

## TLX 6001RFPv PROGRAMMABLE ROOM THERMOSTAT

### What is a programmable room thermostat?

A room thermostat works by sensing the air temperature, switching the heating on when the air temperature falls below the thermostat setting and switching the heating off when the thermostat setting has been reached.

A programmable room thermostat allows you to choose different room temperatures to be used at different times of the day and night. It also allows you to set different temperature profiles for each day of the week.

A programmable room thermostat does not switch your central heating off in the same way that a central heating programmer does. Instead, the boiler is always ready to provide heat if the air temperature falls below the current thermostat set temperature.

Turning a programmable room thermostat to a higher setting will not make the room heat up any faster. How quickly the room heats up depends on the design of the heating system, for example, the size of boiler and radiators.

Neither does the setting affect how quickly the room cools down. Turning a programmable room thermostat to a lower setting will result in the room being controlled at a lower temperature, and saves energy.

The way to set and use your programmable room thermostat is to find the lowest temperature settings that you are comfortable with at the different times you have chosen, and then leave it alone to do its job. The best way to do this is to set low temperatures first, say 18°C, and then turn them up by one degree each day until you are comfortable with the temperatures. You won't have to adjust the thermostat further. Any adjustments above these settings will waste energy and cost you more money.

If your heating system is a boiler with radiators, there will usually be only one programmable room thermostat to control the whole house. But you can have different temperatures in individual rooms by installing thermostatic radiator valves (TRVs) on individual radiators. If you don't have TRVs, you should choose a temperature that is reasonable for the whole house. If you do have TRVs, you can choose a slightly higher setting to make sure that even the coldest room is comfortable, then prevent any overheating in other rooms by adjusting the TRVs.

The time on the programmer must be correct. Some types have to be adjusted in spring and autumn at the changes between Greenwich Mean Time and British Summer Time.

You may be able to temporarily adjust the heating programme, for example, 'Override', 'Advance' or 'Boost'. These are explained in the manufacturer's instructions.

Programmable room thermostats need a free flow of air to sense the temperature, so they must not be covered by curtains or blocked by furniture. Nearby electric fires, televisions, wall or table lamps may prevent the thermostat from working properly.

### TLX RFPv Room Thermostat

The TLX RFPv is a radio-frequency programmable room thermostat and receiver which allows the user to select two different temperatures, i.e. comfort & economy, for different times of the day. The thermostat can be configured for 7day, 5day/2day or 24hr programming and the user can select between eight pre-defined temperature profiles. Six of the pre-defined temperature profiles can be modified by the user to meet their particular requirements.

**Thermostat position:** To be placed at a height of 1.5m from the floor. Do not position on an outside wall, above a radiator, next to a door, or in direct sunlight.

#### For fixed wiring only

Disconnect mains supply before fitting receiver, or removing unit from back plate. A switch having a contact separation of at least 3mm in all poles must be incorporated in the fixed wiring as a means of fully disconnecting the mains supply. An appropriate fuse should also be fitted to the circuit.

### Installation

**N.B. All installations should be carried out by a competent person and in line with current wiring regulations**

- 1 Remove the back plate from the receiver by loosening the retaining screw at the bottom of the unit.
- 2 Choose a suitable place near to the boiler. Fix the back plate to the wall with screws, 3mm max
- 3 Route wires through the back of the back plate and connect wires to the receiver in accordance with the diagram on page 3 (fig.2) and current Wiring Regulations
- 4 Position receiver into back plate and tighten the retaining screw at the bottom of the unit.

#### **WARNING**

The cover must not be removed unless the thermostat is isolated from the electrical supply.

