

/ EDITION 2026 · EN · FIRMWARE 10.25

Z-Wave Thermostat V8 Family

One Z-Wave 800 Long Range thermostat platform, five firmware models: fan-coil thermostat (relay or 0–10 V), ThermoLight, ThermoIR and FloorHeat.

Z-WAVE 800 LR | FAN-COIL | LIGHTS | IR AC | FLOOR

APX-[Series]-TZA · TZD · TZ010
TZLA · TZLD · TZCA · TZCD · TZFA · TZFD

ONE THERMOSTAT, FIVE PRODUCTS

Every room, one wall device

5 in 1

The same faceplate, display and back unit become a fan-coil thermostat, a thermostat with lights, an infrared air-conditioner controller or a floor-heating thermostat with lights. One design across the whole project, one spare part, one installer routine, and each room gets exactly the functions it needs.

01 · THERMOSTAT

Fan-coil, 2-pipe or 4-pipe

Three fan speeds and a valve, or two fan speeds with separate heating and cooling valves, chosen by one parameter.

FAN L	FAN M	FAN H	VALVE
FAN L	FAN H	HEAT V	COOL V

02 · THERMOSTAT 0–10 V

Modulating valve

Three fan speeds and a 0–10 VDC output that opens the valve in proportion to the demand: smooth, quiet regulation.

FAN L	FAN M	FAN H	0–10 V

03 · THERMOLIGHT

Climate and two lights

Two light circuits on the thermostat's own keys, plus a fan-coil with fan and valve or a 2-speed fan.

LIGHT 1	LIGHT 2	FAN	VALVE

04 · THERMOIR

Any air conditioner

Four lights, and split or ducted air conditioners controlled over infrared through a Remotec ZXT-800: Heat, Cool, Fan, Auto and Dry.

LIGHT 1	LIGHT 2	LIGHT 3	LIGHT 4

05 · FLOORHEAT

Floor heating and three lights

Water or electric floor heating with its own icon and a flame that shows when the floor is heating, plus three lights.

LIGHT 1	LIGHT 2	LIGHT 3	FLOOR

EVERY MODEL

Made to match the room

15 LED colours per key and state, separate display and button brightness, a calm standby level, a start-up light show, Z-Wave 800 Long Range and firmware updates over the air.

light · fan-coil / cooling · heating · Boxes = outputs Q1 · Q2 · Q3 · Q4

OVERVIEW

One platform, five models

Choose the model by what the room needs: a fan-coil, lights, an IR air conditioner or floor heating.

All five models use the same 86 × 86 mm faceplate (Crystal glass or Classic metal), the same touch panel and display, and the same back units. What changes is the firmware: it decides what the four outputs do and what the Z-Wave controller sees. The model is chosen when the thermostat is programmed; the label on the box names it.

MODELS COVERED BY THIS MANUAL

MODEL	WHAT IT CONTROLS	OUTPUTS Q1 · Q2 · Q3 · Q4	IN THE HUB
Thermostat relay APX-[Series]-TZA · TZD	Fan-coil unit: 3-speed fan and a valve, or 2 fans and 2 valves	Fan low · med · high · valve or fan low · fan high · heat valve · cool valve	1 HVAC thermostat + temperature sensor
Thermostat 0–10 V APX-[Series]-TZ010	Fan-coil unit with a modulating 0–10 VDC valve / actuator	Fan low · med · high · — valve on the 0–10 V output	1 HVAC thermostat + temperature sensor
ThermoLight APX-[Series]-TZLA · TZLD	Two lights and a fan-coil (1-speed fan + valve, or 2-speed fan)	Light 1 · Light 2 · fan · valve or Light 1 · Light 2 · fan low · fan high	2 switches + HVAC thermostat + sensor
ThermoIR APX-[Series]-TZCA · TZCD	Four lights, and an air conditioner over infrared (Remotec ZXT-800 + QuickApp)	Light 1 · Light 2 · Light 3 · Light 4	4 switches + HVAC thermostat (Heat, Cool, Fan, Auto, Dry) + sensor
FloorHeat APX-[Series]-TZFA · TZFD	Three lights and one floor-heating zone (electric or water)	Light 1 · Light 2 · Light 3 · floor heating	3 switches + HVAC thermostat (Off / Heat) + sensor

Z-WAVE 800 LR

Mesh and Long Range operation with compatible controllers (Fibaro HC3, Yubii Home).

TEMPERATURE

Integrated sensor, external NTC 10K or IR probe on G / I. The hub can also supply the room temperature (Thermostat models).

FIRMWARE 10.25

15 LED colours, separate display and button brightness, over-the-air update through the controller.

Model codes: [Series] = Crystal or Classic; the last letter is the back unit (A = 110–240 VAC, D = 12–24 V, 010 = 0–10 V output). A code ending in -IR has the IR probe on G / I, for example APX-Crystal-TZFA-IR.

