displays in the app. This option appears only if you have selected the Relay as Control Type.

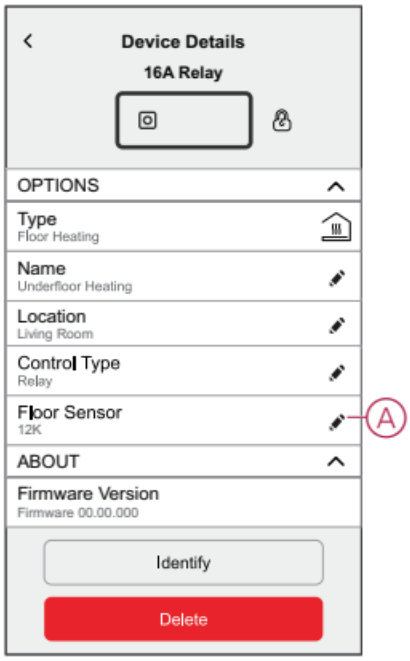
DANGER
RISK OF FATAL INJURY FROM ELECTRIC SHOCK
The device is not a Safety Extra Low Voltage (SELV) device. The sensors lines are on mains (230 VAC) line.

Only use sensors with the appropriate insulation rating.
Failure to follow these instructions will result in death or serious injury.

To select the floor Sensor:

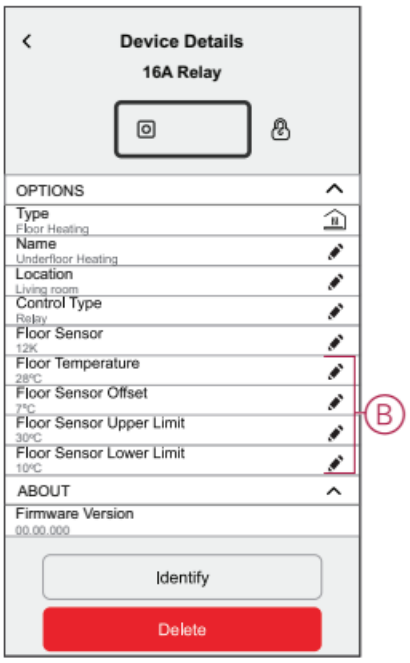
1. On the Home page, tap .
2. Tap Devices > Climate > 16A Relay > Floor Sensor (A) and select the sensor from the list.
    - NTC 10K
    - NTC 12K
    - NTC 15K
    - NTC 33K
    - NTC 47K

    NOTE: Not fitted is selected by default.
3. Tap OK.



Once the floor sensor is selected, new options (B) appear in the app.

- Floor Temperature – It shows the temperature of the floor measured by the floor sensor.
- Floor Sensor Offset – Allows you to calibrate the floor sensor to match the actual temperature of the floor.
- Floor Sensor Upper Limit – The upper limit is set to maintain the floor temperature below the set limit.
- Floor Sensor Lower Limit – The lower limit is set to maintain the floor temperature above the set limit.



Offsetting the floor sensor
Using Wiser Home app, the Floor Sensor Offset option allows you to calibrate the floor sensor to match the actual temperature measured by an external device.

To offset the floor sensor:

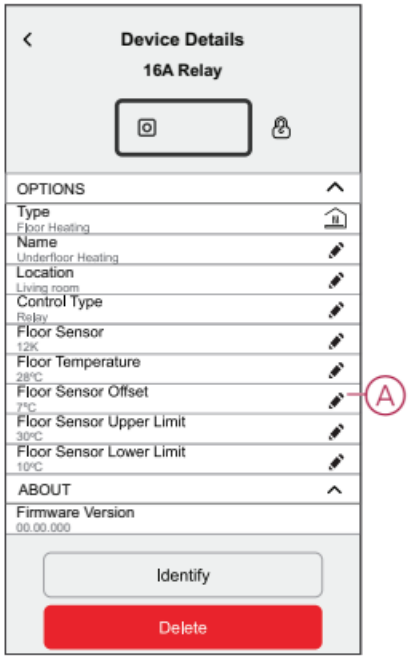
1. On the Home page, tap .
2. Tap Devices > Climate > 16A Relay > Floor Sensor Offset (A) and select the temperature that is required for

offsetting, to match the actual temperature.

3. Tap OK.

NOTE:

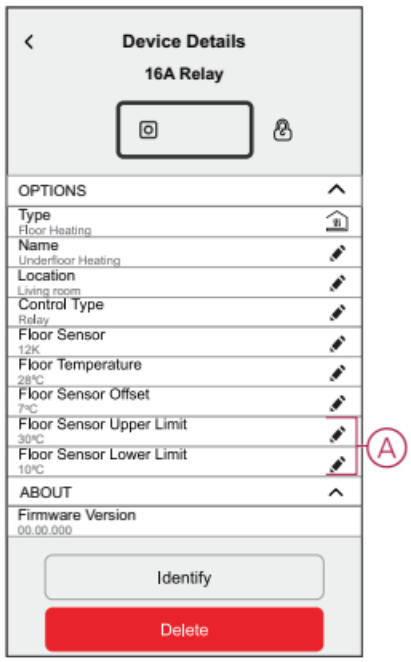
- The allowed temperature range to offset the floor sensor is 9 °C to -9 °C.
- The floor temperature shows the final temperature of the floor including any offset that is applied.
  TIP: Offsetting the floor sensor is not required, if the floor temperature measured by the floor sensor and an external device are same. You can set it to 0 °C.



Setting the floor sensor Upper/Lower limit
Using the Wiser Home app, you can switch on/off the electrical underfloor heater by setting lower/upper temperature limit. This allows you to maintain the floor temperature within the set limits.

