

EUROSTER 506 Multi-function Thermostat



Introduction

The unique design of this product includes "Intelligent Mode Selection" which allows selecting the desired operation mode either heating/cooling or floor-heating.

There are 3 operating modes:

1. Room mode-- Room sensor commands
Room temperature regulation either for cooling or heating.
2. Floor mode (Floor heating)-- Floor sensor commands
Floor temperature controls heating.
3. Room +Floor limitation(Floor heating)
--Both Room sensor & Floor sensor joint command
Room temperature as the priority command to heating system with floor temperature limitation.

Thermostat can detect from the jumpers

1. The number of temperature sensors that have been connected.

2. If the Cooling or Heating mode is required

The unit will automatically operate in the mode that has been detected.

Factory default settings:

Heating & room-sensor enabled.

Choosing correct location for the thermostat at



The thermostat should be located in the room where the heating/cooling is to be controlled, except in case for floor heating only.

The place of installation should be chosen so that the sensors can measure the room temperature as accurately as possible, without being affected by direct solar radiation or other heating or cooling sources.

The mounting height should be approximate 1.5 meters above the floor.

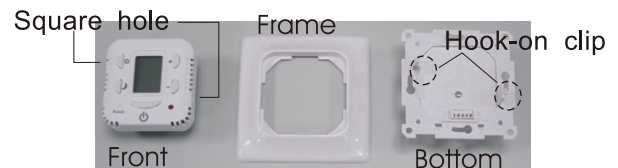
The unit can be fitted to most commercially available recessed conduit boxes or directly on the wall (Surface-mount box for installing this unit is also available)

Start installation-- It's important to follow the procedures described in this section, otherwise the thermostat may not work properly.

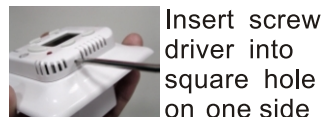
1. To open thermostat plastic housing-- Refer to photo description below

Plastic enclosure of this unit consists 3 plastic parts, Front, frame and bottom. They are assembled by an unique design of hook-on closure.

Hook-On clip extends from the Bottom part, through the Frame at middle and hook onto two tiny square holes on both right & left side of the Front part of the plastic housing.



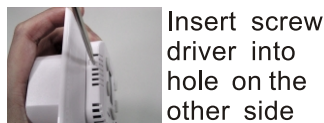
(A flat-head screw-driver is required)



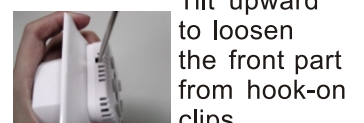
Insert screw driver into square hole on one side



Tilt screw driver upward to loosen.



Insert screw driver into hole on the other side



Tilt upward to loosen the front part from hook-on clips.



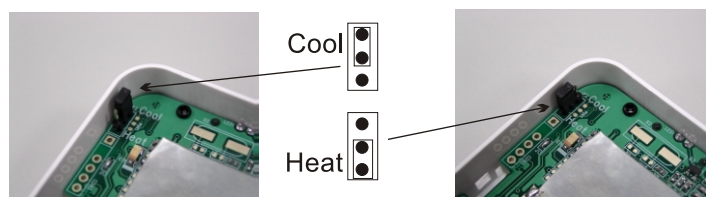
Open by hands, as shown on left.

GENERAL INFORMATION \ INSTALATION GUIDE

#2

2.Choosing Cooling or Heating mode

look for JUMPER selector on PCB shown in picture (at top left corner on the back of the Front part)



A. Cooling mode chosen ---this thermostat will work as Room thermostat for cooling only.

Display on LCD will be

System ON		System OFF	
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Functions provided in thermostat that involve floor-heating will be disabled when Cooling mode is chosen. Do not choose Cooling-mode if you are using this thermostat for floor-heating.

Symbol of will appear on LCD to alert users, if an error occurred in this selection.

