DEWENWILS Zigbee 3.0 Thermostatic Radiator Valve

DEWENWILS Zigbee 3.0 Smart Thermostatic Radiator Valve User Manual

Model: Zigbee 3.0 Thermostatic Radiator Valve

1. Introduction

Thank you for choosing the DEWENWILS Zigbee 3.0 Smart Thermostatic Radiator Valve. This device allows for intelligent control of your heating system, offering enhanced comfort and energy efficiency. Please read this manual carefully before installation and operation to ensure proper use and optimal performance.



Image 1.1: DEWENWILS Zigbee 3.0 Smart Thermostatic Radiator Valve (TRV) and its mobile application interface.

2. Package Contents

Ensure all items are present in the package:

- 1 x DEWENWILS Zigbee 3.0 Smart Thermostatic Radiator Valve
- 6 x Adapters (RA, RAV, RAVL, Caleffi, Giacomini, and M28)
- 1 x User Manual
- (Note: 2 x 1.5V AA alkaline batteries are required and not included)

3. Product Features

- **Flexible Control:** When used with a Tuya Zigbee 3.0 Hub (not included), the thermostatic valve can be controlled via the Tuya Smart Life app. It also supports voice commands through Alexa and Google Assistant, allowing easy temperature adjustment in various rooms. (Note: Not compatible with Amazon Echo Gateway).
- **Programmable Schedules:** Configure up to 4 programs for each day of the week. This feature enables flexible and energy-saving temperature management, with both manual and automatic adjustment options.
- **Temperature Calibration:** The programmable radiator thermostat includes a temperature calibration function. This allows you to adjust the difference between the temperature measured near the radiator and the actual ambient room temperature, enhancing comfort.
- **Window Open Detection:** If the ambient temperature suddenly drops by 5 °C during heating, the system recognizes that a window is open and automatically stops heating to conserve energy.
- **Safety and Durability:** Equipped with multiple functions including child lock, frost protection, limescale prevention, low battery alert, and NTC sensor failure alert, ensuring safety and longevity.
- **Wide Compatibility:** Features an M30 x 1.5 mm connector type and includes 6 adapters (RA, RAV, RAVL, Caleffi, Giacomini, and M28), making it compatible with most valve types.

4. Setup and Installation

4.1. Battery Installation

1. Unscrew the bottom cap of the TRV.
2. Insert two 1.5V AA alkaline batteries, ensuring correct polarity (+/-).
3. Screw the bottom cap back on securely. The display will light up.

4.2. Mounting on Radiator

The TRV is designed for M30 x 1.5 mm valve bodies. If your existing valve is not M30 x 1.5 mm, use one of the provided adapters.

1. Remove your existing thermostatic head from the radiator valve.
2. If necessary, select the appropriate adapter from the 6 included (RA, RAV, RAVL, Caleffi, Giacomini, M28).
3. Mount the chosen adapter onto the radiator valve.
4. Screw the DEWENWILS TRV onto the adapter or directly onto the M30 x 1.5 mm valve body until it is hand-tight.