Outputs Q1–Q4 are the relay outputs of the back unit: switched live on the TZA (110–240 VAC) back unit, the normally open contacts L, M, H, V on the TZD (12–24 VAC/DC) back unit.

THE PANEL

Faceplate, touch keys and display



Crystal · glass · interchangeable icons



Classic · metal · fixed icon layout

Every model has **four touch positions with RGB LEDs** (Buttons 1–4) and a **display** with four touch controls: power, fan, up and down. Crystal faceplates take one icon insert and one diffuser at each touch position.

DISPLAY CONTROLS (ALL MODELS)

CONTROL	TOUCH	HOLD
Power	Thermostat on / off	On: next mode (Heat → Cool → Fan ..., the modes of the model). Off: show / hide the temperature in standby.
Up / Down	Setpoint +/− one step	Setpoint runs continuously
Fan	First touch shows the fan speed, the next touches change it (low, medium, high, auto)	—

FloorHeat has no fan and only one mode (floor heating): the fan control does nothing and Hold on Power does not change the mode. When the display buttons are locked (parameter 17) a touch only shows the lock icon; a very long touch unlocks them.

BUTTONS 1–4 PER MODEL

MODEL	BUTTON 1	BUTTON 2	BUTTON 3	BUTTON 4
Thermostat / 0–10 V	Scene	Scene	Scene	Scene · add / remove
ThermoLight	Light 1 (Q1)	Light 2 (Q2)	Scene	Scene · add / remove
ThermoIR	Light 1 (Q1)	Light 2 (Q2)	Light 3 (Q3)	Light 4 (Q4) · add / remove
FloorHeat	Light 1 (Q1)	Light 2 (Q2)	Light 3 (Q3)	Scene · add / remove

Every button also sends a scene to the controller (touch and hold), so it can run any scene in the hub. Button 4 is the commissioning button on every model (see Z-Wave commissioning).

LEDS AND BRIGHTNESS

15 colours, two brightness levels

Every colour and every brightness is a Z-Wave parameter, set from the controller.

Each touch position has its own colour for **off** (parameters 1–4) and **on** (parameters 6–9). On light keys "on" means the light is on; on the other keys the on colour shows while the key is touched.

LED COLOUR VALUES

0 Off	**1** Red	**2** Green	**3** Yellow	**4** Blue	**5** Purple	**6** Cyan	**7** White
8 Orange	**9** Lilac	**10** Pink	**11** Amber	**12** Warm white	**13** Lime	**14** Sky blue	**15** Magenta

Values 1–7 are the colours of earlier firmware; 8–15 are new in firmware 10.25 for this family. Default: off = 6 (cyan), on = 5 (purple).

HOW BRIGHTNESS IS SET

PANEL LEVEL

Parameter 12 — working brightness while someone uses the panel.
Parameter 11 — standby brightness 5 s after the last touch.

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SHARE PER PART

Parameter 46 — display, digits and icons, 1–100 %.
Parameter 47 — buttons, the four LEDs, 1–100 %.

EXAMPLE	P11	P12	P46	P47	DISPLAY WORKING / STANDBY	BUTTONS WORKING / STANDBY
Default	33	100	100	100	100 % / 33 %	100 % / 33 %
Softer buttons	33	100	100	50	100 % / 33 %	50 % / 17 %
Bedroom	20	80	60	30	48 % / 12 %	24 % / 6 %

START-UP

After power-up a light wave crosses the four keys from cyan to white, the keys glow for a few seconds, then the panel fades into its normal state. While the keys glow the thermostat is starting; a constant red on all keys instead means the unit is not activated, alternating red means wrong firmware for this hardware.

INSTALLATION

Prepare and fit the thermostat

Isolate the supply first. Follow the wiring page for the exact model.

SAFETY

- Installation, wiring and commissioning must be carried out by a qualified electrician in line with local regulations.
- Isolate and verify the supply before wiring, servicing or changing the back unit or faceplate.
- Protect each supply circuit with a suitable circuit breaker. Never exceed the ratings in this manual.
- Use the product indoors only, in a dry location, within the stated temperature and humidity range.
- Do not open the housing. There are no user-serviceable parts inside.

