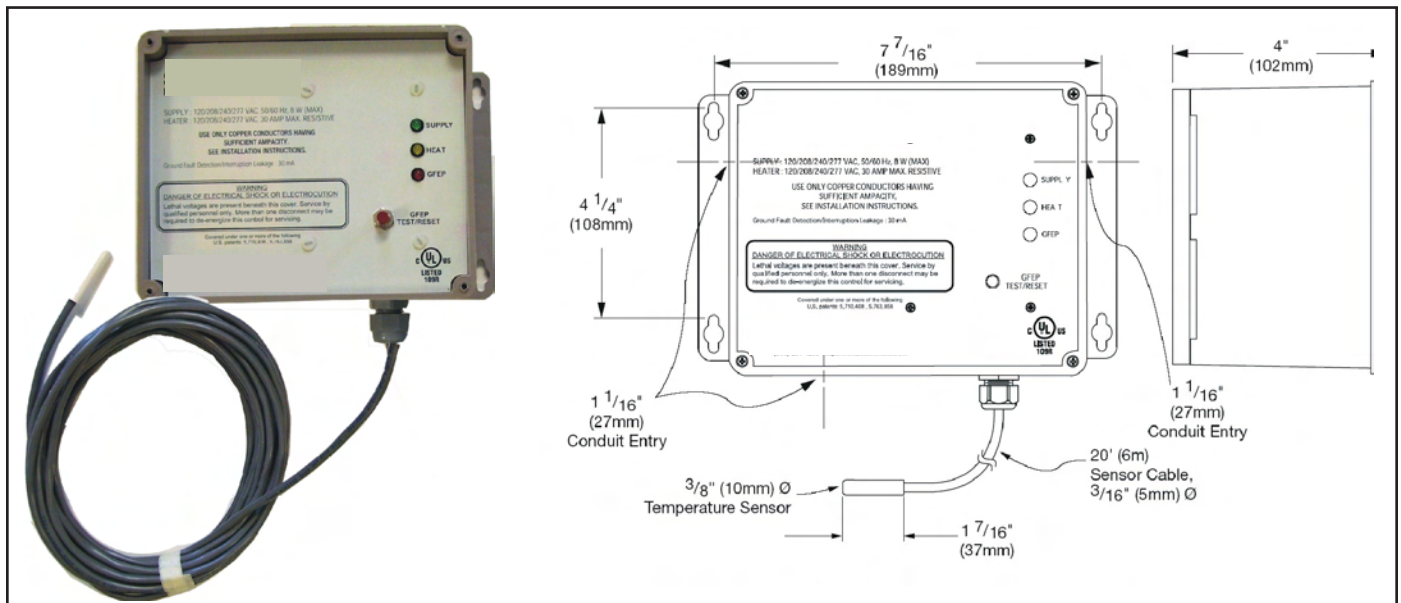


AMBIENT SENSING - Electronic Thermostat with Ground Fault Equipment Protection

FEATURES & BENEFITS

- Automatic freeze protection
- 40°F (4.4°C) set point
- Automatic supply voltage selection
- Two-pole contactor switches up to 30 AMP heater loads
- Integral 30 mA GFEP
- C-UL-US listed
- Simple to install and operate
- Alarm relay with isolated contact



DESCRIPTION

This C-UL-US listed Freeze Protection Thermostat replaces electromechanical thermostats in cost-sensitive applications requiring ground fault equipment protection (GFEP). It is listed by Underwriters Laboratories to Standard UL 873 for Temperature-Indicating and -Regulating Equipment.

The thermostat operates heaters at temperatures below 40°F (4.4°C) and turn them off above 42°F (5.5°C). The external temperature sensor (supplied) is a NEC Class 2 device rated for wet locations.

The thermostat features a built-in 30 mA GFEP that is digitally filtered to minimize false tripping. A ground fault must be manually reset with the TEST/RESET switch before heater operation can be resumed. The GFEP function is automatically tested along with the heaters whenever power is applied and once every 24 hours thereafter for additional safety.

The Freeze Protection Thermostat includes an alarm relay with an isolated SPDT 1 AMP contact. The alarm relay is reverse acting and is normally closed unless there is a ground fault condition, GFEP circuitry fails a test, or when there is a bad temperature sensor.

The thermostat operates from automatically selected operating voltages of 120, 208, 240 or 277 volts, single-phase. They control heater loads of up to 30 amps while consuming less than 2 watts when idling. They operate in non-hazardous environments in a temperature range extending from - 40° to 131°F (- 40° to 55°C). The rugged non-metallic enclosure is appropriate for installation in indoor or outdoor locations suitable for NEMA 4x applications.

SPECIFICATIONS

General

Area of use	Nonhazardous locations
Approvals	 Type 873 Temperature Regulating Equipment

Enclosure

Protection	NEMA 4x
Cover attachment	Polycarbonate cover, machine screws
Entries	1 × 3/4" entry (bottom right) for NEC Class 2 connections 3 × 1-1/16" entries (bottom left and left) for supply and load power
Material	Polycarbonate
Mounting	Wall mounted

Front Panel Interface

Status indicator	SUPPLY (green) power applied SUPPLY (green, flashing) bad thermistor HEAT (yellow) call for heat GFEP (red) ground fault condition GFEP (red, flashing) failed GFEP test GFEP (red, flashing, rapid) GFEP test in progress
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Remote Interface

Alarm relay	Isolated SPDT 1 AMP Class 2 contact
Summary alarms	No Power Ground Fault Condition GFEP function test failure Bad or missing Thermistor

Control

Supply voltage	120, 208, 240 or 277 volts, single phase (automatically selected)
Contact type	Two Form A DPST
Maximum ratings	Voltage: 277 VAC Current: 30 amps

Temperature Sensor

Set point	40°F (4.4°C)
Dead band	2°F (1°C)
Sensor type	Thermistor network
Circuit type	NEC Class 2

Ground Fault Equipment Protection (GFEP)

Set point	30 mA
Automatic self test	Mode A: Verifies GFEP function before contactors operate Mode B: Verifies GFEP function every 24 hours
Manual test/reset	TEST/RESET switch of front panel

Environmental

Operating temperature	-40°F to 130°F (-40°C to 55°C)
Storage temperature	-67°F to 167°F (-55°C to 75°C)

