

## **SNOW SWITCH MODEL SC-40C** MODULAR SNOW/ICE HEATER CONTROL SYSTEM

### FEATURES & BENEFITS

- Automatic snow and ice melting control minimizes operating costs
- ETI PN 22477: 208-240 VAC, 50 amp max.resistive  
ETI PN 22478: 277 VAC, 40 amp max. resistive  
ETI PN 22480: 277/480, 50 amp max. resistive  
ETI PN 22481: 600 VAC, 50 amp max. resistive
- UL Listed for Temperature Regulating Equipment
- Adjustable Hold-On timer continues heater operation after snow and ice stop to ensure complete melting
- Automatic and manual-override operator controls for changing environmental conditions
- Optional remote control operation for added convenience
- Integral 30mA of Ground Fault Equipment Protection (GFEP) Weather-resistant NEMA 4X enclosure

### DESCRIPTION

The ETI SC-40C snow and ice melting satellite contactor answers the need for cost effective modular snow melting heater control. One or more SC-40Cs, when used with an APS-4C control panel acting as the master control, allow for modular snow melting system design. There is no limit to the number of SC-40Cs that can be inter-faced in a single system. This approach reduces front end design, hardware, and installation costs while providing a number of useful features that would be otherwise too expensive and complex to implement. The SC-40C provides Ground-Fault Equipment Protection (GFEP) as required by the national electrical codes. Upon sensing a ground-fault condition, the SC-40C inhibits operation of its contactor until manually reset. Circuits

without a ground fault continue to operate normally, thus partitioning defective heating cables.

The adjustable hold-on timer continues heater operation on each SC-40C for up to 10 hours after snow stops to ensure complete melting and to compensate for differences between zones. The optional RCU-4 remote control unit can be located where system operation can be conveniently observed. It duplicates many of the controls and indicators on the SC-40C front panel.

Each SC-40C provides a complete energy management computer (EMC) interface. This feature provides remote access for advanced applications requiring remote or zone control along with remote annunciation. Each SC-40C maintains communication to and from the APS-4C using a 3-wire cable.

Thus, the APS-4C alarms ground faults occurring anywhere in the system. This feature inserts a short time delay between the operation of each contactor, thus improving power quality by limiting the inrush current. The RCU-4 remote control unit supplied permits overriding zone control in applications requiring the capability.

## SPECIFICATIONS

### GENERAL

Area of use

Non-hazardous locations

Approvals



**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

SC-40C 208/240 V: 208-240 V 50/60 Hz 3-phase

SC-40C 277 V: 277 V 50/60 Hz single phase

SC-40C 277/480 V: 277/480 V 50/60 Hz 3-phase

SC-40C 600 V: 600 V 50/60 Hz 3-phase

Load

ETI PN 22477: 208-240 VAC, 50 amp max. resistive

ETI PN 22478: 277 VAC, 40 amp max. resistive

ETI PN 22480: 277/480, 50 amp max. resistive

ETI PN 22481: 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 1,000' (304m) 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

-50°F to 180°F (-45°C to 82°C)

Storage temperature

-40°F to 160°F (-40°C to 71°C)

## ORDERING INFORMATION

### ORDER NUMBER

### DESCRIPTION

22477

SC-40C Satellite Contactor, 208-240 VAC 50/60 Hz Three Phase

22478

SC-40C Satellite Contactor, 277 VAC 50/60 Hz Single Phase

22480

SC-40C Satellite Contactor, 277/480 VAC 50/60 Hz Three Phase

22481

SC-40C Satellite Contactor, 600 VAC 50/60 Hz Three Phase

### ACCESSORIES

21358

RCU-4 Remote Control

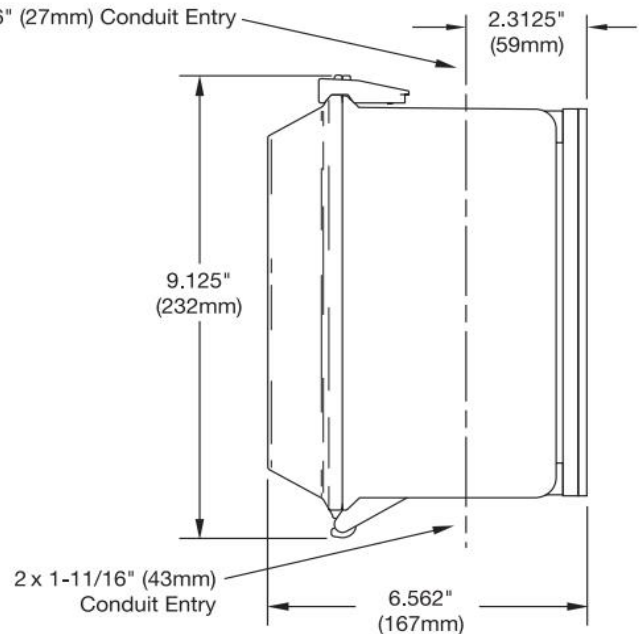
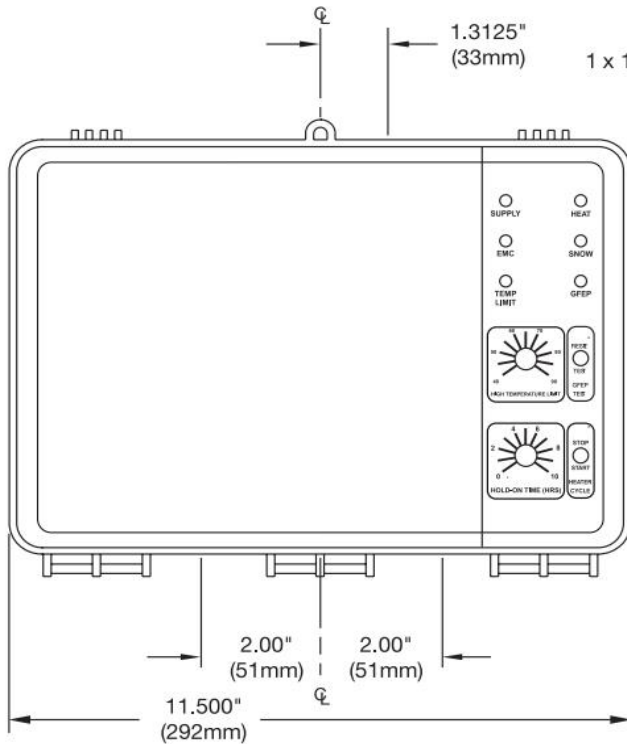
25076

Temperature Sensor w/ 20' (6m) lead PTS-

22690

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](mailto:info@networketi.com)

**Web:** [networketi.com](http://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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