1. **Check the model.** The label names the model (Thermostat, Thermostat 0–10 V, ThermoLight, ThermoIR or FloorHeat) and the back unit. The frame is shared; the electronics, terminals and firmware differ.
2. **Wire the back unit** following the wiring page of that model. Tighten every terminal and keep low-voltage and mains cables separate.
3. **Connect the G / I accessory.** Standard models: external NTC 10K sensor. Models ending in -IR: IR probe. Connect only the accessory supported by your model.
4. **Fit icons and diffusers** (Crystal only): one icon insert and one diffuser at each of the four touch positions.
5. **Attach the faceplate.** Keep it parallel to the wall and press only at the corners until it is seated.
6. **Power-cycle once** after final assembly so the touch sensors set their reference.
7. **Add to the Z-Wave network** with Button 4 (see Z-Wave commissioning), then set the parameters for the installation.

FACEPLATE HANDLING

Remove or fit the faceplate only at the corners, keeping it parallel to the wall. Do not lever a tool against the visible glass or metal edge, and do not twist or bend it. Clean with a soft, dry or slightly damp cloth; no solvents or abrasive cleaners.

SPECIFICATIONS

Back units

Choose the back unit for the supply and the loads.

AC VERSIONS · TZA, TZ010

Supply	110–240 VAC, 50/60 Hz
Outputs Q1–Q3	Switched live
Output Q4 · TZA	Switched live
Valve · TZ010	0–10 VDC output, max. 20 mA (Q4 not connected)
Sensor input	G = reference, I = NTC 10K or IR probe

LOW VOLTAGE · TZD

Supply	12–24 VAC/DC, approx. 100 mA
Outputs	Four normally open relay contacts L, M, H, V with a shared COM
Sensor input	G = reference, I = NTC 10K or IR probe

WHICH BACK UNIT FOR WHICH MODEL

MODEL	TZA · 110–240 VAC	TZD · 12–24 V CONTACTS	TZ010 · 0–10 V
Thermostat	TZA	TZD	—
Thermostat 0–10 V	—	—	TZ010
ThermoLight	TZLA	TZLD	—
ThermoIR	TZCA	TZCD	—
FloorHeat	TZFA	TZFD	—

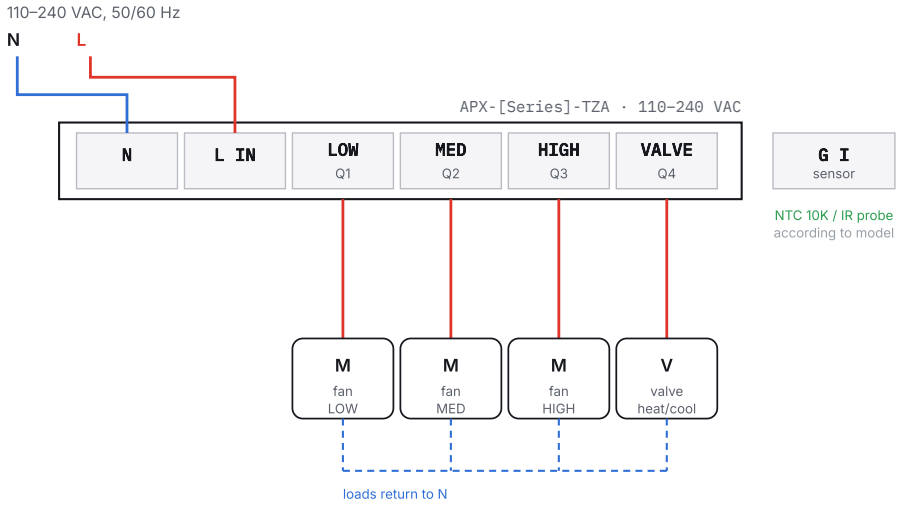
SENSOR INPUT

G / I depends on the model. Never connect mains voltage to the sensor / IR input. Keep sensor wiring away from mains cables.

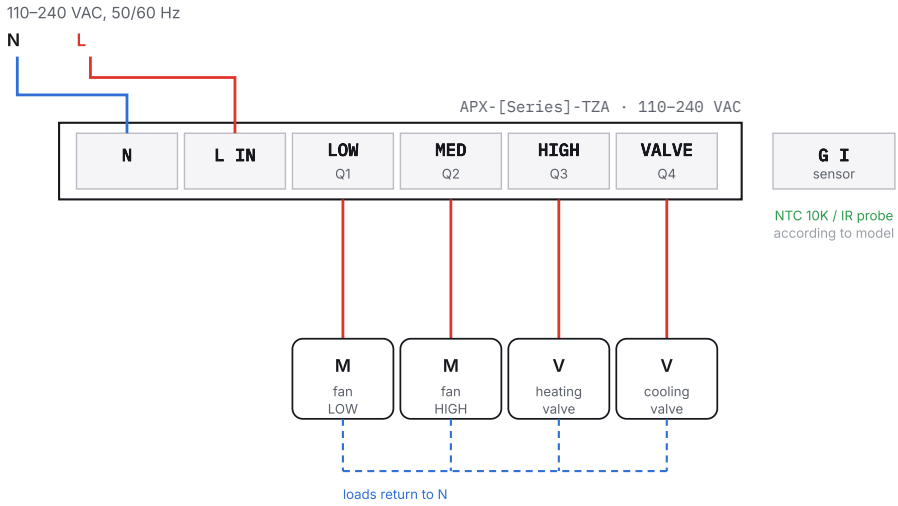
WIRING · THERMOSTAT

Fan-coil, two relay layouts

Parameter 18 chooses the layout. **0–3**: three fan speeds and one valve (the classic fan-coil). **4–7**: two fan speeds and two valves, for 4-pipe fan-coils with separate heating and cooling coils.



