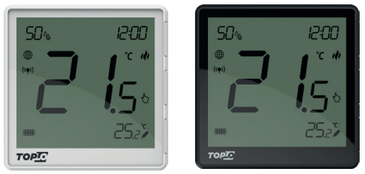
TOPTO

Internet controlled thermostat, ZigBee



EGRFWIFIW EGRFWIFIB

Quick Guide

Ver. 5.1
Release date: VII 2024
Soft:
ZigBee: v1.0.13
MCU: v2.0.2

Works with ENGO SMART App | Powered By tuya

GET IT ON Google Play | Available on the App Store

Hey Google | works with alexa

Producer:
Engo Controls S.C.
43-262 Kobielice
4 Rolna
Poland

Product Compliance

This product complies with the following EU Directives: 2014/30/EU, 2014/35/EU, 2014/53/EU, 2011/65/EU

SAFETY INFORMATION:

Use in accordance with national and EU regulations. Use the device only as intended, keeping it in a dry condition. The product is for indoor use only. Please read the entire manual, before installation or use.

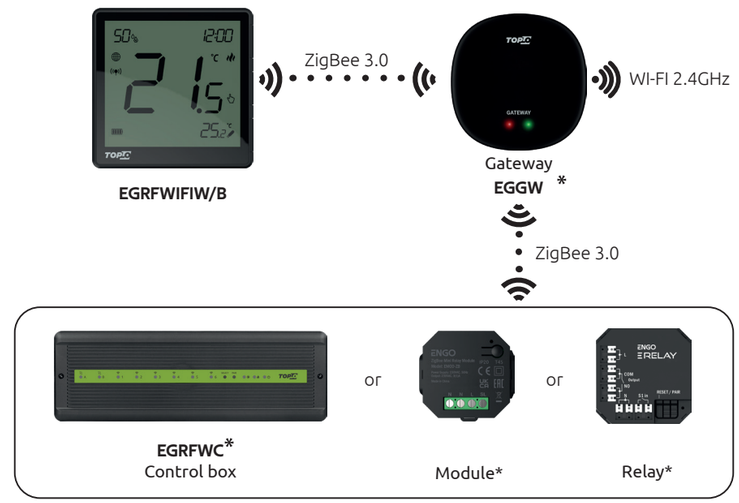
⚠ WARNING:

This product must be used with a ZigBee EGGW gateway (purchased separately). Thermostat programming is done by ENGO Smart app.

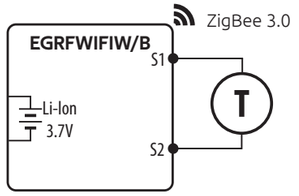
Product advantages:

- Li-Ion — Built-in Li-Ion 3,7V Battery
- ZIGBEE 3.0 — Communication in the ZigBee 3.0 standard
- A multitude of functions available from ENGO Smart / Tuya Smart application
- NTC — S1-S2 Input for additional sensor
- ENGO BINDING — ENGO binding function (devices connection in Online and Offline mode)

Wireless communication diagram



Connection description



* Products sold separately

Legend:

- Battery powered
- T — Temperature sensor
- S1, S2 — Thermostat input for ext. temperature sensor
- Connection with ZigBee 3.0 network
- Connection with WiFi 2.4GHz network

Installation thermostat in the app

Make sure your router is within range of your smartphone. Make sure you are connected to the Internet. This will reduce the pairing time of the device.

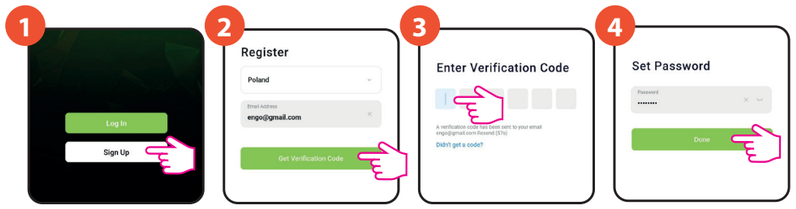
STEP 1 - DOWNLOAD ENGO SMART APP

Download the ENGO Smart app from Google Play or Apple App Store and install it on your smartphone.

