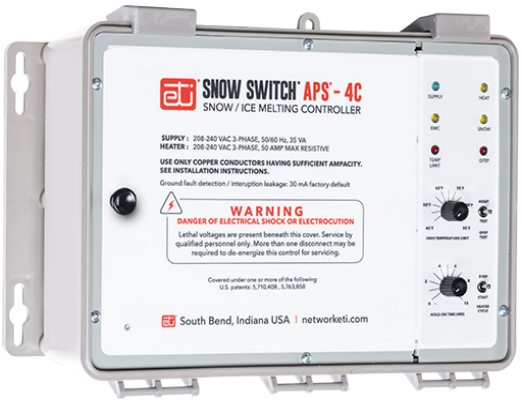


SNOW SWITCH MODEL APS-4C

AUTOMATIC SNOW/ICE MELTING SYSTEM CONTROL PANEL

FEATURES & BENEFITS

- Automatic snow/ice melting control
- Satellite contactor interface for larger systems
- Energy management computer (EMC) interface
- Accommodates MI, constant wattage and self-limiting heaters
- Multiple sensor capability
- Advanced patented and patent pending ground fault protection
- Heater hold-on and test capabilities
- C-UL-US
- Simple to install and operate
- Low system costs
- Minimum energy costs

DESCRIPTION

The APS–4C Snow Switch when used with one, or more, compatible sensors automatically controls snow/ice melting heaters for minimum energy costs. Applications include pavement, sidewalk, loading dock, roof, gutter and down spout snow /ice melting in commercial and industrial environments. The APS –4C is interchangeable with the earlier APS–4.

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–4 C front panel functions.

The APS–4 C provides advanced patented and patent pending round fault equipment protection (GFEP) as required by the USA and Canadian National Electric Codes. The GFEP automatically tests itself every time the heater contactors operate and once every 24 hours. The trip current can be set at 60 or 120mA via an internal switch or retained at the 30ma default value. As an aid to troubleshooting heater 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 heaters. It also permits safe testing at outdoor temperatures too high for continuous heater operation. The temperature sensor is included. The APS -4 C 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 are NEC Class 2. This simplifies installation while enhancing fi re and shock safety. The APS –4C can interface up to six sensors from the CIT–1 product family. Using more sensors provides superior performance by better matching the controller to site performance requirements.

The APS-4 C is an exceptionally capable deicing controller. For complete information describing its application, installation and features, please contact Customer Service or check on the web at www.networketi.com.

SPECIFICATIONS

GENERAL

Area of use	Non-hazardous locations
Approvals	c UL us LISTED 109R **Type 873** Temperature Regulating Equipment Also evaluated by Underwriters Laboratories Inc® in accordance with UL 1053 Ground-Fault Sensing and Relaying Equipment

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 277V single phase Two 1-1/16" entries (bottom) for supply and load power, 277 V single phase only
Material	Polycarbonate
Mounting	Wall mount
Dimensions	9.125" (L) x 11.500" (W) x 6.562" (H) 232mm (L) x 292mm (W) x 167mm (H)

CONTROL

Supply voltage	208-240 VAC, 35 VA, three phase 50/60 Hz 277 VAC, 45 VA, single phase 50/60 Hz 277/480 VAC, 45 VA, three phase 50/60 Hz 600 VAC, 50 VA, three phase 50/60 Hz
Load	208-240 VAC, 50 amp max. resistive 277 VAC, 40 amp max. resistive 277/480 VAC, 50 amp max. resistive 600 VAC, 50 amp max. resistive
Contact type	3 Form A
Weight	3 Pounds
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 heater contact on and off. If temperature exceeds optional high limit thermistor (45°F), heater shuts off to reduce costs and prevent damage.