Parameter 18 = 0–3. Q1–Q3 fan speeds, Q4 valve (switched live). The value sets in which modes the valve may open: 0 never, 1 heating, 2 cooling, 3 both.



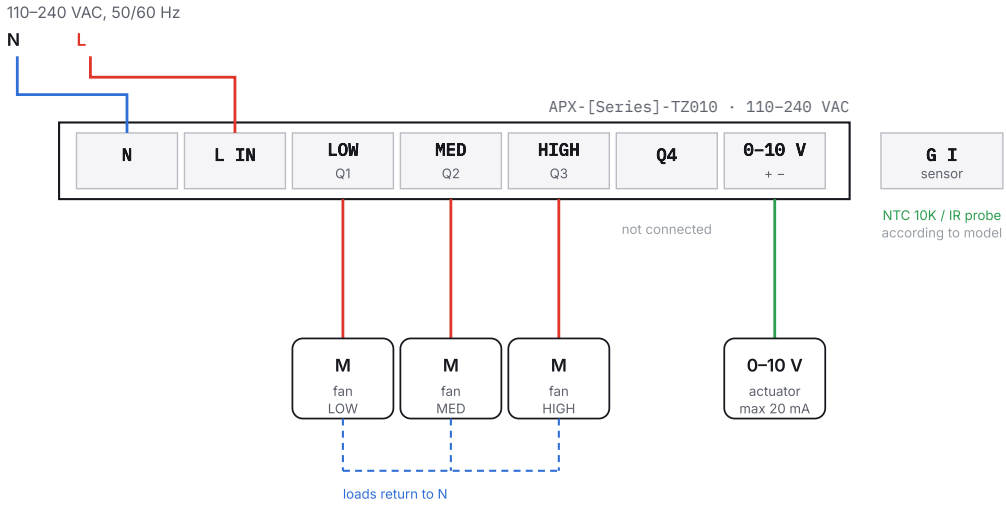
Parameter 18 = 4–7. Q1 fan low, Q2 fan high (medium also runs on Q2), Q3 heating valve, Q4 cooling valve. 4 = valves never, 5 heating only, 6 cooling only, 7 both.

NOTE

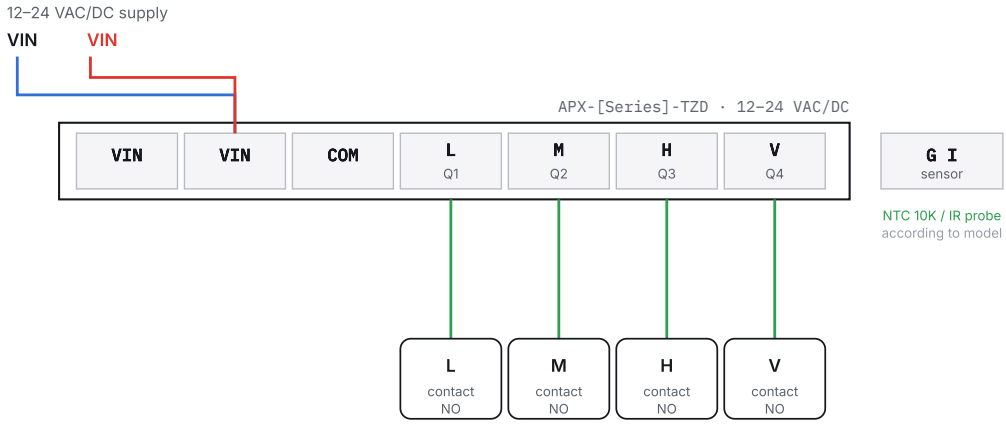
Changing parameter 18 between the two layouts switches every output off first, then the thermostat drives the new layout. On the TZD back unit use the contacts L, M, H, V in place of Q1–Q4.

WIRING · 0–10 V AND LOW VOLTAGE

TZ010 and TZD back units



TZ010. Q1–Q3 fan speeds, Q4 not connected. The 0–10 VDC output (max. 20 mA) drives the valve actuator or BMS input; the output rises over the Delta-T band (parameter 21, default 2.0 °C) from the setpoint.