Google Play | ENGO SMART | App Store

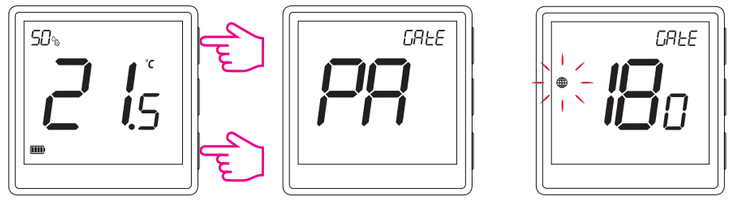
STEP 2 - REGISTER THE NEW ACCOUNT

To register a new account, please follow the steps below:



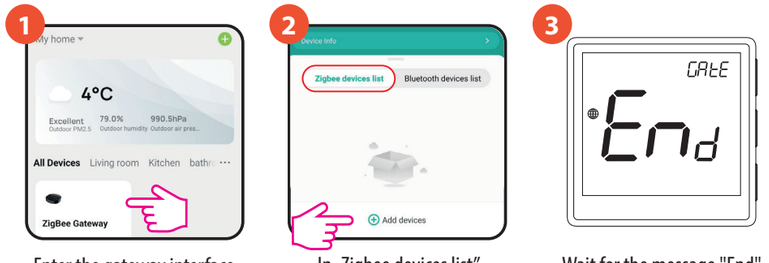
1. Click „Register" to create new account.
2. Enter your e-mail address to which the verification code will be sent.
3. Enter the verification code received in the email. Remember that you only have 60 seconds to enter the code!!
4. Then set the login password.

STEP 3 - CONNECT THE THERMOSTAT TO ZigBee



Make sure ZigBee Gateway has been added to the Engo Smart app. Press and hold the ▲ and ▼ buttons on the thermostat until the display shows „PA". Then release the keys. The pairing mode will be started up.

Thermostat counts the time back (180s).



1. Enter the gateway interface.
2. In „Zigbee devices list" go „Add devices".
3. Wait for the message "End" to appear on the thermostat screen.

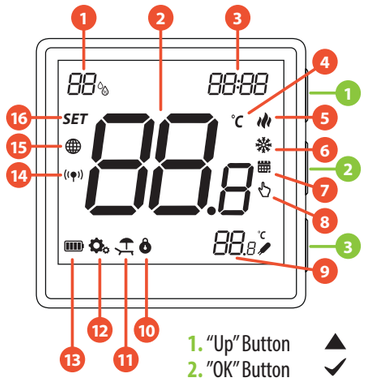
INTRODUCTION:

EGRFWIFI is a surface-mounted room thermostat which works over ZigBee technology. It has a built-in humidity sensor and a minimum/maximum setpoint temperature limiting function. The EGRFWIFI has the ability to work in heating or cooling modes. The unique feature of this thermostat is the possibility of wireless control over ENGO binding function. In order to have the ability to controll wirelessly, EGRFWIFI needs to be used with ENGO Smart / TUYA Smart mobile application and EGGW internet gateway (sold separately). „ENGO binding" function provides wireless and direct connection to the receivers (e.g. EGRFWC control box, module or relay) over the EGGW gateway. After adding to the mobile app, thermostat offer more functions, e.g. push notifications or possibility of programming time schedules.

Technical Informations

Power supply	Built-in Li-Ion 3,7V Battery
Charging connector	USB type C, 5V DC
Temperature range	5,0°C - 45,0°C
Display temperature accuracy	0,5°C
Control algorithm	TPI or Histeresis (from ±0,1°C to ±2°C)
Communication	ZigBee 3.0 2,4GHz
S1/S2 multifunctional input	Floor temp sensor, external air sensor, occupancy sensor
IP protection class	IP30
Dimension [mm]	90 x 90 x 14 mm

LCD Icon Description + Button Description



1. "Up" Button ▲
2. "OK" Button ✓
3. "Down" Button ▼

1. Current humidity reading
2. Current/Setpoint temperature
3. Clock
4. Temperature unit
5. Heating indicator (icon is animating when there is heating demand)
6. Cooling indicator (icon is animating when there is cooling demand)
7. Schedule mode icon
8. Temporary override mode
9. External/Floor or Occupancy sensor
10. Button lock
11. Holiday mode
12. Settings icon
13. Battery indicator
14. Receiver binding indicator
15. ZigBee network connection indicator
16. Settings icon / temperature settings

Button description

▲	Change the parameter value up
▼	Change the parameter value down
✓	Manual/Schedule mode - short button press (Online mode)
	Enther the installer parameters- hold 3 seconds
	Turn OFF/ON thermostat - hold 5 seconds
▲+▼	Enter the pairing mode - hold 5 seconds
	Enter binding mode - hold 5 seconds
	Factory reset - hold until the FA message appears
▲+✓	Lock/Unlock thermostat keys - hold 3 seconds
▼+✓	Heating/Cooling mode change - hold 3seconds

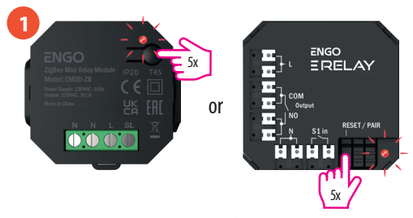
Name the device and click „Done"

The thermostat has been installed and displays the main interface.

