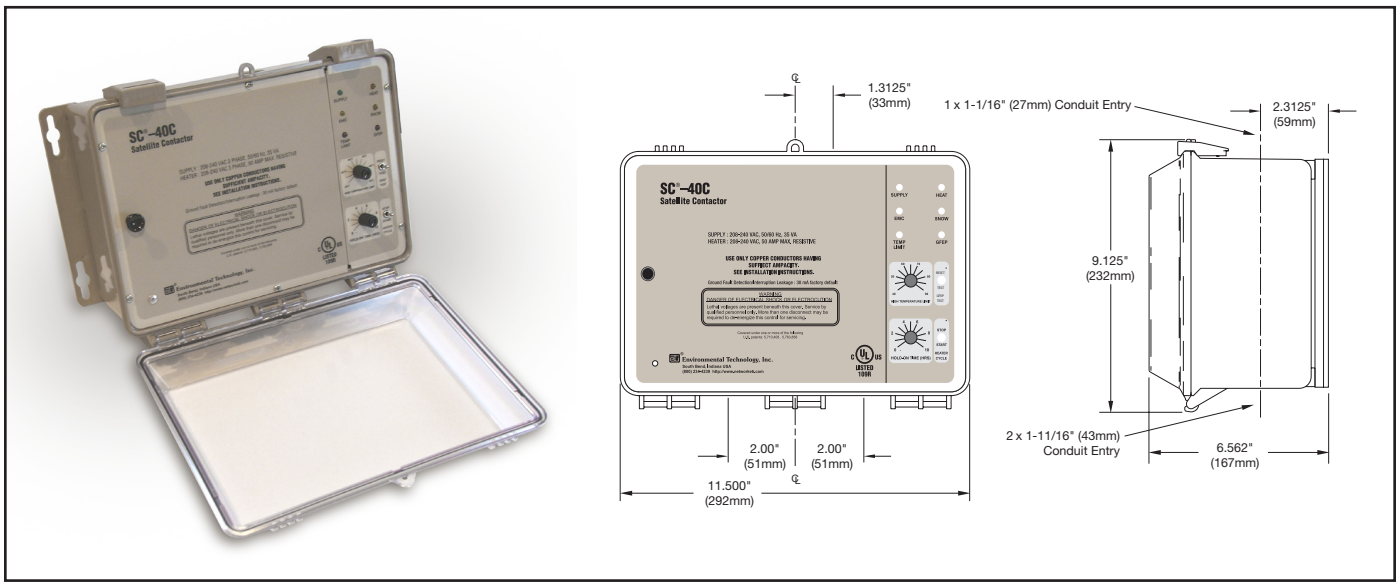
We Manage Heat ®

Modular Snow/Ice Heater Control System
MODEL SC™–40C SATELLITE CONTACTOR

DATA SHEET

FEATURES & BENEFITS

- Modular power control of automatic snow melting systems
- No system size limit
- Staged heater operation for high power quality
- Energy management computer (EMC) interface
- Accommodates MI, constant wattage and self-limiting heaters
- 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 SC–40C 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 interfaced 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 the same advanced patented and patent pending Ground Fault Equipment Protection (GFEP) as required by the USA and Canadian National Electric codes that is found on the APS–4C. Upon sensing a ground fault condition, an SC–40C inhibits operation of its contactor until manually reset. Circuits without a ground fault continue to operate normally thus partitioning defective heaters.

The adjustable hold-on timer can initiate heater operation on each SC–40C for up to 10 hours 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 communications to and from the APS–4C using a 3-wire cable. Thus, the APS–4C alarms ground faults occurring anywhere in the system. The SC–40C also 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.

The SC–40C is interchangeable with the earlier SC–40. 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	Nonhazardous locations
Approvals	c UL us LISTED 109R Type 873 Temperature Regulating Equipment

Enclosure

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

Communications 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

Control

Supply	ETI PN 22477: 208-240 VAC, 35 VA, three phase 50/60 Hz ETI PN 22478: 277 VAC, 45 VA, single phase 50/60 Hz ETI PN 22480: 277/480 VAC, 45 VA, three phase 50/60 Hz ETI PN 22481: 600 VAC, 50 VA, three phase 50/60 Hz
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 VAC, 50 amp max. resistive ETI PN 22481: 600 VAC, 50 amp max. resistive
Contact type	3 Form A
Maximum Ratings	Voltage: 600 VAC Current: 50 amps
Heater hold-on timer	0 to 10 hours; actuated by 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

Not Applicable

High Limit Thermostat

Adjustment range	40°F to 90°F (4°C to 32°C)
Dead band	1°F (0.6°C)
Sensor type	Thermistor network
Circuit type	NEC Class 2

Lead length	Up to 500' (152m) using 18 AWG 2-wire jacketed cable Up to 1,000' (304m) 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) ALARM (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 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 (Optional)
19272	High Temperature Sensor w/ 20' (6m) lead (Qty 1 included)
22690	PTS–100 Embedded Temperature Sensor (Optional)
Snow/Ice Sensors (Not Included)	
10001	CIT–1 Aerial Snow Sensor
11351	GIT–1 Gutter Ice Sensor
20756	SIT–6E Pavement Mounted Snow/Ice Sensor
Control Panels (Not Included)	
22472	APS–4C Control Panel, 208-240 VAC 50/60 Hz Three Phase
22473	APS–4C Control Panel, 277 VAC 50/60 Hz Single Phase
22475	APS–4C Control Panel, 277/480 VAC 50/60 Hz Three Phase
22476	APS–4C Control Panel, 600 VAC 50/60 Hz Three Phase

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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