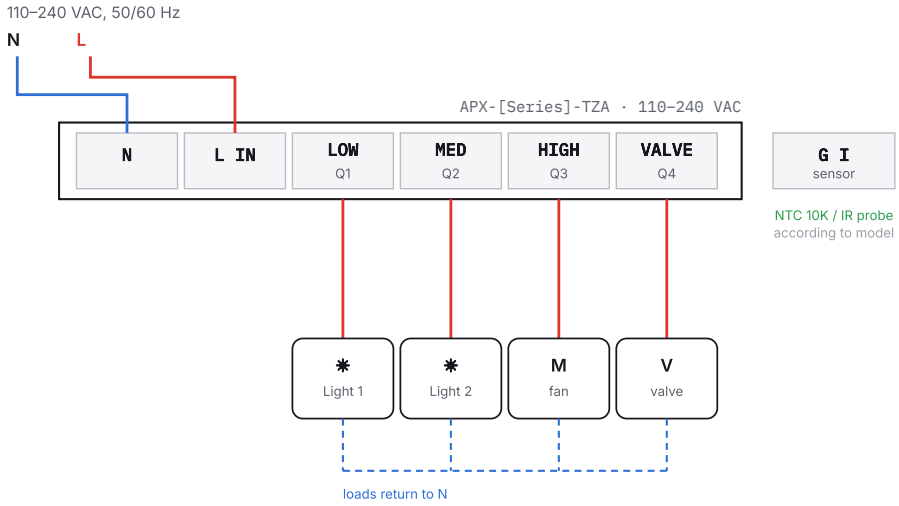
TZD. COM feeds the common side of the four normally open contacts. The contacts take the role of Q1–Q4 for the model: fan speeds and valve(s) on the Thermostat, lights and fan/valve on ThermoLight, lights on ThermoIR and FloorHeat.

> **IMPORTANT**
> Use loads and a supply rated for 12–24 VAC/DC on the TZD. Never connect mains voltage to the TZD contacts.

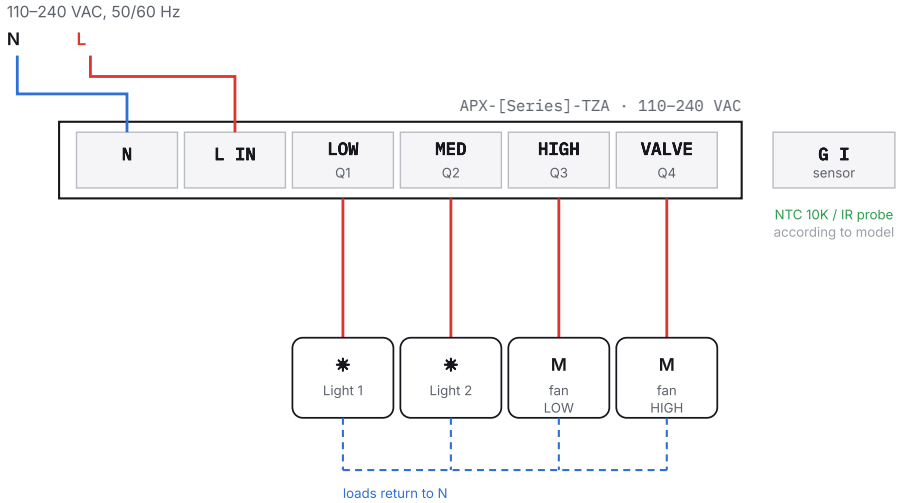
WIRING · THERMOLIGHT

Two lights and a fan-coil

Q1 and Q2 are two independent lights, switched by Buttons 1 and 2 or from the hub. Parameter 23 sets Q3 and Q4.



Parameter 23 = 0 (default). Q3 runs the fan at any speed, Q4 is the valve (parameter 18 sets in which modes it may open).



