

LUX®

TQX Smart Thermostat
Installation and
instruction manual



Important!

- Please read the instructions
- Disconnect power before starting work
- Take a photo of your existing thermostat wiring

v03

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Help!

If you get stuck, please visit www.luxproducts.com for additional videos and support material.

C-wire

This thermostat requires a C-wire or a Power Bridge. If your existing thermostat does not use a C-wire, please use the Lux Power Bridge included in this package or contact an HVAC professional.

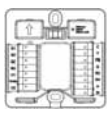
System compatibility

This thermostat is for most 24VAC systems. It is not compatible with 120-240VAC heating. If you see thick red or black wires, “line voltage”, or wire nuts, **STOP!**

What is included?



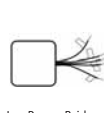
TQX thermostat



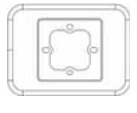
Wall plate



Remote sensor
(batteries included)



Lux Power Bridge
(used when 'c-wire' is not available)



Decorative trim plate to cover rough edges of dry wall



Wiring labels



Self-tapping screws
optional wall anchors



Phillips
screwdriver



Matter-enabled
Smart Speaker
(optional)

Tools (not included)

⚠ WARNING

- **INGESTION HAZARD:** This product contains a button cell or coin battery.
- **DEATH** or serious injury can occur if ingested.
- A swallowed button cell or coin battery can cause **Internal Chemical Burns** in as little as **2 hours**.
- **KEEP** new and used batteries **OUT OF REACH** of **CHILDREN**
- **Seek immediate medical attention** if a battery is suspected to be swallowed or inserted inside any part of the body.



- Remove and immediately recycle or dispose of used batteries according to local regulations and keep away from children. Do NOT dispose of batteries in household trash or incinerate.
- Even used batteries may cause severe injury or death.
- Call a local poison control center for treatment information.
- Battery type: CR2450
- Nominal battery voltage: 3V
- Non-rechargeable batteries are not to be recharged.
- Do not force discharge, recharge, disassemble, heat above (manufacturer's specified temperature rating) or incinerate. Doing so may result in injury due to venting, leakage or explosion resulting in chemical burns.
- Ensure the batteries are installed correctly according to polarity (+ and -).
- Do not mix old and new batteries, different brands or types of batteries, such as alkaline, carbon-zinc, or rechargeable batteries.
- Remove and immediately recycle or dispose of batteries from equipment not used for an extended period of time according to local regulations.
- Always completely secure the battery compartment. If the battery compartment does not close securely, stop using the product, remove the batteries, and keep them away from children.

FCC Statement

This device complies with Part 15 of the FCC Rules Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

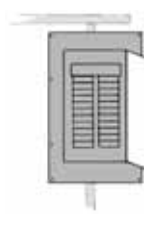
NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC RF exposure warning

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

1



Turn-off the power at the circuit breaker to both your heating and cooling systems before performing any wiring.

3

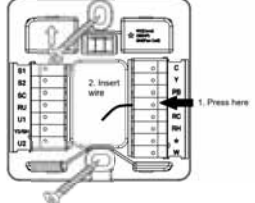
The most typical installations include;

- Conventional 1H/1C (Y, G, W, R, C)
- Conventional 2H/1C (Y, G, W, W2, R, C)
- Heat Pump Single-Stage (Y, G, R, O/B, C)
- Heat Pump with auxiliary heat (Y, G, R, O/B, W, C)
- Heat Pump Multi-Stage (Y, Y2, G, R, O/B, W, U1, C)
- PTAC Conventional 1H/1C (Y, GL, GH, W, R, C)
- 2-pipe Fan Coil (GH, GM, GL, Y, R, C)
- 4-pipe Fan Coil (GH, GM, GL, W, Y, R, C)
- Humidifier/Dehumidifier/Timed Ventilation (U1, U2, R, C)

If you have only one R wire, please use the RH terminal.

For more advanced systems including those without a 'c-wire', please see the wiring diagram on reverse side.

5



Make sure the arrow on the wall plate is pointing up and insert each of the wires into the terminals. Press lever then insert corresponding wire.

Once all the wires are secure, screw self-tapping screws in to the top and bottom mounting holes of the wall plate; use the bubble level to ensure the wall plate is straight before tightening.

7

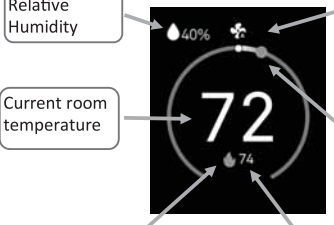
You can now mount your TQX thermostat on to the wall plate.

Ensure that the thermostat is the right way up (terminal pins at the bottom), align the thermostat over the terminals and push firmly. The thermostat should snap into place.

You may now return the power to your HVAC system and your TQX thermostat will power-up. The user menu will navigate you through the rest of the set-up process.

