

# ecostat<sup>2</sup> PRE5004EC2



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## Quick start instructions - page 1 of 4

Touch Auto-on 3 stage infra-red settable intelligent thermostat with 7 day auto-on feature.



## SPECIFICATION

### Size

Size: Standard single gang plate size. Requires a 30mm deep surface pattress or 25mm or greater sunken box. When mounting into a sunken wall box or metal clad box remove the top and bottom mounting lugs of the box.

### Supply voltage

216-253V AC at 50Hz.

### Load

16A Resistive, not suitable for use with quartz heaters.

### Electrical connections

Live in (Lin), Neutral (Nin), Common (COM), Normally open/live out (Lout), 216-253V AC 50Hz Boost Trigger (TRIG).

### Terminal capacity

6mm<sup>2</sup> Maximum cable CSA, internal terminal size 2.9mm x 4mm.

### Indicators

Heating active, Frost, Boost.

### Adjustment

Frost or boost selection, button selected.

### Programs

Boost, Setback, Frost.

### Timing range

Boost 0-999 minutes, Setback 0 minutes to 999 hours.

### Temperature range

Boost, Setback and Frost 1 to 40°C.

### Clock events

Two auto-on events per day, 7 day programmable.

### Clock range

23 hours, 59 minutes

### Clock cell

CR2477 3V, Available from Prefect using code PRE5001B (not supplied)

### Clock cell life expectancy

Based upon 2 months per year the unit is powered down, 5 Years.

### Programming method

AUTO LOCK SYSTEM © Secure infra-red programming via the PRE5901 handset.

### Conformance

EMC-2004/108/EC LVD-2006/95/EC

### ERP Class

ErP Class 1, SHE 1%

ERP seasonal heating efficiency 1%

### Casing material

PC/ABS

### Temperature Range

0°C to 40°C

### Temperature accuracy

+/- 0.5°C

### IP Rating:

IP3X

### Ecodesign Lot 20 compliant

Yes

### Warranty

5 Years

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## INSTALLATION

- All installation and wiring works must be completed by a competent person and conform to relevant regulations in force at time of installation.
- Locate the thermostat at least 300mm away from the nearest edge of the heater. Ensure the thermostat is placed where it cannot be affected by extraneous heat sources, for example: televisions, desktop computers, fridges. If fitted too close to an extraneous heat source the thermostat will not function correctly. Mount the thermostat at the centre point of the room if possible. Do not mount the thermostat behind curtains or room dividers.
- Ensure the thermostat has a local means of safe isolation. A double pole isolator must be used, a PRE6000 double pole Key switch is recommended.
- Mount the thermostat at 1200mm from finished floor level.
- The thermostat can be mounted in both surface or sunken boxes. When mounting into a metal clad pattress or sunken box the upper and lower lugs must be removed.
- Ensure the thermostat is not mounted within 1m of forced heating or ventilation systems.

## WIRING

### MAINS OUTPUT

1. All wiring works should be completed by a competent person/s. Isolate the appropriate circuit that the thermostat is to be supplied from. Perform safe isolation procedure to ensure the circuit is completely isolated. Ensure the supply has been locked in the off position. Always ensure safe working practices.
2. Make any circuit adjustments required in accordance with current regulations.
3. If the trigger terminal is to be used ensure the trigger supply is fed from the same circuit as the thermostat supply to conform with current regulations.
4. Connect the live and neutral supply to the thermostat, note that the load neutral must be fitted with the supply neutral. Ensure the supplied mains link is fitted between Lin and COM terminals, terminate the loads live supply to the normally open terminal (Lout). Ensure the link is securely fastened in both the Lin and COM terminals.
5. Recheck all terminals including any factory fitted connections then fit the unit to the back box ensuring cables are not in a position to be damaged.
6. Re-energise the circuit. Press the up button twice to enable a 2 minute test cycle.

