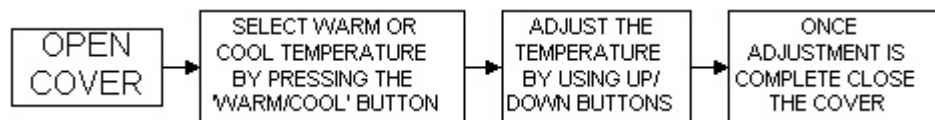


WARM AND COOL TEMPERATURE ADJUSTMENTS

The ThermoPlus has two preset temperature levels, these are known as 'Warm', higher level temperature(21°C) and 'Cool', lower or set back temperature(15°C). The preset temperatures have been selected to give a comfortable, safe, yet efficient comfort level in the home. In certain installations it may be necessary to adjust either the 'Warm' and / or 'Cool' temperatures to meet the specific needs of the user. This can be achieved by following the simple steps below;



PLEASE NOTE: It is **not** necessary to enter the installer mode to adjust the temperature settings.

GENERAL INFORMATION

Before handing over the installation to the user, always ensure that the system responds correctly on all control programmes and that other electrically operated equipment and controls are correctly adjusted.

EXPLAIN HOW TO OPERATE THE CONTROLS AND HAND OVER THE USERS OPERATING INSTRUCTIONS TO THE USER.

SPECIFICATION THERMOPLUS PRT1

Contact type: Micro dis-connection
(Voltage Free)
Contact rating: 3(1)Amps 230-240V AC
Power supply: 230-240V AC 50Hz
Operating Temperature range: 0°C to 40°C
Temperature Control Range: 5°C to 30°C
Standby Temperature: 5°C to 10°C
Double insulated.
Dirt protection: Normal situations.
Enclosure protection: IP30
Purpose of control: Electronic thermostat

Battery Type: Lithium
Case material: Thermoplastic, flame retardant
Dimensions: 120mm x 90mm x 32mm
Display: Liquid crystal
Clock: 24 hour
Display time adjustment: 1 Minute steps
Switched time adjustment: 15 Minute steps
Programme selection: Auto, Standby
Operating periods per day (Warm): 3
Override: Instant Warm/Cool
Backplate: Industry Standard Backplate

Horstmann Controls Limited
Bristol
BS4 1UP

Email: sales@horstmann.co.uk
Website: www.horstmann.co.uk



LEAFLET No P82324
ISSUE 1

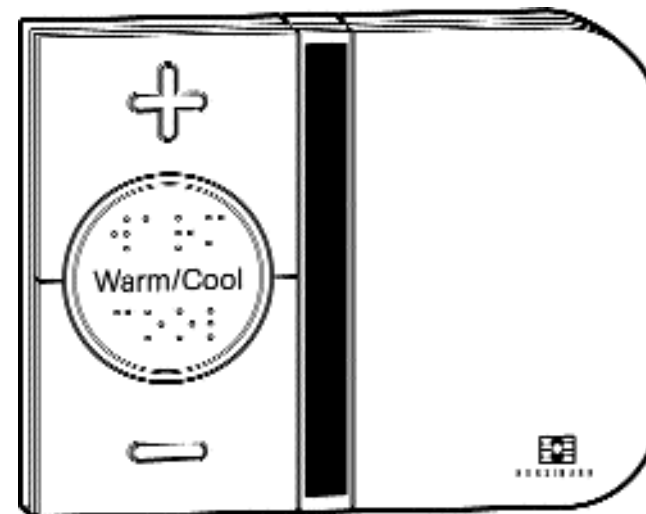
THERMOPLUS PRT1
INSTALLATION INSTRUCTIONS



HORSTMANN

The Horstmann ThermoPlus PRT1 - Programmable Room Thermostat Offers a number of pre-installed heating profiles which are simply set-up by the installer to provide maximum comfort to the user. Once installed, user operations are kept to a minimum by using the +/- and Warm/Cool buttons on the front of the unit.

