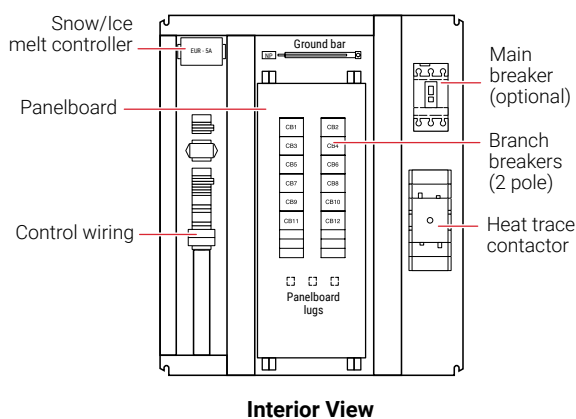
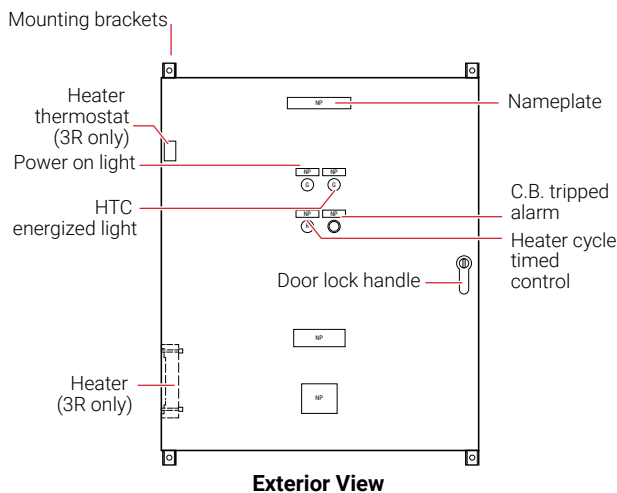


SNOW MELTING AND DE-ICING POWER DISTRIBUTION AND CONTROL PANEL FOR SINGLE-PHASE HEATING CABLES



PRODUCT OVERVIEW

The nVent RAYCHEM SMPG1 is a three-phase power distribution panel for single-phase heating cables that includes ground-fault protection, monitoring and control for snow melting or roof & gutter de-icing systems. The ETI® EUR-5A snow melting and gutter de-icing controller is included with the SMPG1. When used with one or more compatible sensors, the EUR-5A 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 calibrated 40°F to 90°F (4°C to 32°C) high limit slab sensor 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 EUR-5A 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 EUR-5A can interface up to six sensors.

For three-phase heating cable configurations, refer to the SMPG3 data sheet (H57814). For additional information on single-phase snow melting designs, contact your nVent representative.

SMPG1

Ambient operating temperature	Indoor installation (NEMA 1/12): Outdoor installation (NEMA 3R/4):	14°F (-10°C) to 122°F (50°C) -40°F (-40°C) to 122°F (50°C) (Includes space heater and thermostat)
Main contactor	3-pole 100 A or 200 A	
Main circuit breaker (optional)	Square D type HDL (15–150 A) 3-pole Square D type JDL (150–200 A) 3-pole	
Operating heating cable voltage	208 or 277 V, single phase	
Branch ground-fault breaker	Square D type QOB-EPD / EDB-EPD	
Circuit breaker rating	15–50 A	
Field wire size	#12–8 AWG (15–30 A C.B.), #8–2 AWG (40–50 A C.B.)	