To set the floor sensor temperature limit:

1. On the Home page, tap .
2. Tap Devices > Climate > 16A Relay.
3. Tap Floor Sensor Upper Limit/ Floor Sensor Lower Limit (A) and set the upper/lower temperature limit.
   NOTE:
   Upper limit range is 5 °C to 40 °C.
   Lower limit range is 4 °C to 39 °C.
4. Tap OK.
   TIP: You can select Disabled, if setting the floor sensor limit is not required.



Identifying the device

Using the Wiser Home app, you can identify the Relay from the other available devices in the room.

To identify the Relay:

1. On the Home page, tap .
2. Tap Devices > 16A Relay > Identify (A) to rename the Relay.

   NOTE:

   This feature flashes the Relay LED, so you can identify the actual device.

   The Relay LED will continue to flash until you tap OK.

Using the device

Setting the room temperature using the app

Using the Wiser Home app, you can adjust, set or boost the room temperature.
Precondition: Add a Wiser Room Thermostat / Wiser Temperature/Humidity Sensor in the same room where 16A Relay is located.

To adjust, set or boost the room temperature:

1. On the Home screen, tap  from the room tab or All tab.

   TIP: The orange flame shows the heating is on.

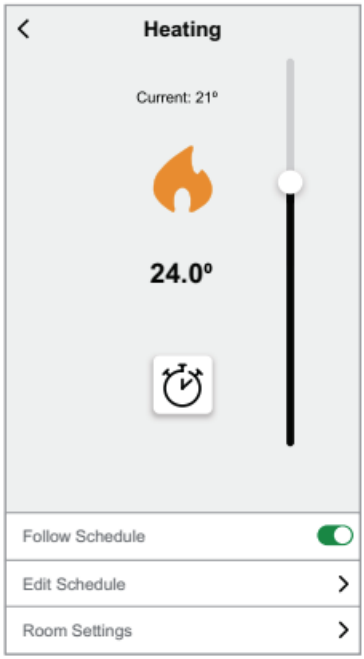
   a. Use the slider control on the right of the screen to adjust the temperature.

   NOTE: The flame shows that the room temperature is lower than the desired temperature (set point) and so the heating is ON.

   b. Tap  to set the boost time.

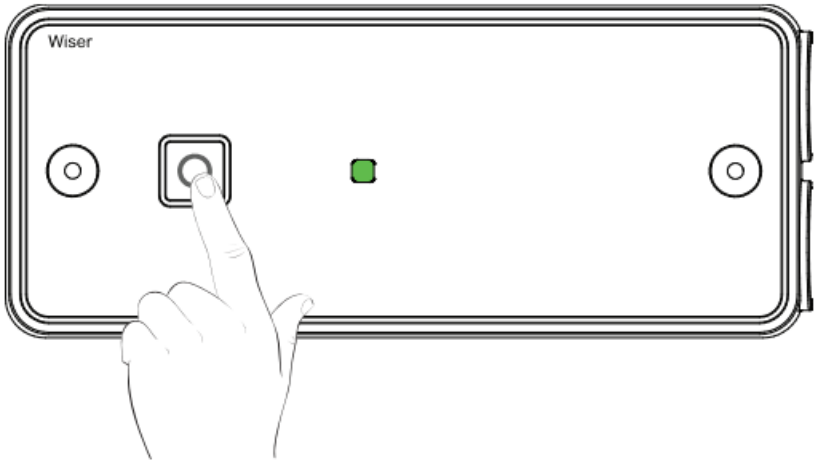
   TIP: You can Boost the room temperature using the Wiser Room Thermostat center button.

   NOTE: Boost can be stopped at any time by tapping the  and selecting it off.



IMPORTANT: If you have installed both PowerTag and Relay, you can monitor the powerflow and energy consumption in the Energy tab. For more information, refer to Energy view of individual devices.

Emergency Heating
You can do emergency heating by pressing the Relay Set button when the Hub is not working or the Wiser Home app heating control is not responding.

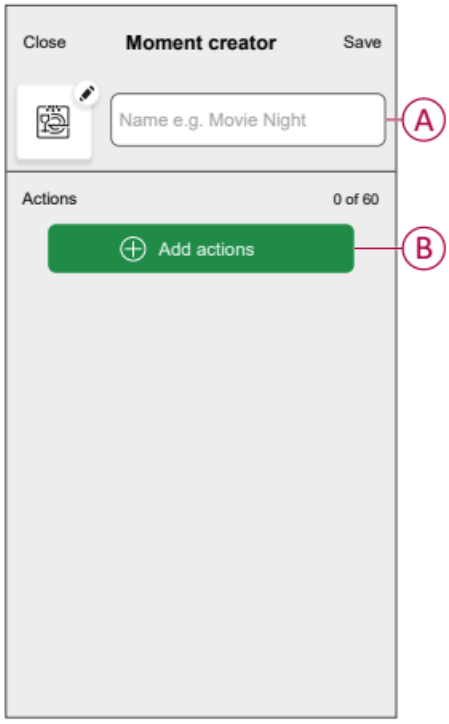


Creating a moment
Moment allows you to group multiple actions that are usually performed together.
By using the Wiser Home app, you can create moments based on your needs.