**INTERFERENCE WITH SEALED PARTS  
RENDERS GUARANTEE VOID**

## Initial set-up

Remove the battery cover from the back of the unit and insert 4 x AA batteries into the room thermostat. The display will power up to show the day of the week (Mon), the time (0:00), the current room temperature e.g. 21.0°C, the Default Program Value (P1), the Sun symbol (☀) and the temperature profile, indicated by black squares along the bottom of the display. It may also show a fan symbol if the actual room temperature is lower than 21°C

## Setting the time

- Press "TIME" key once to flash day of the week, press "△" or "▽" to set day of the week.
- Press "TIME" key again to flash hour, press "△" or "▽" to set hours.
- Press "TIME" key again to flash minute, press "△" or "▽" to set minutes.
- Press "TIME" key to exit or wait 15 seconds to exit automatically.

## Setting the Sun (comfort) and Moon (economy) temperatures

- Press "TEMP" to display "☀" and "21.0°C"
- Press "△" or "▽" keys to set SUN temperature (*factory default value 21.0°C*).
- Press "☀/☾" key to display "☾" and "18.0°C".
- Press "△" or "▽" keys to set MOON temperature (*factory default value 18.0°C*).
- Press "TEMP" key to exit or wait 15 seconds to exit automatically.

## Advance

- Press "☀/☾" key to change from "☀" to "☾" and vice versa. The ☸ symbol will be displayed. Normal program function will be restored at the next program change.

## Temperature override

- To set an override temperature press "△" or "▽" twice until the ☸ symbol is displayed. Press "△" or "▽" again to change the current set temperature to the desired override temperature.
- Press "OFF" key once to confirm and exit. The override temperature will be used until next program change after which the original set temperatures will be restored.
- To cancel an override press the "OFF" key twice. The ☸ symbol will disappear.

## Frost protection

- Press the "OFF" key once to display the ☸ and "❄" symbols. The system will now run at 7°C.
- Press "OFF" key once to exit. The ☸ and "❄" symbols will disappear.

## Resetting factory defaults

To reset the unit to its factory default condition press and hold the 'OFF' button while pressing & releasing the 'RESET' button.

## Low power indication / changing the batteries

A low power symbol "🔋" will be displayed when the power is below 1.3V. Replace all 4 batteries together. You will now need to reset the time; however, the temperature and program settings will not be affected.

## Program

### Program selection

To program the RFPv using the 'Default Program Values':

- Press the 'Prog' key once. The day/days of the week will flash.
- To select the days to be programmed press the '▽' or '△' keys to scroll through & select either Mon to Fri, Sat & Sun, Mon to Sun, or each day individually.
- When a selection is made press the 'Prog' key once and the 'P' symbol will flash. This enables one of the "Default Program Values", P1 to P8, to be selected (see fig.1).
- Press '▽' or '△' key to select a 'Default Program Value' to be applied to the time period selected at step (b).
- Press 'Prog' twice to confirm your selection or wait 15 seconds to exit automatically.
- If you selected 7 days, Mon to Sun, at step (b) programming is now complete and all 7 days will use the same program. If you selected Mon to Fri you now need to program Sat & Sun. Repeat steps (a) to (e). If you selected an individual day you now need to program the remaining six days by repeating steps (a) to (e) for each day.

### Program setting

Creating your own program values:

- The line at the bottom of the display, marked from 00 to 24 is the 'Time Line' which is divided into 1hr time segments. If a segment is represented by a solid black square '■' the thermostat will use the Sun ☀ temperature during that time segment. When no black square is visible in a segment the thermostat will use the Moon ☾ temperature during that time segment. Programs P1 to P6 can be altered by switching solid black segments on or off to create your own program values. (*P7 & P8 can't be altered*)
- To create your own program values press 'Prog' twice until the 'P' symbol flashes then press '▽' or '△' key to select a Default Program that is as close to your desired program as possible (see fig.1).
- Press 'Prog' and the number '0' will appear in the display. A black flashing square ■ will also appear at the LH side of the time line at position '00' (*the number shown in the display corresponds to the position of the flashing black square on the time line*)
- To add a black segment or to keep an existing black segment anywhere along the time line, the Sun ☀ symbol must be visible in the display. To remove a black segment or to keep an existing blank segment, the Moon ☾ symbol must be visible in the display. Pressing the "☀/☾" key toggles between Sun ☀ and Moon ☾ modes.
- Pressing the '△' '▽' keys will move the flashing black square along the time line. If the Sun ☀ symbol is visible, each time the flashing square is moved it will switch the time segment on and turn it solid black ■ (*if the segment is already black it will remain black*). If the Moon ☾ symbol is visible, each time the flashing square is moved it will switch the time segment off and delete the solid black square (*if the segment is already clear it will remain clear*). In this way segments can be switched on or off to create a program to suit individual needs.
- When you are happy with your program press 'Prog' to confirm or wait 15 seconds to exit automatically. The program number that you have re-programmed can now be selected for any day of the week (*see 'Program selection'*)