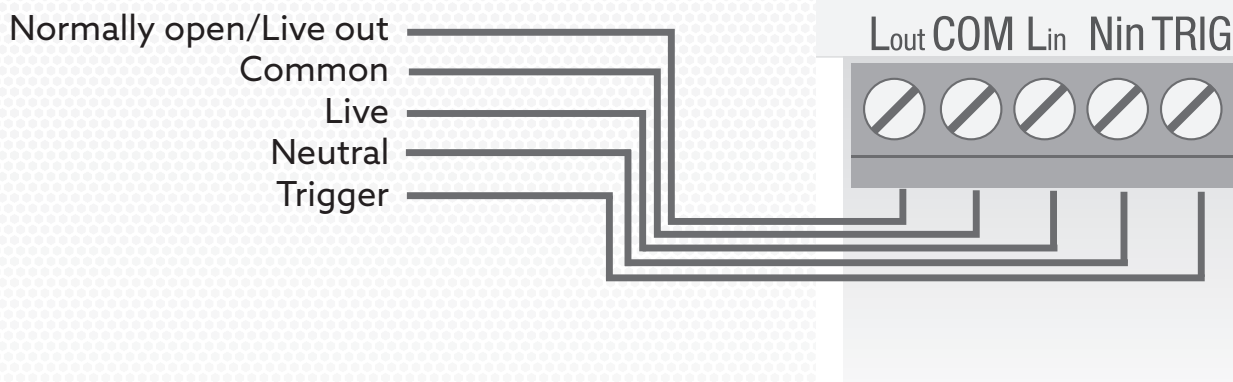
### VOLT FREE OUTPUT

1. All wiring works should be completed by a competent person/s. Isolate the appropriate circuit that the thermostat is to be supplied from. Perform safe isolation procedure to ensure the circuit is completely isolated. Ensure the supply has been locked in the off position. Always ensure safe working practices.
2. Make any circuit adjustments required in accordance with current regulations.
3. If the trigger terminal is to be used ensure the trigger supply is fed from the same circuit as the thermostat supply to conform with current regulations.
4. Terminate the live and neutral supply to the thermostat. Ensure the supplied mains link is removed.
5. Terminate the loads feed cable to the common (COM) terminal. Terminate the load return to normally open terminal (Lout).
6. Recheck all terminal connections and fit the unit to the back box ensuring cables are not in a position to be damaged.
7. Re-energise the circuit. Press the up button twice to enable a 2 minute test cycle.


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## TERMINAL CONNECTIONS



## TROUBLESHOOTING

FAULT	CHECK
No LEDs are lit	<ol style="list-style-type: none"><li>1. Check the unit is wired as per the wiring section in the full manual.</li><li>2. Check the mains supply voltage, ensure that 216-253V AC are present and stable between Lin and Nin terminals.</li></ol>
The load does not turn on	<ol style="list-style-type: none"><li>1. Ensure there is power to the load if not fed by the thermostat, for example a volt free boiler connection.</li><li>2. Check the unit is wired as per the wiring section in the full manual.</li><li>3. Check that the  LED is lit. This LED will only light when the thermostat relay is closed. If the LED is off the relay is open. If the LED is lit the thermostat is calling for heat.</li><li>4. Check that the current room temperature is not above that of the thermostat set-point. If the room temperature is above the temperature set-point the thermostat will not close it's relay to heat until the room temperature falls below the set-point.</li><li>5. If wired in a mains output configuration ensure the mains link has been fitted between the COM and Lin terminals.</li><li>6. If the load is not turning on at a programmed auto-on event time, check that the auto-on events have been correctly programmed into the thermostat. Check the current time has been set. Programmed auto-on timings can be read using the PRE5901 handset. See PRE5901 instructions for details. NOTE: the auto on feature is omitted when the thermostat is in frost mode.</li></ol>



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### TROUBLESHOOTING

FAULT	CHECK
The load does not turn off	<ol style="list-style-type: none"><li>1. Check the unit is wired as per the wiring section in the full manual.</li><li>2. Check that the LED is not lit. This LED will only light when the thermostat relay is closed. If the LED is off the relay is open. If the LED is lit the thermostat is calling for heat and therefore the load will not switch off until heating is complete.</li><li>3. Check that the current room temperature is not below that of the thermostat set-point. If the room temperature is below the current temperature set-point the thermostat will not open it's relay to discontinue heating until the room temperature is raised above that of the set-point.</li><li>4. If wired in a volt free contact configuration ensure the mains link has been removed.</li><li>5. Check that the clock auto-on function has not activated. Programmed auto-on timings can be read using the PRE5901 handset. See PRE5901 instructions for details.</li><li>6. Check the trigger is not active, if 216-253VAC is supplied to the TRIG terminal the thermostat will stay in boost mode until the voltage is disconnected.</li></ol>
The LED's are flashing and the buttons do not work	This is normal after first power up. The thermostat stays dormant for 1 minute while the unit stabilises. Once this time has elapsed the unit will function as normal.
The load switches off after 2 minutes	The thermostat has a 2 minute test cycle/pre-warm, when the unit is boosted from setback or frost, or triggered via the clock or trigger the thermostat will heat regardless of temperature for 2 minutes. Once this time run has elapsed the thermostat will resume temperature sensing. If the load is switching off after this time the temperature set-point is below that of the room temperature meaning there is no need for the load to be on.
The thermostat is always in boost mode	<ol style="list-style-type: none"><li>1. A mains voltage is present at the trigger (TRIG) terminal holding the unit in boost mode.</li><li>2. Foreign substance jamming the up button.</li><li>3. Auto-on is active. Programmed auto-on timings can be read using the PRE5901 handset. See PRE5901 instructions for details.</li></ol>
The thermostat does not stay at set level	<ol style="list-style-type: none"><li>1. The current run time has elapsed and the thermostat has changed to another mode.</li><li>2. A foreign substance is jamming one of the buttons.</li><li>3. A mains voltage is present at the trigger terminal (TRIG) changing the program to boost mode, the thermostat will return to setback mode once the voltage is removed.</li><li>4. A time event has been triggered.</li></ol>

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