B. Heating mode chosen--- for use of this thermostat for Heating or Floor-Heating.

Display on LCD will be

System ON		System OFF	
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3.To enable or disable the room sensor

This selection provides 3 operating modes:

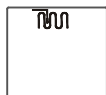
A.Room mode-- Room sensor controls on/off
Display onLCD shall show room-mode symbol.
(Room sensor is positioned inside the thermostat)

Room Sensor must be enabled



B.Floor mode (Floor heating) -- Floor sensor controls on/off
Display onLCD shall show.

Room sensor must be disabled



C.Room +Floor limitation(Floor heating)
Room sensor controls on/off with
Floor sensor controls floor temperature limitation.
Display on LCD shall show

Room Sensor must be enabled

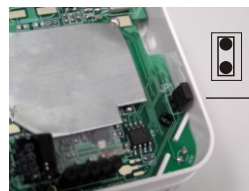


Be certain the floor-sensor cable is connected, if B or C mode is required.

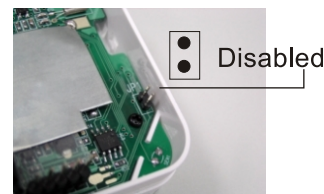


How to enable or disable the Room Sensor

Locate for JUMPER selector on PCB shown in picture. Choose "enabled" or "disabled".



Room Sensor enabled

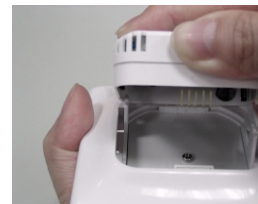


Room Sensor disabled

4.To close the unit: Line up the pins with the connector



1.Put the Frame be situated on top of the Bottom part.



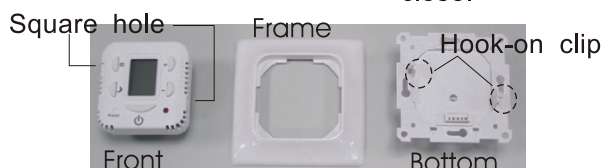
2.Placing One side of the Top part in the Frame



3.Close another side



4.Press the Front part downward to firmly close.



Be certain the two hook-on clips extends from the Bottom part are positioned in the square holes on the Front part.

Remark:





This unit has compatible plastic housing structure to most commercially available recessed conduit boxes (bezel). Users can insert the bottom part in the conduit box and directly close the Front part on top of the Bottom part without the Frame being situated in middle.



SAVE THESE INSTRUCTIONS SPECIFICATION

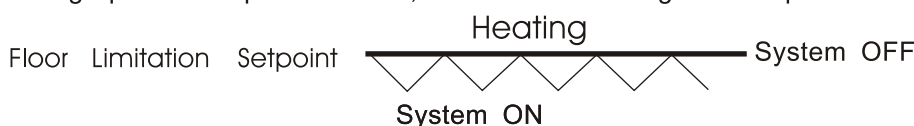
It's recommended to thoroughly read technical data stated in this page prior to adjusting the Internal Setting to your application needs.