## Default Program Values

P1	0-24 ☀						
P2	0-24 ☾						
P3	0-6 ☾	6-23 ☀	23-24 ☾				
P4	0-6 ☾	6-8 ☀	8-17 ☾	17-23 ☀	23-24 ☾		
P5	0-6 ☾	6-8 ☀	8-11 ☾	11-13 ☀	13-19 ☾	19-23 ☀	23-24 ☾
P6	0-6 ☾	6-8 ☀	8-12 ☾	12-23 ☀	23-24 ☾		
P7	0-24 ☀						
P8	0-24 ☾						

Fig.1

## Communication

- Hold the "on/off" key on <sup>Fig.1</sup>Rx for 3 seconds, green LED will flash. The learning mode has now been activated.
- Press the "LEARN" key on Tx (*on rear case*) once. If the green LED on Rx flashes then it means that Tx and Rx communication has been successfully set up. The Tx can now control the Rx to be on or off.

### Rx operation


- Press the "manual" key once. The green LED should be lit (*manual status has been entered*).
- Press the "on/off" key once. The red LED should be lit and relay is on (*COM and NO terminal is closed*).
- Press the "on/off" key once again. The red LED is off and relay is off (*COM and NC close*).
- Press the "manual" key. The green LED is off and the automatic mode has been entered.

## Technical specification

### General Specification

Protection rating:	IP 30
Max ambient temperature	T 40
Storage temperature:	-10°C to 50°C
Humidity limits:	20% to 80% rH

### Tx specification

Power:	4 x AA 1.5V battery
Temperature measuring range:	5°C - 37°C
Temperature control range:	7°C - 30°C
Temperature differential:	0.1°C
Temperature accuracy:	+/- 1°C (at 20°C)
RF Frequency:	868.35MHz
Low Power indication	
7 day programming	
CE mark	

### Rx specification

Power Supply:	230VAC ±10% 50HZ
Load rating:	MAX 6(2)A, 250VAC
Contact type:	1 x SPDT
Volt free switching	
CE mark	

## Wiring

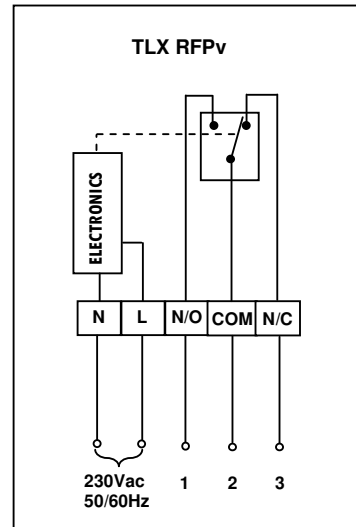


Fig.2

- Always replace all four (4) batteries at the same time. Only use 1.5 V alkaline batteries of the type LR06 (AA).



### Safe Disposal

Do not dispose of batteries with household rubbish. They must be returned in accordance with the local statutory requirements.

### SUNVIC CONTROLS Ltd.

Units 1 & 2, Block 1  
251 Low Waters Road  
Cadzow Industrial Estate  
Hamilton  
ML3 7QU

Tel. 01698 812944

Fax 01698 813637

Technical Helpline 01698 810945

N.B. In line with a policy of continuous product development, SUNVIC CONTROLS Ltd. reserves the right to change the specification, design and materials of products without prior notice.

User Instruction Leaflet: LE/0222/6001/Mar 2011/Rev00