



Carel IR33S Electronic Thermostat Instructions



The Carel IR33 is a very dependable and versatile electronic temperature controller that is well suited for use with DC marine refrigeration and freezer systems. It has an accurate and easy to read LED display of the box temperature. It will operate out of the box as a refrigeration control programmed to display temperature in °C and with a defrost timer that will stop the compressor for 30 minutes every 8 hours. It also has many features that can be programmed for other applications but for most DC refrigeration applications it is best to stick to the basic functions described in this condensed set of instructions.

-  This symbol on the upper left of the display indicates when the thermostat "run" relay is closed and the compressor is running.
-  This symbol will appear on the left of the display when the defrost timer is active 30 minutes every 8 hours – (does not appear if defrost is defeated)

(1) To change temperature set point:

- Press & hold "SET" for 2 seconds until a flashing number appears in display, then release "SET". The flashing number is the present temperature set point.
- Press "UP" or "DOWN" arrows to the desired temperature set point. Suggested starting set points are 40.0°F (4.4°C) for a refrigerator & 10.0°F (-12.2°C) for a freezer.
- Press "SET" to return to temperature display.

Allow sufficient time for the system to settle down between making adjustments.

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Carel IR33S Factory Default Settings

The Carel IR33S thermostat comes set up as a refrigeration thermostat, in degrees Celsius, with 30- minute defrost period every 8 hours.

The following step by step instructions can be used to:

(1) To change display from Celsius to Fahrenheit:

- Press "PRG/mute" & "SET" together & hold down for 5 seconds until "0" flashes.
- Press "UP" arrow until display reads "22".
- Press "SET", "/2" appears in display.
- Press "UP" arrow until "/5" appears on display.
- Press "SET", "0" appears on display.
- Press "UP" arrow until "1" appears on display.
- Press "SET", "/5" appears on display.
- Hold "PRG/mute" for 5 seconds to save this change.

The display will now read in degrees Fahrenheit.

(2) To disable the defrost timer:

- Press & hold "PRG/mute" for 5 seconds until "St" appears on the display.
- Press "UP" arrow until you see "d1" (5 times)
- Press "SET" and you will see the number 8.
- Press "DOWN" arrow until you see "0"
- Press "SET" and you will see "d1" on the display
- Hold "PRG/mute" for 5 seconds to save this change.

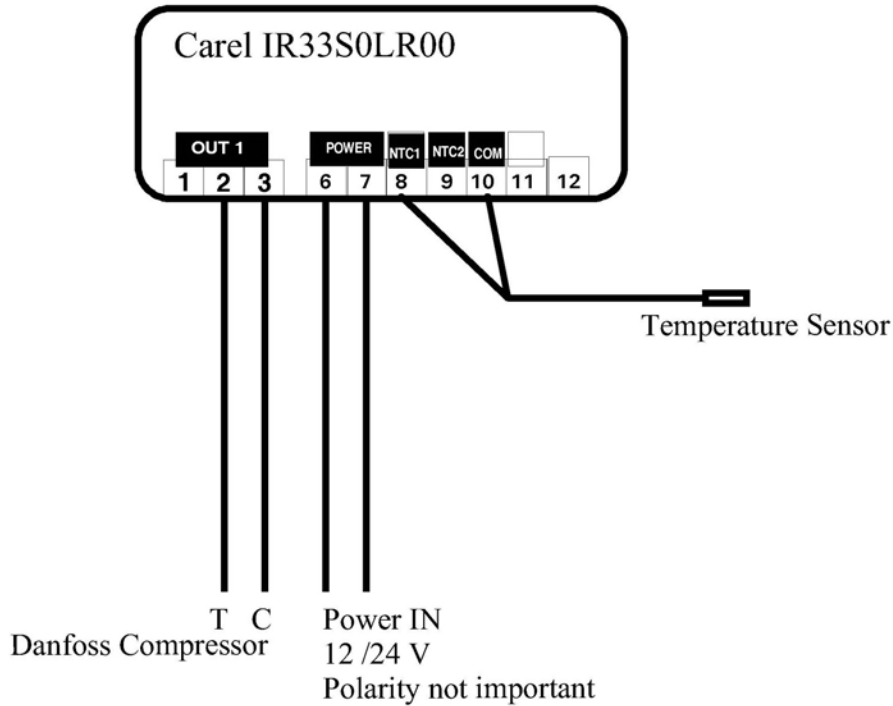
Defrost timer will now be disabled.

(3) General Reset - If a programming error is made a General Reset will return all the settings to the factory defaults.

- Turn power off to thermostat.
- Restore power while holding down the "PRG/mute" button.

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Installation –Wiring Diagram



Wiring

- Power supply, normally the same as the compressor power supply, is connected to terminals 6 & 7. Polarity is not important 18 gauge wire may be used. The power supply must be protected by a breaker or a fuse.
- The sensor wires are connected to terminals 8 & 10. Polarity is not important.
- Thermostat terminals 2 & 3 connect to terminals "C" & "T" on the compressor controller.

Thermostat Sensor mounting

The sensor must be mounted in the refrigerated cabinet so that it senses the average air temperature. It does not attach to the evaporator like a mechanical thermostat. It is best installed at mid height, on a wall or divider that does not have the evaporator mounted on it.