Honeywell

LYRIC T6 and T6R
SMART THERMOSTAT

The **Lyric T6/T6R smart** thermostats are designed to provide automatic time and temperature control of heating systems in homes and apartments.

It's compatible with 24-230V on/off and OpenTherm® appliances such as gas boilers, combi-boilers and heat pump. Also works with zone valve applications but not with electric heating (240V).

The Lyric T6 is for wired on the wall installations and the Lyric T6R for table stand installations (wireless). Both consist of a thermostat and a Receiver box.

The solution is designed with the installer in mind and includes a Receiver module with mounting options for directly on the wall or on a wall box. Wiring can be from below or from the back by lifting the terminal platform, which makes installation quick and easy.
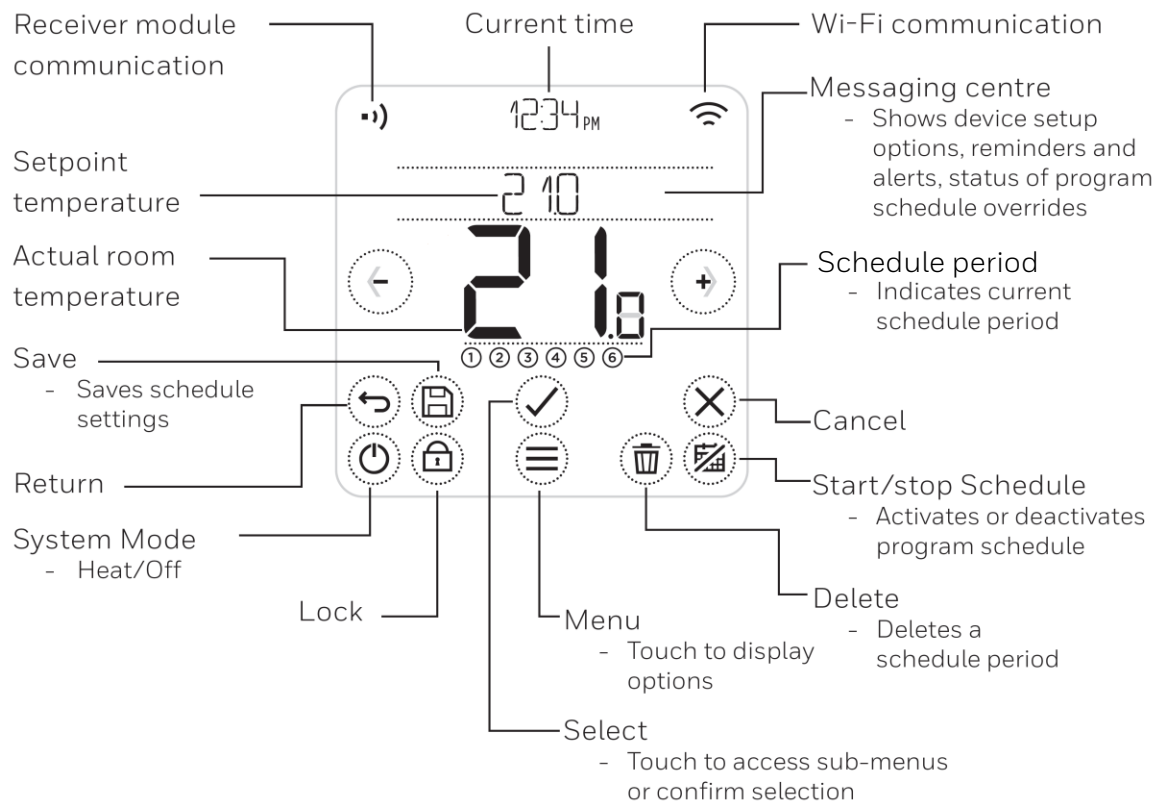
The thermostat has a high contrast PMVA display with dynamic text line and touch screen buttons. The thermostat has a simple programming philosophy to make it easier to install and very user friendly..

The Lyric T6 is ideal for consumers who want to control their comfort remotely and is based on a modern design, which is simple to program and easy to use.

Lyric™ T6
Programmable Thermostat

Lyric™ T6R
Wireless Programmable Thermostat

FEATURES

- Attractive, ultra-modern styling makes it ideal for any location in any type of home.

- Table stand or wall-box mounting thermostat options to fit a new and replacement installations.

- Wi-Fi communication to connect to the Internet
  - Smart Home and Apple HomeKit ready

- Lyric mobile App for:
  - Remote view and change of settings
  - Schedule changes
  - Smartphone Geolocation temperature control

- A dynamic text display on the LCD that gives enhanced feedback to the user / installer.

- High LCD Contrast and backlighting for easier viewing in all light conditions.

- Time out screen with selectable brightness

- Factory programmed daily or 5+2 default heating schedule.

- Schedule with up to 6 independent time and temperature pairs to suit the comfort needs.

- "Hold until" temperature override of programmed schedule temperature till the next switch point.

- Schedule off mode for manual operation.

- Setpoint and room temperature always displayed.

- OFF position has an integral frost protection setting at minimum 5°C so that pipes in the house will never freeze in winter.

