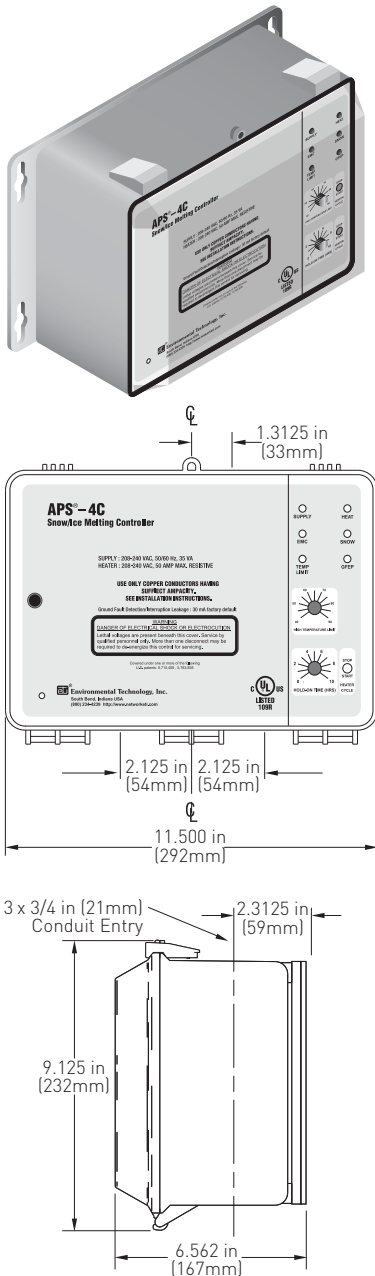



APS-4C
 SNOW MELTING AND GUTTER DE-ICING CONTROLLER

With ground-fault protection


PRODUCT OVERVIEW

The ETI® APS-4C snow melting and gutter de-icing controller with ground-fault protection, when used with one or more compatible sensors, automatically controls surface snow melting and roof and gutter de-icing heating cables for minimum energy costs. Applications include pavement, sidewalk, loading dock, roof, gutter, and down spout snow/ice melting in commercial and industrial environments.

The adjustable hold-on timer continues heater operation for up to 10 hours after snow stops to ensure complete melting. The optional RCU-4 Remote Control Unit can be located where system operation can be conveniently observed. It duplicates many of the APS-4C front panel functions.

The APS-4C provides advanced patented and patent pending ground-fault equipment protection (GFEP) as required by the national electrical codes. The GFEP automatically tests itself every time the contactors operate and once every 24 hours. The trip current can be set at 60 or 120 mA via a DIP an internal switch or retained at the 30 mA default value. As an aid to troubleshooting heating cable ground faults, the APS-4C provides an output that can indicate the ground current on a service person's portable DVM.

The calibrated 40°F to 90°F (4°C to 32°C) high limit thermostat prevents excessive temperatures when using constant wattage and MI heating cables. It also permits safe testing at outdoor temperatures too high for continuous heater operation. The temperature sensor is included.

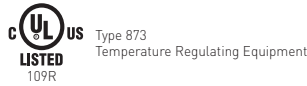
The APS-4C provides a complete interface for use in environments supervised by an energy management computer (EMC). This feature can also be used for general purpose remote control and annunciation.

All sensor and communications wiring is NEC Class 2. This simplifies installation while enhancing fire and shock safety. Multiple sensors provide superior performance by better matching the controller to site performance requirements. The APS-4C can interface up to six sensors.

The APS-4C is an exceptionally capable surface snow melting and roof and gutter de-icing controller. For complete information describing its application, installation and features, please contact your Pentair Thermal Management representative or visit our web site at www.pentairthermal.com.

