

DTC-40

Single Point Thermostat device with 30mA Ground Fault Protection



DESCRIPTION

The DTC-40 is a low-cost single circuit thermostat with 30mA GFPE monitoring and load switching capabilities. It provides an economical solution to ground fault requirements for a single freeze protection circuit.

The DTC-40 is factory preset at 40°F for ambient sensing or pipeline temperature. A Low Temperature Alarm function is available via jumper pin for pipeline sensing and is factory set at 35°F. You can activate the system for testing by placing the temperature sensor in ice water or by temporarily connecting the supplied resistor across the sensor terminals.

The device is in-line and will control a 120, 208, 240 or 277 VAC circuit. The device is capable of controlling up to a 40 amp circuit. Dry alarm contacts are provided for ground fault, remote sensor damage, or low temperature.

Housed in a 9" x 6" x 5" polycarbonate NEMA 4X outdoor-rated enclosure, the DTC-40 contains a UL Listed Class 2 transformer, UL Recognized contactor, and a low voltage control board. It requires a remote sensor for activation, and has a 3°F differential. Once temperature is sensed falling past 40°F, it will activate and stay activated until the temperature reaches 43°F. This helps eliminate short cycling.

When used as an ambient thermostat, the low temperature alarm should be selected OFF.

To allow the placement of the DTC-40 indoors or in a more convenient location, the remote temperature sensor has a 72" two-conductor lead wire. The lead wire can also be lengthened in the field to connect to the DTC-40.

NOTE: Use 22 AWG minimum wire gauge for extending the sensor length up to 500 feet. Use shielded wire if RF or other electrical disturbances are of concern.

MONITORING & ALARM FEATURES

The cover of the DTC-40 has LED indicator lights for

- POWER
- SYSTEM ON
- ALARM

and pushbuttons for Ground Fault

- TEST
- RESET



APPLICATIONS

- Single circuit applications where Ground Fault and Freeze Protection are required
- Pipe Freeze Protection for unheated areas like garages or well pumps

APPROVALS

- UL Listed Class 2 Transformer
- UL Recognized contactor



WARNING: Risk of Electrical Shock. To avoid the risk of electrical shock disconnect all power sources to the control before opening control cover. More than one disconnect may be required to completely de-energize the control and equipment.

DTC-40 Technical Information

DTC-40 ELECTRICAL SPECIFICATIONS

Enclosure: NEMA 4X Polycarbonate
H/W/D: 9/6/5 Inches (24/15/10 cm)
Activation: Factory set at 40°F * (non-adjustable)
Low Temp Alarm: Preset at 35°F ** (non-adjustable)
Input Voltage: 120, 208, 240, or 277 VAC
Electrical Rating: 40 amps max.
Locations: Indoor or outdoor
Sensor: 6' Thermistor, field length extendable
Extension wire: 2-conductor 0-500' = #22AWG
Temperature differential: 3°F

Model Numbers: DTC-40-120 (120 VAC)
 DTC-40-208 (208 VAC)
 DTC-40-240 (240 VAC)
 DTC-40-277 (277 VAC)

Alarms: Low Temperature, Ground Fault, Temperature Sensor Fault
 2A Rated Dry Alarm Contacts (120 VAC Max) for remote alarm indication.

NOTE: Each DTC-40 includes a 10k resistor and instructions for activating the system for testing at an installation.

The DTC-40 comes with a 2 Year Warranty.

* **Activation temperature** can be factory set up to 150°F at no extra charge.
 ** **Low Temperature Alarm** can also be factory set at a temperature other than 35°F.
 For activation changes above 150°F, consult the Delta-Therm engineering department.
Example:
 Set Point: 70°F
 Low Temp Alarm: 60°F
 Voltage: 208
 Part Number: DTC-40/70-208
 Custom units will include labels indicating set point and low temperature alarm.



Does yours look like this?
 Note the load wires through the toroid coil (donut).

