ENGO CONTROLS E25 24V AC

ZigBee/868MHz Smart Thermostat

E25-24W E25-24B

Quick Guide

UK CA CE EAC

Works with ENGO SMART App | Powered By tuya

Ver. 1.1
Release date: X 2024
Soft:
ZigBee: v1.0.3
MCU v0.3.0

GET IT ON Google Play | Available on the App Store

Hey Google | works with alexa

Producer:
Engo Controls sp z o.o. sp. k.
Rolna 4 St.
43-262 Kobielice
Poland

www.engocontrols.com

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.

Installation

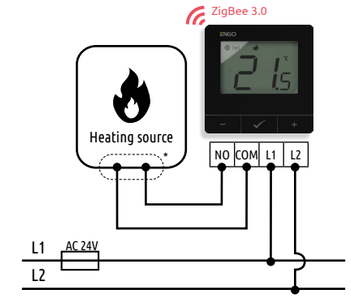
Installation must be performed by a qualified person with appropriate electrical qualifications, in accordance with the standards and regulations in force in a given country and in the EU. The manufacturer is not responsible for non compliance with the instructions.

ATTENTION:

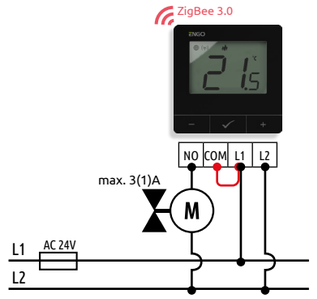
For the entire installation, there may be additional protection requirements, which the installer is responsible for.

Connection description

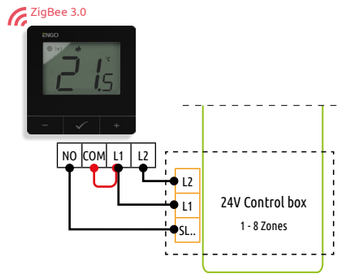
a) Connection diagram for heating source



b) Connection diagram to 24V actuator



c) Connection diagram to the control box



Legend:

	Fuse
L1, L2	24V AC power supply
COM, NO	Voltage-free output
SLA, SLB, SL..	Input terminals
M	Valve actuator
((	Wireless communication
	Heating source* - Boiler's contacts for ON/OFF thermostat (according to the boiler's instructions)

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.

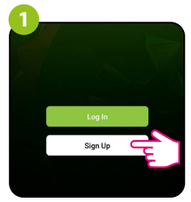
ENGO SMART App | Powered By tuya

Hey Google | works with alexa

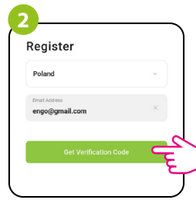
GET IT ON Google Play | Available on the App Store

STEP 2 - REGISTER THE NEW ACCOUNT

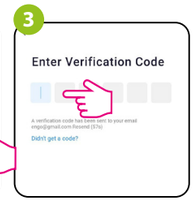
To register a new account, please follow the steps below:



Click „Register" to create new account.



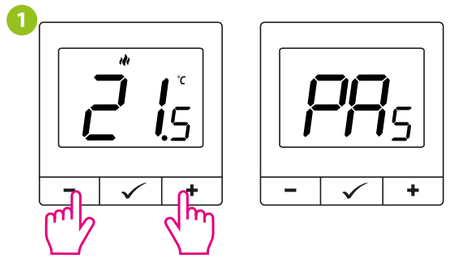
Enter your e-mail address to which the verification code will be sent.



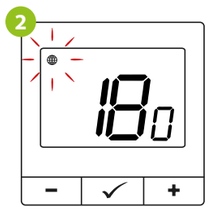
Enter the verification code received in the email. Remember that you only have 60 seconds to enter the code!

Then set the login password.

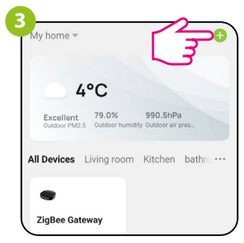
STEP 3 - CONNECT THE THERMOSTAT TO ZigBee



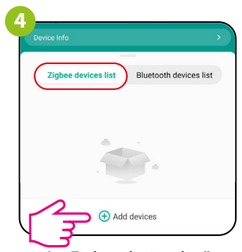
Make sure ZigBee Gateway has been added to the Engo Smart app. Press and hold the – and + buttons on the thermostat until the display shows „PA". Then release the keys. The pairing mode will be started up.