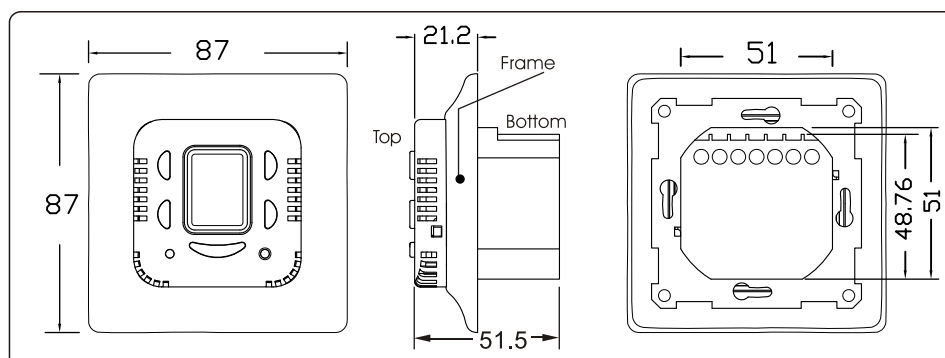
1. Operate power : Volt operate 230Vac
2. Display: LCD digital display
3. Output: Volt-free or voltage output , Rating 16Amp/250Vac
4. Circuitry consumption: 8VA
5. Temperature indication: C or °F selectable to users
6. Temperature control range: Room: 5 ~ 35°C (40 ~ 95°F) Floor: 5 ~ 45°C (40 ~ 113°C)
7. Temperature display range: -10~50°C (14 ~122°F), accuracy $\pm 0.1^{\circ}\text{C}$ (0.2°F)
* no decimal indicator above 100°F
8. Comfort  & Economy  setpoint adjustment range:
 -  Room mode: Range 5 ~ 35°C (40 ~ 95°F)
default Cool 24°C(75°F), Heat 21°C(70°F)
 - Floor mode & Room+Floor-Limitation mode : Range 5 ~ 45°C (40 ~ 113°F)
default Floor-mode 26°C (78°F)
Room+Floor-Limitation mode: 21°C (70°F) (Room Temp. performs the priority commands)
 -  Room mode: Range 5 ~ 35°C (40 ~ 95°F)
default Cool 27°C(80°F), Heat 16°C(60°F)
 - Floor mode & Room+Floor-Limitation mode: Range 5 ~ 45°C (40 ~ 113°F)
default Floor-mode 21°C (70°F)
Room+Floor-Limitation mode: 16°C (60°F) (Room Temp. Performs the priority commands)
9. Floor temperature limitation adjustment range:
For Floor mode & Room+Floor-limitation only:
High Limit.: 20 ~ 45°C(68 ~ 113°F) default 29°C(85°F)
Lo Limit.: 5 ~ 20°C(40 ~ 68°F) default 15°C(59°F)
* In floor-mode , Lo Limit. Performs as low-temperature protection, Hi-Limit. Functions as floor-temp. limitation.
* In Room+Floor Limitation mode, only Hi-Limit. Effects.
10. Temperature sensor : NTC 10K Ohm at 25°C
11. Switching differential (Hysteresis) selectable to users
Room & Room+Floor-Limit. mode: 0.2/0.4/0.6/ 0.8 /1°C ~ 0.4/0.8/1.2/1.6/2 °F , default 0.4°C/0.8°F
Floor mode only: 0.6°C/ 1°C/2°C /3°C ~ 1.2°F/2°F/4°F/6°F , default 1°C/2.0 °F



12. Floor-limitation switching differential: 2.0 °C (4.0 °F) prefixed, not adjustable.
In Room+Floor Limit mode, after floor temperature reached floor-limit. Setpoint, heating system ON/OFF shall perform as graphic descriptions below, before users change the setpoint.



13. Frost protection: Prefixed, not adjustable to users. Effects when thermostat is OFF by Stand-by() mode.
Room mode & Room+floor limit. Mode 5°C 40 °F). Floor mode 10°C(50°F)
14. Shortest cycle rate protection: 3 minutes, effects only in Cool-mode.
15. Material: Non flammable plastics ,standard white or RAL 9010
16. Storage temperature : -10 ~ 60°C.
17. Dimension: 87.0 H x 87.0 W x 51.5 D mm



For choosing the required floor-limitation setpoint; it's recommended to carefully check the material used in constructing your floor before selection. It's advised to consult with your builder.

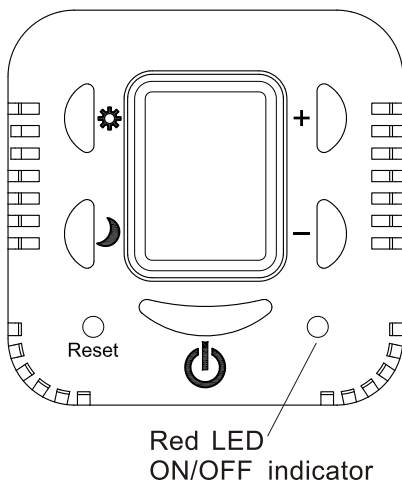


Contact your distributor or technician for advice in order to obtain the ideal temperature for the coziest possible home.