Please ensure that the installation checklist, located within the product packaging, is completed before handing over the installation.



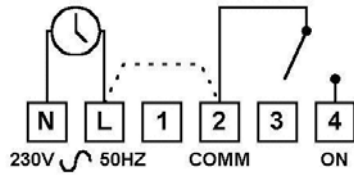
PLEASE NOTE: The ThermoPlus contains a selection of five pre-set profile options, one of these must be set by the Installer. It is vital that care is taken to ensure a profile is selected that suits the lifestyle of the householder concerned.

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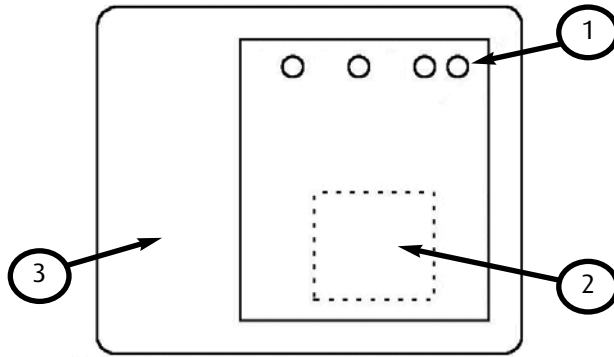
INTERNAL AND EXTERNAL WIRING CONNECTIONS

INTERNAL WIRING CONNECTIONS



- The ThermoPlus has Voltage Free contacts.
- A link L - 2 is required for mains Voltage applications.
- The ThermoPlus PRT1 is mains operated, not battery powered.

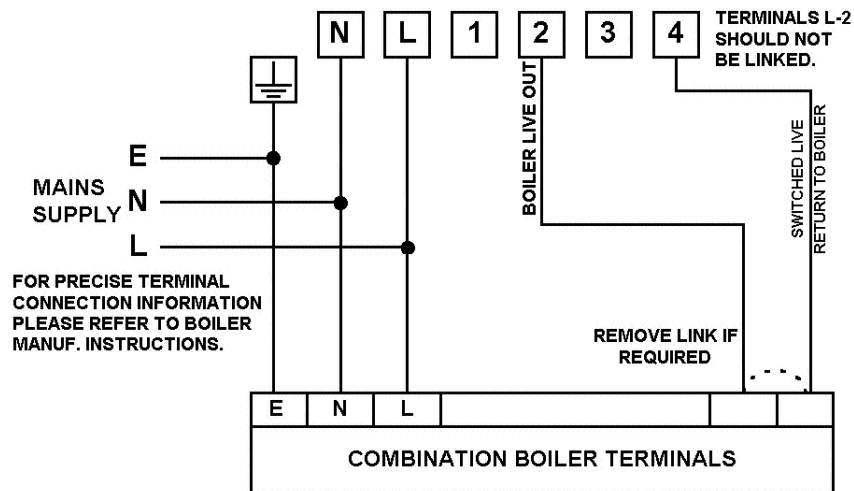
REAR VIEW OF THE THERMOPLUS



- 1 - CONNECTOR PINS
- 2 - CAPACITY LABEL
- 3 - PRODUCTION DATE LABEL

WIRING DIAGRAMS

An example circuit diagram for a typical combination boiler installation is shown below. This diagram is schematic and should be used as a guide only. Please ensure that all installations comply with the current IEE regulations and the boiler manufacturers installation instructions. For reasons of space and clarity not every connection has been included and the diagram has been simplified, for instance some Earth connections have been omitted.