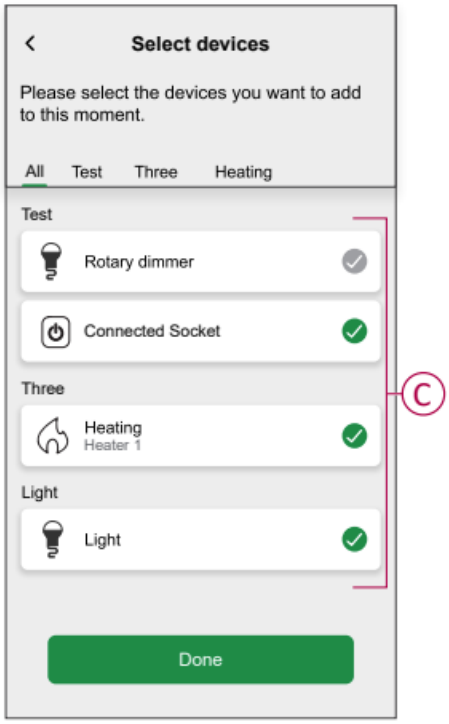
To create a moment:

1. On the Home page, tap .
2. Go to Moments > to create a moment.
3. Enter the name of the moment (A).

   TIP: You can choose the cover image that best represents your moment by tapping .
4. Tap Add actions (B) to select the list of devices.

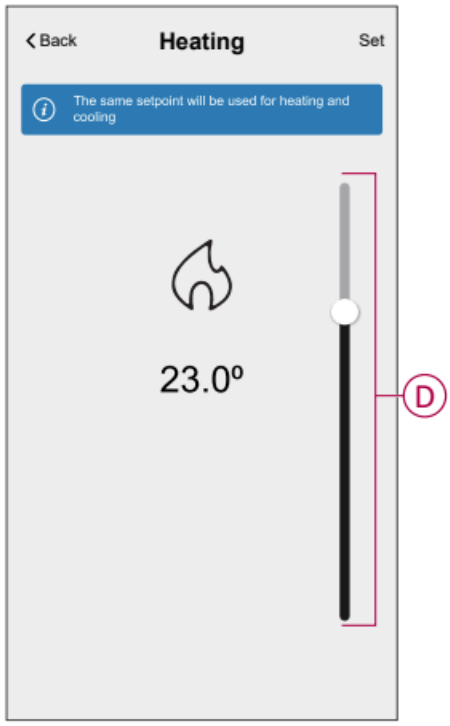


5. In the Add actions menu, you can select the devices (C).



6. Once all the device are selected, tap Done.
7. On the Moment creator page, tap the device to set the condition. For example, select heating.

   Set the required temperature using sliding bar (D).



   When the desired condition is set, tap Set.
8. Once all conditions are set, tap Save.

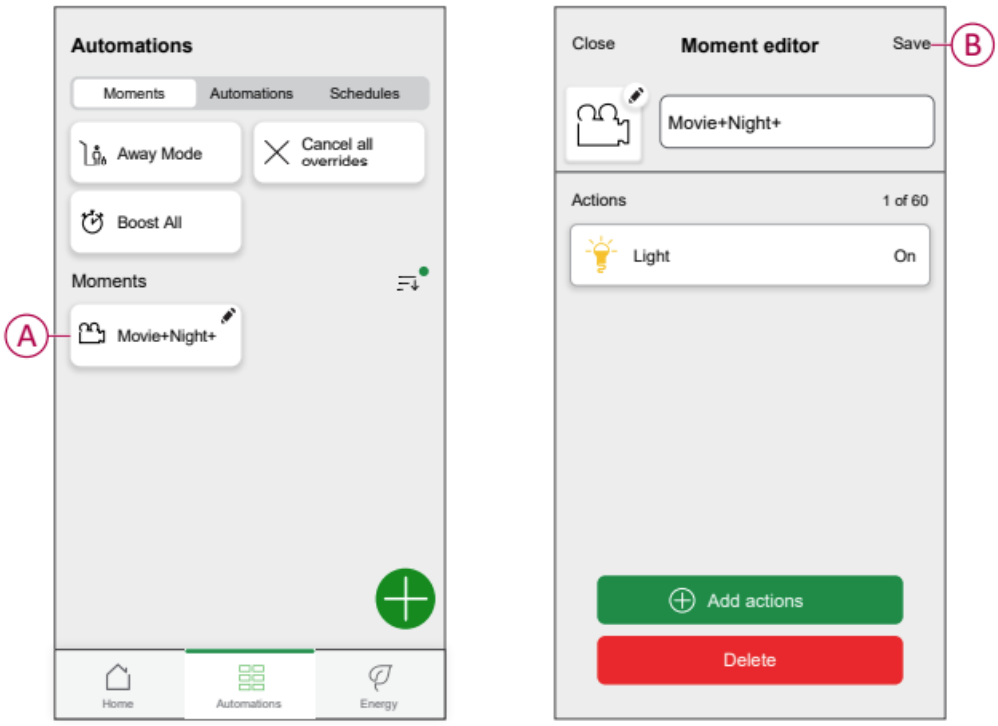
   Once the moment is saved, it is visible on the Moments tab. You can tap on the moment to enable it.

Editing a moment

To edit a moment:

1. On the Home page, tap  .

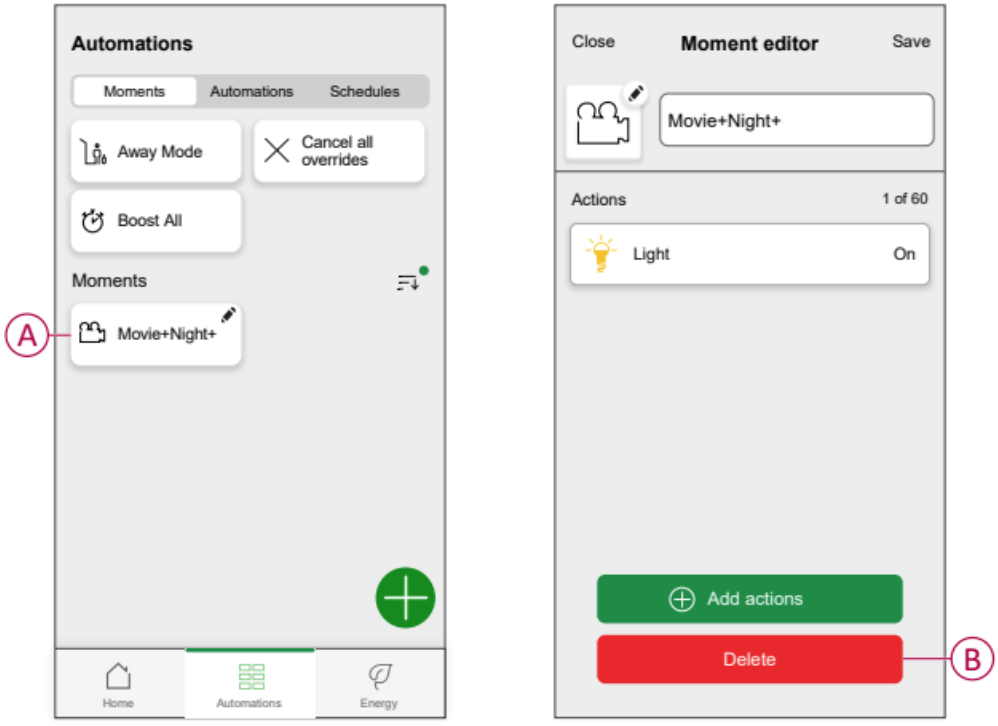
2. Go to Moments, locate the moment you want to edit and tap (A).
3. On the Moment Editor page, you can tap each item to change the settings and tap Save (B).



Deleting a moment

To delete a moment:

1. On the Home page, tap .
2. Go to Moments, locate the moment you want to delete and tap (A).
3. On the Moment Editor page, tap Delete (B) and tap Ok.

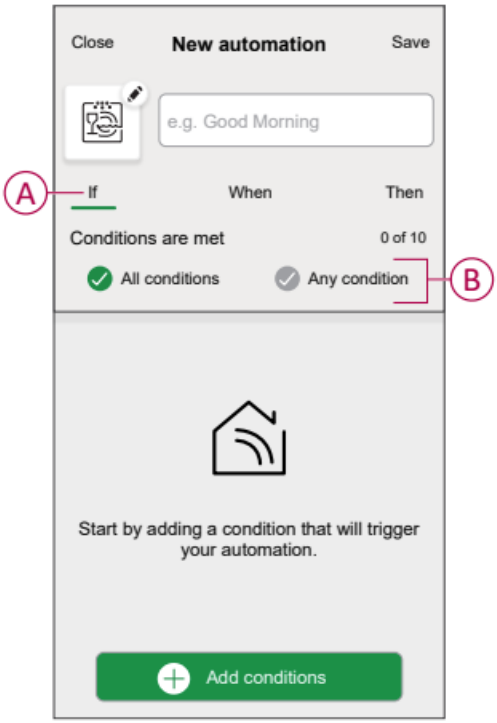


Creating an automation

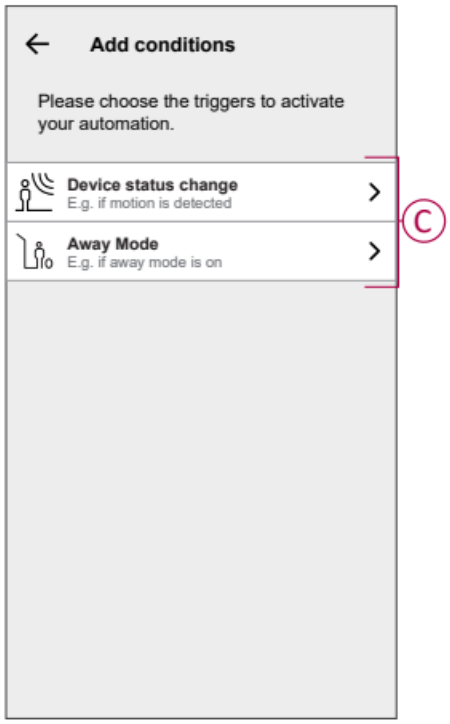
An automation allows you to group multiple actions that are usually done together, triggered automatically or at scheduled times. By using the Wiser app, you can create automations based on your needs.

To create an automation:

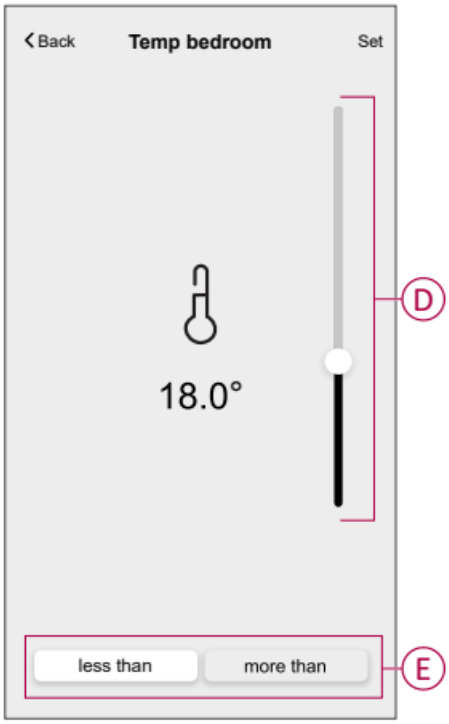
1. On the Home page, tap .
2. Go to Automation > to create an automation.
   NOTE: Max. 10 automations can be added.
3. Tap If (A) and select any of the following conditions (B):
   All conditions: This triggers an action only when all conditions are met.
   Any condition: This triggers an action when at least one condition is met.



4. Tap Add conditions and select any of the following (C):
   Device status change: Select a device to enable automation.
   Away Mode: Enable/Disable away mode to trigger an action.
   TIP: Away mode can also be used as a trigger to turn off the lights, dimmer or closing the shutter etc. For more information refer to Away mode.