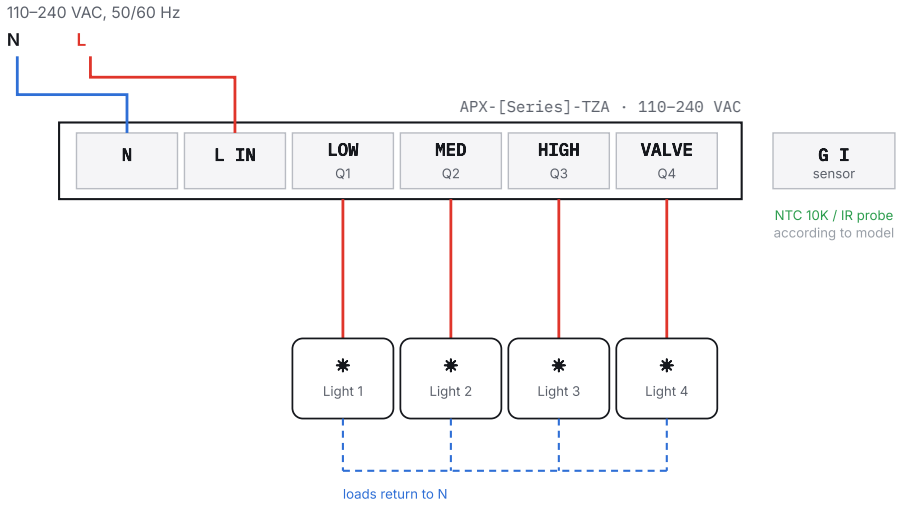
Parameter 23 = 1. 2-speed fan: Q3 low, Q4 medium and high. No valve output.

NOTE

Parameters 24–27 enable or disable each output; a disabled output stays off while the light or thermostat still reports to the hub. ThermoLight is offered in two builds: the standard one (lights on endpoints 1–2, thermostat on endpoint 3, for Yubii Home and HC3 with Z-Wave engine 3) and one with the thermostat on the main device for HC3 with Z-Wave engine 2.

WIRING · THERMOIR

Four lights and an IR air conditioner



ThermoIR. Q1–Q4 are four lights, switched by Buttons 1–4 or from the hub. The thermostat has no output of its own.

HOW THE AIR CONDITIONER IS CONTROLLED

THERMOIR
The user sets mode, setpoint and fan on the panel.

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HUB QUICKAPP
"Thermostat to ZXT-800" copies every change to the IR controller within about a second.

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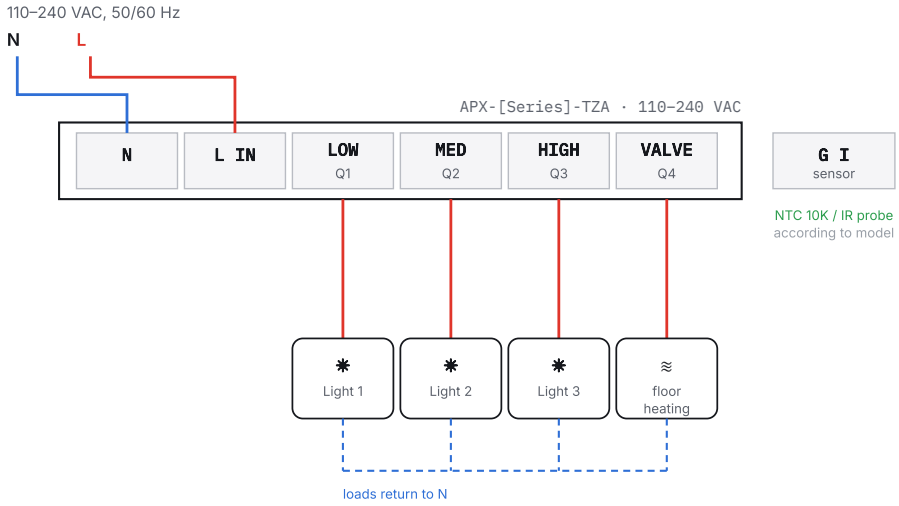
REMOTEC ZXT-800
Sends the infrared code to the air conditioner.

ON THE PANEL	MODES	NOTES
Heat, Cool, Fan, Auto, Dry	Hold Power to step through them	The display shows the setpoint; the room temperature is still reported to the hub.
One setpoint	Used for every mode	The air conditioner regulates the temperature itself; ThermoIR does not switch it on and off.
Fan low / medium / high / auto	Fan control	Sent to the air conditioner through the QuickApp.

SET-UP
Add the ZXT-800 and teach it the air conditioner's code set first. Then import the QuickApp into the hub and select the ThermoIR thermostat and the ZXT-800 in its settings. The separate guide "Thermostat to ZXT-800 QuickApp" describes every step.

WIRING · FLOORHEAT

Three lights and floor heating



FloorHeat. Q1–Q3 are three lights (Buttons 1–3 or the hub). Q4 switches the floor heating.

FLOOR HEATING TYPE	CONNECT Q4 TO
Water (hydronic) zone	The zone valve actuator: a mains actuator on the TZA, a 12–24 V actuator on the TZD.
Electric heating mat or cable	The coil of a contactor rated for the heating load. Never run the heating load itself through Q4.

REGULATION AND DISPLAY

FloorHeat has one mode, heating. The relay closes when the temperature falls to the setpoint minus Delta-T (parameter 21, default 0.5 °C) and opens when it reaches the setpoint.