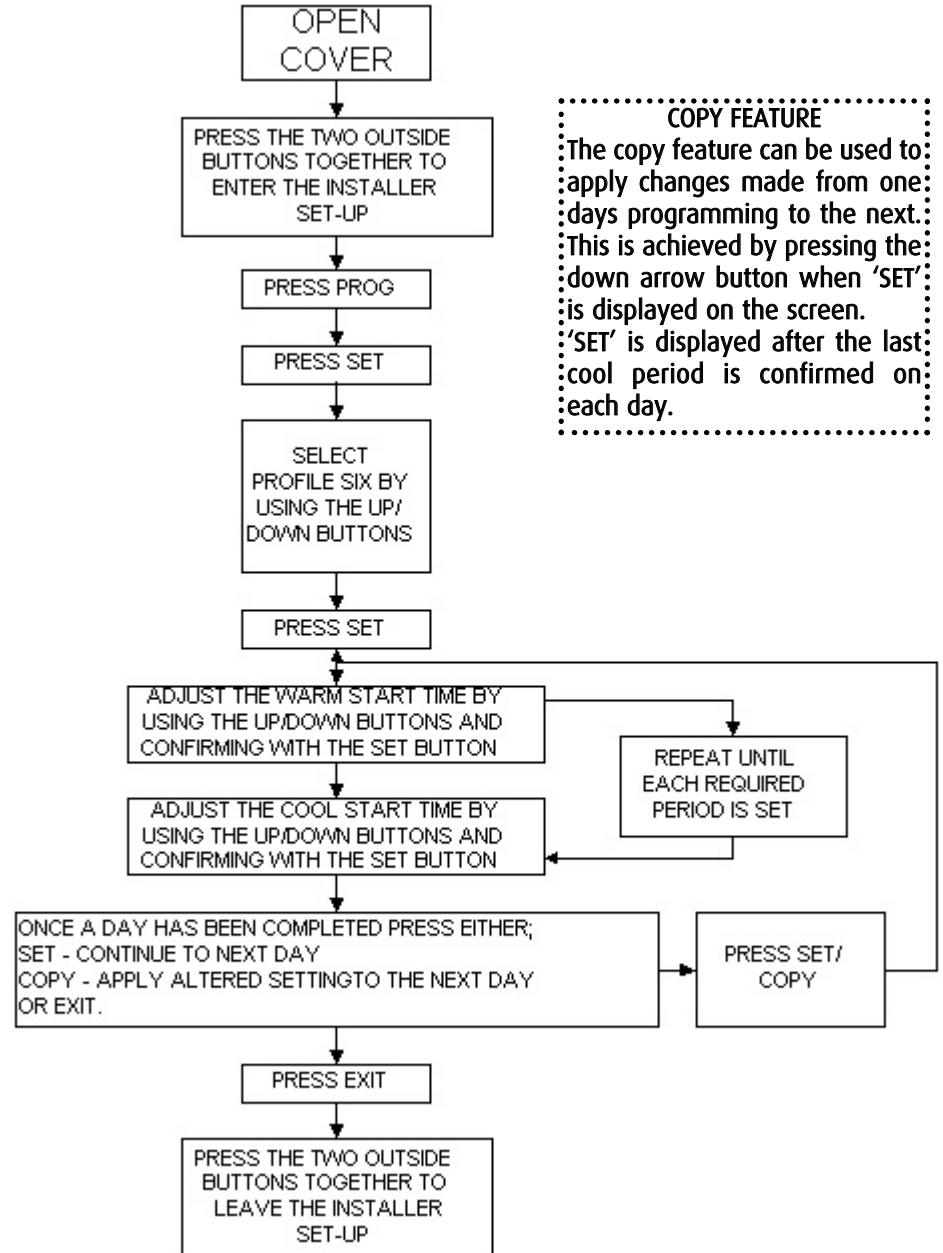
Typical combination boiler installation

PROFILE SIX

INSTALLER DEFINABLE - 24 HOUR OR 7 DAY PROGRAMMING

Profile six will allow the installer to set up a profile to the exact requirements of the user. By using the flow chart below you can adjust the Warm/Cool timing periods on each day of the week.

