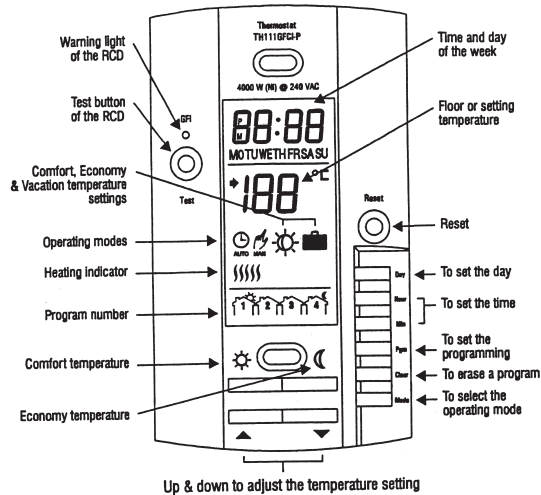


# TH111RCD-P (230-240 VAC)

## OWNERS GUIDE



## Installation

This thermostat is designed to control electric floor heating systems. The resistive load must not exceed 4000 watts (NI) @ 230-240 VAC (16.7 A). The thermostat is equipped with a residual current device (RCD) and therefore the isolation of the line and load are required for operation. During an earth fault, the two lines of the load will be cut off from the 230-240 V line. Connect the thermostat as shown in the diagram.

**Electricians or experienced technicians should install the thermostat.**

This thermostat is designed to be used with a circuit breaker.

### PARTS INCLUDED

- One (1) TH111 RCD-P (230-240 VAC) thermostat
- Two (2) 6-32 screws
- Four (4) solderless connectors (for copper wire)
- One (1) temperature sensor with a 4.5 metre extension

**TURN OFF POWER OF THE HEATING SYSTEM AT THE MAIN POWER PANEL TO AVOID ELECTRICAL SHOCK.**

Keep air vents of the thermostat clean and free from obstructions.

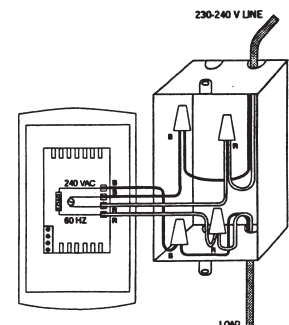
### 1) Connecting wires and mounting thermostat

Connect the rear thermostat wires to the 230-240 V LINE and to the load using solderless connectors for copper wires. See schematic diagram.

Push the excess wire back into the electrical box to prevent interference with the thermostat. Secure the thermostat using two (2) 6-32 screws. Once the thermostat is properly installed, return power to heating system.

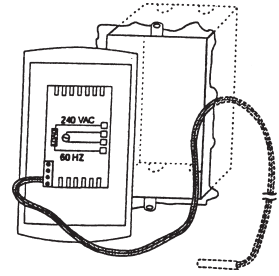
NOTE 1 : All cables and connections must conform to the local electrical code.

**WARNING :** Special CO/ALR solderless connectors must be used when connecting with aluminium conductors.

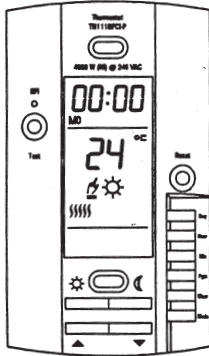



## 2) Connecting temperature sensor wire

Connect the temperature sensor wire to the two lower screws of the terminal block at the back of the thermostat (no polarity needs to be respected). The wire must pass outside the electrical box and follow the wall down to the floor. The sensing probe should be placed in a representative heat area for maximum system performance. The sensing probe should be centered between the heating wires. The temperature sensor wire cannot cross any heater wires and the sensing probe must not be directly or adjacent to a heating wire.




## Power Up



- When the power is applied for the first time, the display will show the following
  - Time:00:00
  - The floor temperature
  - Manual mode icon 
- If there is other information that shows up on the display then the power may have previously been on or the installation may be defective. Contact your local distributor.
- The warning light (GFI) must be off.
- The message LO or HI will appear on the display if the temperature sensor is defective or the temperature is below 0°C or higher than 60°C.
- The heating indicator will be present on display and the relay will be closed due to the current going in the load.