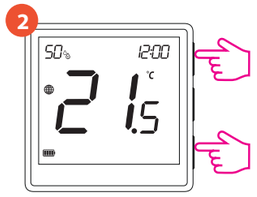
On the controller screen globe icon appeared stating that he has been he added to the ZigBee network.

Binding thermostat with the module/relay

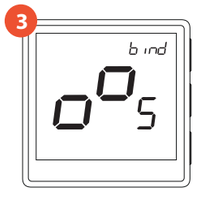
Make sure that the module/relay and thermostat are in the same ZigBee network (they are added to the same gateway EGGW).



To properly link thermostat with the module/relay first click quickly the button on the device 5 times. The LED diode will start flashing slowly on red, which means the device is in binding mode.



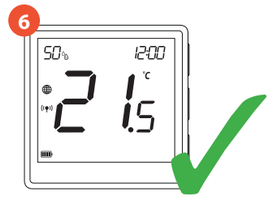
On the EONE thermostat, hold ▲ and ▼ buttons until the "bind" message appears.



Release the keys, binding function process of linking thermostat with control box is active.

The "binding" process takes up to 300 seconds.

After successfull binding operation „End" message will be displayed. LED on the module will stop flashing.



Both devices have been successfully linked. Thermostat displays the main screen, icon " ((•)) " appeared on the screenindicating connection with the receiver (module/relay in this case).

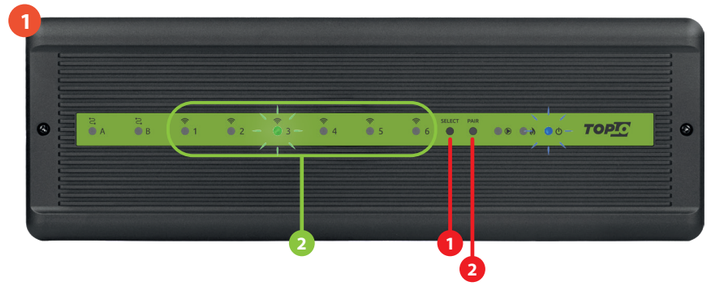
ATTENTION:
If the binding process fails, it must be repeated taking into account the distances between devices, obstacles and local radio signal interferences.

Remember:
Radio range can be increased by Engo ZigBee repeaters.

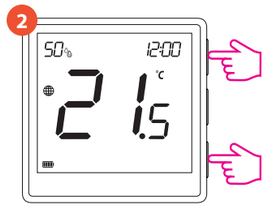
ATTENTION:
When the thermostat is binded with the module, the relay will turn off after 50 minutes, if the communication between the devices is lost.

Binding thermostat with the **EGRFWC** wireless control box

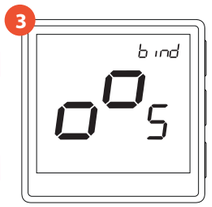
Make sure that the EGRFWC control box and thermostat are in the same ZigBee network (they are added to the same gateway EGGW) and the POWER LED lights up blue.



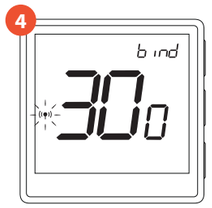
In order to correctly link thermostat with the control box, first select the zone in the control box with the SELECT button (1) (zone which you want to link with thermostat). The LED (2) will flash 3 times for the selected zone. Confirm your selection by clicking PAIR button (2). The LED (2) will flash green with the previously selected zone - binding process has started, it is active for 10 minutes and during this time you can link thermostat with the selected zone.



On the EONE thermostat, hold ▲ and ▼ buttons until the "bind"message appears.

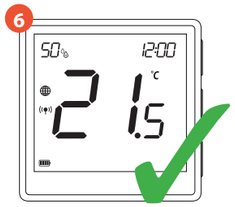


Release the keys, binding functionprocess of linking thermostat with control box is active.



The "binding" process takes up to 300 seconds.

After successfull binding operation „End" message will be displayed.



Both devices have been successfully linked. Thermostat displays the main screen, icon " ((•)) " appeared on the screen indicating connection with the receiver (EGRFWC in this case).

ATTENTION:
If the binding process fails, it must be repeated taking into account the distances between devices, obstacles and local radio signal interferences.

Remember:
Radio range can be increased by Engo ZigBee repeaters.

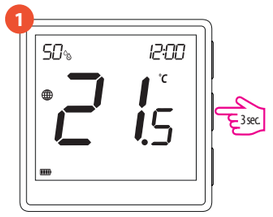
ATTENTION:
When the thermostat is binded with the module, the relay will turn off after 50 minutes, if the communication between the devices is lost.