SETTING YOUR OWN PROFILE PROFILE



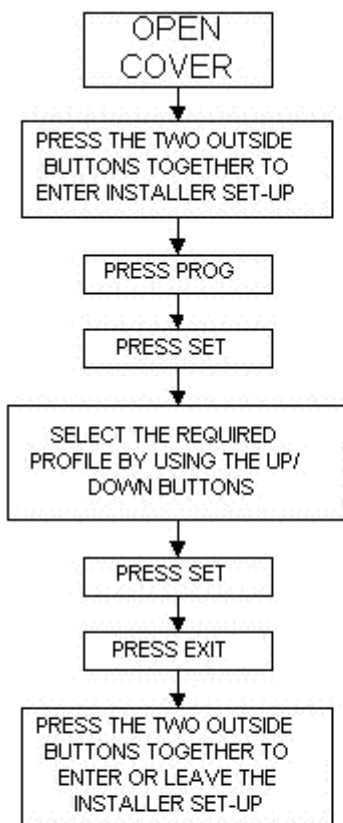
COPY FEATURE
 The copy feature can be used to apply changes made from one days programming to the next. This is achieved by pressing the down arrow button when 'SET' is displayed on the screen. 'SET' is displayed after the last cool period is confirmed on each day.

SETTING USER PROFILES - ONE TO FIVE

The ThermoPlus contains a selection of five pre-set profile options, one of these must be set by the Installer. It is vital that care is taken to ensure a profile is selected that suits the lifestyle of the householder concerned. The flow chart below is designed to easily guide you through the process of setting the required profile.

Profiles one to five are detailed on page 8 and 9.

PLEASE NOTE: If none of the provided profiles meet the users requirements it is possible to set a user defiled profile, full details are given on page 11.



Profiles one to five have fixed programmes, they can be reviewed by pressing the set button once the selection process detailed above have been completed. To set a custom profile please refer to the instructions on page 11.

SPECIFIED BOILER CONNECTIONS

| VAILLANT ECOMAX 824/2E | | VAILLANT TURBOMAX PLUS 824/2E | |
|-----------------------------------|---------------------|-----------------------------------|---------------------|
| (Remove link from terminals 3/4.) | | (Remove link from terminals 3/4.) | |
| BOILER TERMINAL | THERMOPLUS TERMINAL | BOILER TERMINAL | THERMOPLUS TERMINAL |
| 3 | 2 | 3 | 2 |
| 4 | 4 | 4 | 4 |

| RAVENHEAT CSI 85 | | RAVENHEAT LS 80 | |
|--|---------------------|--|---------------------|
| (Remove link from room thermostat terminals) | | (Remove link from room thermostat terminals) | |
| BOILER TERMINAL | THERMOPLUS TERMINAL | BOILER TERMINAL | THERMOPLUS TERMINAL |
| Out | 2 | Out | 2 |
| Switch | 4 | Switch | 4 |

| IDEAL HE24 | | IDEAL MINI C24 | |
|-------------------------------------|---------------------|-----------------------------------|---------------------|
| (Remove link from terminals L1/L2.) | | (Remove link from terminals 1/3.) | |
| BOILER TERMINAL | THERMOPLUS TERMINAL | BOILER TERMINAL | THERMOPLUS TERMINAL |
| L1 | 2 | 3 | 2 |
| L2 | 4 | 1 | 4 |

INSTALLATION AND CONNECTION OF THE THERMOPLUS PRT1 SHOULD ONLY BE CARRIED OUT BY A SUITABLY QUALIFIED PERSON. ALWAYS CONSULT THE SPECIFIC BOILER MANUFACTURERS INSTALLATION INSTRUCTIONS BEFORE COMMENCING THE INSTALLATION .