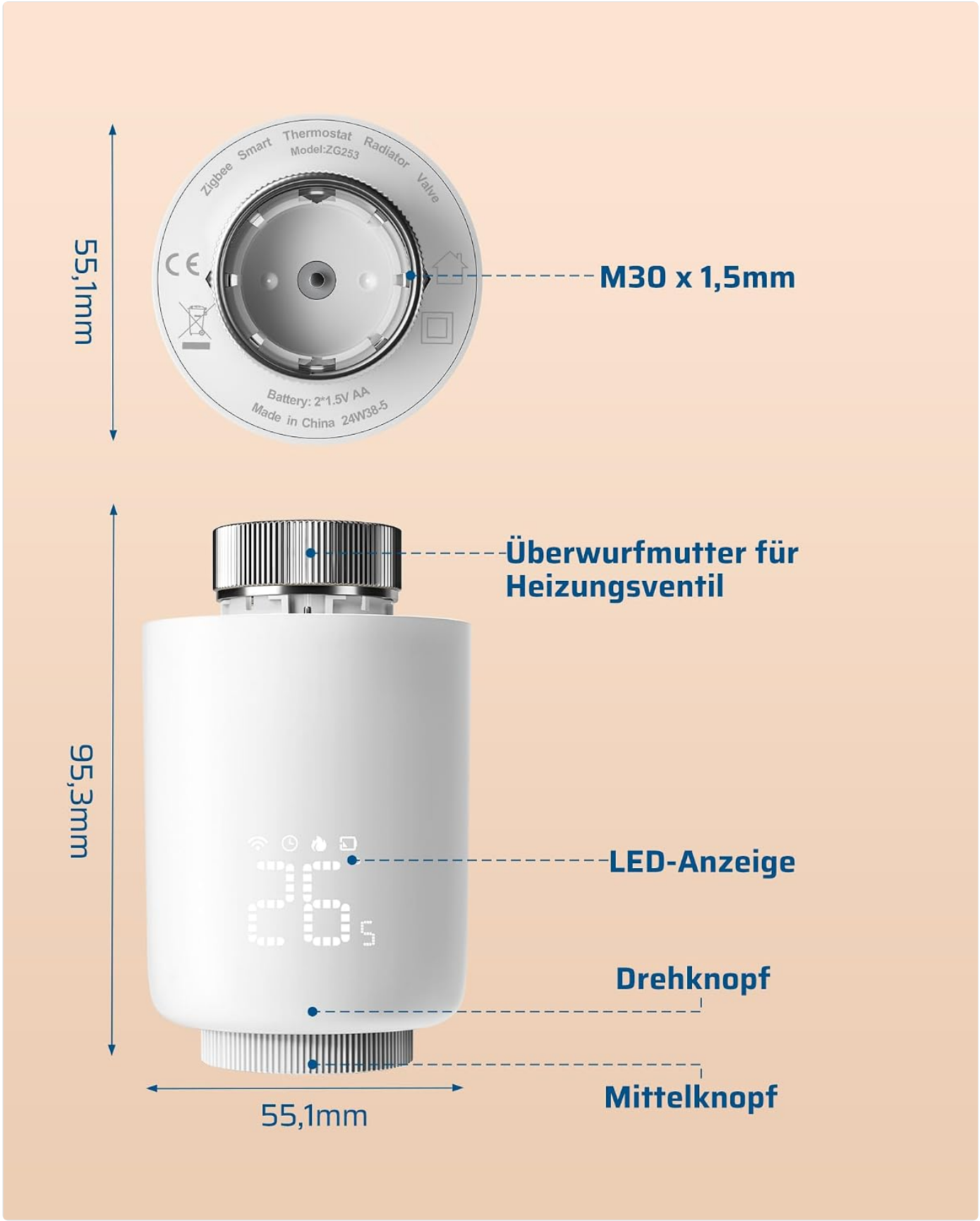


Image 4.1: Product dimensions and key components (LED display, rotary knob, center button).

