

INSTALLATION INSTRUCTIONS

TD3 Case Display (P/N 810-2210)

Introduction

The TD3 is a LonWorks Echelon based refrigeration case display that uses three inputs to monitor discharge air temperature, product probe temperature, and a defrost termination sensor, which can be either a temperature or digital sensor. The TD3 sends information to an Einstein controller (P/N 830-1000) via the Echelon Network. The Einstein can then change refrigeration settings according to the input data.

Installation

The TD3 is designed to be mounted upwardly on the face of a refrigeration display case. Since the unit is sealed, all that is needed for installation is a 3/4" hole for the wiring harness and two pilot holes (1/8") for #6 mounting screws. On the back of the unit is a wiring sleeve that is designed to keep moisture from entering the display case through the wiring hole.

For programming purposes, be sure that **before mounting** the unit that you either remove the Echelon address sticker on the back of the unit or save a copy of it.

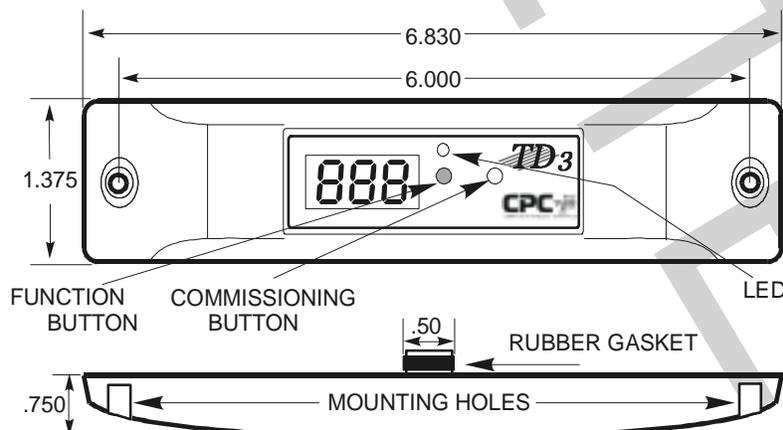
Wiring

There are five sets of wires that come from the back of the unit. These are to supply power, connect the unit to the network, and to connect the unit to up to three sensors.

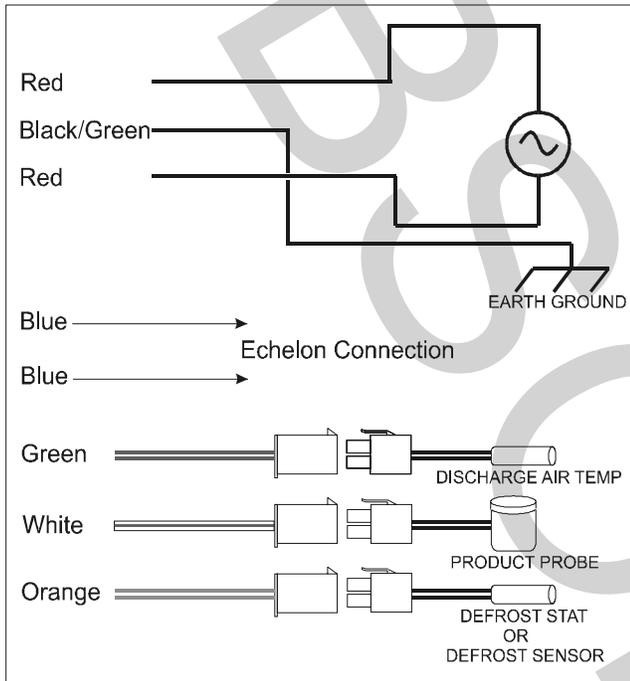
The unit requires power supplied by the standard CPC 24VAC transformer (P/N 640-0041). This transformer is rated at 50VA and can handle up to five TD3s.

Connect the Red leads for power and the Green/Black wire to earth ground.

Connect the two Blue network wires to the Echelon trunk line connecting other TD3s to the Einstein controller. Consult the **Einstein RX Refrigeration Controller User's Guide**, P/N 026-1601 for Echelon wiring lengths and restrictions.



The three sets of wires with connector ends are for connecting sensors to the unit. The Green pair is for a standard discharge air temperature sensor (P/N 501-1121). The White pair is for a product probe sensor (P/N 508-9000). The Orange pair is for either an analog or digital defrost termination sensor. All of these sensors are supplied by CPC and come fitted with compatible connector ends.



Wiring Diagram

Programming

Programming the unit is as simple as setting up the Einstein controller to read the unique Echelon address (see **Einstein RX Refrigeration Controller User's Guide**, P/N 026-1601) and commissioning the TD3 by pressing the Commissioning Button.

If the unit can not be commissioned at the TD3 (for instance, if the TD3 is far from the Einstein, or if you are programming alone) the Einstein controller can accept the unique Echelon address number typed in. The address number is located on the back of the unit. Make sure to either remove the address sticker or make a copy of it before mounting the unit.

For more details on how to program the TD3, see **Einstein RX Refrigeration Controller User's Guide**, P/N 026-1601.

Operation

The numeric display of the TD3 has five features:

- The TD3 by default displays discharge air temperature.
- Press the function button once (“Pr” will flash for one second) and the temperature value for the product probe is displayed. This value will be displayed for ten seconds and then go back to display the discharge air temperature.
- Press the function button again (within ten seconds of the first press) and “dF” will flash for one second. Then either the defrost termination temperature (for an analog sensor) or the defrost or the defrost status (for a digital sensor, open, closed) will be displayed. Again, after ten seconds the display will go back to discharge air temperature.
- Press the function button one more time and either “°C” or “°F” will flash, and then the discharge air temperature will display again.
- When the case is in defrost mode, “dEF” will be displayed.
- If a sensor failure is detected, or a sensor is absent from and input, “—” will be displayed for that particular sensor mode.

Status LED

The LED on the front of the TD3 is a status light that is controlled by the Einstein. If the status light is green, conditions are normal. A red status light indicates an alarm condition. The TD3 sends information from the connected sensors to the Einstein controller and the Einstein compares the data to alarm parameters that have been programmed in the Einstein (see **Einstein RX Refrigeration Controller User's Guide**, P/N 026-1601).