WARNING : ISOLATE MAINS SUPPLY BEFORE COMMENCING INSTALLATION

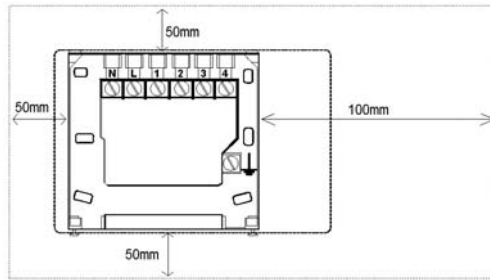
FITTING THE BACKPLATE

Once the Backplate has been removed from the packaging please ensure the ThermoPlus is re-sealed to prevent damage from dust, debris etc.

The Backplate should be fitted with the wiring terminals located at the top and in a position which allows a total clearance of at least 50mm around the thermostat.

The ThermoPlus should be

mounted on an internal wall approximately 1.5 metres from floor level and should be in a position away from draughts, direct heat and sunlight.



DIRECT WALL MOUNTING

Offer the plate to the wall in the position where the ThermoPlus is to be mounted, remembering that the Backplate fits to the left hand end of the thermostat. Mark the fixing positions through the slots in the Backplate, drill and plug the wall, then secure the plate in position. The slots in the Backplate will compensate for any misalignment of the fixings.

WIRING BOX MOUNTING

The Backplate may be fitted directly on to a single gang steel flush wiring box complying with BS4662, using two M3.5 screws. ThermoPlus thermostats are suitable for mounting on a flat surface only, they must not be positioned on a surface mounted wall box or on unearthed metal surfaces.

ELECTRICAL CONNECTIONS

All necessary electrical connections should now be made. Flush wiring can enter from the rear through the aperture in the Backplate. Surface wiring can only enter from beneath the ThermoPlus and must be securely clamped.

The mains supply terminals are intended to be connected to the supply by means of fixed wiring.

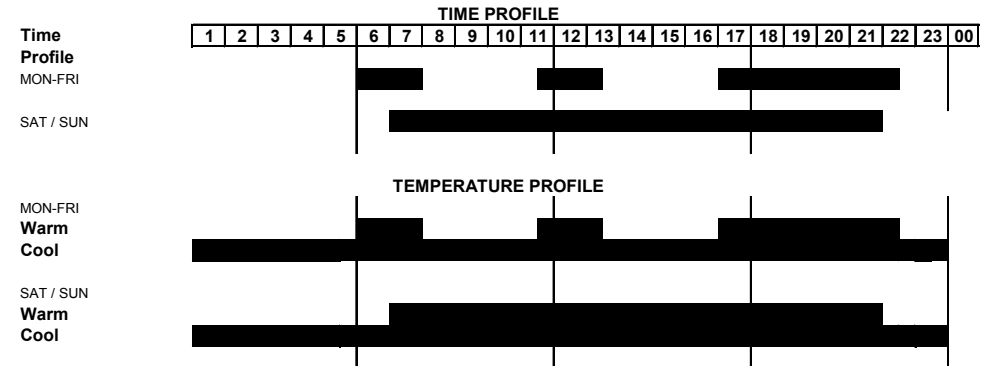
The ThermoPlus is mains powered and requires a 3 Amp fused spur. The recommended cable sizes are 1.0mm² or 1.5mm².

The ThermoPlus is double insulated and does not require an Earth connection, an Earth connection block is provided on the Backplate for terminating any cable Earth conductors. Earth continuity must be maintained and all bare Earth conductors must be sleeved. Ensure that no conductors are left protruding outside the central space enclosed by the Backplate.

