Introduction

The PB130-230 power base is designed to power a TSTAT control module. The resistive load must not exceed 3450 watts (NI) @ 230 VAC (15 A).

Installation Guidelines

TURN OFF POWER TO THE HEATING SYSTEM AT THE MAIN POWER PANEL TO AVOID ELECTRICAL SHOCK. Installation must be carried out by an electrician.

- All work must conform to the most recent IEE regulations for electrical installations and wiring.
- This thermostat must be connected on a circuit equipped with an RCD. It must be installed on a certified electrical box.
- The thermostat must be installed on an inside wall.

Material

1. One (1) PB130-230 power base
2. One (1) wall plate
3. One (1) floor sensor
4. Two (2) screws

Technical Specifications

Supply: 230 VAC, 50 Hz
Maximum load: 3450 Watts (NI) @ 230 VAC; 15 A (resistive only)
Compliance: EN60730-2-9 / EN50081-1 / EN50082-2
Storage: -20°C to 50°C (-4°F to 122°F)
Protection: Class 2
Protection degree: IP20
Automatic action: Type 1.B
Environment: Normally polluted
Size (H • W • D): 2.94 x 2.94 x 0.53 in. (74.6 x 74.6 x 13.3 mm)

Warranty

WARMUP PLC THREE-YEAR LIMITED WARRANTY

This product is warranted against material defects and workmanship in normal use for a period of three (3) years, from the date of the original purchase from authorized dealers. During this period, Warmup plc will repair or replace the product with a new or of equivalent quality at Warmup plc’s option, without charge, any product proven defective in normal use. Warranty does not cover transportation costs. Nor does it cover a product subjected to misuse or accidental damage. This warranty does not cover the cost of installation, removal or reinstallation.

This limited warranty is in lieu of all other warranties, obligations or liabilities expressed or implied by the company. In no event shall Warmup plc be liable for consequential or incidental damages resulting from installation of this product. This warranty does not affect your statutory rights.

The defective product and the original sale receipt must be returned to the original dealer or shipped pre-paid, insured and addressed to:

Warmup PLC
702 Tudor Estate
Abbey Road
London NW10 7UW

WEEE Directive:

- Do not dispose along with normal household waste.
- Do not burn.

The product and its packaging must be disposed at a suitable recycling centre.

Installation and Wiring

1. Remove the screw holding the control module to the power base.
   The screw cannot be completely removed.

2. If you have a wall plate:
   Before making the connections, make sure that the base covers the electrical box entirely. Otherwise, install the cover plate behind the base.

   NOTE: The cover plate can also be used to cover the plate for aesthetic reason.

3. Connect the wires:
   - Power: Terminals 1 and 5
   - Load: Terminals 2 and 4
   - Floor sensor: Terminals 6 and 7 (no polarity)
   - Terminal 3 (F.P.) is not connected

   NOTE: The terminals are designed to handle wires between 0.33 and 4 mm².

The floor sensor must be centered between the heater wires (80°C max.). Do not place the floor sensor next to a heater wire. The temperature sensor wire must not cross any heater wires. Make sure the temperature sensor wire is properly affixed along the wall, in the concrete and into the electrical box (insulated material only and could be run in a raceway) and that there is no interference with the thermostat.

4. Push the wires into the electrical box and secure the base to the electrical box anchorage using the screws provided.

5. Install the control module onto the power base (see owner’s guide).

6. Return power to the heating system.
Introduction
Your new programmable electronic thermostat is designed to control electric floor heating systems and is equipped with a microprocessor and proportional integral adaptive (PIA) temperature control technology for total comfort.

The TSTAT is also preprogrammed to fit most homeowners' lifestyles and settings can be easily modified if required.

On/Standby Feature
The thermostat has an On/Standby feature making it possible to put the thermostat in sleep mode when its use is not required (e.g. summer).

Display with Backlight
The convenient backlight will light at the press of any button and will stay on for 12 seconds.

2 First Power On
On the first installation, the screen displays: 0:00, MO, and the floor temperature.

Temperature reading is above or below display limits:
LO: The temperature is below -10°C.
The heating indicator is displayed and the relay is closed (energized). The screen will display the floor temperature when it rises above -10°C.
HI: The floor temperature is above 60°C. The floor temperature will be displayed when it drops below 60°C.

The floor sensor is defective:
E1: The floor sensor is not connected properly or is open circuit.
E2: The floor sensor is short circuited.
If this situation occurs, you can configure the thermostat to operate like a regulator.

3 Setpoints Definition
Comfort (default is 28°C)
Represents the temperature you wish to have when you are at home (morning and evening).

Associated with programs 1 and 3
To modify:
Set the temperature using \( \uparrow \) and \( \downarrow \) until the icon is displayed on the screen (approx. 3 seconds).

Economy (default is 20°C)
Represents the temperature you wish to have when you are away at work and during the night.

Associated with programs 2 and 4
To modify:
Set the temperature using \( \uparrow \) and \( \downarrow \) and press \( \leftarrow \) until the icon is displayed on the screen (approx. 3 seconds).

