



## FEATURES

- Calibrated control temperature setting
- Built-in GFEP with programmable automatic reset
- Continuous monitors either constant wattage or self-limiting heaters
- Automatic supply voltage selection
- Alarm relay with isolated contact
- Two-pole contactor up to 30 AMP heater loads
- C-UL-US Listed
- Simple to install and operate

## BENEFITS

- Automatic temperature control
- Reduced operating costs
- Enhanced safety
- Reduces system down-time

## DESCRIPTION

The patented and patent pending GPT-3 Freeze Protection Thermostat is engineered to fit in between electromechanical thermostats and high-end general purpose single and multiple channel temperature controls. It offers performance features that cannot be provided by simple electromechanical thermostats while providing lower cost and operational simplicity when compared to the high-end products. The GPT-3 is ideally suited for cost sensitive applications that would otherwise go unmonitored.

The computerized GPT-3 has a calibrated adjustment for setting the control temperature between 41° and 77°F (5° and 25°C). This range is ideal for freeze protection applications without being so wide that accidental maladjustment could prevent freeze protection.

GPT-3 features enhance heating system safety and reliability without sacrificing either operational simplicity or energy efficiency. For example, the GPT-3 monitors heating cables continuously so damage occurring during the summer months is alarmed when it happens rather than waiting until heat is needed. Both constant wattage and self-limiting heaters are accommodated.

The GFEP uses digital filtering to minimize false trips. Although preset for 30 mA, the GFEP can be set to trip on currents as high as 120 mA to avoid nuisance tripping on longer cable runs. The GPT-3 checks the GFEP for proper operation any time that it is tested or reset. The GFEP and



heater cable are both tested automatically every 24 hours for proper operation and freedom from ground leakage for an extra margin of safety.

Normally, the GFEP must be reset manually after being tripped. However, some critical service applications, such as fire sprinkler protection, consider a ground fault condition of secondary importance. The GPT-3 can be set to meet this requirement by resetting automatically.

The GPT-3 checks its control temperature sensor. Upon detecting a failure, it prevents heater operation. A second sensor checks the temperature at the far end of the cable when using a self limiting heater. Upon detecting sensor failure, the GPT-3 alarms the fact and continues heater operation.

The GPT-3 checks its contactor and alarms stuck or open contacts. A contactor failure causes uncontrolled heater operation.

The GPT-3 has features making it simple to install and easy to operate. It automatically selects operating voltages of 120, 208, 240 or 277 volts. The temperature sensors are NEC Class 2 devices that can be located up to 2,000' (610m) away from the GPT-3. The NEMA 3R rating provides location flexibility as does its -40° to +136°F (-40° to 58°C) operating temperature range. The nonmetallic enclosure features a lockable transparent cover which prevents tampering while displaying GPT-3 operational information for operational personnel.



## SPECIFICATIONS

### Control

Range: 41° to 77°F (5° to 25°C)  
Dead band: 2°F (1°C)

### Electrical

Supply: 120, 208, 240, or 277volts auto-selected  
Heater load: 30 amps maximum  
Alarm relay: Isolated SPDT 1 amp class 2 contact

### Indicators

Supply (green) Power applied  
Heater (yellow) Call for heat  
GFEP (red) Ground fault occurring or has occurred  
Fault (red) Contactor failure  
Temperature Sensor Failure  
Power-on self-check failure

### GFEP

Settings: 30 mA default, 60, 90, 120 mA selectable  
Reset: Manual default, automatic selectable  
Auto-test: Every 24 hours (estimated)

### Heater Monitoring

Choices: Self-limiting default, constant wattage selectable  
Alarm relay: No power  
Heater failure  
Contactor failure  
Ground fault or GFEP failure  
Temperature sensor failure

### Temperature limits

Operating: -40° to +136°F (-40° to 58°C)  
Storage: -67° to +167°F (-55° to 75°C)



Type 873  
Temperature Regulating Equipment

## ORDERING INFORMATION

### Order Number

19425  
19272

### Description

Model GPT-3 Freeze Protection Thermostat  
Ambient Temperature Sensor(s) (2 included)

## 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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