## Checking residual current device (RCD)

- Adjust the setpoint temperature until the heating indicator  appears on the display.
- Press on the test button. The test is conclusive if the warning light (GFI) on the thermostat is ON and power to the load is cut off.
- If the above events do not occur then check the installation
- Press the RESET button to reset the RCD

If the RCD test fails

- Check the load wires
- The thermostat must be in heating mode to carry out the test (heating indicator ON)

The RCD test should be carried out monthly. If the test fails :

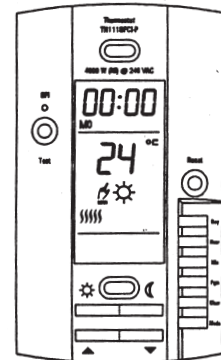
- Cut off the electric power to the heating system
- Call customer service or return the thermostat to your supplier for verification
- If the warning light comes on during the normal operation, cut off power to the heating system and have an electrician verify the installation

### Options Selection

At the back of the thermostat, there are 3 pre-set factory options as follows :

- Temperature in degrees centigrade (default) or Fahrenheit
- Time in 12 or 24 hours (default)  
You can press on Day, Hour and Minute buttons to adjust the time and day
- Normal operation (default) or Early Start function

This is a built in function, which, when used in conjunction with the timer functions, enables the thermostat to calculate the optimum time to start the heating system to achieve the desired temperature setting at the programmed time. This function has the ability to start the heating system as early as 6 hours prior to the programmed time. **In order to enable this function, set the switch E.S. to "ON" at the back of the thermostat. You will have to ensure that the main power is turned off before you enable this function.**



## Comfort, Economy and Vacation settings

These settings represent the temperatures you wish to have


During the day or when the heating is required

Comfort 

At night or when the heating is not required

Economy 


While you are away for an extended period

Vacation 


### How to program your settings


Comfort Setpoint Temperature  (when the heating is required)

The Comfort temperature can be set as follows :


First press the  button

Then select the temperature that you require (by using the arrow keys at the bottom of the thermostat) ▲▼

Finally press and hold the  button for approximately 3 secs until the icon  appears on the display.

Economy Setpoint Temperature  (at night or when the heating is not required)

The Economy Temperature can set as follows

First press the  button

Then select the temperature that you require (by using the arrow keys at the bottom of the thermostat) ▲▼




Finally press and hold the  button for approximately 3 secs until the icon  appears on the display.

Vacation Temperature  (while you are away for an extended period)

The Vacation Temperature can be set as follows :

First press the  and  buttons

Then select the temperature that you require (by using the arrow keys at the bottom of the thermostat) ▲▼

Finally press and hold the  and  buttons simultaneously for approximately 3 secs until the  icon is displayed.

Press the Mode button to exit this function and return to the normal operating mode.





## Operating Modes

The TH111RCD-P has two operating modes – Automatic and Manual

In order to select an operating mode, press the MODE button at the right panel of the thermostat.




### AUTOMATIC

This mode uses your own chosen programming. In order to activate this mode,

- Press on the Mode button to display the automatic icon. 
- When the Mode button displays the automatic  icon - the  or  icons whichever are currently in use will indicate which temperature setting is being used.
- The icon of the program no. will also be shown.

### MANUAL

This mode allows you to maintain a constant temperature of the floor

- Press on the Mode button to display the Manual icon 
- Set the desired temperature using the arrow keys ▲▼ or
- You can select the pre programmed Comfort or Economy or Vacation settings. (Remember that to activate the vacation setting, you will have to press on the  and  buttons simultaneously)

## Programming

In order to program the time and day

- Set the time using the Hour and Min buttons
- Set the day using the Day button

## Schedule Programming

The TH111RCD-P allows you to program 4 different settings for each day of the week

For eg

The time at which you wake up	P1 or Prog 1	☀
The time you leave (eg. for work)	P2 or Prog 2	☾
The time you arrive back home	P3 or Prog 3	☀
The time you go to bed	P4 or Prog 4	☾



### To program your schedule

Eg P1

- Press on PGM button to access the programming mode
- Press on Day button to select the day to be programmed. (If you desire P1 to be the same for all the days of the week, you can select all the days by pressing and holding the Day button for 3 seconds)
- Press on PGM button to select the program...in this case 1
- Press on the Hour and minute buttons to program the time

This completes your programming for P1. You can now press the Mode button to exit this function  
You can accordingly program P2, P3 and P4 as desired, using the above steps....