- Alert messages to assist in fault-finding.

- Receiver box with clear LED indication and override button

- A flip up wiring platform for easy wiring

- On/Off or OpenTherm® compatible heating control.

- User menu allows extra functions to be set at the discretion of the user:
  - Language selection
  - Wi-FI setup
  - Optimisation.
  - Clock setting.
  - Resetting the heating program to factory default.
  - Brightness.
  - Temperature offset.
  - Lock function

- Advanced menu (Installer Set-Up) allows extra functions to be set at the discretion of the installer to match the consumers applications and needs:
  - Language selection
  - 5+2 or daily schedule option
  - Upper / Lower Set point Limit Adjust.
  - Minimum ON time.
  - Cycle rate.
  - Factory Reset.
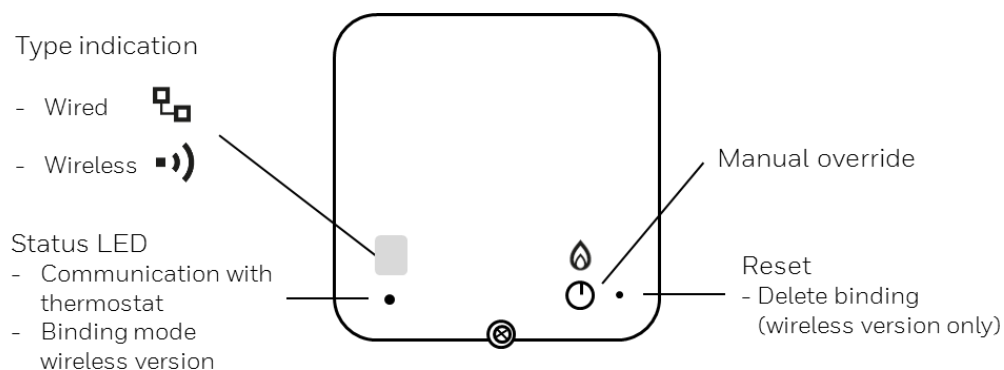 - Binding (wireless version)

THERMOSTAT DISPLAY/BUTTON LAYOUT

Receiver module communication

Current time

Wi-Fi communication

Messaging centre
- Shows device setup options, reminders and alerts, status of program schedule overrides

Setpoint temperature

Actual room temperature

Schedule period
- Indicates current schedule period

Save
- Saves schedule settings

Cancel

Return

Start/stop Schedule
- Activates or deactivates program schedule

System Mode
- Heat/Off

Delete
- Deletes a schedule period

Lock

Menu
- Touch to display options

Select
- Touch to access sub-menus or confirm selection

Reference to the icons:

Geofencing active

Heating demand active

Geofencing home active

Receiver module communication

Geofencing away active

Communication failure

Geofencing sleep active

Wi-Fi communication

Failure/Alarm

Wi-Fi failure

Optimisation active

Schedule disabled

Schedule enabled

Temporary Hold active

RECEIVER BOX INTERFACE

Type indication

- Wired

- Wireless

Manual override

Status LED
- Communication with thermostat
- Binding mode wireless version

Reset
- Delete binding (wireless version only)

SPECIFICATIONS

Lyric T6/T6R Thermostat

Control form	:	Adaptive Fuzzy Logic
Room Temperature display range	:	From 0 °C to 50 °C
Dimensions (w x h x d)	:	Lyric T6 (wired) 103 x 103 x 28 mm Lyric T6R (wireless) 108 x 103 x 68 mm
Time display	:	24 hour or 12 hour AM/PM format
Time keeping accuracy	:	Synchronized with Internet when connected or typically better than 10 minutes per year
Program	:	5+2 or daily schedule with 6 daily time and temperature level changes
Time setting resolution	:	Program - 10 minute steps
Sensing element	:	100K (@ 25 °C) NTC thermistor
Temperature setting range	:	Program : 5 to 37 °C in 0.5 °C steps OFF : 5 °C
Power	:	Lyric T6 (wired) ~20VDC/300mA by Receiver box Lyric T6R (wireless) 5VDC power adapter
Wiring	:	Lyric T6 (wired) terminal block capable of accepting wires up to 1.5 mm^2

RF communication

RF operation band	:	ISM (868.0-868.6) MHz, 1% duty cycle
Max. power	:	25mW
Protocol	:	Encrypted
Comm. Range	:	30 m in a residential building environment
Comm. technology	:	short, high rate transmissions to minimise air time and avoid collisions
Receiver class R.E.D.	:	RX Cat 2 (ETSI EN300 220-1 version 1.3.1)
RF binding method	:	Factory pre-bound
Wi-Fi	:	IEEE 802.11b/g/n – 2.4GHz
Max. power	:	10mW

Receiver box

|		
Power	:	230VAC
Electrical rating	:	230 V~, 50...60 Hz, 0.5 A to 5 A resistive 0.5 A to 3 A inductive (0.6 pf) 24 V~, 50...60 Hz, 0.5 A to 5 A resistive 0.5 A to 3 A inductive (0.6 pf)
Cycle rate	:	Selectable by application (see installer set up)
Wiring	:	Terminal block capable of accepting wires up to 1.5 mm^2
Wire access	:	From back via large wall box opening. From bottom with cable clamps. Mains wiring – left. Low voltage wiring – right.
Dimensions	:	110 x 110 x 40 mm (w x h x d)
IP class	:	30

