Evesta R Wi-Fi
Twin Led thermostat
Installation and user manual

This guide describes technical functions of the Evesta R Wi-Fi Twin Led thermostat.

TECHNICAL DATA

Voltage: 230V 50/60 Hz
Maximum load: 16A (resistive)
Setpoint temperature range: +5 °C…+40 °C
Device usage temperature: +0 °C…+40 °C
External control: Pilot wire 230V 50/60Hz
IP-class: IP21
Color: White RAL9003
Sensors: Integrated room sensor and NTC 10 kΩ floor sensor included in sales package
Wi-Fi: 2.4GHz 802.11bgn
Standards: CE, EN 60730-1, EN 60730-2-9, EN 300 328 V2.2.2
Phone operating system requirements:
Android 8.0 / iOS 12 or newer.

INSTALLATION

Installation must be done by a qualified electrician in accordance with the building and wiring regulations. Before installation, disconnect any power to thermostat mains. Note that external control (pilot wire) may have its own mains connection.
Start installation by removing the front part using small screwdriver (Figure 1)

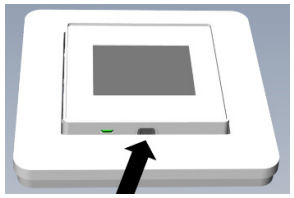

Figure 1.

Wires must be stripped 9-10mm. Wires can be released by pressing the connector's release switch. If you are using multi-strand wire press terminal block release switch to help wire installation. Pull the wire to make sure it is properly connected. Floor sensor must be placed into protective tube in concrete. Make sure there is no water in the tube.

L: Live
LOAD L: Heating cable connection (Live)
LOAD N: Heating cable connection (Neutral)
N: Neutral
PILOT: External control 230VAC for Home, Away mode
SENSOR: Floor-sensor NTC (6.8, **10**, 12, 15, 22, 33, 47, 100kΩ) type.
Use external screw connector to connect heating cable protective earth.

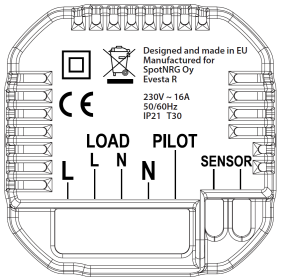

Figure 2.

Next, position the thermostat and fasten it onto the wall's mounting box using 2-4 screws. Open the frame retaining spring, position the frame and close the spring. Then attach the front part, make sure the connector between front and bottom part is correctly placed. Press the front part until it snaps in place. The front part can be later removed by pressing the ejector latch.

THERMOSTAT USAGE WITHOUT APPLICATION

Thermostat offers bare minimum functionality without the phone application. This can be used in new buildings when Wi-Fi is not yet available.

When thermostat is first time powered up heating is disabled.

Heating can be turned on/off by short pressing (<5s) paper-clip button on the side of the device.

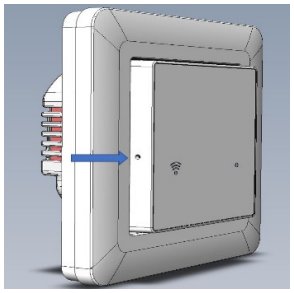

Figure 3.

When heating is turned on relay LED will blink red five times. When heating is turned off relay LED will blink white five times.

Regulation uses fixed 22°C setpoint. If a floor sensor is present, regulation is done based on floor temperature. 10k floor sensor is assumed. Otherwise, regulation is done based on internal room temperature sensor. Sensor configuration is detected when heating is turned on. If you change sensor configuration (e.g. add floor sensor), first turn the heating off and then back on.

THERMOSTAT USAGE WITH APPLICATION

Android or Apple phone application enables controlling the thermostat over the internet.

The application can be downloaded from Apple App Store or Google Play Store.

Adding thermostat to the application: Select Add Thermostat from Zone card and follow the instructions in the application.