PROFILES FOUR AND FIVE 5 DAY / 2 DAY - DIFFERENT WEEKDAY / WEEKEND PROFILE

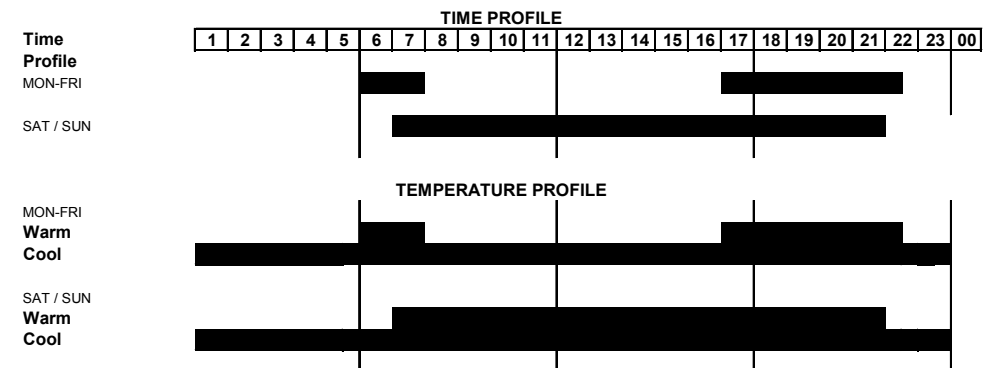
PROFILE 4

| PROFILE FOUR | START | STATUS | | START | STATUS |
|--------------|-------|--------|---------|-------|--------|
| MON - FRI | 06:00 | WARM | SAT/SUN | 07:00 | WARM |
| | 08:00 | COOL | | 22:00 | COOL |
| | 11:30 | WARM | | | |
| | 13:30 | COOL | | | |
| | 17:00 | WARM | | | |
| | 22:30 | COOL | | | |



PROFILE 5

| PROFILE FIVE | START | STATUS | | START | STATUS |
|--------------|-------|--------|---------|-------|--------|
| MON - FRI | 06:00 | WARM | SAT/SUN | 07:00 | WARM |
| | 08:00 | COOL | | 22:00 | COOL |
| | 17:00 | WARM | | | |
| | 22:30 | COOL | | | |



Profiles one to five have fixed periods, no alteration to the Warm/Cool times can be made, if it is necessary make any alterations then profile six must be used. Profile six will allow the installer to set up a profile to the exact requirements of the user. Please refer to the flowchart on page 11.

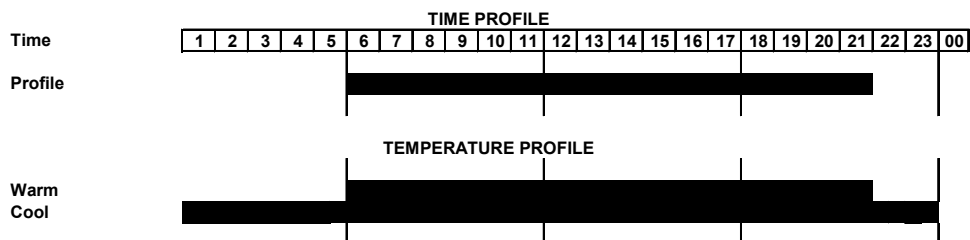
HEATING PROFILES

The ThermoPlus has six heating profiles, five are fixed and one adjustable by the installer. Profile 'ONE' has been set as the default and is detailed below. During installation a heating profile should be set to best match the users requirements, illustrations of the pre-set profiles are shown below.

PROFILE 1

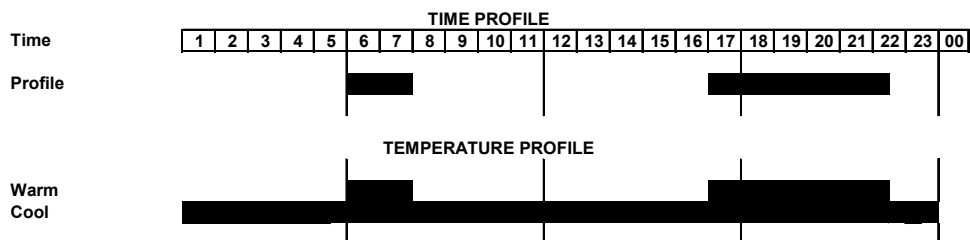
PROFILES ONE TO THREE 24 HOUR - SAME PROFILE EACH DAY

| PROFILE ONE - DEFAULT | START | STATUS |
|-----------------------|-------|--------|
| EVERY DAY | 06:00 | WARM |
| | 22:00 | COOL |



