USER & SAFETY GUIDE

Read before use

This document contains important technical and safety information about the device and its safety use and installation.

⚠ **CAUTION!** *Before beginning the installation, please read this guide and any other documents accompanying the device carefully and completely. Failure to follow the installation procedures could lead to malfunction, danger to your health and life, violation of the law or refusal of legal and/or commercial guarantee (if any). Allterco Robotics EOOD is not responsible for any loss or damage in case of incorrect installation or improper operation of this device due to failure to follow the user and safety instructions in this guide.*

Introduction to Shelly devices

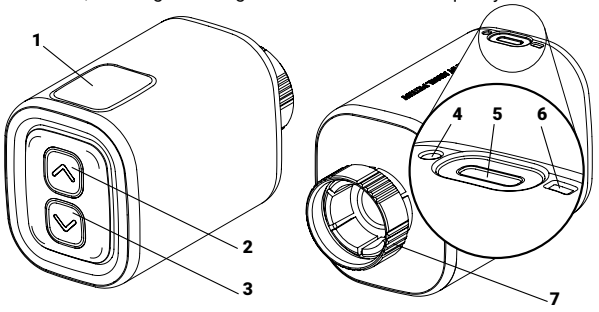
Shelly® is a line of innovative microprocessor-managed devices, which allow remote control of electric appliances through a mobile phone, tablet, PC or home automation system. Shelly® devices can work standalone in a local Wi-Fi network or they can also be operated through cloud home automation services. Shelly® devices can be accessed, controlled and monitored remotely from any place the user has internet connectivity, as long as the devices are connected to a Wi-Fi router and the Internet. Shelly® devices have built-in web servers through which the user can adjust, control and monitor them. The cloud function can be used if it is activated through the web server of the device or the settings in the Shelly Cloud mobile application. The user can register and access Shelly Cloud using either Android or iOS mobile application, or with any internet browser at **https://my.shelly.cloud.**

Shelly® devices have two Wi-Fi modes - Access Point (AP) and Client mode (CM). To operate in Client Mode, a Wi-Fi router must be located within the range of the device. Shelly® devices can communicate directly with other Wi-Fi devices through HTTP protocol. An API is provided by Allterco Robotics EOOD. For more information, please visit **https://shelly-api-docs.shelly.cloud/#shelly-family-overview** or contact us at **developers@shelly.cloud.**

Control your home with your voice

Shelly® devices are compatible with Amazon Alexa and Google Home supported functionalities. Please see our step-by-step guide on **https://shelly.cloud/support/compatibility**.

Shelly® TRV (the Device) is an intelligent Wi-Fi connected, self-regulating valve fitted to a hot water heating system radiator. It can control the temperature of a room by changing the flow of the hot water through the radiator. Shelly® TRV can maintain the room temperature according to a set weekly schedule. If needed, the temperature can be changed at any time by pressing the buttons on the device, or through your mobile phone, tablet or PC. Shelly® TRV is powered by a built-in rechargeable battery. The battery can be recharged via a USB-C connector. Shelly® TRV is designed to work without recharging for 2 years, but this depends on the specific working conditions, such as how often it is necessary to adjust the hot water flow, Wi-Fi signal strength and wireless network quality.



1. Display
2. Up button
3. Down button
4. Temperature sensor
5. USB type C charging port
6. Reset button
7. Metal ring

Installation Instructions

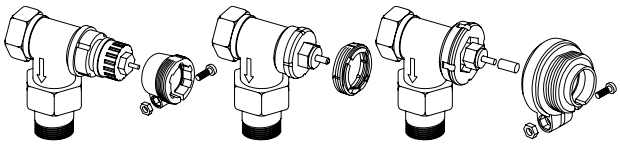
⚠ **CAUTION!** *The product is intended for indoor use only.*
⚠ **CAUTION!** *Protect the product from dirt and moisture.*
⚠ **CAUTION!** *Do not use the product in a damp environment and avoid splashing water.*
⚠ **CAUTION!** *Ensure that the radiator is turned off and has cooled down before beginning the Device installation.*

Compatible valves

If you already have thermostatic radiator valves, which typically have a dial on top with numbers from 1 to 5, most probably, your radiators are compatible with Shelly® TRV. Check the list of compatible radiator valves by brand and model at **https://shelly.cloud/knowledge-base/devices/shelly-trv/**.

Radiators with manual valves are not compatible with Shelly® TRV. Manual valves are typically small and discrete. They are standard when you have a separate thermostat in the room or a central thermostat.

If your radiator valves are not compatible you can use one of the adapters included in the box.