5. Tap Device status change > Temperature/Humidity Sensor > Temperature, Set the temperature using sliding bar (D) and select the condition (E) (less than / more than), then tap Set.



NOTE:

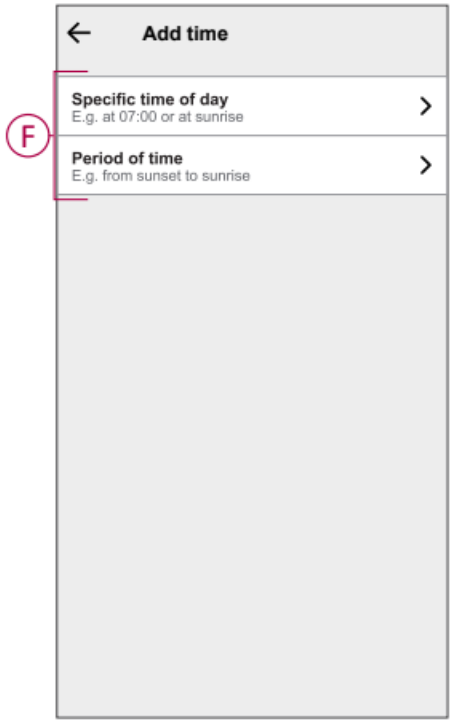
Max. 10 conditions can be added.

To remove an added condition, swipe left and tap  .

6. To set a specific time for your automation, tap When > Add time and select any of the following (F):

   Specific time of the day: Sunrise, Sunset, Custom.

   Period of time: Daytime, Night time, Custom.



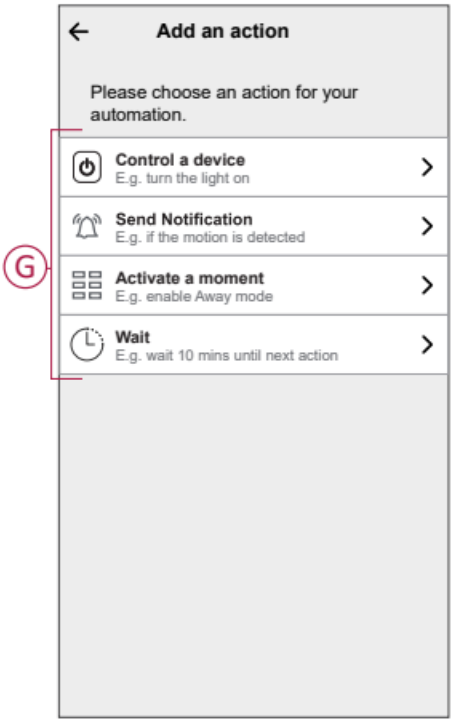
NOTE:

Max. 10 entries can be added

To remove a specific time, swipe left and tap  .

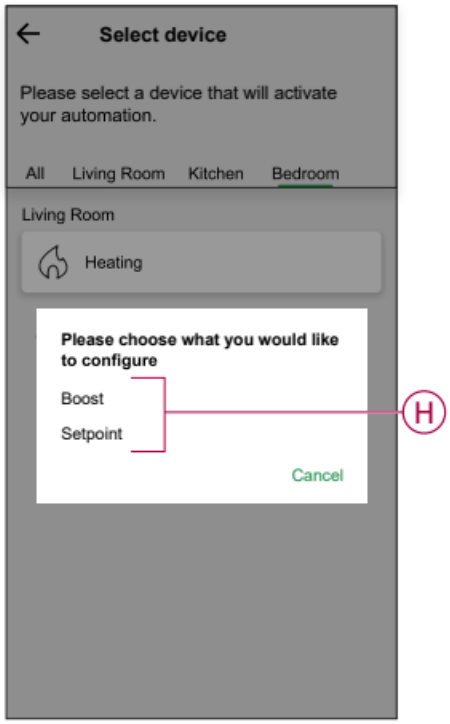
7. To add an action, tap Then > Add an action and select any of the following (G):
   - Control a device: Select a devices that you want to trigger.
   - Send notification: Turn on the notification for the automation.
   - Activate a moment: Select the moment that you want to trigger.
   - Wait: This option allows you to add a delay in an automation sequence.

     You can set the wait time in increments of 1 hour and 1 minute, up to a maximum of 24 hours. This feature is useful for delaying actions within an automation.

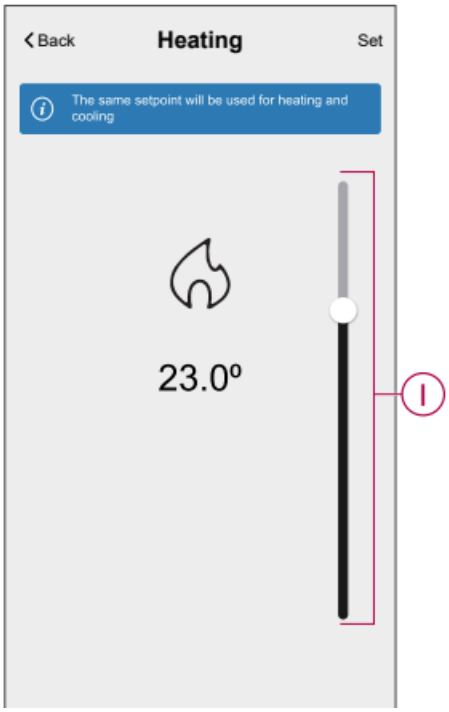


8. Tap Control a device > Heating and select any of the following (H):

- Boost: Set the duration to increase the temperature by 2° C.
- Setpoint: Set the desired temperature.