4 Select the Operating Mode
There are three operating modes:
Manual
Maintains a constant temperature.

- Press MODE to select \( \uparrow \).
- Set the temperature using \( \uparrow \) or \( \downarrow \) or press one of the pre-defined setpoint buttons \( \downarrow \).

Automatic
Executes the schedule.

- Press MODE to select \( \uparrow \).
- To bypass the current program for a 2-hour period, simply define a new setpoint using \( \uparrow \).
- The Auto icon flashes to indicate the bypass.

Standby
This mode is used to put the thermostat in sleep mode when it is not required (e.g. summer).

- Press MODE to select \( \downarrow \).
Preprogrammed Schedule

The preprogrammed schedule is used with the Automatic mode and controls the floor temperature by automatically alternating between the Comfort and Economy programs. The schedule consists of 4 daily programs which are defined as follows:

Program 1: time you wake up, Comfort temperature
Program 2: time you leave home, Economy temperature
Program 3: time you return home, Comfort temperature
Program 4: night time, Economy temperature

Overview of the preprogrammed schedule:

<table>
<thead>
<tr>
<th>Programs</th>
<th>MO</th>
<th>TU</th>
<th>WE</th>
<th>TH</th>
<th>FR</th>
<th>SA</th>
<th>SU</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6:00</td>
<td>6:00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>8:30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>23:00</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>17:00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>23:00</td>
<td>23:00</td>
<td></td>
<td></td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>PPD^1</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

1. Number of programs per day. See “Advanced Programming”.

Modify the Schedule

To modify the pre-programmed schedule, follow these steps:

1. Press PGM, the first program is displayed and the clock segment flashes.
2. Use ∆ or to set the start time of the first program.
3. Once you are done, repeat steps 1 and 2 for remaining programs (2, 3 & 4).
4. Press MODE to exit.

Note: To modify the number of programs per day, see “Advanced Programming”.

Note: After 60 seconds of inactivity, the thermostat will automatically exit programming mode.

Advanced Programming

<table>
<thead>
<tr>
<th>Description</th>
<th>Menu</th>
<th>Default</th>
<th>Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display settings &amp; Temperature control</td>
<td>unit</td>
<td>°C/24h</td>
<td>°C/24h or °F/12h or P</td>
</tr>
<tr>
<td>Number of programs per day</td>
<td></td>
<td>4</td>
<td>2, 3, 4, 5, 6</td>
</tr>
<tr>
<td>Heating Cycles</td>
<td>CPH</td>
<td>4</td>
<td>2, 3, 4, 5, 6</td>
</tr>
</tbody>
</table>

Heating Cycles (CPH)

1. Press and hold PGM for 3 seconds to access the advanced programming mode.
2. Press PGM to select the desired menu.
3. To modify the default programming, use ∆ or to select an option.
4. Press MODE to exit.

Technical Specifications

Model: TSTAT

<table>
<thead>
<tr>
<th>PIA temperature control</th>
<th>Regulator</th>
</tr>
</thead>
<tbody>
<tr>
<td>°C 28°C (82°F)</td>
<td>° 6 (60%)</td>
</tr>
<tr>
<td>°C 20°C (68°F)</td>
<td>° 3 (30%)</td>
</tr>
<tr>
<td>Setting range</td>
<td>0° to 10 (0 to 100%)</td>
</tr>
<tr>
<td>Setting scale</td>
<td>0.5° (10%)</td>
</tr>
<tr>
<td>Display range</td>
<td>0° to 10 (0 to 100%)</td>
</tr>
<tr>
<td>Display scale</td>
<td>0.1° (10%)</td>
</tr>
<tr>
<td>Temp. accuracy</td>
<td>± 0.2°C (0.36°F)</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>-20°C to 50°C (-4°F to 122°F)</td>
</tr>
<tr>
<td>Software and controller</td>
<td>Class A, electronic</td>
</tr>
<tr>
<td>Programming protection</td>
<td>Protected memory</td>
</tr>
<tr>
<td>Clock protection</td>
<td>6 hours</td>
</tr>
<tr>
<td>Size (H/W/D)</td>
<td>3.2 x 3.3 x 0.65 in (81.4 x 84.6 x 16.5 mm)</td>
</tr>
</tbody>
</table>

Warranty

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Technical Specifications

- PIA temperature control
- Regulator
- Setting range
- Setting scale
- Display range
- Display scale
- Temp. accuracy
- Storage temperature
- Software and controller
- Programming protection
- Clock protection
- Size (H/W/D)

Warranty

WARMUP PLC
702 Tudor Estate
Abbey Road
London NW10 7UW

Display Settings (unit)

- °C/24h or °F/12h
- P (Power Regulator)

In this mode, there is no temperature reading nor display. Should be used only when the floor sensor is damaged (E1/E2 error).

For example (15-minute cycle):

- If you select 6 (60%) as the setpoint, your system will heat for 60% of the cycle; it will be ON for 9 minutes then OFF for the last 6 minutes. Scale: 0 to 10 (0 to 100%).

Note: The time, day and programs are saved.

Technical Specifications

- This thermostat has selectable heating cycles, see Heating Cycles below.

WEEE Directive:

- Do not dispose along with normal household waste.
- Do not burn.

The product and its packaging must be disposed at a suitable recycling centre.

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