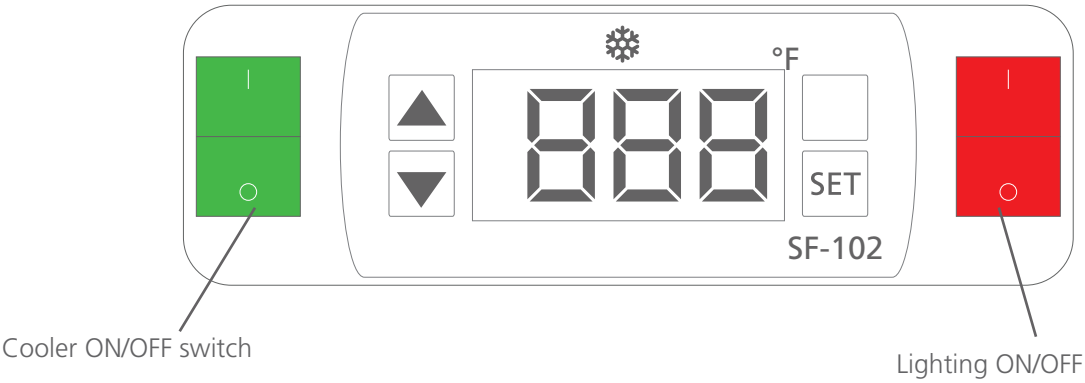
SF-102
DIGITAL TEMPERATURE CONTROL



PANEL OPERATIONS

1. Set temperature (compressor stop temperature) adjustment
   - Press **SET** button, the set temperature is displayed.
   - Press ▲ or ▼ to modify and store the displayed value.
   - Press **SET** button to exit the adjustment and display the unit interior temperature.
   - If idle for for 10 or more seconds, the unit interior temperature will be displayed.

2. Parameter setup
   - Press **SET** button and hold for 6 seconds to enter the parameter setup mode while E1 flashes.
   - Press **SET** button again to toggle through the parameters (see table below).
   - Press ▲ or ▼ buttons, the value will be displayed and can be modified and stored.
   - If idle for 10 seconds the unit interior temperature will be displayed.

PARAMETER	FUNCTION	SET RANGE	DEFAULT
S	Set Point	33 to 41 °F	35 °F
E1	Lower set point limit	33 °F	33 °F
E2	Raise set point limit	Set Temperature 41 °F	41 °F
E3	Temperature Hysteresis	1 to ~18 °F	3 °F
E4	Comp. start delay time	0 ~ 10 min	4 min
E5	Offset on room temp.	-5 ~ 5 °F	0
E6	Offset on evap. temp.	-5 ~ 5 °F	0
F1	Max. frost duration	1 ~ 60 min	10 min
F2	Defrost interval time	0 ~ 24 hr	2 hr
F3	Defrost termination temp.	32~68 °F	46 °F
F4	Display during defrost	0=Norm. disp., 1=Last value before defrost	1
C1	Temperature unit	0 = °F , 1 = °F	°F

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FUNCTION DETAILS

1. Temperature control
   - After the delay time, the compressor starts operating when cold room temperature is ≥ (set temp. + Hysteresis), and will be off when interior unit temperature is ≤ set temp.

   - To protect the compressor, it cannot re-start unless the time when the compressor stops is longer than the delay time (Parameter E4).

2. Abnormal work mode:
   - When room sensor is short-circuited or overheated (more than 120°F) "HH" is displayed. When the room sensor is open-circuited or temperature is too low (less than -40°F) "LL" is displayed. At that time the compressor operates automatically by the cycle of 10 minutes on and 5 minutes off.

NOTES FOR INSTALLATION

- The sensor cable leads must be kept seperate from main voltage wires in order to avoid high frquency noise. Seperate the power supply of the loads from the power supply of the controller.

- When the installing the sensor should be placed with the head upward and the wire downward; the evaporator sensor must be installed between the fins of the evaporator in the area where ice is the thickest.

- Don't Place the evaporator probe near the electrical heater.

- In case of long-distance probe installation from the controller, the probe cable may be prolonged up to 100m max. without any re-calibration.

- The temperature controller can not be installed in the area with water drops.

CIRCUIT DIAGRAM