LYRIC T6 and T6R
SMART THERMOSTAT

PRODUCT SPECIFICATION SHEET

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.

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 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**
- **Setpoint temperature**
- **Actual room temperature**
- **Save** - Saves schedule settings
- **System Mode** - Heat/Off
- **Current time**
- **Wi-Fi communication**
- **Messaging centre** - Shows device setup options, reminders and alerts, status of program schedule overrides
- **Schedule period** - Indicates current schedule period
- **Cancel**
- **Start/stop Schedule** - Activates or deactivates program schedule
- **Delete** - Deletes a schedule period
- **Menu** - Touch to display options
- **Lock**
- **Select** - Touch to access sub-menus or confirm selection

**Reference to the icons:**

- 🌍 Geofencing active
- 🏡 Geofencing home active
- 🌐 Geofencing away active
- 🌜 Geofencing sleep active
- ⚠️ Failure/Alarm
- 🔄 Optimisation active
- ✂️ Schedule disabled
- 🗻 Schedule enabled
- ⏰ Temporary Hold active
- 📡 Heating demand active
- 📈 Receiver module communication
- ⌚️ Communication failure
- ⌘ Wi-Fi communication
- 📡 Wi-Fi failure

**RECEIVER BOX INTERFACE**

- **Type indication**
  - Wired
  - Wireless
- **Status LED**
  - Communication with thermostat
  - Binding mode wireless version
- **Manual override**
- **Reset** - Delete binding (wireless version only)
# SPECIFICATIONS

<table>
<thead>
<tr>
<th><strong>Lyric T6/T6R Thermostat</strong></th>
<th><strong>Receiver box</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Control form</strong></td>
<td><strong>Power</strong></td>
</tr>
<tr>
<td><strong>Room temperature display range</strong></td>
<td>Electrical rating</td>
</tr>
<tr>
<td><strong>Dimensions</strong> (w x h x d)</td>
<td>Cycle rate</td>
</tr>
<tr>
<td>Lyric T6 (wired) 103 x 103 x 28 mm</td>
<td><strong>Wiring</strong></td>
</tr>
<tr>
<td>Lyric T6R (wireless) 108 x 103 x 68 mm</td>
<td><strong>Wire access</strong></td>
</tr>
<tr>
<td><strong>Time display</strong></td>
<td><strong>Dimensions</strong></td>
</tr>
<tr>
<td>24 hour or 12 hour AM/PM format</td>
<td><strong>IP class</strong></td>
</tr>
<tr>
<td><strong>Time keeping accuracy</strong></td>
<td><strong>Environmental and standards</strong></td>
</tr>
<tr>
<td>Synchronized with Internet when connected or typically better than 10 minutes per year</td>
<td><strong>Operating temperature range</strong></td>
</tr>
<tr>
<td><strong>Program</strong></td>
<td><strong>Shipping and storage temperature</strong></td>
</tr>
<tr>
<td>5+2 or daily schedule with 6 daily time and temperature level changes</td>
<td><strong>Humidity range</strong></td>
</tr>
<tr>
<td><strong>Time setting resolution</strong></td>
<td><strong>EMC</strong></td>
</tr>
<tr>
<td>Program - 10 minute steps</td>
<td><strong>LVD</strong></td>
</tr>
<tr>
<td><strong>Sensing element</strong></td>
<td><strong>R&amp;TTE:</strong></td>
</tr>
<tr>
<td>100K (@ 25°C) NTC thermistor</td>
<td><strong>ErP</strong></td>
</tr>
<tr>
<td><strong>Temperature setting range</strong></td>
<td><strong>RF communication</strong></td>
</tr>
<tr>
<td>Program : 5 to 37°C in 0.5°C steps</td>
<td><strong>RF operation band</strong></td>
</tr>
<tr>
<td>OFF : 5°C</td>
<td><strong>Max. power</strong></td>
</tr>
<tr>
<td><strong>Power</strong></td>
<td><strong>Protocol</strong></td>
</tr>
<tr>
<td>Lyric T6 (wired) ~20VDC/300mA by Receiver box</td>
<td><strong>Comm. Range</strong></td>
</tr>
<tr>
<td>Lyric T6R (wireless) 5VDC power adapter</td>
<td><strong>Comm. technology</strong></td>
</tr>
<tr>
<td><strong>Wiring</strong></td>
<td><strong>Receiver class</strong></td>
</tr>
<tr>
<td>Lyric T6 (wired) terminal block capable of accepting wires up to 1.5 mm²</td>
<td><strong>R.E.D.</strong></td>
</tr>
<tr>
<td></td>
<td><strong>RF binding method</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Wi-Fi</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Max. power</strong></td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Specific Applications</th>
<th>Setting</th>
<th>What do you need to change?</th>
</tr>
</thead>
</table>
| Cycle / Hour          | Minimu m ON time (in minutes) | Note:  
a. To change Cycle/Hour,  
b. To change Minimum ON Time, |
| Heating               |         |                             |
| Gas Boilers (+30KW)   | 6       | No action required          |
| Oil Boiler            | 3       |                             |
|                       | 4       | 1. Set Minimum ON Time to 4 minutes.  
2. Set Cycle/Hour to 3. |
| Thermal Actuator      | 12      | Set Cycle/Hour to 12.       |
| Zone valve            | 6       | No action required.         |