Environmental and standards

Operating temperature range	:	0 to 40 °C
Shipping and storage temperature	:	–20 to 55 °C
Humidity range	:	10 to 90% rh, non-condensing
EMC	:	2014/30/EU
LVD	:	2014/35/EU
R&TTE:	:	1995/5/EC
ErP	:	Class V (+3%), (EU) 811/2013

Honeywell, declares that this thermostat is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU

ADVANCED MENU

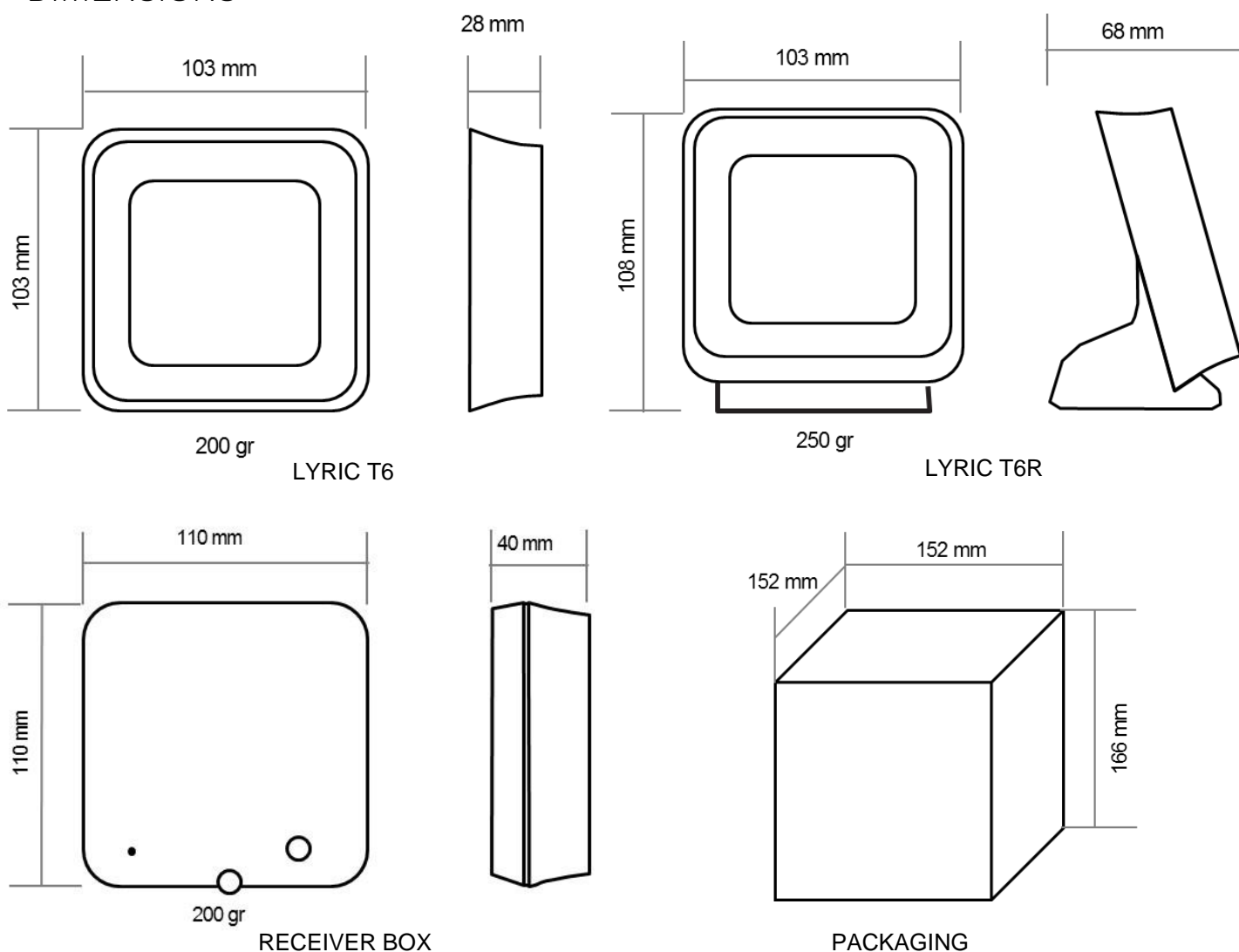To enter the Advanced menu (installer set-up):

Press the ☰ menu key for 5 seconds.
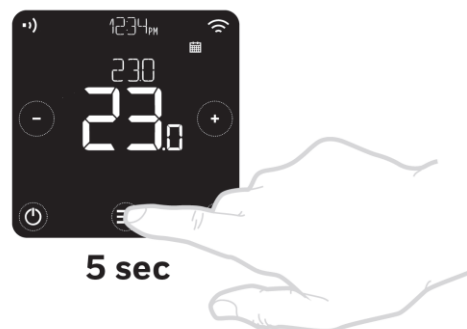
Specific Applications		Setting		What do you need to change?
		Cycle / Hour	Minimum ON time (in minutes)	Note : a. To change Cycle/Hour, b. To change Minimum ON Time,
Heating	Gas Boilers (<30KW)	6	1	No action required
	Oil Boiler	3	4	1. Set Minimum ON Time to 4 minutes. 2. Set Cycle/Hour to 3.
	Thermal Actuator	12	1	Set Cycle/Hour to 12.
	Zone valve	6	1	No action required.