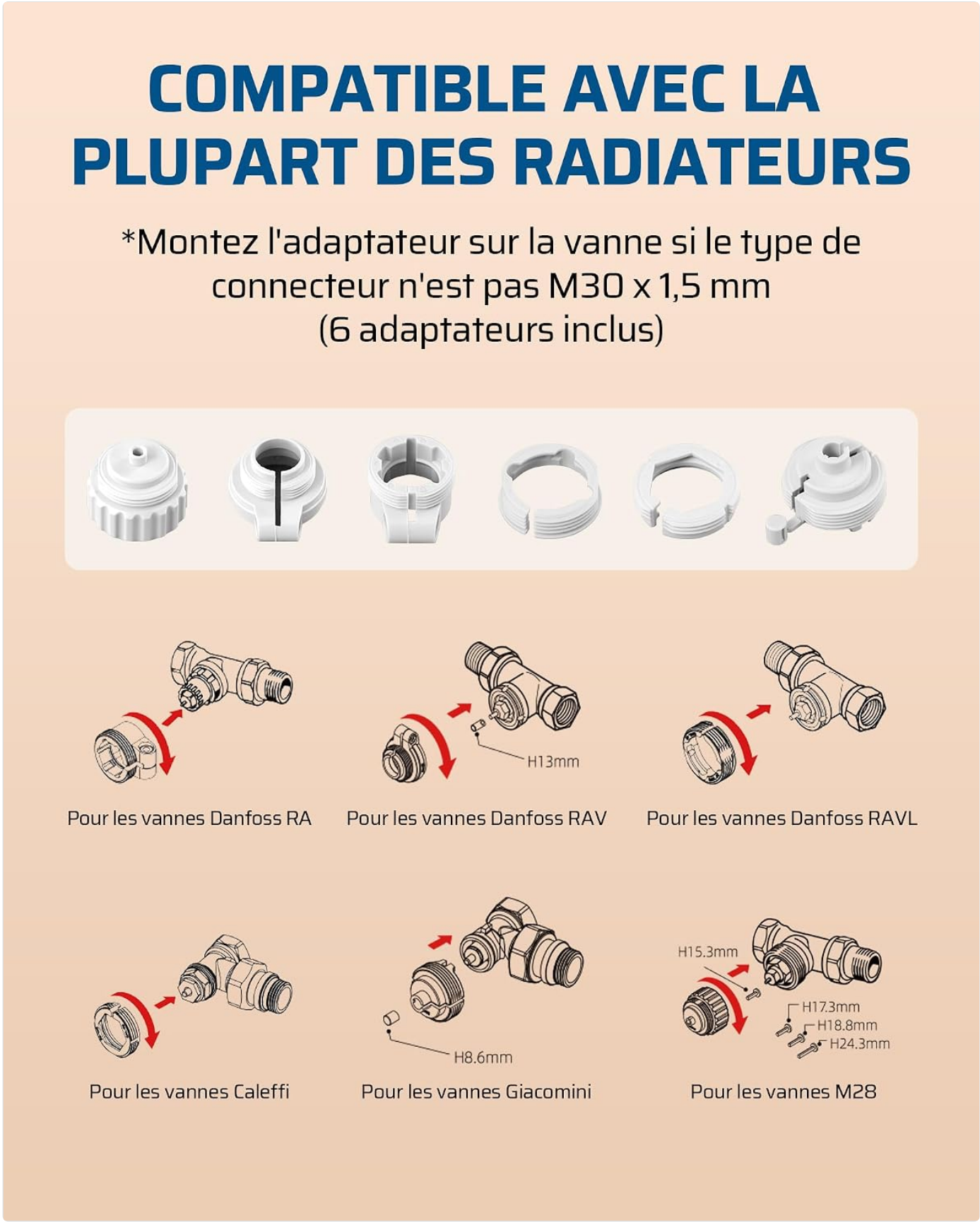


Image 4.2: Compatibility with various radiator valves using included adapters (Danfoss RA, RAV, RAVL, Caleffi, Giacomini, M28).

4.3. Pairing with Tuya Zigbee Hub and Smart Life App

A Tuya Zigbee 3.0 Hub (not included) is required for smart control.

1. Ensure your Tuya Zigbee 3.0 Hub is powered on and connected to your home network.
2. Open the Tuya Smart Life app on your smartphone.
3. Add the Zigbee Hub to the app if you haven't already.

4. On the TRV, press and hold the center button for 3-5 seconds until the Zigbee icon flashes, indicating pairing mode.
5. In the Smart Life app, select your Zigbee Hub and then choose to add a new sub-device. Follow the on-screen instructions to complete the pairing process.
6. Once successfully paired, the Zigbee icon on the TRV display will stop flashing and remain solid.



Image 4.3: The TRV controlled via the Tuya Smart Life app, requiring a Tuya Zigbee 3.0 Hub.

5. Operating Instructions

5.1. Manual Temperature Adjustment

Rotate the knob on the TRV clockwise to increase the temperature and counter-clockwise to decrease it. The desired temperature will be displayed on the LED screen. Adjustments are typically in 0.5 °C increments.

5.2. App Control (Smart Life)

Once paired with the Tuya Smart Life app, you can control the TRV remotely.

- Open the Smart Life app and select your TRV device.
- Adjust the target temperature using the app's interface.
- Set weekly schedules, activate child lock, or enable other advanced features directly from the app.



Image 5.1: Detailed view of the Smart Life app interface for TRV control, including current temperature and settings.

5.3. Voice Control (Alexa & Google Assistant)

Integrate your TRV with Amazon Alexa or Google Assistant for convenient voice control.

