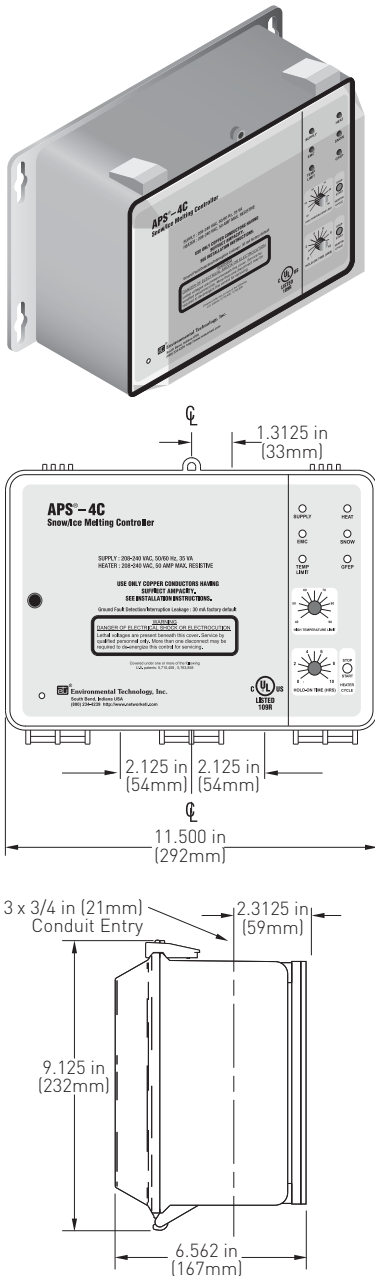



**APS-4C**  
 SNOW MELTING AND GUTTER DE-ICING CONTROLLER

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.

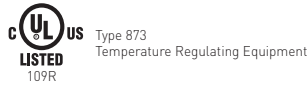
The APS-4C provides a complete interface for use in environments supervised by an energy management computer (EMC). This feature can also be used for general purpose remote control and annunciation.

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](http://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)

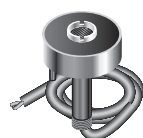
**ENVIRONMENTAL**

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**



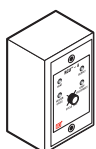
CIT-1 512289-000 CIT-1 Snow sensor



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.



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