Special Features	Description
OpenTherm	If the Receiver box is connected to an OpenTherm appliance various appliance specific data can be viewed. The data displayed is depending on what the appliance is providing.
Heat Range	The normal lower temperature limit of 5 °C can be increased up to 21 °C to protect the inhabitants from cold conditions. This is a useful feature aimed at supporting the elderly, children and disabled inhabitants. The normal upper temperature limit of 35 °C can be reduced down to 21 °C to save energy. This feature is useful for leased homes and apartments.
Schedule options	The thermostat has 2 default schedules: daily (every day) and 5+2 (week + weekend days)
External Temperature Sensor (only with wired version)	An external temperature sensor can be fitted, allowing the thermostat to control the temperature from another room or space, where it is inconvenient to locate the thermostat. It will read the remote sensor every 1 minute. The sensor can be connected up to 50 meters from the unit. This feature is useful for commercial premises where the public may tamper with the product.
Optimisation (optimal start, optimal stop and delayed start)	Optimal Start: learns how long it takes your system to reach the programmed temperature. It turns on the heating system earlier to make sure it's comfortable at the scheduled time. Optimal Stop: Saves energy and money by switching off a little bit earlier than the normal programmed time. If the home is up to temperature, it will not notice the effect on the temperature, but will show a difference in the fuel bill. Delayed start: Saves energy by slightly delaying the start of heating depending on the difference between the scheduled temperature and the actual room temperature
Clock setting	Change display format (default 24hr) and adjust time and date. When connected to Internet time and date will be synchronized
Low Load Control	If the Receiver box is connected to an OpenTherm appliance this setting is used in the demand control. When an appliance is no longer able to modulate lower the control switches from modulating control to low/off control.
Temperature Offset	If the Thermostat is located in a hot/cold location and cannot be moved because of wiring then the measured/ displayed temperature can be adjusted by +/- 1,5 °C. This feature is useful if the homeowner wants the reading to match another appliance temperature display.
Binding (only with wireless version)	Menu to bind the Thermostat and the Receiver box, test the RF signal strength of the radio communication and to clear an existing binding.
Reset	Menu to reset the thermostat back to factory default settings, reset the schedule to default settings, reset the Wi-Fi and Homekit settings.
Failsafe (only with wireless version)	When the radio communication between the Thermostat and Receiver box is lost for longer than 1 hour the Receiver box will start to cycle the demand 20% on / 80% off.

Menu item	Default	Options
Language	English	English, Francais, Espanol, Deutsch, Nederlands, Italiano
OpenTherm	-	OpenTherm boiler data when a vailable
Cycle rate	6	3,6,9 or 12
Min on time	1 minute	1, 2, 3, 4 or 5 minutes
Heat range	Min = 5.0 Max = 37.0	Min: 5.0°C to 21.0 °C, Max:21.0°C to 37.0 °C
Schedule options	Daily	1 = daily schedule, 2 = 5+2 days schedule
External sensor	no sensor	0 = no sensor, 1 = external room sensor
Optimisation	Opt.start on Opt.stop off	Opt start: 0 = off, 1 = on, 2 = Delayed start Opt stop: 0 = off, 1 = on
Clock	Format: 24h Time: --:-- Date: 01/09/2016	Clock format: 1 = 12h, 2 = 24h Setup time and date
Low Load Control	ON	0= Off, 1 = On
Temperature offset	0.0	-1.5°C to 1.5 °C
Bind	-	Bind, check RF and clear bind.
Adv Reset	-	Factory, schedule, Wi-Fi and Homekit reset
Failsafe	OFF	0= Off, 1 = On

