



The PT-SINGLE Heat-Trace Control is a single-point microprocessor-based heat-trace control thermostat. It is ideal for applications which require Ground-Fault Equipment Protection (GFEP). Ideal uses include freeze protection, hot water temperature maintenance, grease line trace, tank heating, and other temperature monitoring and control applications.

The PT-SINGLE Heat-Trace Control operates from the heater's power source. A universal power supply allows the PT-SINGLE to operate from 100 V ac to 277 V ac, and control a resistive load up to 30 A.

Adjustable Temperature Setpoint and Alarms

The temperature setpoint is adjustable from -99.9°F to 999°F (-73.3°C to 537.7°C) to a tenth degree resolution.

Sensor Inputs

The PT-SINGLE comes with a 100K ohm thermistor temperature sensor with a 20 ft. jacketed cable. The included sensor has an operating range of -40°F to 230°F (-40°C to 110°C). The PT-SINGLE can also use 2-, 3-, or 4-wire RTD sensors for systems requiring high-temperature sensing.

Precision Monitoring and Control

The PT-SINGLE monitors temperature, load current, and ground leakage current. Alarms include high temperature, low temperature, high load current, low load current, ground fault, sensor fault, internal fault, and power fail. These alarms are easy to adjust and observe from the front panel. The PT-SINGLE can be set to energize or de-energize the heaters during a sensor fault.

Ground-Fault Equipment Protection

The PT-SINGLE Heat-Trace Control includes integral GFEP. This eliminates the extra expenses associated with having to provide separate GFEP components in the circuit panel. The PT-SINGLE normally disconnects power immediately when ground fault current exceeds the set value. If it is set to Fire Protect mode, for critical fire protection systems, then it will generate the alarm but power will be maintained to prevent freezing.

Automatic GFEP Circuit Self-Test

To ensure continued safe operation, the PT-SINGLE performs a self-test of the GFEP circuit when power is first applied, along with a load ground fault test, and this repeats periodically thereafter at an adjustable interval.

For complete information describing its application, installation, and features, please contact Customer Service or check on the web at networketi.com.

Specifications

General

Certifications UL 60730-1, UL 1053, CSA E60730-1:13

Environmental

Area of use Nonhazardous locations
 Operating temperature range -40 °F to 131 °F (-40 °C to 55 °C)

Enclosure

Dimensions 8 1/8" (W) x 5 1/2" (H) x 4 3/8" (D)
 207 mm (W) x 140 mm (H) x 112 mm (D)
 Ingress protection NEMA 4X, IP66
 Cover attachment Polycarbonate cover, plastic screws
 Cable entries Two liquid-tight cable glands installed for sensor and alarm leads, cable diameter 0.08" to 0.24" (2 mm to 6 mm)
 One 1.046" hole to accommodate a 3/4" conduit fitting for power wiring connection
 Material Polycarbonate
 Weight 2.7 lb. (1.22 kg)
 Mounting Wall mount with flanges

Wiring Terminal Ratings

Power Barrier Strip Terminals for Line, Neutral, and Ground; use 10 AWG wires rated for at least 194 °F (90 °C)
 Sensors Terminal Block, rising cage clamp, 12-28 AWG leads
 Alarm relay Terminal Block, rising cage clamp, 12-28 AWG leads

Parameter Settings

Temperature setpoint heat ON Adjustable -99.9 °F to 999 °F (-73.3 °C to 537.7 °C)
 Default 38 °F (3.33 °C)
 Temperature setpoint heat OFF Adjustable -99.9 °F to 999 °F (-73.3 °C to 537.7 °C)
 Default 40 °F (4.44 °C)
 Low-temperature alarm threshold -99.9 °F to 999 °F (-73.3 °C to 537.7 °C)
 Default 35 °F (-1.7 °C) Disabled
 Low-temperature alarm delay 0 s to 3000 s
 Default 300 s
 High-temperature alarm threshold -99.9 °F to 999 °F (-73.3 °C to 537.7 °C)
 Default 140 °F (60 °C) Disabled
 High-temperature alarm delay 0 s to 3000 s
 Default 300 s
 Low-current alarm threshold 0.0 A to 10.0 A
 Default 0.1 A Enabled
 Low-current alarm delay 0 s to 300 s
 Default 5 s Enabled
 High-current alarm threshold 0.0 A to 55.0 A
 Default 30.0 A Disabled
 High-current alarm delay 0 s to 600 s
 Default 300 s
 Ground fault limit current 1.0 mA to 300.0 mA
 Default 30 mA
 Self-Test Interval 1 h to 250 h
 Default 24 h Enabled
 Temperature Unit °F or °C
 Default °F

User Interfaces

Pushbuttons UP, DOWN, ENTER, TEST / RESET BACK
 DIP switches RTD wiring configuration
 Panel lockout

Remote Interface

Alarm relay Isolated SPDT 1 AMP Class 2 contact

Indicators

Status indicator Power (Green)
 Heater (Yellow)
 Low Temperature (Blue)
 Summary alarm (Red)
 Display 2.7" OLED graphic 128x64
 Summary alarm relay reporting Low temperature
 High temperature
 Low load current
 High load current
 High ground fault current
 Stuck relay
 Sensor fault
 Internal fault

Control Ratings

Temperature accuracy +/- 2 °F (1 °C)

Temperature Sensors

Temperature inputs (Included) Thermistor: 100k ohms at 25 °C, range -40 °F to 230 °F (-40 °C to 110 °C), 20ft Lead (25076)
 RTD Sensor: Platinum, Alpha = 0.00385, ITS-90, 100 ohms at 0 °C
 Input supports 2-wire, 3-wire, or 4-wire connection
 Sensor operates at 1 mA

GFEP (Ground-Fault Equipment Protection)

Operation Continuously tests ground fault current whenever the load is on; also manually and periodically tests equipment ground fault current with each self-test.
 Range Adjustable 1 mA to 300 mA, Default 30 mA
 Automatic self-test Verifies GFEP functionality every 24 hr. and whenever the load is energized

Power

Supply voltage 100 - 277 V ac 50/60 Hz
 Controller power consumption 5 W maximum, 2 W idle
 Load rating 30 A, 100 - 277 V ac resistive

*Specifications are at 77 °F (25 °C) and are subject to change without notice.

Ordering Information

Description
PT-SINGLE Single-Point General Purpose Heat-Trace Control
Temperature Sensor

Limited Warranty

ETI's two year limited warranty covering defects in workmanship and materials applies. Contact Customer Service for complete warranty information.

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