9. Tap Setpoint, set the required temperature using vertical sliding bar (I), then tap Set.



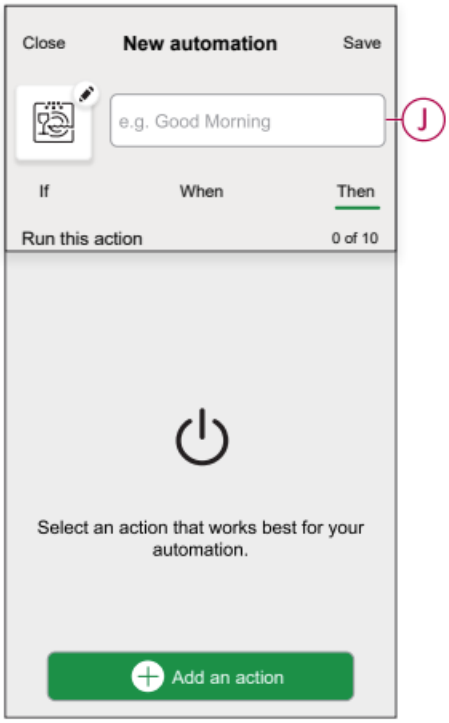
NOTE:

Max. 10 actions can be added.

To remove an action, swipe it left on the action and then tap .

10. Enter the automation name (J).

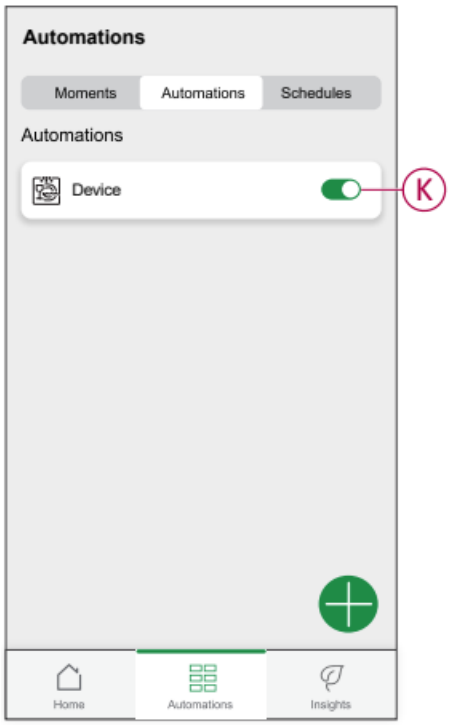
You can choose the cover image that represents your automation by tapping .



11. Tap Save.

    Once the automation is saved, it is visible on the Automation tab.

    Using the (K) you can enable and disable the automation.



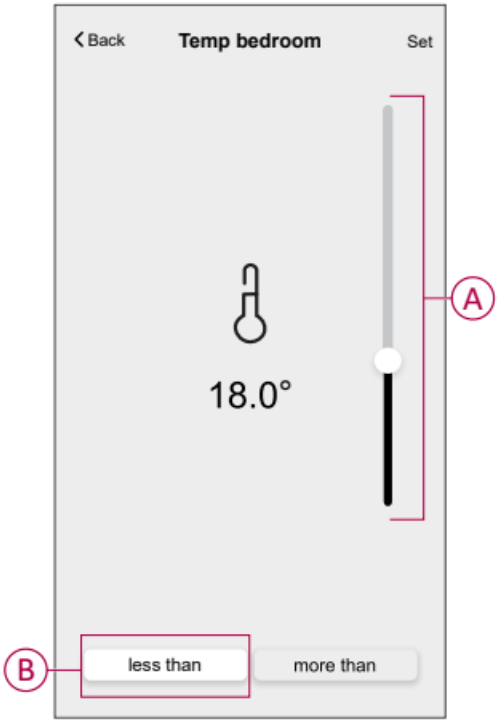
Example of an automation

This demonstration shows you how to create an automation to turn on the Heating to 20 °C when the temperature is less than 18 °C.

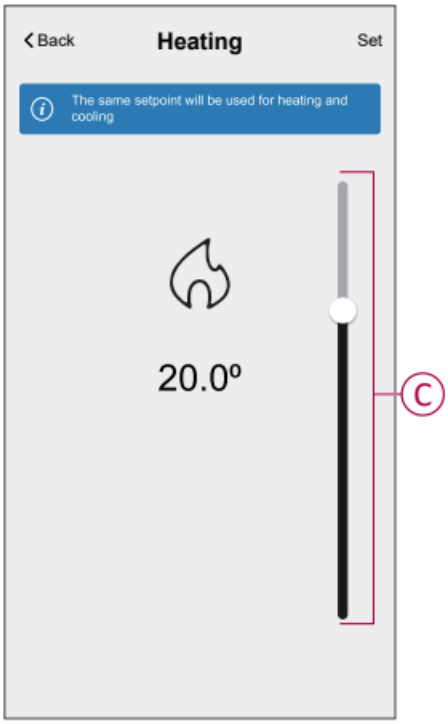
NOTE: It is mandatory to create two automations. First, switch on the heater at 22 °C when the room temperature is at 17 °C or lower. Second, switch off the heater when the room temperature is at 25 °C or above.

The room heater will not turn off automatically until you create another automation.

1. Go to Automation > to create an automation.
2. To add a condition, tap Add Condition > Device status change > Temperature/Humidity Sensor > Temperature.
3. Set the temperature as 18 °C (A) and the condition as less than (B) and tap Set.