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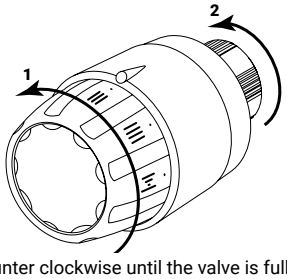
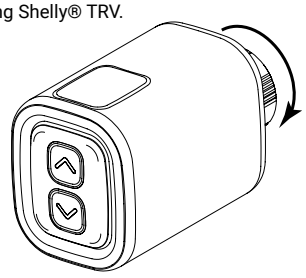
Remove the existing thermostatic radiator valve



1. Turn the dial counter clockwise until the valve is fully open.
2. Unscrew the metal ring counter clockwise to remove the valve.

Install Shelly® TRV

1. Check if you need an adapter and, if necessary, mount the suitable one before installing Shelly® TRV.



2. Fasten the Shelly® TRV to the radiator valve by turning the metal ring clockwise. Do not fully tighten the ring.
3. Place the Device display in the correct position and then fully tighten the metal ring.

⚠ **CAUTION!** *Do not try to rotate the Device, if the metal ring is fully tightened. This can damage it.*

Switch on the Device

Press briefly the Device **Reset** button. The screen will light up with the CL message and the motor inside will turn in both directions. This is the calibration process.

If the calibration process is successful, the screen will display AP and the Device is ready to be connected to your Wi-Fi network.

If the calibration is not successful, E1 message will be displayed. The reason is either the ring is not tightened enough or the Device is not properly mounted to the radiator.

Try tightening the ring or remove the Device and carefully mount it again. Press and holding for 3 seconds any of the **Up** and **Down** buttons. Then press **Down** button a couple of times. The Device will try to calibrate again.

⚠ **IMPORTANT:** *If the Device has not been added into your Wi-Fi network in 3 minutes, it will switch off. Press briefly the Reset button to start it again.*

If needed, the Device can be switched off manually by pressing briefly the Reset button while the Device is in AP mode.

Charge the device

Fully charge the Device before its first use for about 7 hours. Battery status is displayed while charging. The line, which indicates the battery level, is flashing while the device is charging. A dot is displayed next to the bottom line, when a charger is connected. If the battery level is not displayed, press briefly the **Reset** button.

- b_ . <50%
- b= . 50-75%
- b≡ . >90%

⚠ **IMPORTANT:** *The device heats up during charging, which prevents it from measuring the room temperature correctly.*

⚠ **CAUTION!** *Use only charging adapters that comply with USB-C standard. Do not use the Device if the charging adapter or the charging cable are damaged.*
⚠ **CAUTION!** *Do not use the Device if it has been damaged.*
⚠ **CAUTION!** *Do not attempt to service or repair the Device yourself.*

Device Status

To check the Device status press and hold for 5 seconds both **Up** and **Down** buttons. Use the **Up** or **Down** buttons to scroll through all the parameters:

- Mode:
  - AP Access point mode
  - St Station mode
  - CO connected to a Wi-Fi network
- Battery level:
  - b_ <50% (<10% if the dash is flashing)
  - b= 50-75%
  - b≡ >90%
- Status:
  - E0 No issues
  - E1 Calibration problem
  - E2 Temperature sensor problem

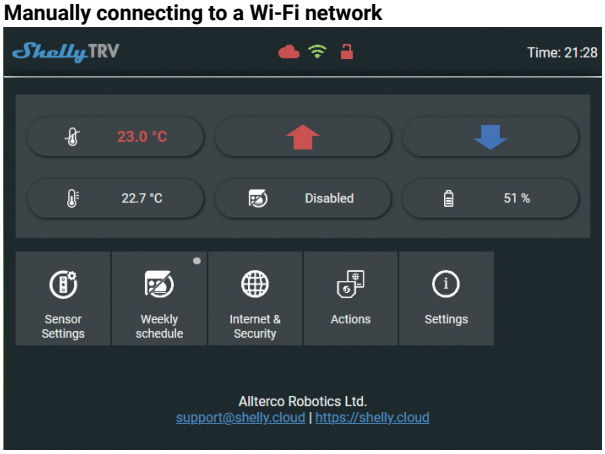
Initial inclusion

The most convenient way to use your Shelly® devices is through the Shelly Cloud mobile application and Shelly Cloud service.
Download the Shelly Cloud mobile application for Android or iOS here:

Download on the App Store
GET IT ON Google Play
EXPLORE IT ON AppGallery

Instructions on how to connect your device to the Shelly Cloud and control it through the Shelly mobile application can be found in the enclosed App Guide.

Manually connecting to a Wi-Fi network



You can manage and control the Device through its embedded web interface too.

