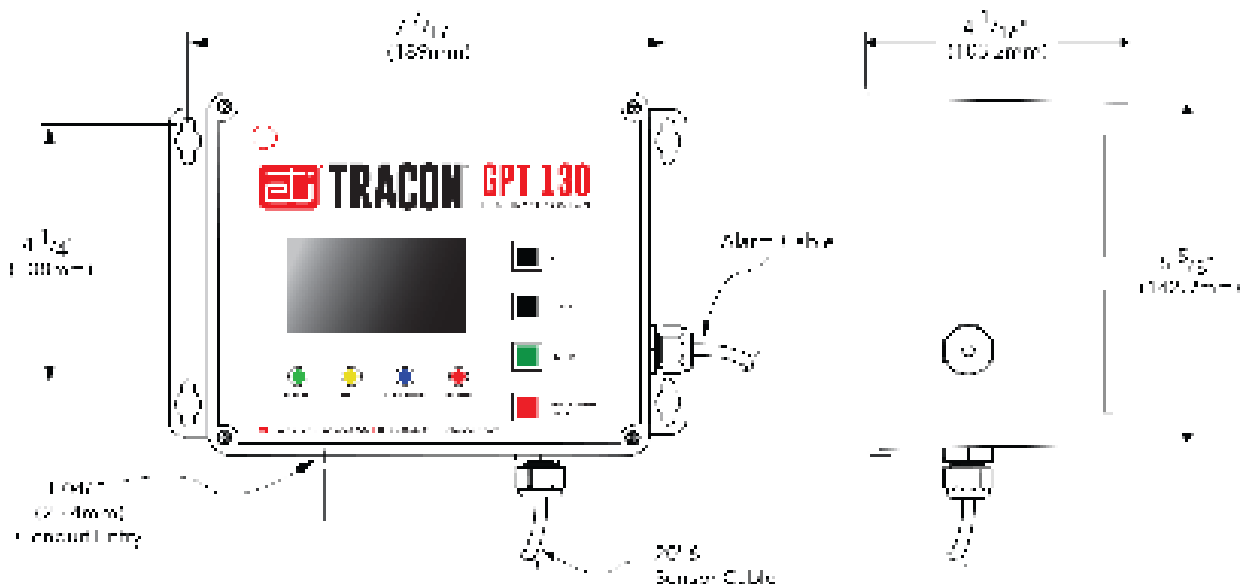# WarmlyYours

Pipe Freeze Protection Controller | PT–SINGLE

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.

Features

- Adjustable temperature setpoint allows precise control of a wide range of processes

- Can use an NEC Class 2 temperature sensor with up to 2,000 ft. cable for enhanced installation options

- Thermistor temperature sensor with 20 ft. cable included for applications of –40 °F to 230 °F (–40 °C to 110 °C)

- RTD input allows higher accuracy and extreme–temperature applications

- The unit can accommodate RTD sensors with 2–, 3–, or 4–wire configuration

- Temperature display for accurate adjusting and monitoring

- Load current display for accurate adjusting and monitoring

- Ground fault current display for accurate monitoring, protection, and alarm

- Adjustable alarm thresholds for excess ground fault current, load current, and temperature

- Alarms indicated with panel display and relay contact for remote signaling

- A Fault Mode setting which can be set to energize or de-energize the heaters during a sensor failure

- Fire Protection Mode maintains heater operation for use in critical fire protection systems

- Durable weather–resistant NEMA 4X IP66 enclosure permits indoor or outdoor installation

Specifications

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 ¾" 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
User Interfaces	
Pushbuttons	UP, DOWN, ENTER, TEST / RESET BACK
DIP Switches	RTD wiring configuration, Panel lockout
Parameter Settings	
Temperature Setpoint Heat ON	Adjustable –99.9 °F to 999 °F Adjustable –99.9 °F to 999 °F (–73.3 °C to 537.7 °C)
Temperature Setpoint Heat OFF	Adjustable –99.9 °F to 999 °F Adjustable –99.9 °F to 999 °F (–73.3 °C to 537.7 °C)
Low–Temperature Alarm Threshold	–99.9 °F to 999 °F (–73.3 °C to 537.7 °C) Default 35 °F (–1.7 °C)
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 100 °F (37.8 °C)
High–Temperature Alarm Delay	0 s to 3000 s Default 300 s
Low–Current Alarm Threshold	0.0 A to 10.0 A Default 1.0 A
Low–Current Alarm Delay	0 s to 300 s Default 5 s
High–Current Alarm Threshold	0.0 A to 55.0 A Default 30.0 A
High–Current Alarm Delay	0 s to 600 s Default 300 s
Ground Fault Limit Current	1.0 mA to 300.0 mA
Self–Test Interval	1 h to 250 h when enabled Default 24 h
Temperature Unit	°F or °C Default °F
Indicators	
Status Indicator	Power (Green), **Heater (Yellow), Low Temperature (Blue), Summary Alarm (Red)**
Display	2.7" OLED graphic 128×64
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 °CInput supports 2–wire, 3–wire, or 4–wire connection Sensor operates at 1 mA
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