All factory default settings can be found in the page "SPECIFICATION", it's advised to look through them before changing the internal settings.

Adjustment procedure

Press both & for 5 seconds to enter adjustment mode. Follow the flashing guide on the LCD to complete adjustment. The Content varies depending on the chosen operating mode.



It is advisable to press "RESET" before changing the Internal Setting.

This thermostat can operate in one of these operating modes
— Heating/Cooling/Floor-Heating



Consult with technician if uncertain on the choice of the correct operating mode.

1

Room mode-- Room sensor commands .
Room temperature controls either cooling or heating

1. Press or to select °C or °F
2. Press for next adjustment, the COMFORT default value.
3. Press or to select the desired temperature for COMFORT.
4. Press again the to choose the desired ECONOMY default value .
5. Press or to select the desired temperature for ECONOMY.
6. Press for next adjustment, the Switching Differential (Hysteresis).
7. Press or to select the desired switching differential (5 selections).
8. Once all adjustments are completed, press again the button and start to operate.

Notice:



A 3 minute waiting time will be required for the thermostat to start its operation after installation, if Cool mode was chosen.

The waiting time will not be required if Heat mode was chosen.























MANUAL TEMPERATURE SETTING & INTERNAL SETTING ADJUSTMENT

#2

Press both  &  for 5 seconds to enter adjustment mode. Follow the flashing guide on the LCD to complete adjustment. The Content varies depending on the chosen operating mode.



2

Floor mode (Floor heating)-- Floor sensor commands Floor temperature controls heating.

1. Press  or  to select °C or °F
2. Press  for next adjustment, the "Hi Limit" default value. (System shuts off when temperature reaches HiLimit)
3. Press  or  to select the desired temperature for HiLimit .
4. Press again the  to choose desired "Lo Limit" default value. (Compulsory system activated when temperature reaches LO Limit)
5. Press  or  to select the desired temperature for "LoLimit".
6. Press  for next adjustment, the COMFORT  floor temperature setpoint.
7. Pressing  or  to choose the desired COMFORT floor temperature setpoint.
8. Press again the  button for next adjustment, the ECONOMY  floor temperature setpoint.
9. Press  or  to choose the desired ECONOMY floor temperature setpoint.
10. Press the  to choose the desired switching Differential (Hysteresis).
11. Press  or  to select desired switching differential (4 selections).
12. Once all adjustments are completed, press again the  button and start to operate.


















Reminder

Within Floor mode, COMFORT setpoint cannot be set above "Hi Limit", ECONOMY setpoint cannot be set lower than "Lo Limit".

Press both  &  for 5 seconds to enter adjustment mode. Follow the flashing guide on the LCD to complete adjustment. The Content varies depending on the chosen operating mode.

3



Room +Floor limitation mode (Floor heating)
Both Room sensor & Floor sensor joint command


1. Press  or  to select °C or °F
2. Press  for next adjustment, the COMFORT  room temperature setting.
3. Press  or  to select the desired temperature setpoint for COMFORT .
4. Press  for next adjustment, the ECONOMY  room temperature setting.
5. Press  or  to choose the desired ECONOMY room temperature setpoint.
6. Press again the  for next adjustment, the "Hi Limit" floor temperature limitation. (System shuts off when floor temperature reaches "Hi Limit")
7. Press  or  to choose the desired " floor temperature limitation setpoint for "Hi Limit".
8. Press the  to choose the desired switching differential (Hysteresis).
9. Press  or  to select the desired switching differential (5 selections).
10. Once all adjustment are completed, press again the  button and start to operate.

Reminder

Within Room+Floor-Limitation mode, COMFORT setpoint cannot be set above "Hi Limit".