1. Ensure your Alexa or Google Assistant device is set up and linked to your Smart Life account.
2. Use commands such as:
    - "Alexa, set [device name] to 22 degrees."

- "Hey Google, what is the temperature of [device name]?"



Image 5.2: Example of voice control integration with Alexa and Google Assistant.

5.4. Programming Schedules

Create custom heating schedules to match your daily routine and save energy.

- In the Smart Life app, navigate to the TRV settings and select "Weekly Timing" or "Schedule".

- You can set up to 4 time periods and corresponding temperatures for each day of the week.
- Long-press a selected day to copy its settings to other days.

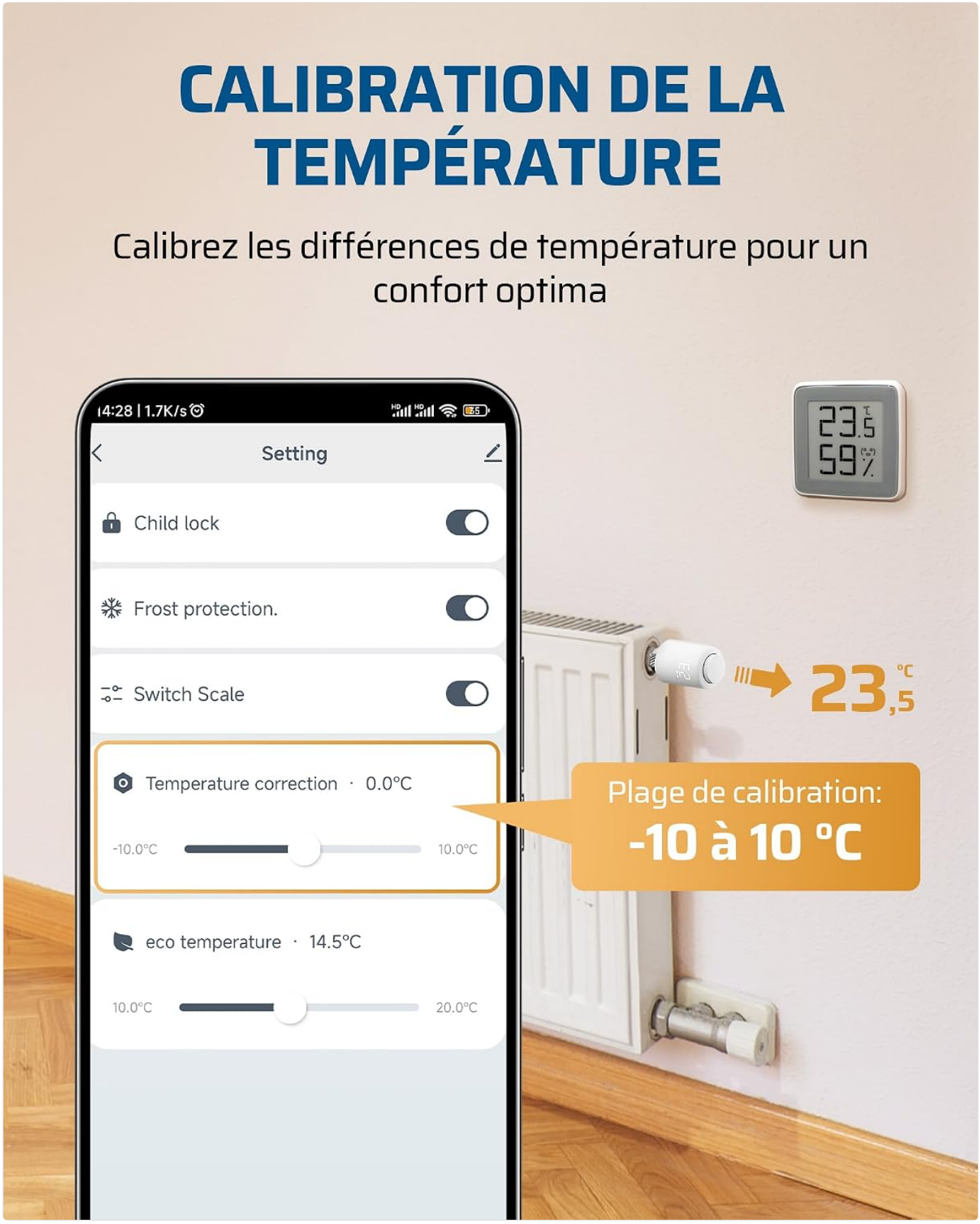


Image 5.3: Setting multiple programs for each day of the week via the app.