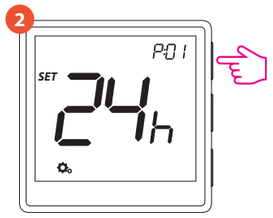
Installer parameters

Pxx	Function	Value	Desription	Default value
P01	Clock format	12h	12 hour	24h
		24h	24 hour	
P02	Heating/Cooling Selection	🔥	Heating	🔥
		❄	Cooling	
P03	Control algorithm	TPI UFH	TPI for Underfloor Heating	TPI UFH for heating HIS 1.0 for cooling
		TPI RAD	TPI for Radiators	
		TPI ELE	TPI for Electrical Heating	
		HIS 0.2	SPAN +/-0,1℃	
		HIS 0.4	SPAN +/-0,2℃	
		HIS 0.6	SPAN +/-0,3℃	
		HIS 0.8	SPAN +/-0,4℃	
		HIS 1.0	SPAN +/-0,5℃	
		HIS 2.0	SPAN +/-1,0℃	
		HIS 3.0	SPAN +/-1,5℃	
		HIS 4.0	SPAN +/-2,0℃	
P04	Offset temperature	-3.5℃ do +3.5℃	If the thermostat indicates wrong temperature, you can correct it by max ± 3.5°C"	0℃
P05	"Minimum setpoint"	5℃ - 45℃	Minimum heating / cooling temperature that can be set	5℃
P06	"Maximum setpoint"	5℃ - 45℃	Maximum heating / cooling temperature that can be set	35℃
P07	S1/S2 Input	1	Disable	1
		2	External sensor as a floor sensor	
		3	External sensor as an air sensor	
		4	Occupnacy sensor (ON/OFF volt free input)	
P08	Maximum floor temperature for heating (function active when P07=2)	5℃ - 45℃	In order to protect the floor, the heating will be turned off, when the temperature of the floor sensor rises above the maximum value.	35℃
P09	Minimum floor temperature for heating (function active when P07=2)	5℃ - 45℃	In order to protect the floor, the heating will be switched on, when the temperature of the floor sensor drops below the minimum value.	10℃
P10	Maximum floor temperature for cooling (function active when P07=2)	5℃ - 45℃	In order to protect the floor, cooling will be switched on, when the temperature of the floor sensor exceeds the maximum value.	15℃
P11	Minimum floor temperature for cooling (function active when P07=2)	5℃ - 45℃	In order to protect the floor, cooling will be turned off, when the temperature of the floor sensor drops below the minimum value	7℃
P12	Comfort warm floor	OFF	This function helps to keep the floor warm, even if there is no heating demand from the room thermostat. This feature is available only for Heating Mode. User can select 5 levels of warm floor feature. Note that comfort warm floor function will activate heating for specified amount of time (in relation to Level setting choosen by user). Heating will be activated only if in the past 1 hour heating was OFF.	OFF
		Level 1 = 7min		
		Level 2 = 11min		
		Level 3 = 15min		
		Level 4 = 19min		
		Level 5 = 23min		
P13	Valve protection	ON	Function disabled	OFF
		OFF	Function enabled	
P14	Backlight brightness	10% - 100%	Adjustable in the range from 10 to 100%	50%
P15	PIN Code for settings access	NO	Function disabled	NO
		PIN	Function enabled	
P16	Require a PIN to unlock the keys every time (function active when P15=PIN)	NO	Function disabled	NO
		YES	Function enabled	
CLR	Clear settings factory reset	NO	No action	NO
		YES	Factory Reset	

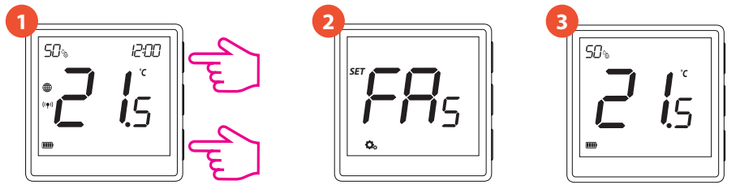
Installer settings

To enter installer parameters press and hold ✓ button for 3 seconds.





Use ▲ or ▼. button to move between parameters. Enter the parameter by ✓. Edit the parameter using ▲ or ▼. Confirm the new parameter value with the ✓ button.

Factory reset

To RESET Thermostat to factory settings, hold down the ▲ and ▼ buttons until the FA message appears. Then release the keys. Thermostat will restart, restore default factory settings and displays the home screen. The device will be removed from the ZigBee network you will need to add/pair it again.