Manual temperature setting

Users can conveniently increase or decrease temperature setpoint by pressing  or  buttons while the thermostat is operating.




The Symbol  shall appear on the LCD while thermostat is operating in Override mode.

This manual change of the temperature setpoint will not alter Comfort or Economy settings.

----- **SAVE THESE INSTRUCTIONS** -----
RESUME DEFAULT SETTINGS

Resume default settings

After this thermostat has been in operation for certain period time, If users wants to resume the default settings;

1. Press and hold the  button for 5 seconds.
2. On the LCD, the  will appear
3. Press the  button.
4. Thermostat has now resumed the default settings.



PROPOSED APPLICATIONS - ROOM (ZONE) THERMOSTAT

Following schematics display few useful application for use of this thermostat in room mode.

⚠ DANGER ⚠

Electric Shock Or Fire Hazard

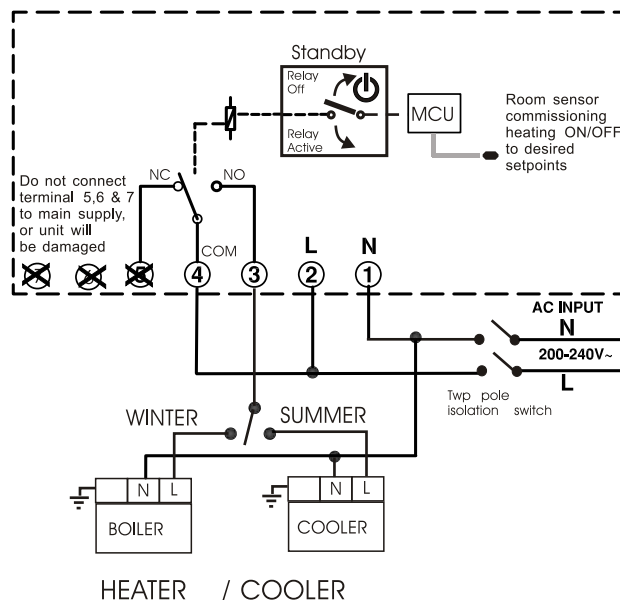
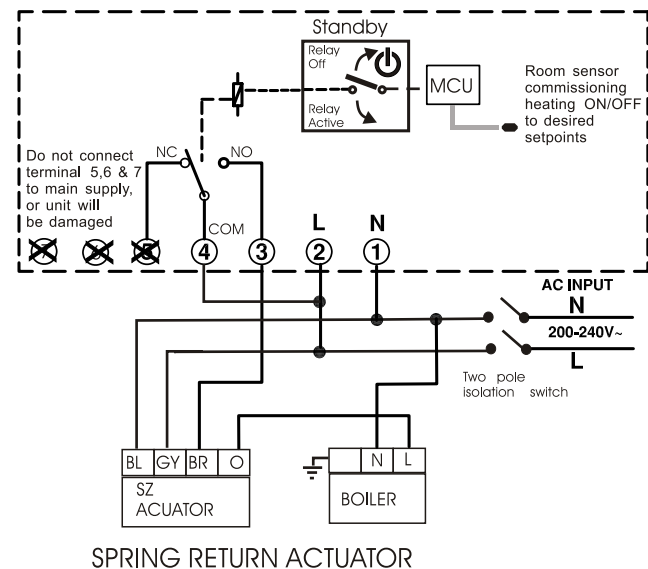
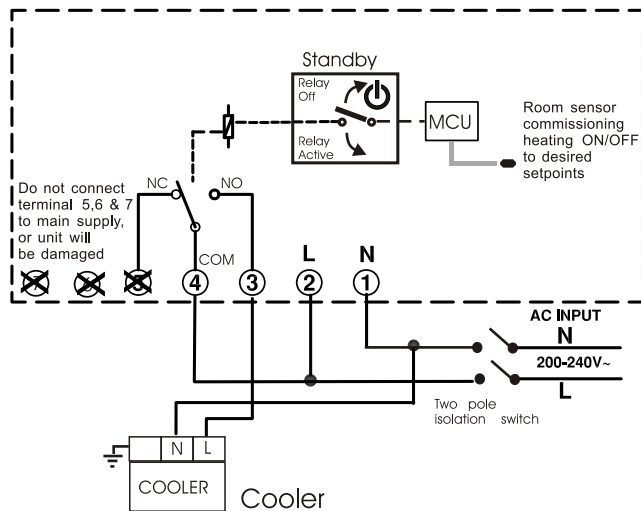
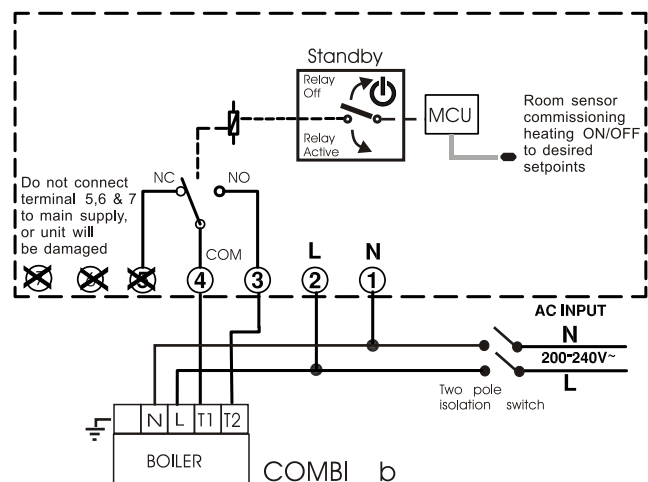
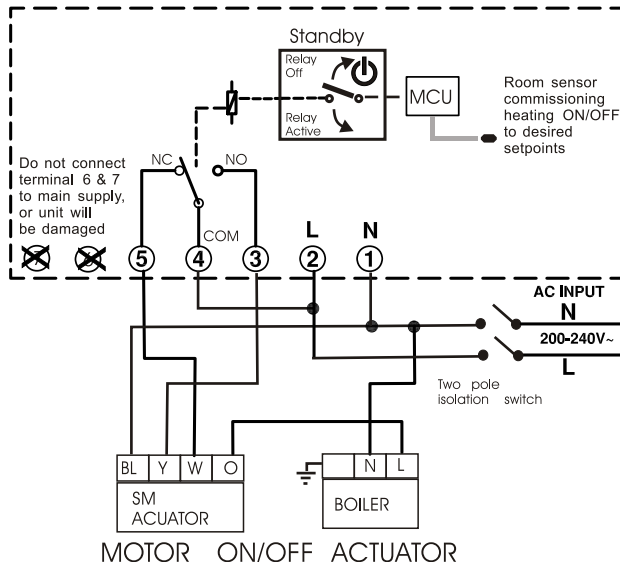
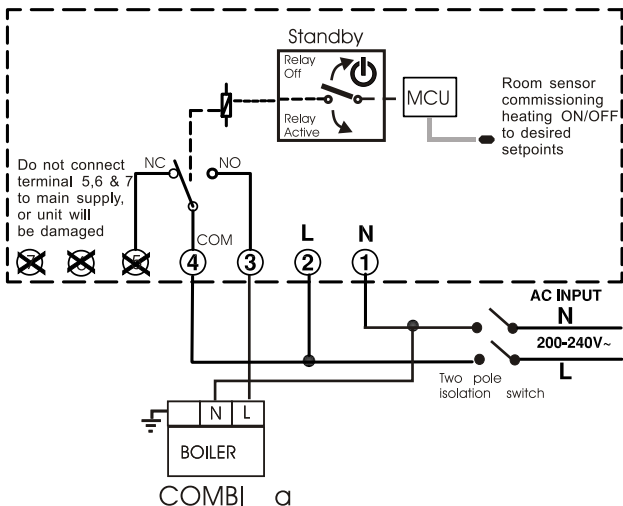
READ ALL WIRE SIZING, VOLTAGE REQUIREMENT AND SAFETY DATA AVOID PROPERTY DAMAGE AND PERSONAL INJURY

Disconnect the main before wiring

In this application, temperature control can only be by the Room sensor which is located inside the thermostat.

