# HEAT PLUS INSTALLATION MANUAL (Soldering)







# 1. Preparation and floor cleaning

First of all, check all the construction materials and tools. Remove any protrusions on the installation location and wipe off dusts. If there is moisture on the floor, place a vinyl to prevent the growth of moisture.





### 2. Placing the insulation material

(Taping the joints and using the 3M bond to fix the floor if necessary)

Cut the insulation material to proper sizes and install them on the floor.

Cut the insulation material to fit the corners of your room. Use the OPP tape to connect the insulation materials.





# 3. Cutting the film

Cut the heat plus films to proper sizes on top of the insulation material.





# 4. 1st insulation works with electrical tapes on the copper wire

After cutting the film, place it on the floor. Place the film properly but make sure that they do not overlap with each other. And fix the both sides of the film with the OPP tape and Insulate the copper area of the cut area with electrical tapes





5. Secondary insulation on the cut film with insulation tapes

Insulate the entire cut area with line tapes.





# 6.Removing the coating from the copper area and 1st soldering

Once the insulation work is completed, use the OPP tape to fix the film while leaving the area to perform electrical works on. The area not taped with the OPP tapes should be moved back and then wiring works should be done. Solder the copper area after melting it with a soldering tool or cutting it off with a knife.





7. Insulating the soldered area with a butyl tape

Insulate the soldered area with a butyl tape.







# 8. Attaches an insulation tape on the both sides of the soldered area

On the soldered area that is insulated with a butyl tape, perform another insulation works with insulation tape. On the back side of the soldered area, perform the primary insulation works with electrical tapes and then perform the secondary insulation works with insulation tapes.





#### 9. Arranging wires

Arrange the wires nicely. If the wiring area is exposed, cut some insulation materials off with the same thickness as the wire and place them between the insulation materials. The cut insulation areas should be handled with the OPP tape to prevent moisture from rising up. Also, when cutting the wire, you must consider the location of a temperature controller.

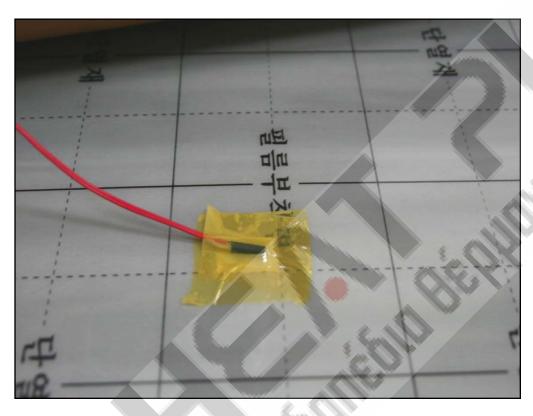




# 10. Calculating the power consumption

Add the total resistance of all the serially connected lines to yield the total power consumption. Normally, the max capacity of each controller is 4kW. So, you should not exceed 15M.

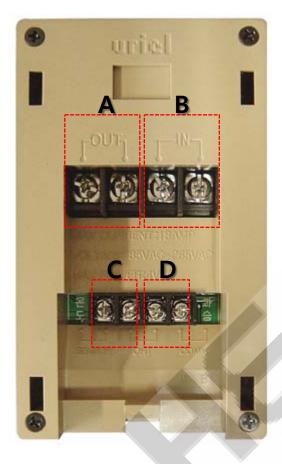




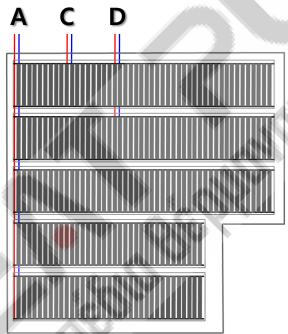
# 11. Attaching a temperature sensor

Place the sensor's detection area in the low middle area and fix it with a butyl tape. At this moment, cut the insulation material to prevent protrusions.









# 12. Connecting thermostat

2 wires from film to "A"2 electricity wire (power) to "B"Temperature sensor to "C"Overheating sensor to "D"





# 13.Test operation

After turning on the power, check if the circuit breaker works properly. Check if the temperature rises properly in the heat plus heating film.