### To erase your program

If you wish to erase the settings for the program eg P1

- Press on PGM button to select the program....P1
- Press on Day button to select the day
- Now press Clear

The time field will now display —:— when the selected program P1 is inactive

### Example 1

Comfort period from 7:00 AM to 10.30 PM

Economy period from 10:30 PM to 7:00 AM

Identical schedule for all days of the week

1. Press on PGM button to access the programming mode.
2. Press on Day button 3 seconds to select every day of the week
3. Press on Hour button to enter 7:00 AM, Prog. 1 (☀)
4. Press on PGM button again to select Prog. 2 (☾), and press on Hour and Min buttons to enter 10:30 PM.
5. Press on Mode button to exit this function.

### Example 2

Comfort period : Monday to Friday from 6:15AM to 8:15 AM and from 5:00 PM to 10:00 PM.

Schedule/Day	MON	TUE	WED	THU	FRI	SAT	SUN
PROG. 1	6:15 AM	6:15 AM	6:15 AM	6:15 AM	6:15 AM	7:30 AM	7:30 AM
PROG. 2	8:15 AM	8:15 AM	8:15 AM	8:15 AM	8:15 AM	-	-
PROG. 3	5 PM	5 PM	5 PM	5 PM	5 PM	-	-
PROG. 4	10 PM	10 PM	10 PM	10 PM	10 PM	11 PM	11 PM

NOTE : It is faster to program the same schedule for every day and then modify the exception days.

1. Press on PGM button to access the programming mode.
2. Press on Day button 3 seconds to select every day of the week

3. Press on Hour and Min buttons to enter 6:15 AM, Prog. 1 (☀)
4. Press on PGM button again to select Prog. 2 (☾), and press on Hour and Min buttons to enter 8:15 AM.
5. Repeat step 4 to enter Prog. 3 (5:00 PM) and Prog. 4 (10:00 PM)

NOTE : When making modifications, make sure that you are in the right program.

**To modify the Saturday and Sunday schedules:**

6. Press on Day button until SA or SU is displayed.
7. Press on PGM button to select Prog. 1 ☀ and Hour and Min buttons to enter 7:30 AM
8. Press on PGM button to select Prog. 2 ☾ and then Clear button to erase it.
9. Press on PGM button to select Prog. 3 ☀ and then Clear button to erase it.
10. Press on PGM button to select Prog. 4 ☾ and then Hour and Min buttons to enter 11:00 PM
11. Press on Mode button to exit this function.

## Temporary or permanent temperature bypass

While you are in the Automatic mode, you can temporarily modify the room temperature by :

- Pressing the arrow keys to select the desire temperature ▲▼
  - Then press on the ☀ or ☾ buttons to select the Comfort or Economy settings which have been programmed.
- This temperature will be maintained until the beginning of the next programmed schedule.

You can also switch to the Vacation setting for a prolonged absence by :

- Pressing on the ☀ and ☾ buttons at the same time.
- The display will show the 🧳 icon.

The derogation in this case is permanent.

You can return to the normal operating mode by pressing the Mode button.

If however you wish to return to the programmed settings, press on the Mode button twice.

## Memory back-up

In the event of a power failure, your thermostat will maintain the programming and the time. However the time may have to be reset if the power failure is more than 2 hours.

## Characteristics

Model	:	TH111RCD-P (230-240 VAC)
Supply	:	230 – 240 VAC, 50/60 Hz
Load	:	16.7 A maximum (Resistive only)
Power	:	4000 watts (NI) @ 230 – 240 VAC
Residual current device (RCD)	:	10mA TRIP LEVEL
Approvals	:	CSA /C, US
Display range	:	0 to 60 °C
Setting range	:	5 to 40 °C
Comfort default setting	:	28 °C
Economic default setting	:	18 °C
Storage	:	-20 to 50 °C

## Warranty

### **WARMUP HEATING SYSTEMS LIMITED TWO (2) YEAR WARRANTY**

This product is warranted against defects in material and workmanship under normal conditions of use for a period of two (2) years from the date of purchase. During this period, **WARMUP** will repair or replace the product if it is defective in normal operating conditions in terms of materials or workmanship with a new product of equivalent quality at **WARMUP'S** option.

This warranty does not cover costs of transportation, removal, installation or damage caused by misuse or accident.

In no event will **WARMUP** be liable for consequential loss resulting from the installation of the product.

This warranty is intended to give you the protection given to you as a consumer under the Consumer Guarantees Act 1993.

Any defective product should be sent with the original invoice to the original installer, or shipped prepaid, insured and addressed to :

### **WARMUP HEATING SYSTEMS NZ LIMITED**

Copsey Business Park  
20 Copsey Place  
Avondale, Auckland

If you have any questions concerning the installation or programming of the product please call for technical assistance on (09) 820 4001.