DIMENSIONS

103 mm

28 mm

103 mm

200 gr

LYRIC T6

103 mm

108 mm

68 mm

250 gr

LYRIC T6R

110 mm

110 mm

40 mm

200 gr

RECEIVER BOX

152 mm

152 mm

166 mm

PACKAGING

INSTALLATION

To ensure your safety, **always make sure mains power is switched OFF** before accessing wiring.
Before removing **the old thermostat** take a picture of the old thermostat's wiring as a reference then proceed to installation.
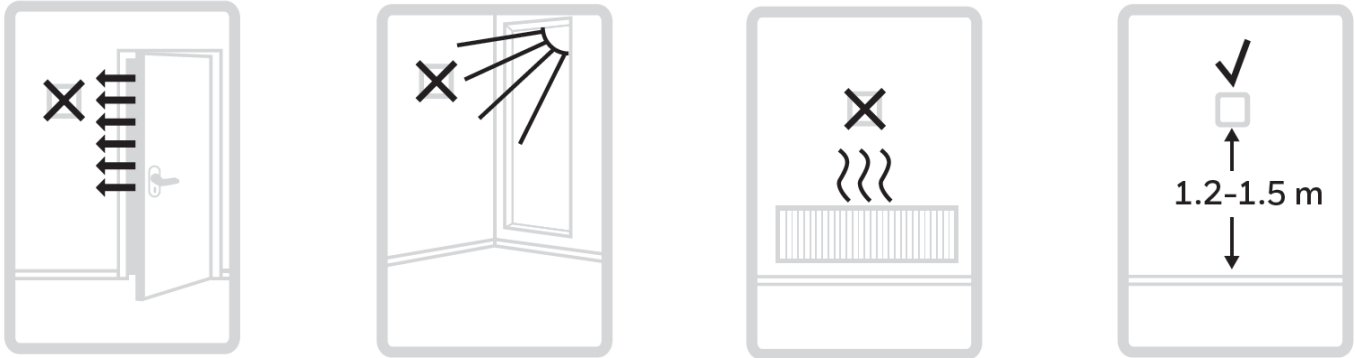
The Lyric T6 thermostat should not be placed near draughts, in direct sunlight or near heat sources. It should be at least 1.2 – 1.5 meters from the floor.

**Maximum cable length between Receiver box and thermostat:** 15m for 0.5mm² cable or 20m for 1.0mm² cable.

Prepare Receiver Box

Needed during installation:
- Cable with 2 wires from the Receiver Box (R4H810A) to thermostat.
- Cable with 2 wires from the boiler to Receiver Box.
- The Receiver Box requires 230V power

Find a suitable location near the boiler. Leave at least 30cm distance from any metal objects including wall boxes and boiler housing.

Loosen the front screw to remove cover or tighten it when the cover is back in position.
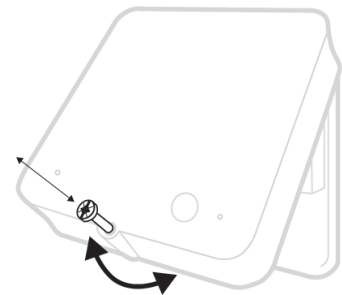
Install Receiver Box

A. Wall box or Rear wiring
Hinge open the terminal block flap to access the cables and wall box screw holes.

B. Surface wiring
Use the cable clamps to secure the surface wiring.

Replace cover
Locate the hinges at the top of the cover and wall plate, close the cover and secure with the screw.
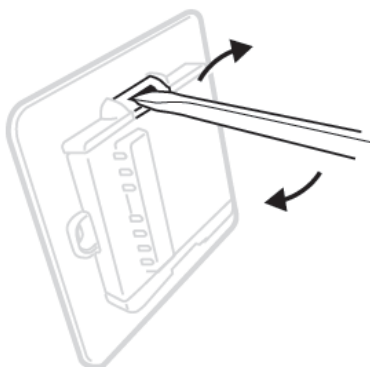

Max 6 mm

min 0.25mm²
max 1.5mm²
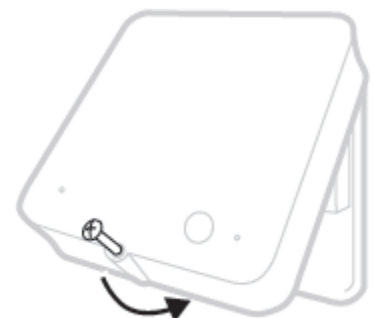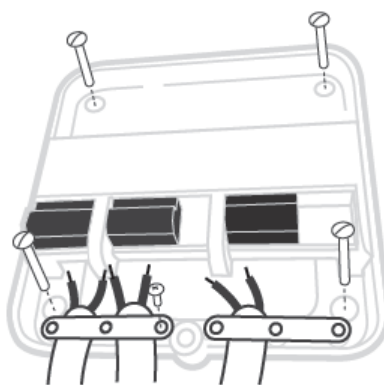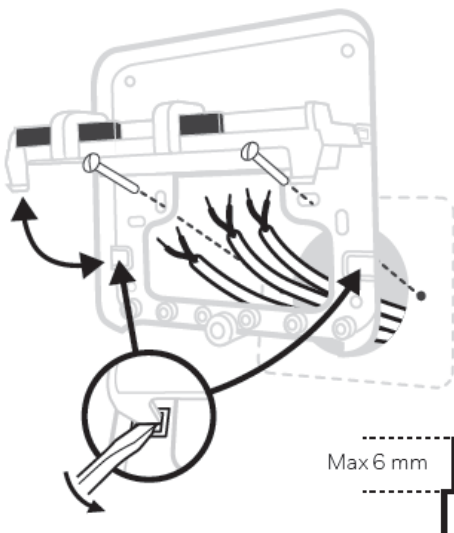
Note: See the wiring diagrams on page 9 for the correct wiring connections.
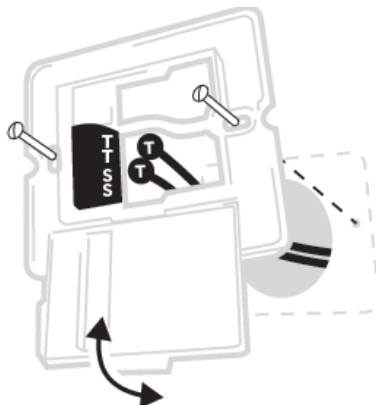
Install the Lyric T6 wired thermostat

A. Wall plate
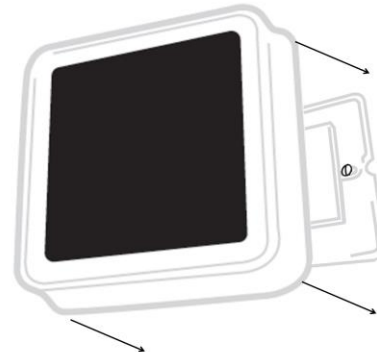Using a screwdriver open wall plate terminal cover to connect wires.