GENERAL

Area of use Nonhazardous locations
 Approvals



ENCLOSURE

Protection NEMA 3R
 Cover attachment Hinged polycarbonate cover, lockable
 Entries One 1-1/16" entry (top) for NEC Class 2 connections
 Two 1-11/16" entries (bottom) for supply and load power, except 277 V single phase
 Two 1-1/16" entries (bottom) for supply and load power, 277 V single phase only
 Material Polycarbonate
 Mounting Wall mounted

CONTROL

Supply voltage APS-4C-208/240 V: 208–240 V 50/60 Hz 3-phase
 APS-4C-277 V: 277 V 50/60 Hz single phase
 APS-4C-277/480 V: 277/480 V 50/60 Hz 3-phase
 APS-4C-600 V: 600 V 50/60 Hz 3-phase
 Contact type 3 Form A
 Maximum ratings Voltage: 600 V
 Current: 50 A except 277 V single phase, 40 A for 277 V single phase
 Heater hold-on timer 0 to 10 hours; actuated by snow stopping or toggle switch
 System test Switch toggles the heater contact on and off. If temperature exceeds high limit, heater cycles to prevent damage.

GROUND-FAULT EQUIPMENT PROTECTION (GFEP)

Set point 30 mA (default); 60 mA and 120 mA selectable by DIP switch
 Automatic self-test Mode A: Verifies GFEP function before contactors operate
 Mode B: Verifies GFEP and heaters every 24 hours
 Manual test/reset Toggle switch provided for this function
 Maintenance facility DC output proportional to ground current provided for troubleshooting the heater system

SNOW/ICE SENSORS

Sensor input Up to 6 sensors: CIT-1, GIT-1, SIT-6E
 Circuit type NEC Class 2
 Lead length Up to 500 ft (152 m) using 18 AWG 3-wire jacketed cable
 Up to 2,000 ft (609 m) using 12 AWG 3-wire jacketed cable

HIGH LIMIT THERMOSTAT

Adjustment range 40°F to 90°F (4°C to 32°C)
 Dead band 1°F (0.6°C)
 Circuit type Thermistor
 Sensor interface NEC Class 2
 Lead length Up to 500 ft (152 m) using 18 AWG 2-wire jacketed cable
 Up to 1,000 ft (504 m) using 12 AWG 2-wire jacketed cable

ENERGY MANAGEMENT COMPUTER (EMC) INTERFACE

| | | |
|---------|--------------|----------------------------|
| Inputs | OVERRIDE ON | (10 mA dry switch contact) |
| | OVERRIDE OFF | (10 mA dry switch contact) |
| Outputs | SUPPLY | (10 mA dry switch contact) |
| | SNOW | (10 mA dry switch contact) |
| | HEAT | (10 mA dry switch contact) |
| | HIGH TEMP | (10 mA dry switch contact) |
| | REMOTE | (10 mA dry switch contact) |

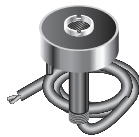


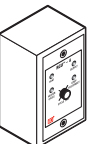
ENVIRONMENTAL

| | |
|-----------------------|--------------------------------|
| Operating temperature | -40°F to 160°F (-40°C to 71°C) |
| Storage temperature | -50°F to 180°F (-45°C to 82°C) |

ORDERING DETAILS

| Catalog number | Part number | Description |
|------------------|-------------|--|
| APS-4C-208/240V | P000000783 | APS-4C Snow melting and de-icing controller with ground-fault protection, 208-240 Vac 50/60 Hz three phase |
| APS-4C-277V | P000000784 | APS-4C Snow melting and de-icing controller with ground-fault protection, 277 Vac 50/60 Hz single phase |
| APS-4C-277V/480V | P000000785 | APS-4C Snow melting and de-icing controller with ground-fault protection, 277/480 Vac 50/60 Hz three phase |
| APS-4C-600V | P000000786 | APS-4C Snow melting and de-icing controller with ground-fault protection, 600 Vac 50/60 Hz three phase |

Snow/Ice Sensors

| | | | |
|---|--------|------------|-----------------------------|
|  | CIT-1 | 512289-000 | CIT-1 Snow sensor |
|  | GIT-1 | 126795-000 | GIT-1 Gutter sensor |
|  | SIT-6E | P000000112 | SIT-6E Pavement snow sensor |
|  | RCU-4 | P000000884 | RCU-4 Remote control unit |

LIMITED WARRANTY

ETI's two year limited warranty covering defects in workmanship and materials applies.