Be certain you have Read the Installation guide.

DO NOT connect floor-sensor cable, if you are using this unit for Room (zone) thermostat.



SAVE THESE INSTRUCTIONS

PROPOSED APPLICATIONS - FLOOR-HEATING THERMOSTAT

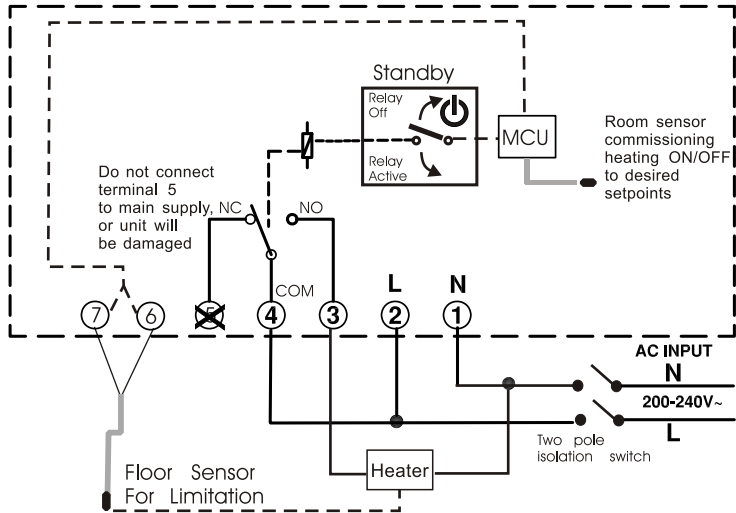
Following schematics display two separate application for use of this thermostat in Floor-heating



Electric Shock Or Fire Hazard

READ ALL WIRE SIZING, VOLTAGE REQUIREMENT
AND SAFETY
DATA AVOID PROPERTY DAMAGE AND PERSONAL
INJURY

Disconnect the main
before wiring

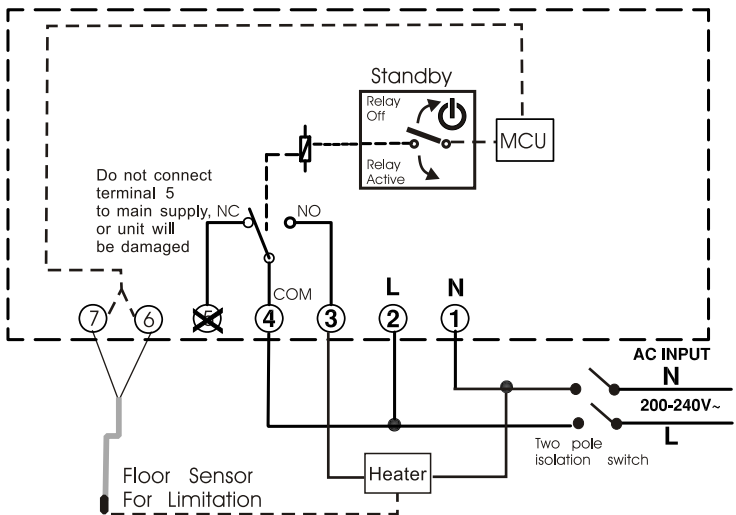


Room +Floor-Limitation mode

In this application,
temperature
control requires
both Room sensor
& floor sensor.

Be certain you have
Read the
Installation guide.

Be certain the
floor sensor cable
is being connected.



Floor mode

In this application,
temperature
control can only be
by the Floor sensor .

Be certain you have
read the Installation
guide.

Be certain you have
chosen correct
jumper position
on PCB
for this application