B. Surface wiring
Connect 2 thermostat wires to the **T** and **T** terminals and close cover. *Remember to use the same wires that you connected to the Receiver Box when connecting to the thermostat.*
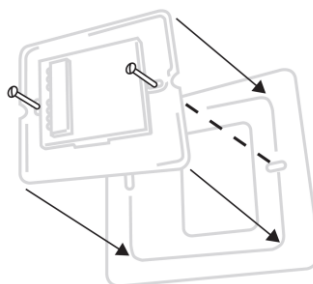
C. Place thermostat
Attach the thermostat to the wall plate when finished.

Optional cover plate (ACC400)
For mounting on an Italian wall box or in case of a larger foot print of the old thermostat a cover plate can be mounted behind the wall plate.
Dimensions 117x117 mm

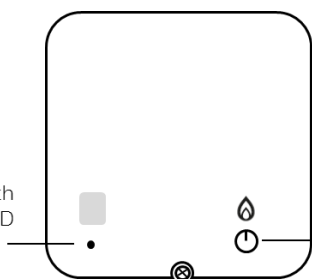## Install the Lyric T6R wireless thermostat

Choose the appropriate plug.
Place the thermostat on an even, horizontal surface and plug it in.

1.70 m
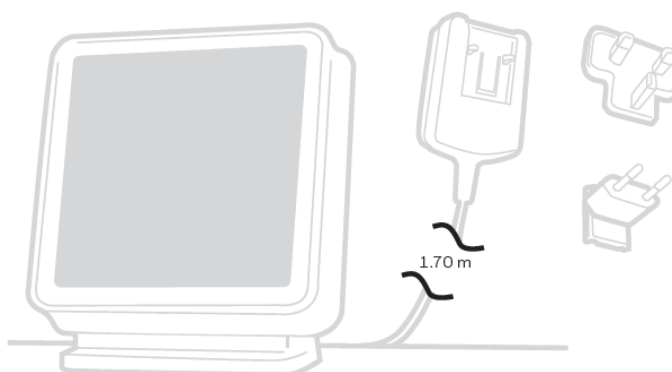
Complete installation

Turn ON mains power to the Heating Appliance and Receiver Box.

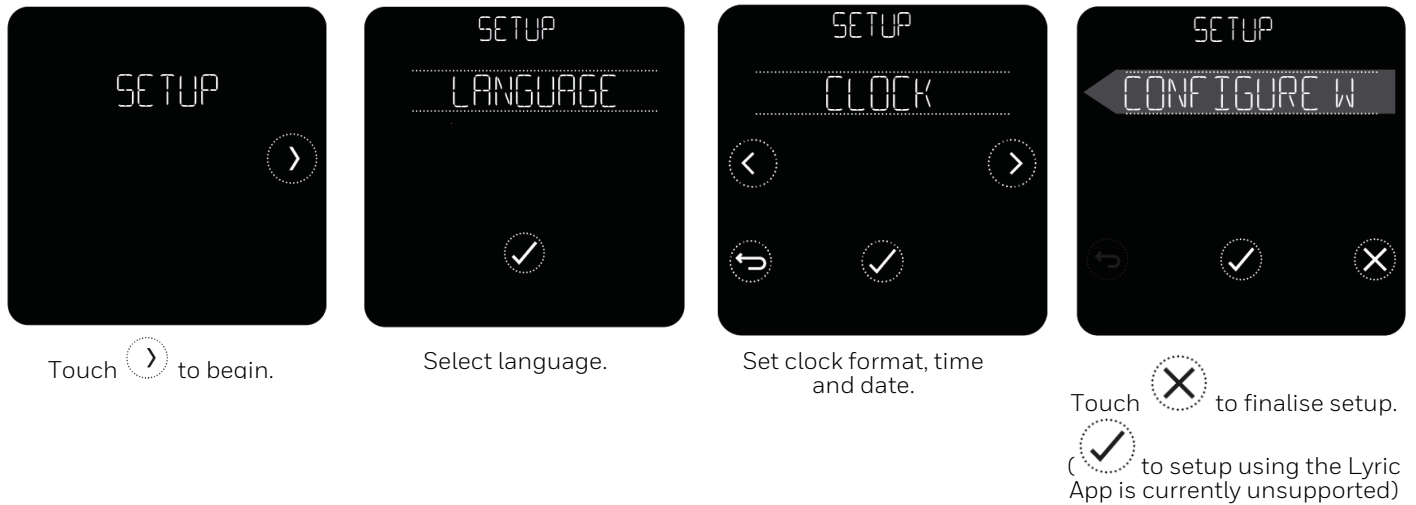After powering up both devices the status LED should be green

Press the manual override to check if the boiler switches on. Button LED lights green

Setup and configuration

After power up, SETUP is displayed on the thermostat's screen.