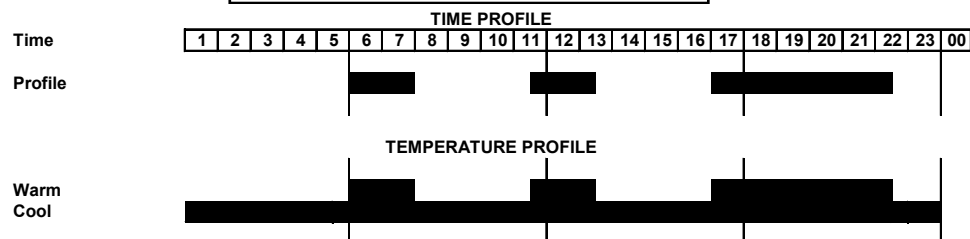
PROFILE 2

| PROFILE TWO | START | STATUS |
|-------------|-------|--------|
| EVERY DAY | 06:00 | WARM |
| | 08:00 | COOL |
| | 17:00 | WARM |
| | 22:30 | COOL |



PROFILE 3

| PROFILE THREE | START | STATUS |
|---------------|-------|--------|
| EVERY DAY | 06:00 | WARM |
| | 08:00 | COOL |
| | 11:30 | WARM |
| | 13:30 | COOL |
| | 17:00 | WARM |
| | 22:30 | COOL |



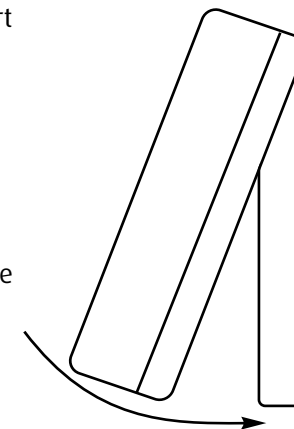
COMMISSIONING THE THERMOSTAT

Ensure all dust and debris has been cleared away from the work area before removing the ThermoPlus PRT1 from its packaging.

FITTING THE THERMOSTAT

- If surface wiring has been used, remove the knockout/insert from the bottom of the thermostat to accommodate it.
- Loosen the two 'captive' retaining screws on the bottom of the Backplate.
- Fit the thermostat to the Backplate, ensure the lugs on the Backplate engage with the slots on the thermostat.
- Swing the bottom of the thermostat into position ensuring that the connection pins on the back of the unit locate into the terminal slots in the backplate.
- Tighten the two 'captive' retaining screws to fix the unit securely.

Then switch ON the mains supply.



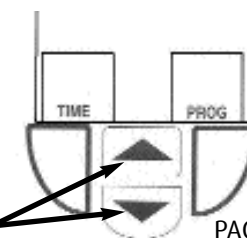
END VIEW OF THE THERMOPLUS

RESET PROCEDURE

PLEASE NOTE; Using this procedure will restore the ThermoPlus to the original factory programme settings, the time setting will also default to **1st January 2005**.