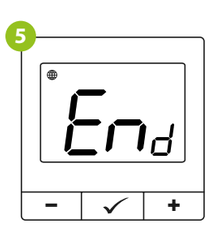
Thermostat counts the time back (180s).



Enter the gateway interface.



In „Zigbee devices list" go „Add devices".



Wait for the message "End" to appear on the thermostat screen.

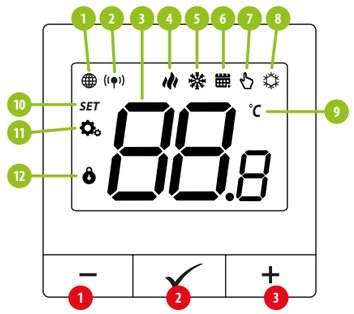
INTRODUCTION:

Internet controlled thermostat with surface-mounted design (24V AC powered). The product is based on a ZigBee/868MHz wireless communication technology. It is designed for radiator or floor heating. It works with electronic wireless heads. It can control up to 6 radiator heads in one room. Thermostat sends temperature measurements to the heads for better control accuracy - it will ensure also comfort and savings. A unique feature of this thermostat is the ability to control devices WIRELESSLY (ENGO binding function). The "ENGO binding" function makes thermostat to communicate directly with receivers, e.g. a wireless control box or relay module (devices with "BIND" function). ZigBee binding can only be performed using the Internet gateway (sold separately). If thermostat is used with an internet gateway connected to the internet, it has the the ability to be controled wirelessly via the ENGO Smart mobile app. When added to the mobile app, thermostat gets additional functions, e.g. time schedules or push notifications. Thermostat has also a key lock function, possibility of setting a minimum and maximum temperature setpoint limits and the ability to operate in heating or cooling mode.

Technical data

Power supply	24V AC 50 Hz
Max. Current	3(1)A
Temp. setpoint range	5,0°C to 45,0°C
Display temp. Accuracy	0,5°C
Control algorithm	TPI Hysteresis (±0.1°C to ±2°C)
Communication	ZigBee 3.0 RF 868MHz
Control output	NO/COM voltage-free
Dimensions [mm]	80 x 80 x 23

LCD Icon Description + Button Description

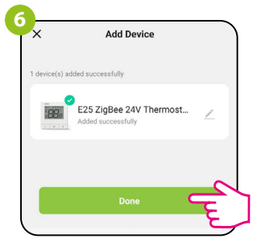


1. "Down" Button –
2. "OK" Button **OK**
3. "Up" Button +

1. ZigBee network connection indicator
2. Receiver binding indicator
3. Current/Setpoint temperature
4. Heating indicator (icon is animating when there is heating demand)
5. Cooling indicator (icon is animating when there is cooling demand)
6. Schedule mode icon
7. Temporary override mode
8. Frost protection mode
9. Temperature unit
10. Settings icon / temperature settings
11. Settings icon
12. Button lock

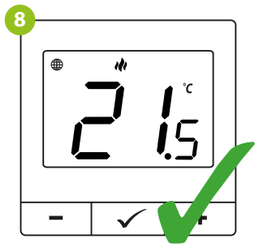
Button description

+	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 Sync / 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.

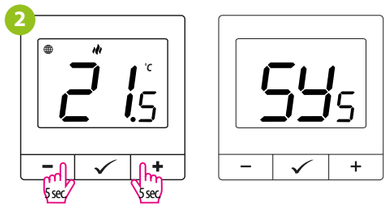


On the controller screen globe icon appeared stating that he has been he added to the ZigBee network.

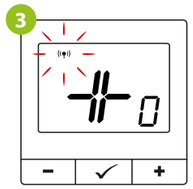
Synchronization with head

An internet gateway is not mandatory to synchronize thermostat with head. Make sure head is installed and adapted to valve insert (see head manual). If thermostat is connected to a wireless control box or relay module, synchronization with head cannot be activated.

After successful adaptation process, press&hold head button for 3 seconds. The LED will start flashing blue.

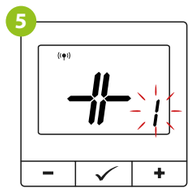


Hold simultaneously – and + buttons on thermostat until the "SY" function appears.

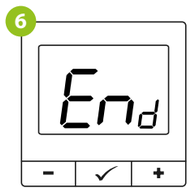


Release buttons, SYNC function will be active (synchronization with head).