Touch ❯ to begin.   Select language.   Set clock format, time and date.

Touch ✕ to finalise setup.

(✓ to setup using the Lyric App is currently unsupported)

Once setup is completed go to the advanced menu to change application specific changes.
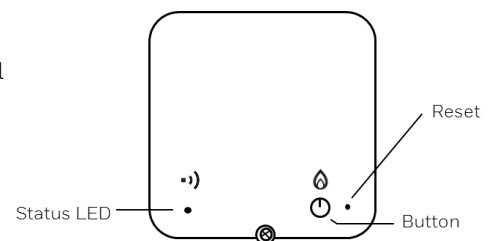
BINDING

The Lyric T6R Smart Thermostat wireless kit comes pre-bound from the factory.
The binding operation described below is only required if:

- The Lyric T6R thermostat or Receiver box is replaced.
- The Lyric T6R thermostat or Receiver box has incorrect or no binding data stored.
  - Thermostat will indicate the Alert message: NO RECEIVER BOX BINDING
  - Receiver box status LED remains green blinking (no communication from thermostat)
 - Receiver box status LED does not light up (not bound).

To bind/rebind

Note: When the Receiver box has been bound before first press with a small pin the pinhole for approximately 3 seconds to reset the binding. All LED's will flash amber for a moment.

1. Put the Receiver box into binding mode by pressing the button for 3 sec.
   - The LED will flash amber

Reset

Status LED

Button

2. Enable binding on the thermostat:

   - Enter the advanced menu by pressing the ☰ button for 5 sec.
   - Navigate to BINDING
   - Select BIND and the signal will be sent

SENDING
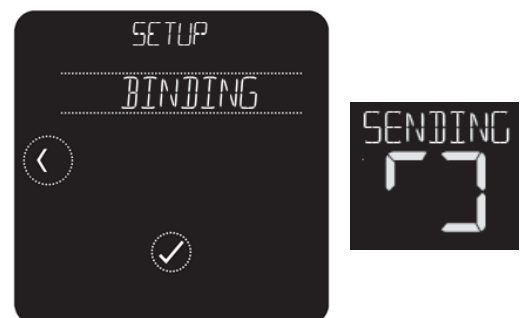
3. When binding is successful:
   - Thermostat will show SUCCESS
   - Receiver box status LED will show green

BINDG SUCCESS
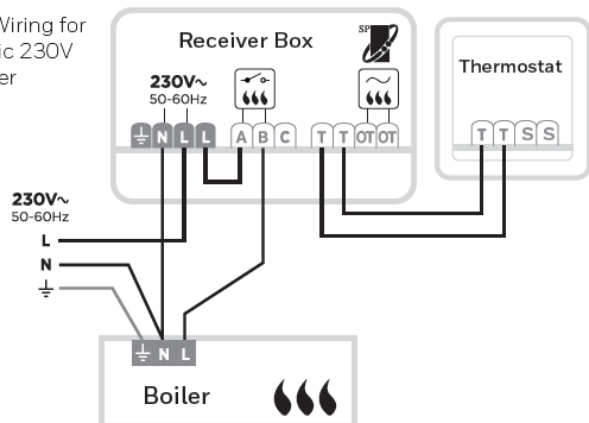
When binding is **NOT** successful:
- Thermostat will show FAILED
- Receiver box will exit binding after 3 min.
RF communication might be too far or is blocked due to wrong location of the Thermostat or Receiver box. Try to move closer or re-locate and re-bind again.
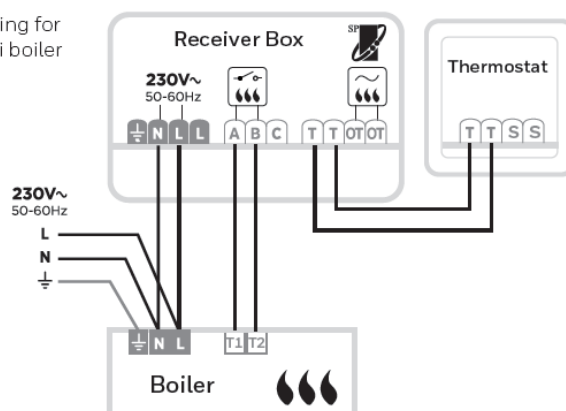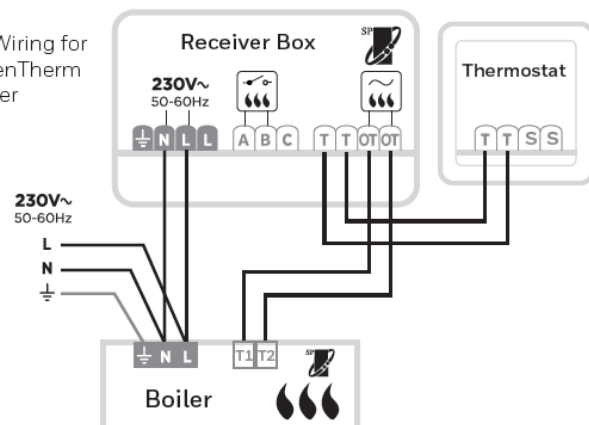
BINDG FAILED