ICON	MEANING
Floor-heating icon	Lit whenever the thermostat is on.
Flame	Lit while Q4 is closed and the floor is heating now; dark when the setpoint is reached.
Fan and valve icons	Never lit: FloorHeat has no fan and no valve.

TIP

For floor heating, measure the floor or the room with an external NTC 10K sensor on G / I (parameter 29 = 1) when the thermostat is not in the room it heats.

Z-WAVE COMMISSIONING

Add, remove, reset and update

Button 4 is used for add, remove and both steps of the factory reset on every model.

ADD TO THE NETWORK

1. Connect the device to the correct supply and wait until the LEDs are steady.
2. Put the Z-Wave controller into inclusion (add) mode. On Fibaro HC3 / Yubii Home choose **non-secure** inclusion: secure inclusion hides the light endpoints.
3. Touch and hold Button 4 for about 4 seconds, until the blue LEDs blink.
4. Wait until the controller confirms that the device has been added, then load the parameter template for the model.

REMOVE FROM THE NETWORK

1. Put the controller into exclusion (remove) mode.
2. Touch and hold Button 4 for about 12 seconds, until the red LEDs blink, then release.
3. Wait until the controller confirms the removal.

FACTORY RESET

1. Touch and hold Button 4 for about 12 seconds, until the red LEDs blink, then release.
2. Touch and hold Button 4 again for about 12 seconds.
3. The device restarts and clears its Z-Wave network data.

Use factory reset only when the primary controller is missing or not working.

FIRMWARE UPDATE (OTA)

1. Start the update from a compatible Z-Wave controller.
2. Keep the supply stable; do not remove the faceplate or switch off.
3. Afterwards check local control, outputs, parameters and status reports.

WHAT THE CONTROLLER SHOWS

MODEL	ENDPOINT 1	ENDPOINT 2	ENDPOINT 3	ENDPOINT 4	ENDPOINT 5
Thermostat / 0–10 V	— (thermostat and sensor on the main device)				
ThermoLight	Light 1	Light 2	Thermostat + sensor		
ThermoIR	Light 1	Light 2	Light 3	Light 4	Thermostat + sensor
FloorHeat	Light 1	Light 2	Light 3	Thermostat + sensor	

Parameter templates for Yubii Home / HC3 for every model are on the dealer site, next to the firmware.

CONFIGURATION PARAMETERS

Parameters common to all five models

All parameters are 1-byte values. Always stay within the listed range.

NO.	PARAMETER	DEFAULT	RANGE	DESCRIPTION
0	State after power restore	2	0–2	0 = off, 1 = on, 2 = restore the last state.
1–4	LED colour when OFF, buttons 1–4	6	0–15	Colour of each button LED while its state is off. See the colour table.
6–9	LED colour when ON, buttons 1–4	5	0–15	Colour while the light is on or the key is touched.
11	Standby brightness	33	0–99	Panel level 5 s after the last touch. Keep below parameter 12.
12	Working brightness	100	1–100	Panel level while in use. Keep above parameter 11.
13	Buzzer level	5	0–10	0 = off, 10 = maximum.
14	Lock all buttons	0	0–1	1 = Buttons 1–4 locked; a touch only flashes the LEDs.
15	Temperature compensation	0	−7 to +7	Offset of the measured temperature, 1 °C per step.
16	Temperature in standby	1	0–1	0 = hide, 1 = show the temperature while the thermostat is off.
17	Lock display buttons	0	0–1	1 = power, fan, up and down locked.
46	Display brightness	100	1–100 %	Digits and icons, as a share of parameters 11 / 12.
47	Button LED brightness	100	1–100 %	The four button LEDs, as a share of parameters 11 / 12.

Colours: 0 Off · 1 Red · 2 Green · 3 Yellow · 4 Blue · 5 Purple · 6 Cyan · 7 White · 8 Orange · 9 Lilac · 10 Pink · 11 Amber · 12 Warm white · 13 Lime · 14 Sky blue · 15 Magenta.

Parameters 5 and 10 (a fifth button) exist in the firmware but have no LED on these panels.