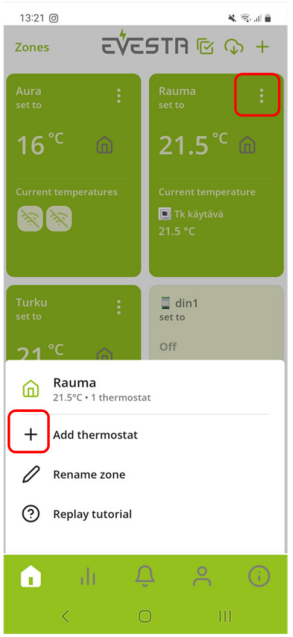

Figure 4. Phone application

When thermostat has not been used earlier with phone application, it can be set to "Connect to Cloud" mode by long pressing (>5s) the paper-clip button. When Wi-Fi icon starts to blink red, the button can be released. When Wi-Fi icon turns green

the thermostat is ready for pairing. Thermostat will also return to factory default settings at the same time. If pairing is not started within one minute, thermostat will return to initial state.

Connection to cloud and Wi-Fi network selection is done with phone application. Please follow the instructions from the phone application.

If connection to cloud is not finalized, thermostat will reboot after 5min and return to initial state.

When the thermostat is successfully connected to the cloud the operation of the paper-clip button will change. Short press will enter “Reconfigure Wi-Fi” mode (Wi-Fi indicator LED solid green), long press will perform factory reset (Wi-Fi icon will blink red five times) and enter “Connect to Cloud” mode. All other settings can be done with the phone application.

SENSOR ERRORS

If floor or room sensor error is detected relay indicator will blink constantly red.

USAGE

1 Local User interface

The indicator LED on the right side of the thermostat indicates relay state. When the indicator is RED relay is conducting and heating element is active. When the thermostat is in cooling mode LED is blue when relay conducts.

Thermostat Wi-Fi indicator LED color codes:

White: Thermostat connected to Wi-Fi and Cloud.
Yellow: Thermostat connected to Wi-Fi, but not connected to Cloud.
Red: Thermostat not connected to Wi-Fi or Cloud.
Off: Wi-Fi off

2 What operation mode should be used?

Thermostat has three main modes in application: Home (**-H-**), Away (**-A-**) and weekly schedule (**SCH**). The additional modes are antifrost and power regulation. With phone application, cooling can also be enabled. In that state thermostat relay conducts if measured temperature is bigger than setpoint.

Home mode default setpoint setting is 21°C, it can be changed from phone application. Away mode default is 19°C.

Weekly schedule helps to save energy by changing setpoint according to programmed schedule for example using lower setpoint during nights. Programming is done with phone application.

External control (pilot wire) can be used to select between Home and Away modes. External control can be enabled in phone application advanced settings menu. If a 230VAC L signal is applied to the pilot input, the thermostat will change to Away mode.

Figure 5. Operation modes

Phone application supports grouping thermostats into zones. Inside zone thermostats share settings (operation mode, setpoints etc.) unless thermostat is set temporarily to use custom settings.

3 Regulation modes

Regulation modes are selected with heating setup in phone application under advanced settings. It is possible to regulate based on room or floor sensor readings. In room regulation, floor temperature limit can be set to protect e.g. wooden floors, naturally that requires that floor sensor is installed.

Advanced settings offers technical parameters like floor and room temperature limits, alarm thresholds, NTC sensor value and Hysteresis value. Those should be only changed by installer or expert user.

4 Electricity cost optimization

Activate electricity cost optimization by using the phone app. The setting is thermostat-specific and can be found under the gear menu in the upper right corner of the thermostat view. Check the location of the thermostat in the application. The location is used to select the right electricity price area and weather forecast. Choose how many degrees the temperature setpoint is automatically raised during cheap electricity. Also choose how much setpoint will be dropped during expensive electricity. When the average temperature of the next day exceeds the "Forecast save limit” setting, the setpoint is not raised during cheap electricity i.e., no heating to the reserve is done. Also select the number of raise and drop hours. You can monitor the operation of the price optimization and achieved savings under the "Reports" tab of the phone application.