<table>
<thead>
<tr>
<th>Special Features</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>OpenTherm</td>
<td>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.</td>
</tr>
<tr>
<td>Heat Range</td>
<td>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.</td>
</tr>
<tr>
<td>Schedule options</td>
<td>The thermostat has 2 default schedules: daily (every day) and 5+2 (week + weekend days)</td>
</tr>
<tr>
<td>External Temperature Sensor (only with wired version)</td>
<td>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.</td>
</tr>
</tbody>
</table>
| 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 Options

<table>
<thead>
<tr>
<th>Menu Item</th>
<th>Default</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language</td>
<td>English</td>
<td>English, Français, Espanol, Deutsch, Nederlands, Italiano</td>
</tr>
<tr>
<td>OpenTherm</td>
<td>-</td>
<td>OpenTherm boiler data when available</td>
</tr>
<tr>
<td>Cycle rate</td>
<td>6</td>
<td>3.6, 9 or 12</td>
</tr>
<tr>
<td>Min on time</td>
<td>1 minute</td>
<td>1, 2, 3, 4 or 5 minutes</td>
</tr>
<tr>
<td>Heat range</td>
<td>Min = 5.0</td>
<td>Max = 37.0, Min: 5.0°C to 21.0°C, Max: 21.0°C to 37.0°C</td>
</tr>
<tr>
<td>Schedule options</td>
<td>Daily</td>
<td>1 = daily schedule, 2 = 5+2 days schedule</td>
</tr>
<tr>
<td>External sensor</td>
<td>no sensor</td>
<td>0 = no sensor, 1 = external room sensor</td>
</tr>
<tr>
<td>Optimisation</td>
<td>Opt start on</td>
<td>Opt stop off</td>
</tr>
<tr>
<td></td>
<td>Opt stop off</td>
<td>Opt start: 0 = off, 1 = on, 2 = Delayed start</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Opt stop: 0 = off, 1 = on</td>
</tr>
<tr>
<td>Clock</td>
<td>Format: 24h</td>
<td>Clock format: 1 = 12h, 2 = 24h</td>
</tr>
<tr>
<td></td>
<td>Time: --:--</td>
<td>Setup time and date</td>
</tr>
<tr>
<td></td>
<td>Date: 01/09/2016</td>
<td></td>
</tr>
<tr>
<td>Low Load Control</td>
<td>ON</td>
<td>0 = Off, 1 = On</td>
</tr>
<tr>
<td>Temperature offset</td>
<td>0.0</td>
<td>-1.5°C to 1.5°C</td>
</tr>
<tr>
<td>Bind</td>
<td>-</td>
<td>Bind, check RF and clear bind.</td>
</tr>
<tr>
<td>Adv Reset</td>
<td>-</td>
<td>Factory, schedule, Wi-Fi and Homekit reset</td>
</tr>
<tr>
<td>Failsafe</td>
<td>OFF</td>
<td>0 = Off, 1 = On</td>
</tr>
</tbody>
</table>

### Dimensions

**LYRIC T6**

- **Length:** 103 mm
- **Width:** 103 mm
- **Height:** 28 mm
- **Weight:** 200 gr

**LYRIC T6R**

- **Length:** 108 mm
- **Width:** 40 mm
- **Height:** 152 mm
- **Weight:** 250 gr

**RECEIVER BOX**

- **Length:** 110 mm
- **Width:** 110 mm
- **Height:** 40 mm
- **Weight:** 200 gr

**PACKAGING**

- **Length:** 152 mm
- **Width:** 152 mm
- **Height:** 168 mm
- **Weight:** 152 mm
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.

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 footprint 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.

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.

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

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

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

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.
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.
# TROUBLESHOOTING

<table>
<thead>
<tr>
<th>Symptom (Fault message)</th>
<th>Possible Cause</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Receiver box button LED is green but the boiler does not switch on.</td>
<td>Boiler wiring might be incorrect or broken</td>
<td>Check the Receiver box wiring</td>
</tr>
<tr>
<td>The status LED on the Receiver box is red (Communication loss)</td>
<td>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.</td>
<td>Try to move thermostat or Receiver box closer or re-locate. Check the power to the thermostat</td>
</tr>
</tbody>
</table>

### 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

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