

## PowerTrace etc1

### Electronic Temperature Control for Heat Trace Cable

#### DESCRIPTION

The PowerTrace etc1 control is a self-contained, single circuit, programmable, electronic line sensing thermostat with monitoring and load switching capabilities.

The control components are contained in a NEMA 4X enclosure with a three button key pad and LED display on the front panel door. The components include a solid state output rated up to 24 amps for use on a 30 amp circuit.

The PowerTrace etc1 control requires a single platinum 100-ohm, 3 wire resistance temperature detector (RTD). The RTD will attach directly to a pipe beneath the pipe insulation. When the temperature sensed is less than the setpoint of the control, the control will apply power to the heating cable.

The control monitors over or under temperature, low current, and 30mA ground fault status. It also includes a 0.5 amp 24-120 VAC electronic contact for remote monitoring that provides the following:

- Temperature and current alarms will cycle the contacts on and off during alarm conditions.
- Ground fault alarm will maintain the contacts in a closed condition, manual reset is required by authorized qualified personnel.

The 30mA GFPE function is a latching alarm. All other alarms are non-latching alarms that will reset when conditions return to set parameters.

#### APPLICATIONS

- Freeze Protection Pipe Tracing Systems
- Temperature Maintenance Pipe Tracing Systems

#### APPROVALS

- UL Listed as temperature indicating and regulating equipment (120, 208, and 240 VAC models).
- 277 VAC model is UL pending.
- Hazardous Locations
  - ♦ Class I, Div. 2
  - ♦ Groups A, B, C & D



PowerTrace etc1

#### MONITORING & ALARM FEATURES

- LED Digital Display on Panel Door:
  - ♦ pipe temperature
  - ♦ setpoint temperature
  - ♦ system status/alarm status
  - ♦ current
- Low and High Temperature Alarm
- Low Current Alarm
- 30mA GFPE Alarm
- TRIAC Alarm Contacts for Remote Monitoring with Building Automation System, or Visual/Audible Alarm.

#### PROGRAMMING FEATURES

- Simple Three Button Key Pad
- Low Current Alarm Disable for Short Cable Runs
- Internal Key Pad Lock-out
- Entered Values Remain If Power Is Removed

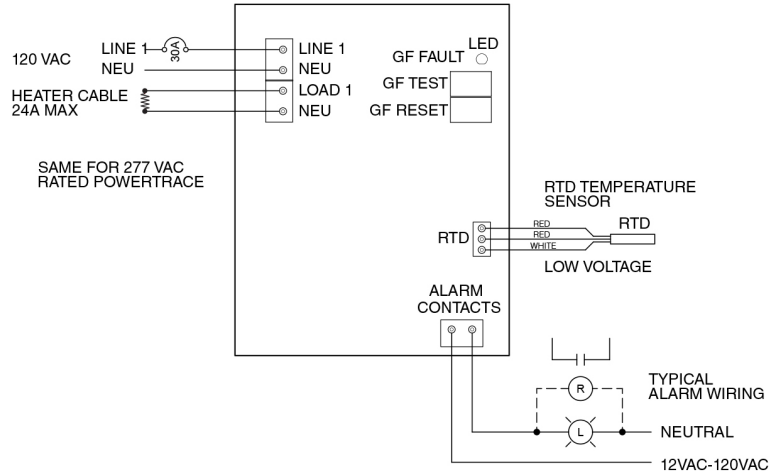
# PowerTrace etc1 Technical Information

## POWERTRACE etc1 ELECTRICAL SPECIFICATIONS

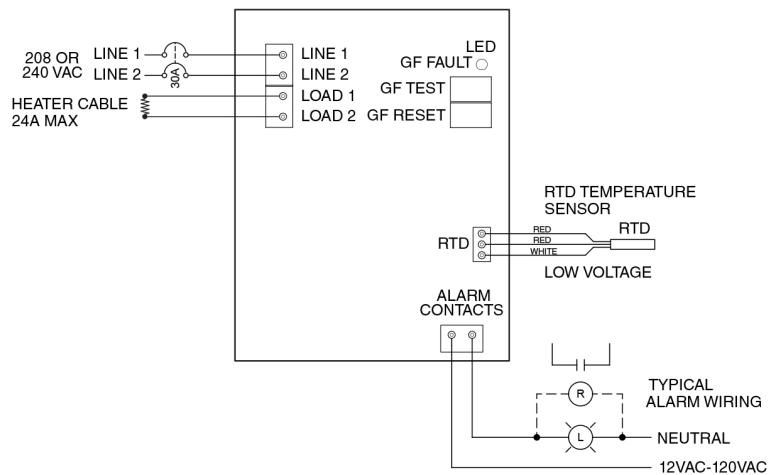
- Enclosure:** NEMA 4X FRP
- H/W/D:** 10/8/6 Inches  
(25/20/13 cm)
- Temperature Range:** 32°F to 200°F +/- 4°F  
201°F to 500°F +/- 3%  
501°F to 800°F +/- 5%
- Input Voltage:** 120, 208, 240, or 277 VAC
- Electrical Rating:** Single pole  
120 and 277 VAC @ 24 amps Dual  
pole 208 - 240 VAC @ 24 amps
- Exposure Limits:** The standard RTD is rated at  
400°F (204°C)
- \*Sensor:** One platinum 100-ohm, 3-wire  
RTD
- \*NOTE:** When maintaining temperatures  
above 400°F (204°C) or exposed  
to pipe temperatures exceeding  
400°F (204°C), Please contact  
Delta-Therm for an RTD stand-off  
hub.

### Model Numbers:

ETC-120	120 VAC
ETC-208/240	208 or 240 VAC
ETC-277	277 VAC



Detail 1. PowerTrace etc1 wiring diagram for 120 and 277 VAC models.



Detail 2. PowerTrace etc1 wiring diagram for 208 and 240 VAC models.

## RTD OPTIONS

Part Number	Description	
RTD-PWRT	platinum 100-ohm mini (0.25" x 1.00" ) 3-wire line sensing RTD, max. temperature rating of 400°F, 6' silicone rubber insulated cable lead, for ordinary and hazardous locations, includes cord grip connector.	included
RTD-PWRT-B	platinum 100-ohm baton style (0.125" x 4" ) 3-wire line sensing RTD, max. temperature rating 390°F, 6' PFA insulated cable lead, for ordinary and hazardous locations, includes cord grip connector.	optional
RTD-RA	platinum 100-ohm right angle 3-wire line sensing RTD, max. temperature rating of 392° F, aluminum screw cover head, for ordinary and hazardous locations	optional

**NOTE:** Avoid using 2-way radios/walkie-talkies within 15 feet of the ETC Controller. Usage may cause false alarms.