9

The TQX displays all the information you need to know about your HVAC



Relative Humidity

Fan mode

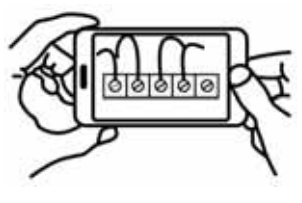
Current room temperature

Heating/ cooling status icon

Set temperature

The distance between the white dot and colour dot shows how much heating/ cooling is needed

2



Remove the front part of your old thermostat from the back part.

If the wires are not already labelled, use the provided wiring labels to mark each one.

Take a photo of the wiring as this may help you later.

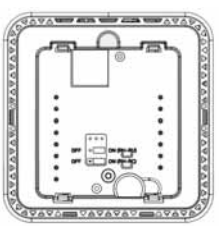
4

Unscrew the screws holding the old thermostat base plate to the wall, remove the wires from the terminals of your old thermostat taking care not to let them fall back into the wall.

(Optional) If you have a decorative trim plate, you should place it between the wall and the wall plate now. Note that you can install it vertically or horizontally depending on your preference.



6

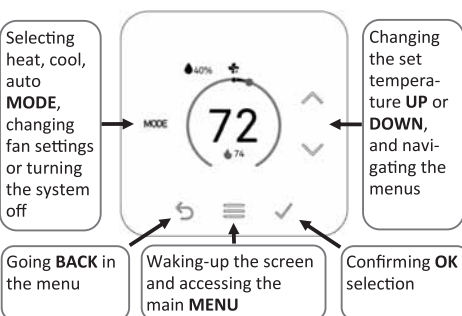


• If your system has both RC and RH terminals; locate the red jumper on the back of the thermostat, and move it to the OFF position (covering the left and center pins).

• If your system has both RU and RH terminals; locate the blue jumper on the back of the thermostat, and move it to the OFF position.

8

The TQX has 6 illuminated buttons to navigate menus and change settings.



Selecting heat, cool, auto **MODE**, changing fan settings or turning the system off

Changing the set temperature **UP** or **DOWN**, and navigating the menus

Going **BACK** in the menu

Waking-up the screen and accessing the main **MENU**

Confirming **OK** selection

10

Radar Occupancy Sensor

The TQX's build-in radar sensor detects the occupancy of a room and the occupancy data may be used for schedule learning, home comfort and energy saving. It also automates the active Home screen or screensaver:

No occupancy: screen will turn off.

Occupancy detected between 3ft and 20ft from TQX: TQX will enter the screensaver.

Occupancy detected within 3ft from TQX: TQX will enter the Home Screen and ready for user control.



11 Calibrate the Radar Occupancy Sensor

You can start the radar calibration process during the first-time thermostat set up:

1. Press **MENU**, select [Sensor], [Thermostat] and [Calibrate].

2. Leave the room for 2 minutes until the calibration process is completed.



Note: The radar occupancy sensor can detect any kind of movement in the room and even through thin walls. To avoid false triggering, please set the range to the minimum distance of the room you would like to detect. The sensor may also detect movement from inanimate objects, like moving curtains, so please open any windows or turn on the HVAC fan before starting the calibration process.

12 Remote Sensor Setup

First time power up: Pull out the tape from the remote sensor's battery cover, it will start flashing red to show that it is ready for pairing. Alternately, press the pairing button for 10s to start pairing manually.

Pairing: On the thermostat, Press **MENU**, select [Sensor] then [Add]. Follow the screen instruction to finish the pairing process.
[Bedroom]: If a room is set to be a bedroom, then once occupancy is detected at any point in the evening, it will assume the room is occupied all night.

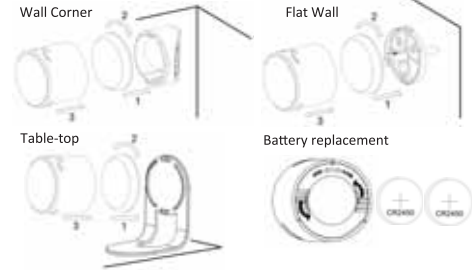
[Temperature Averaging]: This feature means that when the room is occupied its temperature will contribute to the TQX's measured temperature.

[Unoccupied Delay]: This is the amount of time that the sensor will wait from last detected movement before changing to an unoccupied state.

Pairing button



13 Remote Sensor Installation



- The pairing button should face upward.
- Rotate the remote sensor on the magnetic base for improved direction.
- Clip the pet shield (included) to avoid unwanted detection from objects close to the ground.

14



The TQX is compatible with all Matter-enabled controllers, this includes the smart-speakers from you favourite brands. In order to get connected, press **MENU** on TQX

and select [Connectivity]. Open the [Add device] option inside your preferred smart-home app (such as Apple Home, Google Home, Alexa or SmartThings) and scan the QR code.

Most smart-home apps allow you to create 'scenes' or 'automations' depending on events (like coming home) or time of day. When the TQX receives this instruction, it will go to the desired mode and temperature.

If you set a schedule on the TQX, then the TQX will return to its schedule at the next set-point change.

15 Schedule

Press **MENU** and select [Schedule] to view or edit the schedule setting:

Schedule - turn on or turn off the schedule

Learning - if enabled, the TQX will create a learning schedule from all the occupancy sensors.