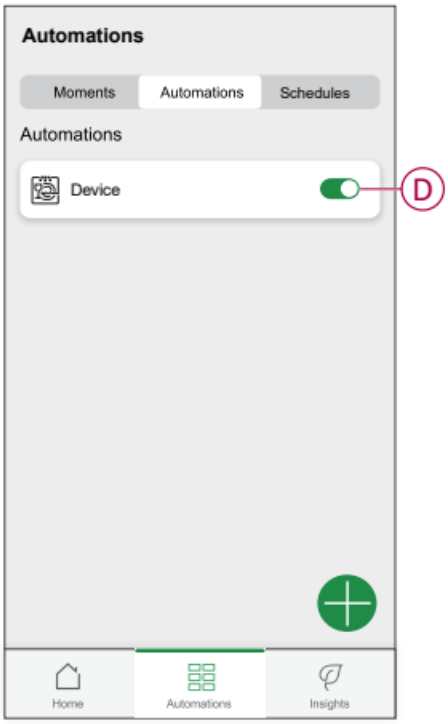
4. Read the information and tap OK.
5. To add an action, tap Then > Add an action > Control a device > Heating > Setpoint. Set the temperature to 20 °C (C), then tap Set.



6. Read the information and tap OK.
7. Enter the name of the automation.

   TIP: You can choose the cover image that represents your automation by tapping  .
8. Tap Save.

   Once the automation is saved, it is visible on the Automation tab.



NOTE: You can enable or disable saved automations on the Automations tab by using (D).

Editing an automation

1. On the Home page, tap Automations .
2. Go to Automation, tap the automation you want to edit.
3. On the Edit automation page, you can perform following changes:

   Change the icon .

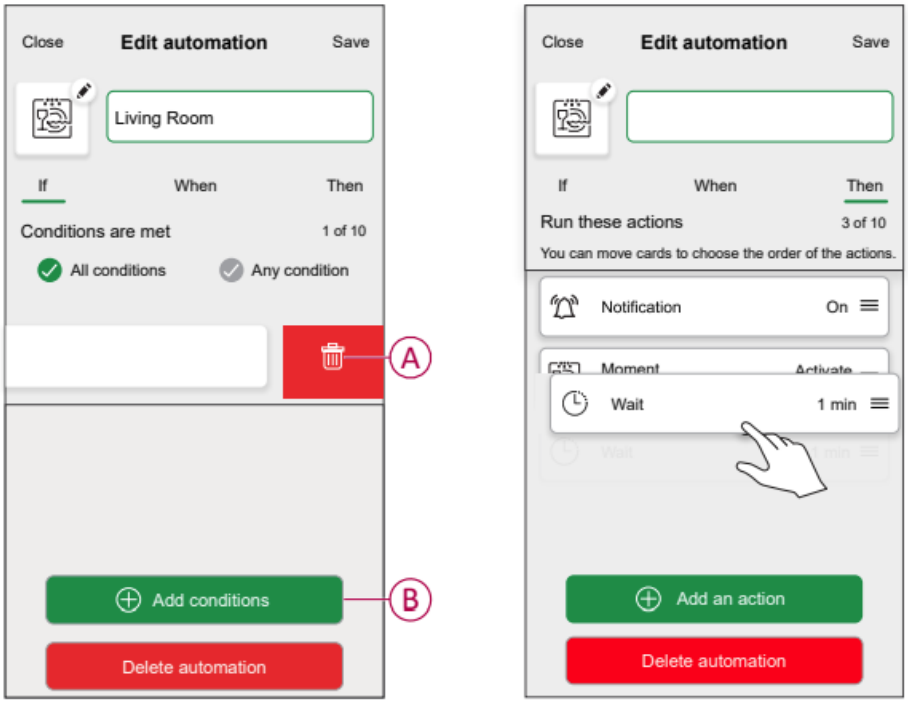
   Rename the automation.

   Tap each condition to change the settings.

   To remove a condition, slide the condition towards left and then tap (A) to delete it.

   Tap ⊕ Add conditions (B) to add new condition.

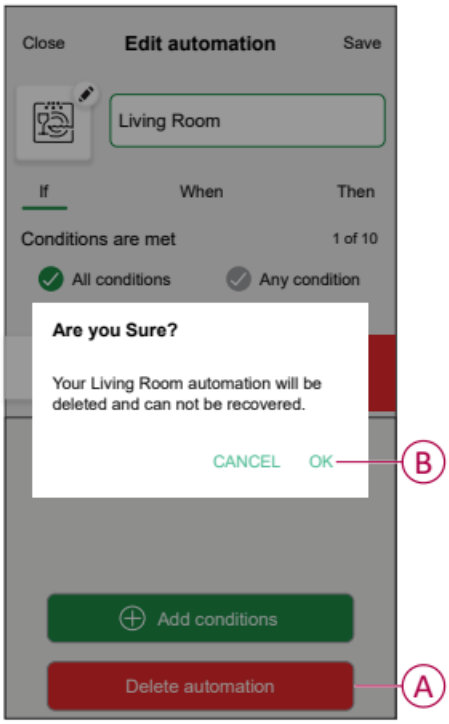
   To change the order of actions, tap the Then option, and hold an action then drag and drop to the desired position.



4. Tap Save to save the changes.

Deleting an automation

1. On the Home page, tap Automations .
2. Go to Automation, tap the automation you want to delete.
3. On the Edit automation page, tap Delete automation (A) and read the confirmation message and then tap OK (B).

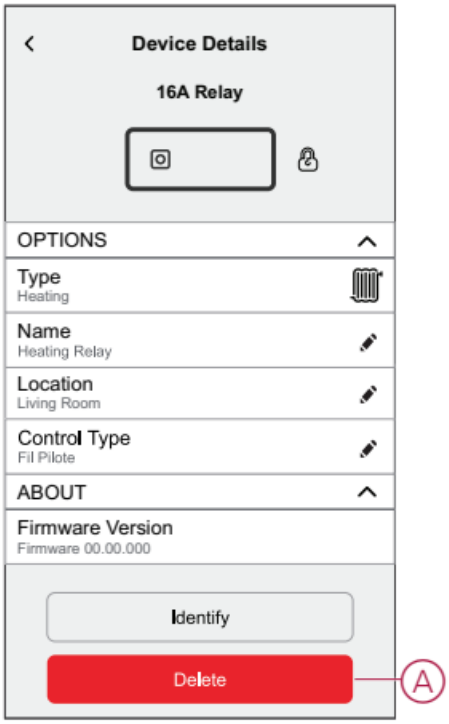


Removing the device

Using the Wiser home app, you can remove the relay from the Wiser system.