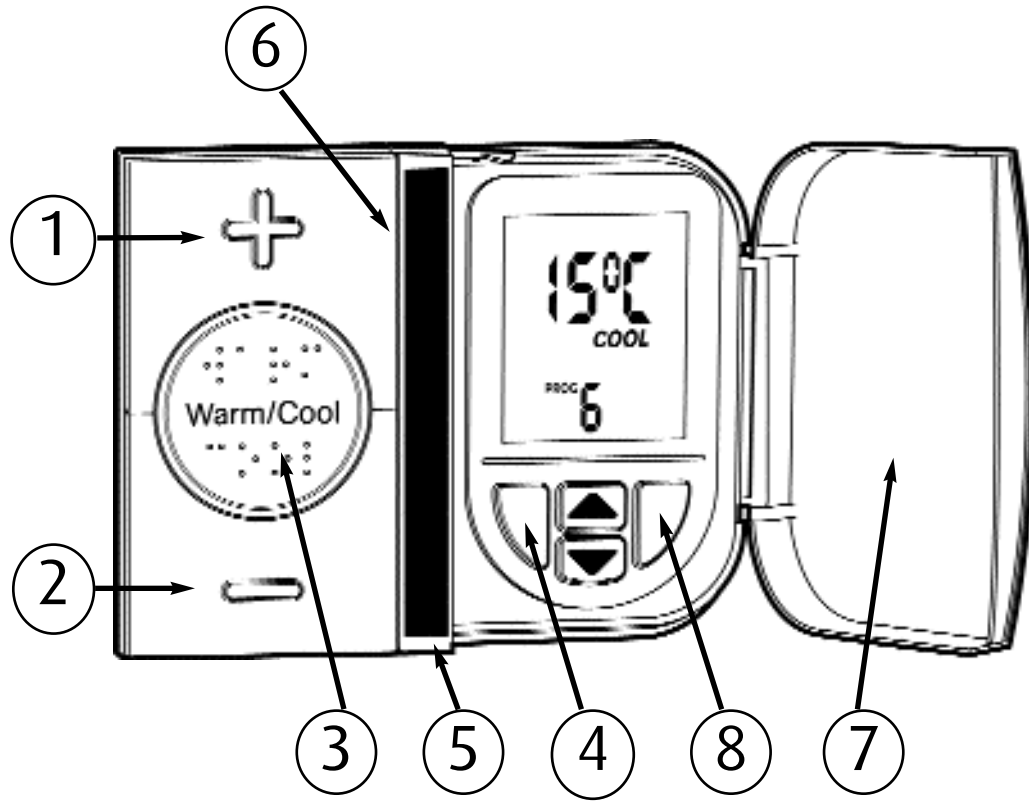
RESETTING THE THERMOPLUS PRT1

- On the ThermoPlus PRT1 press the 'UP' and 'DOWN' arrow buttons together:
- Then release the buttons and the thermostat will return to preset factory settings.



TO RESET PRESS

INSTALLER OPERATING GUIDE



HOW IT WORKS

Warm is shown by red lights (6) and Cool is shown by a blue light (5). The centre button (3) marked 'Warm / Cool' allows you to toggle between warm and cool settings.

When one or more red lights are on, you can increase the temperature by pressing the '+' button (1). For example, press once to go up by 1 degree C, or press twice to go up by 2 degrees C.

When the two or three red lights are on, the temperature can also be lowered to the centre position by using the '-' button (2). For example, press once to go down to the central temperature and press again to go down to one degree below central temperature.

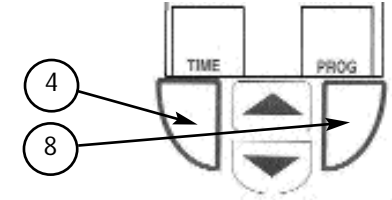
The Blue light means the unit is working to the lower temperature and the '+' or '-' buttons do not work when this blue light is on.

Under the flap (7) is a Blue button (4). During the summer, or when you want your central heating off for long periods, for example if you go on holiday, press the Blue button and close the flap. When you want to go back to normal operation, open the flap and press the Blue button again, remembering to close the flap once finished.

THERMOPLUS INSTALLER MODE

Once the ThermoPlus has been installed, please press buttons 4 and 8 Simultaneously to enter the installer mode, this will allow you to;

- Check the current time/date/year is correct
- Set a profile suitable for the end user
- Set new Warm / Cool temperature



Upon completion of the instructions above, please ensure that you explain operation of this thermostat to the user and hand over the user guide as supplied.

TIME AND DATE CHECK

The ThermoPlus thermostat has been pre-set with the current time and date during manufacture. No alteration should be required to the time and date, however if any modification is required please refer to the flowchart below.