CONFIGURATION PARAMETERS

Thermostat and Thermostat 0–10 V

NO.	PARAMETER	DEFAULT	RANGE	DESCRIPTION
18	Valve mode / relay layout	3	Relay 0–7 0–10 V: 0–3	0–3: 3 fans + valve; 4–7: 2 fans + heating valve (Q3) + cooling valve (Q4). Within a group: valve never / heating / cooling / both. The 0–10 V model has 0–3 only.
19	Auto fan low	0	0–1	1 = in auto fan the fan stays on low after the demand ends.
20	Valve when the fan stays low	0	0–1	0 = close the valve, 1 = keep it open.
21	Delta-T threshold	Relay 5 0–10 V 20	5–30, step 5	0.5–3.0 °C. Heating starts this far below the setpoint and stops at it (cooling mirrors it). 0–10 V: also the modulation band.
22	Fan always on	0	0–1	0 = follow demand, 1 = fan runs continuously.
23	Status reports	1	0–1	0 = do not send normal reports, 1 = send.
24	Temperature sensor	0	0–2	0 = integrated, 1 = external NTC on G / I, 2 = room temperature from the hub (parameter 100).
25	Long-press time	20	5–40	100 ms units, steps of 5 (0.5–4.0 s).
26	Temperature report interval	5	0–60 min	Report the temperature at least this often; 0 = only on change.
100	Hub temperature	—	−100 to 600	2-byte, 0.1 °C. Written by a hub QuickApp when parameter 24 = 2; after 30 min without a new value the thermostat uses its own sensor again.

HUB TEMPERATURE

With parameter 24 = 2 a QuickApp in the hub writes the temperature of another room sensor to parameter 100 every few minutes. The thermostat then displays, reports and regulates on that value.

CONFIGURATION PARAMETERS

ThermoLight and ThermoIR

THERMOLIGHT

NO.	PARAMETER	DEFAULT	RANGE	DESCRIPTION
18	Valve mode	3	0–3	Modes in which the valve (Q4, parameter 23 = 0) may open: 0 never, 1 heating, 2 cooling, 3 both.
19 · 20 · 22	Auto fan low · valve when fan low · fan always on	0	0–1	As on the Thermostat.
21	Delta-T threshold	5	5–30, step 5	0.5–3.0 °C.
23	Thermostat relay mode	0	0–1	0 = fan on Q3 + valve on Q4, 1 = 2-speed fan on Q3 (low) and Q4 (high).
24 · 25	Light relay 1 · 2 enable	1	0–1	0 = the relay stays off; the light still reports to the hub.
26 · 27	Thermostat relay 3 · 4 enable	1	0–1	0 = that output stays off.
28	Status reports	1	0–1	0 = do not send normal reports, 1 = send.
29	Temperature sensor	0	0–1	0 = integrated, 1 = external NTC on G / I.
30	Long-press time	20	5–40	100 ms units, steps of 5.
31	Temperature report interval	5	0–60 min	0 = only on change.

THERMOIR

NO.	PARAMETER	DEFAULT	RANGE	DESCRIPTION
24–27	Light relay 1–4 enable	1	0–1	0 = the relay stays off; the light still reports to the hub.
28	Status reports	1	0–1	0 = do not send normal reports, 1 = send.
29	Temperature sensor	0	0–1	0 = integrated, 1 = external NTC on G / I.
30	Long-press time	20	5–40	100 ms units, steps of 5.
31	Temperature report interval	5	0–60 min	0 = only on change.

Parameters 18–23 exist in the firmware but have no effect on ThermoIR: the air conditioner regulates itself.

CONFIGURATION PARAMETERS

FloorHeat

FLOORHEAT

NO.	PARAMETER	DEFAULT	RANGE	DESCRIPTION
21	Delta-T threshold	5	5–30, step 5	0.5–3.0 °C. Heating starts this far below the setpoint and stops at it.
24–26	Light relay 1–3 enable	1	0–1	0 = the relay stays off; the light still reports to the hub.
27	Floor heating relay enable	1	0–1	0 = Q4 stays off; the thermostat still regulates and reports.
28	Status reports	1	0–1	0 = do not send normal reports, 1 = send.
29	Temperature sensor	0	0–1	0 = integrated, 1 = external NTC (floor or room probe) on G / I.
30	Long-press time	20	5–40	100 ms units, steps of 5.
31	Temperature report interval	5	0–60 min	0 = only on change.

Parameter 18 must stay at 1 or 3 (default 3) on FloorHeat: 0 or 2 would stop the floor heating. The FloorHeat template leaves it out.

SETTING TIPS

- Parameters 11 and 12 depend on each other: standby must stay below working brightness. Parameters 46 and 47 then share that level between display and buttons.
- Parameters 18–22 form one HVAC group on the fan-coil models. Check layout, fan behaviour and Delta-T together.
- Fit the external sensor before selecting it in the temperature sensor parameter.

TECHNICAL SUPPORT

For project consultation, firmware, parameter templates, the ZXT-800 QuickApp and technical support, contact your SmartAPEX dealer or visit our website.

smartapex.es

smartapex.es/dealer

DISPOSAL

Do not dispose of this product with household waste. Take it to a collection point for electrical and electronic equipment in line with local regulations.

DOCUMENT

Specifications and features may change without notice as firmware and hardware are improved. Always use the latest edition of this manual, available from smartapex.es. This edition describes firmware 10.25.