To remove the relay:

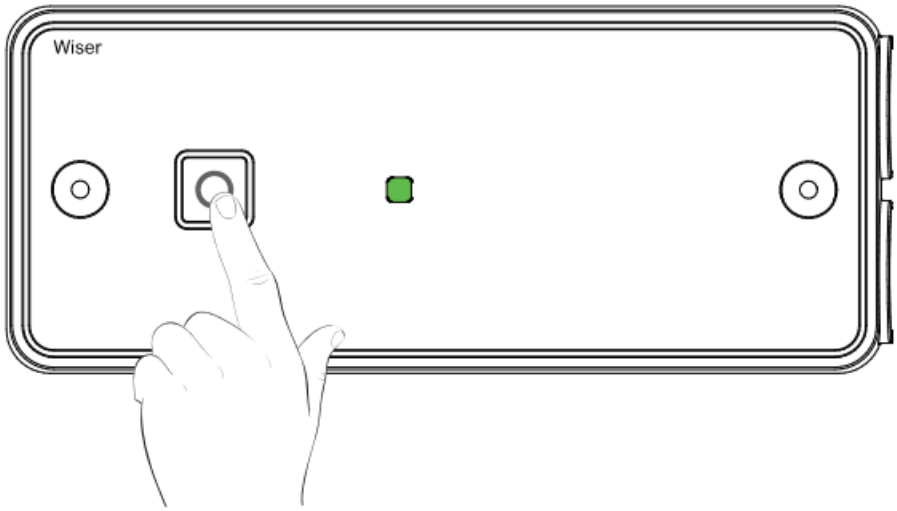
1. On the Home page, tap .
2. Tap Devices > 16A Relay > Delete (A).



Resetting the device
You can reset the Relay to the factory default. It can be reset manually at any time, e.g., when the Hub is replaced.

To reset the Relay:

1. Press and hold the Set button for > 20 seconds.
   After 15 seconds, the LED flashes red.



2. When the LED stops flashing red, release the Set button.
   The LED stops flashing upon successful reset of the Relay.

LED indications

Normal use

Status	User Interaction	Description
Power on		Flashing orange
In connection with the Wifi gateway		Off: heating off Steady
		green: heating on
Pairing in progress		Alternating orange and green flashing
Not paired		Off: heating off
		Steady orange: heating on
Degraded mode (no connection with the thermostat or with the gateway)		Flashing red: heating off
		Steady red: heating on
Manual Test / Forcing		Flashing green: heating on due to forcing

Troubleshooting

Symptom	**Possible cause**	**Solution**
The relay displays offline in the app or the LED flashing or solid red.	1. Weak or no signal between the Wiser Hub and the relay. 2. The relay is working in degrade d mode.	1. Check Hub is online. 2. Check signal strength.
The relay is flashing green.	Emergency heat is active.	Press the button to cancel the emer gency heat function.

Technical Data

Rated voltage:	230 V, 50 Hz (AC ONLY)
Power consumption:	7.3 W
Purpose of control:	Electrical Control, Manual + Automatic Control, Sensing Control
Type of load and rated current:	16 A Resistive or (3A) Inductive Load Circuit for pilot load (FP) **IMPORTANT:** Not suitable for plinth heaters.
IP rating:	IP44
Terminals and Wiring:	Suitable for conductor sizes 1.0 – 2.5 mm^2 Insulation strip length 6.5 mm

Operating Temperature:	0 °C to 60 °C
Storage Temperature:	-20 °C to 65 °C
Class of control:	Class II
Method of mounting control:	Independently mounted control
Method of providing earthing control:	The control is not earthed Terminals are provided for linking exter nal earthing conductors.
Method of attachment for nondetachable co rds:	Type Y attachments
Extent of sensing element: (if installed)	External temperature sensor temperature setting range of 5 °C to 30 °C ±5%
Operating Value:	User variable time control of electrical/heating system (only at sys tem level through Hub controllers)
Degree of pollution:	2
Rated impulse voltage:	4 kV
Ball pressure test:	115 °C
Software class:	A
Radio Technology/ Frequency:	2.4 GHz
Radio signal range:	30 m in free space
Maximum radio frequency power transmitte d:	+13 dBm (20 mW)
Product dimensions: (H x W x D)	162 x 67 x 30 mm
Communication protocol:	Zigbee 3.0 certified
Compatible floor sensors in case of electric underfloor heating:	• 33kΩ Schneider Electric Reference MTN616790 • 33kΩ Eberle Reference F193720 • 15kΩ Devi Reference 140F1091 • 10kΩ Elko Reference 5491605

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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DUG_Wiser 16A Relay for Temperature Control_WH-04

FAQ

Q: What should I do if the device malfunctions?

A: In case of malfunction, refer to the troubleshooting section of the manual or contact customer support for assistance.

Q: Can this device be used for industrial applications?

A: The Wiser 16 A Relay for Temperature Control is primarily designed for residential use. For industrial applications, consult with a professional.

Documents / Resources

	Schneider Electric Wiser 16 A Relay for Temperature Control Device [pdf] User Guide Wiser 16 A Relay for Temperature Control Device, Relay for Temperature Control Device, Temperature Control Device, Control Device

References

- User Manual