



## Broad Range Temperature Controller Model SF-800

### 1. Specifications

Front Panel Size	35mm x 77mm
Mounted Hole Size	28mm x 70mm (75mm deep)
Working Temperature	-10°C to 60°C
Display Range	-45°C to 99°C
Set Temperature Range	-45°C to 99°C
Relative Humidity	20% - 90% (non Condensing)
Power Supply	230-250VAC
Power Consumption	2 watts
Temperature Sensor	NTC, 1pc, 2 meter lead
Relay Contact Capacity	10A/250VAC
Probe Material	Stainless 304
Accuracy	±1°C

Table 1.0

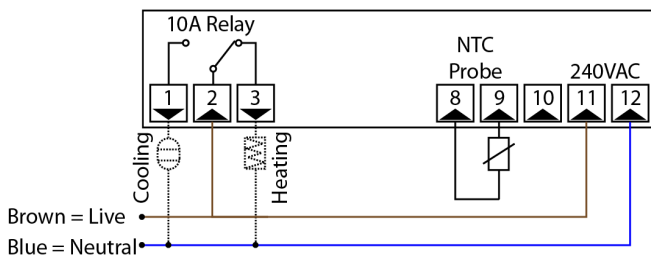
### 2. Installation

- Cut hole 28mm(high) x 70mm(wide) into panel where you wish to mount the controller. Avoid installing in places subject to strong vibrations, corrosive substances, or humidity. Let air circulate around the cooling vents. Ensure that wires for probe, power supply, and other connected devices are separated and do not cross or intertwine.
- Push the controller into the hole and attach the bracket to the rear of the controller pushing it firmly against the mounting panel.

### CAUTION !!

Before Wiring, please make sure that power is switched off.

**WARNING:** Installation should only be undertaken by a qualified electrician.



- Connect the NTC temperature probe to terminals 8 and 9 at the back of the controller. There is no polarity for the probe.
- Connect a 240VAC power source to terminals 11(Live – most likely brown) and 12(Neutral – most likely blue wire).
- Cooling Instructions**  
If you are using this temperature controller for cooling, connect your cooling device (fridge,

compressor etc.) to terminals 1(Neutral) and 2(Live).

### Heating Instructions

If you are using this temperature controller for heating, connect your heating device to terminals 3(Neutral) and terminal 2(Live).

Connect your main power supply (240VAC) to terminals 11 and 12.

### 3. Changing the Set Point

- Press the SET button and the display will start to flash and show the existing set point.
- Use the up and down arrow to change the set point.
- Leave the controller for 5 seconds and it will return back to the home screen.

### 4. Changing the Function Settings

The temperature controller has a number of different function settings that you can change to suit your particular purpose. There are 5 main functions that you have access to which are numbered from E1 to E5. If you chose not to make any changes, the default settings shown in the “Table 2.0” will be pre-set.

If you would like to make changes to the default function settings. Follow these instructions.

- Hold down SET key until E1 appears (approx 5 seconds) on the display.
- Keep pressing the SET key until you get to the function that you are wanting to change (ie E1, E2, E3...) Press the up or down key to alter the particular function setting.
- Once you finish just changing the function settings you can either press SET key again to change other function settings or just leave the controller for 5 seconds and it will return back to the home screen.

Function	Set Range	Default	
E1	Lowest Temp. Limit	≥ -45°C	-30°C
E2	Highest Temp. Limit	≤ 99°C	30°C
E3	Temp. Differential	1 ~ 20°C	3°C
E4	Compressor Delay Time	0-10min	2 min
E5	Temperature Calibration	-10°C ~ +10°C	0

Table 2.0

### 5. Error Messages

LL – Temperature probe open circuit.  
 EE – Internal memory failure.