FRONT PANEL INTERFACE

Status indicator	SUPPLY (green): Power on HEAT (yellow): Heating cycle in progress SNOW (yellow): Sensor(s) detect snow GFEP (red): Ground Fault condition GFEP (red, flashing): Failed GFEP (red, rapid flashing): GFEP test in progress

Communication Bus

Number of cascaded units	Unlimited
Contactor delay	5 second
Bus-wire type	3-wire jacketed cable
Circuit type	NEC Class 2
Lead length	Up to 500' (152m) using 18 AWG 3-wire jacketed cable Up to 2,000' (609m) using 12 AWG 3-wire jacketed cable

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

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)

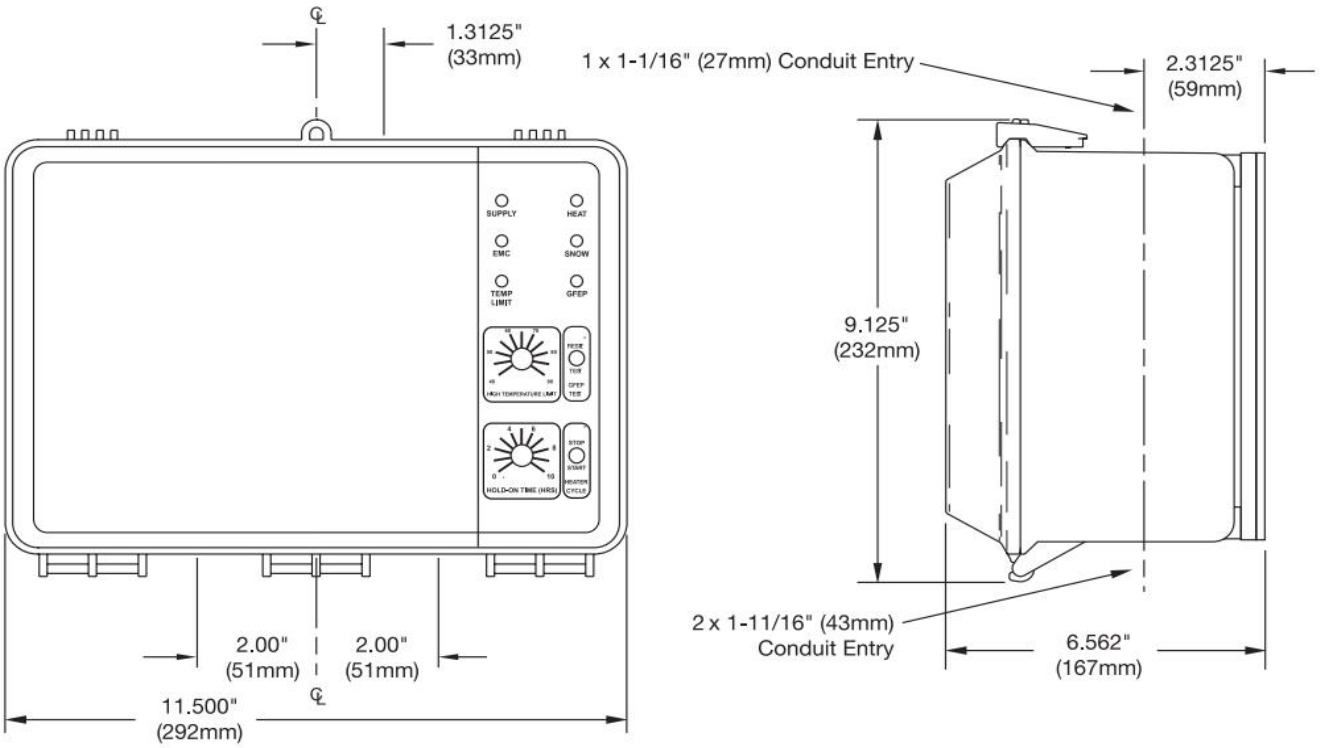
ORDERING INFORMATION

ORDER NUMBER	DESCRIPTION
22472	APS-4C, 208-240 VAC 50/60 Hz Three Phase
22473	APS-4C, 277 VAC 50/60 Hz Single Phase
22475	APS-4C, 277/480 VAC 50/60 Hz Three Phase
22476	APS-4C, 600 VAC 50/60 Hz Three Phase

ACCESSORIES

21358	RCU-4 Remote Control (Optional)
19272	High Temperature Sensor w/ 20' (6m) lead
22690	PTS-100 Embedded Temperature Sensor (Optional)

DIMENSIONAL DRAWINGS



CONTACTING CUSTOMER SERVICE

For assistance, contact Customer Service. Office hours are from 8:00 AM until 5:00 PM ET.

Email: info@networketi.com

Web: networketi.com

Mail: ETI
1850 North Sheridan Street
South Bend, IN 46628

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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