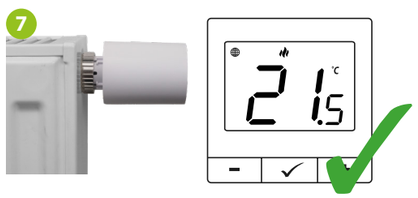
After successful synchronization, LED diode will indicate blue light for 10 seconds.



Thermostat will indicate how many heads are synchronized.



"END" message will appear after successful synchronization.



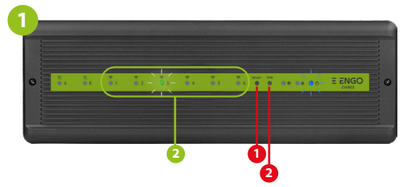
The devices are synchronized and ready to work.

ATTENTION:

The synchronization should be performed for each head separately. One thermostat can control up to 6 heads within one room.

Binding thermostat with the wireless control box

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

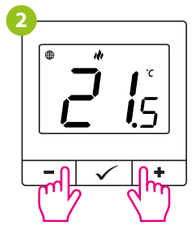


In order to correctly link thermostat with the control box, first select the zone in the control box with the SELECT button (1) (zone which you want to link with thermostat). The LED (2) will flash 3 times for the selected zone. Confirm your selection by clicking PAIR button (2). The LED (2) will flash 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.

or

or

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.

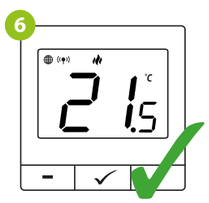


On the thermostat, hold – and + buttons until the "bind" message appears.

Release the keys, binding function process of linking thermostat 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.

ATTENTION:

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

Remember:

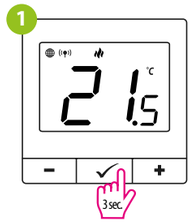
Radio range can be increased by Engo ZigBee repeaters.

ATTENTION:

When the thermostat is binded with the zone , the zone will turn off after 50 minutes, if the communication between the devices is lost.

Installer settings

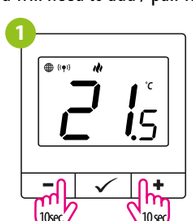
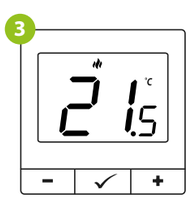
To enter installer parameters press and hold ✓ button for 3 seconds.



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

Installer parameters

Pxx	Function	Value	Desription	Default value
P01	Heating/Cooling Selection	🔥	Heating	🔥
		❄	Cooling	
P02	Control algorithm	TPI UFH	TPI for Underfloor Heating	TPI UFH for heating HIS 0.4 for cooling
		TPI RAD	TPI for Radiators	
		TPI ELE	TPI for Electrical Heating	
		HIS 0.4	SPAN +/-0,2℃	
		HIS 0.8	SPAN +/-0,4℃	
		HIS 1.2	SPAN +/-0,6℃	
		HIS 1.6	SPAN +/-0,8℃	
		HIS 2.0	SPAN+/-1,0℃	
		HIS 3.0	SPAN +/-1,5℃	
		HIS 4.0	SPAN+/-2,0℃	
P03	Offset temperature	-3.0℃ to +3.0℃	If the thermostat indicates wrong temperature, you can correct it by max ± 3.0℃"	0℃
P04	Internal relay	NO	Relay type NO-COM	NO
		NC	Relay type NC-COM	
		OFF	Relay disabled	
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	Backlight brightness	10% - 100%	Adjustable in the range from 10 to 100%	50%
P08	PIN Code for settings access	NO	Function disabled	NO
		PIN	Function enabled	
P09	PIN code value	000-xxx	user PIN	000
P10	Require a PIN to unlock the keys every time (function active when P8=PIN)	NO	Function disabled	NO
		YES	Function enabled	
P11	Valve protection	ON	Function enabled	OFF
		OFF	Function disabled	
P12	Latest available firmware for heads	xxx	Firmware version available to update heads	Read only
P13	Current firmware installed in heads	null - xxx	null - firmware in the heads is latest possible. xxx - a newer version is available, press the button to update the heads	-
P14	Delta RCWC algorithm (only for heads)	0.5℃ to 5.0℃	In case of room temperature change, head opens proportionally to the size of the delta RCWC parameter. The smaller delta RCWC is, the faster the valve response will be.	2.0
CLR	Clear settings factory reset	NO	No action	NO
		YES	Factory Reset	

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, will restore the default factory settings and display the main screen. If the regulator was added to the gate and the ZigBee network, it will be removed from it and you will need to add / pair it again.