- Make sure Shelly® TRV is in AP mode. Open the Device WebUI at 192.168.33.1 in the created by the Device Wi-Fi network.
- Click the **Internet & Security** button and then select **WIFI MODE - CLIENT**.
- Check the **Connect the Shelly device to an existing WiFi Network** checkbox, enter the Wi-Fi network name and password, and press the **SAVE** button.
- Find your Device IP address in the Wi-Fi network. You can use a simple tool to find shelly devices in the local network: https://shelly.cloud/documents/device_finders/ShellyFinderWindows.zip (Windows) and https://shelly.cloud/documents/device_finders/ShellyFinderOSX.zip (Mac OSX).

⚠ **IMPORTANT:** *Enabling the Client mode will disable the Access Point mode. In case you need the Access Point mode again, press the Reset button for 5 seconds.*

How to control room temperature

Setting room temperature using the buttons

- Press shortly any of the buttons to see the measured by the Device room temperature. The display will show the measured room temperature for 3 seconds.
- Press and hold one of the buttons for 3 seconds to display the current temperature with a dot at the last digit. Press the **Up** or the **Down** button to set new target temperature in the range of 5°C to 30°C.

LO message on the display means that the valve is fully closed, and HI means that the valve is fully open.

Setting room temperature using the Shelly Cloud APP

The room temperature can also be monitored and controlled through the Shelly Cloud APP. Check the App Guide for more information.

Setting room temperature using the Device WebUI

- Access the Device by its IP address in your Wi-Fi network.
- Use the red and the blue arrows to set new target temperature.
- When the Device receives the new target temperature, a dot will flash briefly on the display.

⚠ **IMPORTANT:** *If a weekly schedule is activated, the manually set target temperature will be overridden by the next scheduled one.*

Scheduling

Shelly® TRV supports up to 5 pre-set profiles to control the temperature in the room on a weekly schedule. Up to 20 temperature changes can be added to each profile.

Setting Schedule using the Shelly Cloud APP

The scheduling can also be activated and set through the Shelly Cloud APP. Check the App Guide for more information.

Setting Schedule using the Device WebUI

- Access the Device by its IP address in your Wi-Fi network.
- Click on **Weekly schedule** button.
- Select a profile from the dropdown. Select the **Disable** profile to disable the scheduling.
- Click on **EDIT CURRENT SCHEDULE** to add, remove or edit temperature changes.
- Change the profile name if desired by typing a new name and pressing the **RENAME** button.
- Click on the **SET A NEW TIME** button to add a temperature change time.
- Select a desired temperature, check the weekdays it applies to and click the **SAVE** button.
- Edit a scheduled temperature change by clicking the yellow pencil button, or delete it by clicking the red bin button.

Using external temperature sensor

Every radiator-mounted thermostat has a slight deviation from the actual room temperature, since the temperature measurement is performed too closely to the radiator. Shelly® TRV solves the problem by supporting communication with an external temperature sensor (i.e Shelly H&T) or a compatible one, located anywhere in the room.

Enabling external sensor using the Shelly Cloud APP

The use an external temperature sensor can also be enabled through the Shelly Cloud APP. Check the App Guide for more information.

Enabling external sensor using the Device WebUI

- Access the Device by its IP address in your Wi-Fi network.
- Click on **Sensor Settings** button.
- Click **TEMPERATURE OFFSET**
- Check the **Enable external temperature corrections endpoint** checkbox.
- Set a manual temperature offset, if desired, and press the **OK** button.

⚠ **CAUTION!** *Do not allow children to play with the Device. Keep the devices (mobile phones, tablets, PCs) that can remotely control the Device away from children.*

Specification

Specifications are subject to change without notice.

- Model: Shelly TRV-01
- Dimensions (HxWxL): 62x53x94 mm
- Mounting: M30/15
- Power supply: 3.6V 6500mAh NCR18650BD Panasonic rechargeable battery
- Battery life: up to 2 years (depends on working conditions)
- Charger requirements: USB type C (≥1A)
- Electrical consumption: < 500 µA
- Working temperature: -10°C to 40°C
- Temperature control range: 5°C to 30°C
- Radio signal power: 1mW
- Radio protocol: Wi-Fi 802.11 b/g/n
- Frequency: 2412 - 2472 MHz (Max. 2495 MHz)
- RF Output power: <20 dBm
- Operational range: up to 30 m (depends on building construction and materials)
- MQTT: YES
- CoAP: YES
- REST API: YES
- URL Actions: YES
- Scheduling: 5 profiles
- CPU: SiLabs
- Flash: 6MB

Declaration of conformity

Hereby, Allterco Robotics EOOD declares that the radio equipment type Shelly TRV is in compliance with Directive 2014/53/EU, 2014/35/EU, 2014/30/EU, 2011/65/EU. The full text of the EU declaration of conformity is available at
https://shelly.cloud/knowledge-base/devices/shelly-trv/

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Web: http://www.shelly.cloud

Changes in the contact data are published by the Manufacturer at the official website of the Device: https://www.shelly.cloud.

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