6. Advanced Functions

6.1. Temperature Calibration

Due to the TRV's proximity to the radiator, the measured temperature might differ from the actual room temperature. Use the calibration function to adjust this offset.

- In the Smart Life app, go to the TRV settings and find "Temperature correction".
- Adjust the value between -10 °C and +10 °C to match the actual room temperature.



Image 6.1: Temperature calibration settings in the app, allowing adjustment from -10°C to +10°C.

6.2. Window Open Detection

This feature helps save energy by automatically pausing heating when a sudden temperature drop is detected.

- If the room temperature drops by 5 °C within a short period, the TRV will interpret this as an open window and temporarily stop heating.
- Heating will resume automatically after a set period or when the temperature stabilizes.



Image 6.2: Visual representation of the window open detection feature, showing cold air flow.

6.3. Child Lock

To prevent accidental changes by children, activate the child lock function.

- Press and hold the center button on the TRV for 3 seconds to activate or deactivate the child lock.
- Alternatively, enable/disable it through the Smart Life app settings.
- When activated, "LC" will be displayed on the TRV screen.

6.4. Frost Protection

The TRV includes a frost protection feature to prevent pipes from freezing.

- If the room temperature drops below 5 °C, the TRV will automatically open the valve to allow heating and prevent freezing.
- It will close the valve when the temperature rises above 8 °C.

7. Maintenance

- **Battery Replacement:** When the low battery alert appears on the display or in the app, replace the two AA alkaline batteries promptly.
- **Cleaning:** Wipe the TRV with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- **Limescale Prevention:** The TRV periodically exercises the valve to prevent limescale buildup, ensuring smooth operation.

8. Troubleshooting

Problem	Possible Cause	Solution
TRV not responding / Display off	Low or dead batteries; incorrect battery installation.	Replace batteries with new 1.5V AA alkaline batteries, ensuring correct polarity.
Cannot pair with Zigbee Hub	TRV not in pairing mode; Hub not connected; interference.	Ensure TRV is flashing (pairing mode). Check Hub connection. Move TRV closer to Hub. Restart Hub and TRV.
Incorrect temperature reading	Sensor near radiator; no calibration applied.	Use the Temperature Calibration function in the Smart Life app to adjust the offset.
Heating not working as expected	Incorrect schedule; valve stuck; window open detection active.	Check app schedules. Manually adjust temperature. Check for "window open" icon. Ensure valve is not stuck (limescale prevention helps).
"NTC" error on display	NTC sensor failure.	Contact customer support for assistance.

9. Specifications

Brand	DEWENWILS
Model	Zigbee 3.0 Thermostatic Radiator Valve
Connectivity Technology	ZigBee 3.0
Controller Type	Amazon Alexa, Google Assistant, Smart Life App

Power Source	2 x 1.5V AA Alkaline Batteries (not included)
Voltage	3 Volts
Temperature Setting Range	5 °C to 35 °C
Temperature Display Range	0 °C to 35 °C
Operating Temperature Range	0 °C to 50 °C
Wireless Transmission Range	Up to 100 meters (open area)
Connection Type	M30 x 1.5 mm (with 6 adapters included)
Material	Metal
Item Weight	230 grams
Dimensions	11.1 x 9.6 x 6.4 cm (Package)
Special Features	Programmable, Frost Protection, Child Lock, Window Open Detection, Limescale Prevention

10. Safety Information

- Do not expose the device to extreme temperatures, direct sunlight, or moisture.
- Do not attempt to disassemble or repair the device yourself. Contact qualified personnel for service.
- Keep batteries out of reach of children. Dispose of used batteries according to local regulations.
- Ensure the radiator valve is compatible with the TRV or use the correct adapter.
- This device is for indoor use only.

11. Warranty and Support

For warranty information and customer support, please refer to the DEWENWILS official website or contact your retailer. Keep your purchase receipt as proof of purchase.
Visit the DEWENWILS Store on Amazon

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

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