View Schedule - in this option you are able to view and edit the schedule. To edit a schedule, select the first day that you would like to start changing. Set the start time and temperature for each period, keep adding periods until you have completed the day. You can apply the schedule to every day, every weekday, the weekend or a custom selection of days.



16 Schedule

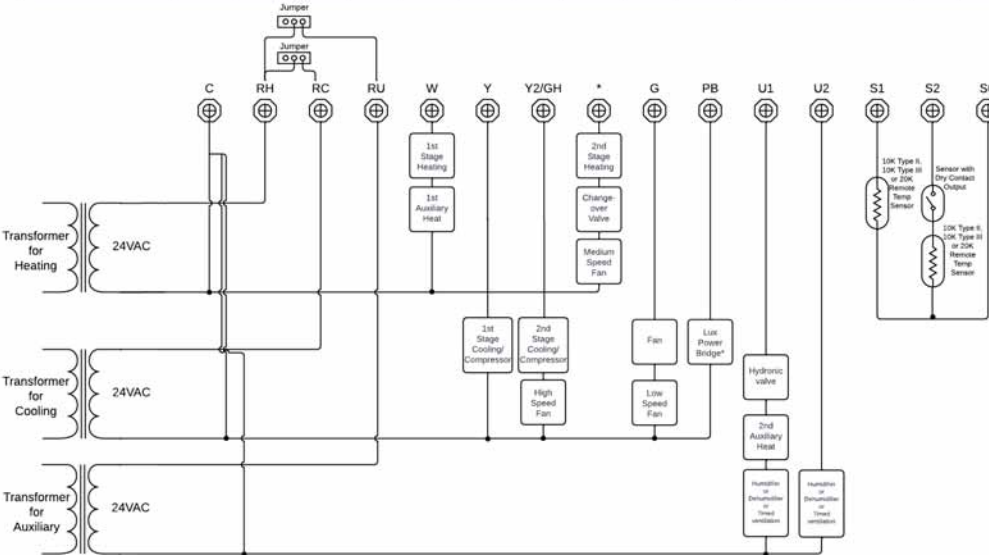
Learning Schedule - TQX will analyse a 3 week period of occupancy sensor data and create the most suitable schedule period:

- Occupied - set room to a comfort temperature.
- Unoccupied - set room to an eco-temperature.
- Sleep - set room to a sleep temperature until the next morning.

Energy Saving By Occupancy - If enabled, TQX will go to your desired set temperature or scheduled temperature when occupancy is detected in the home and will automatically go to a set-back temperature when no occupancy has been detected.

Wiring chart for all system types

	Live/ Neutral				Switched outputs										Wired inputs		
2H2C Conventional	C	RH	RC	RU	W1	Y1	Y2	W2	G	PB	U1 (A)	U2	S1	S2	SC		
4H2C Heat Pump	C	R	RC	RU	W1	Y1	Y2	O/B	G	PB	U1 (W2)	U2	S1	S2	SC		
Conventional PTAC	C	R		RU	W1	Y	GH	W2	GL	PB	U1	U2	S1	S2	SC		
Heat Pump PTAC	C	R		RU	W	Y	GH	O/B	GL	PB	U1	U2	S1	S2	SC		
2 Pipe FC	C	R		RU	W	Y	GH	GM	GL		U1	U2	S1	S2	SC		
4 Pipe FC	C	R		RU	W	Y	GH	GM	GL		U1	U2	S1	S2	SC		



If you need installation support, please visit www.luxproducts.com

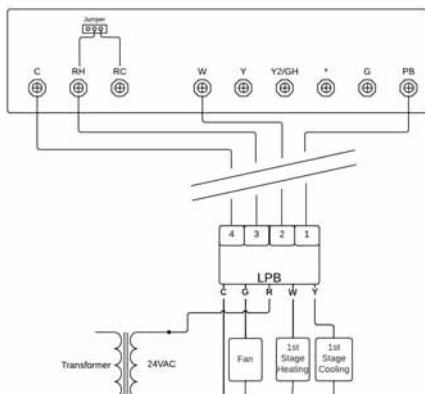


Electrical Ratings

Power source: 19-30 VAC @50/60Hz, 40 VA, Class 2 or SELV
Output Rating: 1.0A resistive load per terminal, 5.0A resistive load combined total

Wire: Solid 18-22AWG, Stranded 20-22 AWG

Wiring chart for 1 heat, 1 cool conventional system with Lux Power Bridge



LUX Power Bridge Installation without C wire

Important: Turn-off the power at the circuit breaker to both your heating and cooling systems before performing any wiring.

- Take a photo of the wiring at both the TQX and your furnace. The Power Bridge cannot be used with 2-wire applications, and requires at least a cooling "Y" wire and a fan "G" wire at the thermostat.
- At TQX - Use the thermostat wire labels to identify each thermostat wire with its current terminal letter. Connect the wire to the terminal block of the power bridge marked [1-4].
- At the furnace - Remove the door panel and locate your control board. Use the additional wire labels to identify each wire from your thermostat with its terminal letter on the control board. Connect the wire to the terminal block of the power bridge marked [Y,W,R,G,C].