WIRING

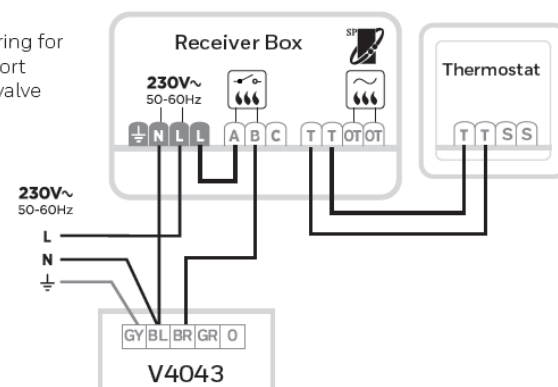**A)** Wiring for basic 230V boiler
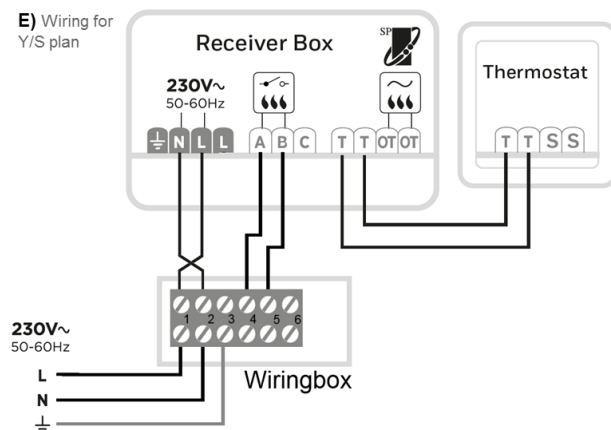

B) Wiring for Combi boiler

C) Wiring for OpenTherm boiler

D) Wiring for two-port zone valve

E) Wiring for Y/S plan

Note: Wiring diagrams are for Lyric T6 wired thermostat solution, for Lyric T6R wireless thermostat the thermostat is not wired to the Receiver box and the terminals are also not available.

TROUBLE SHOOTING

Symptom (Fault message)	Possible Cause	Remedy
The Receiver box button LED is green but the boiler does not switch on.	Boiler wiring might be incorrect or broken	Check the Receiver box wiring
The status LED on the Receiver box is red (Communication loss)	The Receiver box receives no communication from the thermostat: RF communication might be too far or is blocked due to Receiver box location. Thermostat is no longer powered.	Try to move thermostat or Receiver box closer or re-locate. Check the power to the thermostat
Thermostat alert messages		
WIFI RADIO ERROR	The Wi-Fi radio of thermostat is faulty.	Replace thermostat
INTERNAL MEMORY ERROR	The internal memory of thermostat is faulty.	Replace thermostat
INDOOR TEMPERATURE SENSOR ERROR	(wired only) The external temperature sensor is not connected or the wiring is faulty.	Check external sensor wiring and sensor
NO COMMUNICATION RECEIVER BOX	The thermostat receives no communication from the thermostat: RF signal is blocked due to the location of the thermostat. Receiver box is no longer powered.	RF communication might be too far or is blocked due to the location of the Thermostat or Receiver box. Check the power to the Receiver box
RF SIGNAL OF RECEIVER BOX LOW	There is a weak radio signal from the Receiver box	Try to move thermostat or Receiver box closer or re-locate.
NO RECEIVER BOX	The thermostat is not bound with the Receiver box	Bind or re-bind the Receiver box
NO INTERNET	Thermostat has no longer Internet connection.	End user needs to check their Internet connection via router.
NO WIFI SIGNAL	Thermostat has no longer a Wi-Fi connection.	End user needs to check their Wi-Fi network of router.
REGISTER ONLINE	Thermostat is connected to Internet but not yet registered to an account.	End user needs to download the App, create an account and register the thermostat.
WIFI NOT CONFIGURED	Thermostat is not connected to Wi-Fi network.	End user needs to download the App, create an account, connect and register the thermostat.
BOILER FAILURE FAULT XX	The OpenTherm boiler reported a failure number XX.	Check the boiler
BOILER LOW WATER PRESSURE	The boiler reported low water pressure.	Fill up the hydronic system with water.

ORDERING SPECIFICATION

Description	Model	EAN code	Literature
Smart Thermostat wired (UK)	Y6H910WF1011	5025121381031	All packaging contains 6 languages: English, Dutch, French, German, Italian and Spanish
Smart Thermostat wireless (UK)	Y6H910RW4022	5025121381024	
Large cover plate Lyric T6	ACC400	5025121381123	
Smart Thermostat wired (Retail)	Y6R910WF6042	5025121381000	
Smart Thermostat wireless (Retail)	Y6R910RW8021	5025121381116	

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