APPROVALS

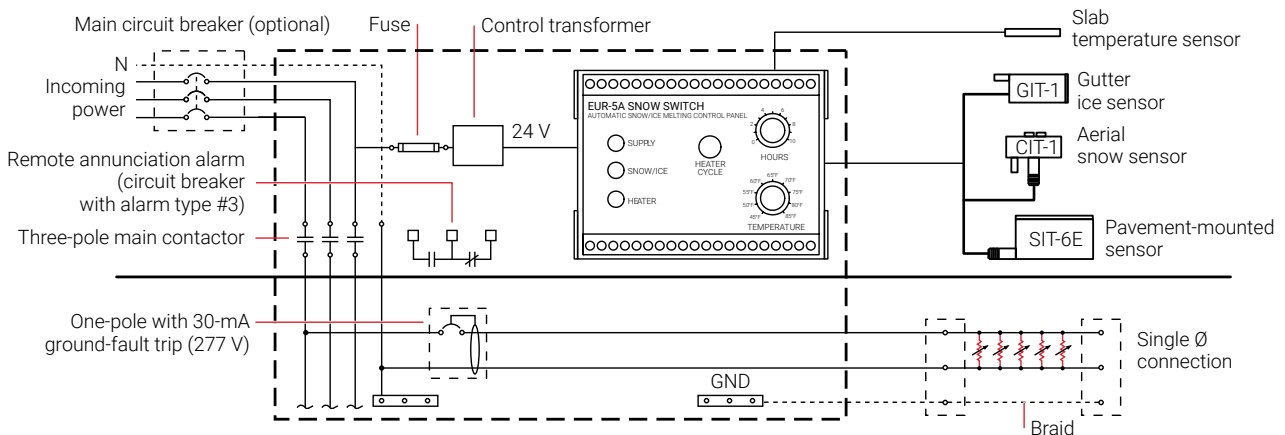


UL STD. 508A
CAN/CSA C22.2 NO. 14

GROUND-FAULT PROTECTION

To minimize the danger of fire from sustained electrical arcing if the heating cable is damaged or improperly installed, and to comply with the requirements of nVent, agency certifications, and national electrical codes, ground-fault equipment protection must be used on each heating cable branch circuit. Arcing may not be stopped by conventional circuit protection. Many RAYCHEM control and monitoring systems meet the ground-fault protection requirement.

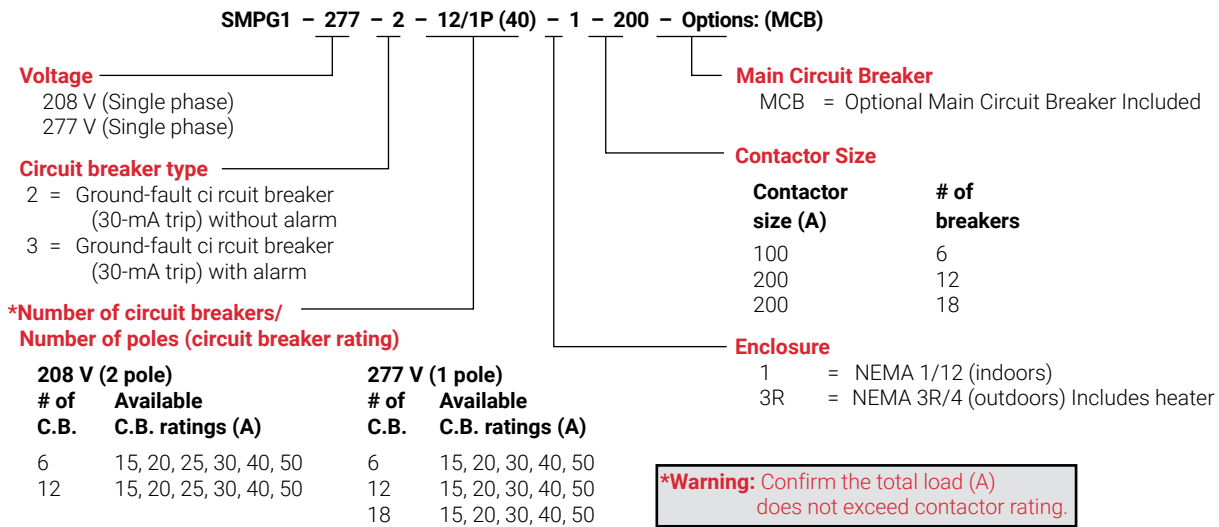
SMPG1 SNOW MELTING AND ROOF AND GUTTER DE-ICING CONTROL SCHEMATIC



CATALOG NUMBER

SMPG1 comes in a variety of configurations. The following chart outlines the elements that constitute a configuration and the corresponding catalog number. If standard configurations do not meet your needs, custom SMPG panels are available and processed under the catalog number SMPG-GENERAL, part number P000000763. Please contact your nVent representative for a custom SMPG panel quotation. Non-standard configurations will carry ETL Certification, not a UL Listing.

SMPG1 – Voltage – Circuit breaker type – Number of circuit breakers/Number of poles (rating) – Enclosure – Contactor Size



MAIN CIRCUIT BREAKERS

Installed in Control Panel			
MCB rating	Voltage	Catalog number	Part number
50 A	120–600 V	HDL36050	T1010097
100 A	120–600 V	HDL36100	T1010101
110 A	120–600 V	HDL36110	T1010102
125 A	120–600 V	HDL36125	T1009792
150 A	120–600 V	HDL36150	T1010087
175 A	120–600 V	JDL36175	T1010053
200 A	120–600 V	JDL36200	T1010103
225 A	120–600 V	JDL36225	T1009945
250 A	480 or 600 V	JDL36250	T1010104

EUR-5A

Supply voltage/max current	21 to 28 Vac/2 A
Control transformer	Included
Operating temperature	–40°F (–40°C) to 140°F (60°C)
Hold on time adjustment	0 to 10 hours
High temperature limit adjustment	40°F (4°C) to 90°F (32°C)
Moisture/temperature sensors	Up to six can be used simultaneously. Members of the CIT-1/GIT-1/SIT-6E family in any combination. Locate up to 2,000 ft (609.6 m) for EUR-5A.
Ambient temperature sensor	Included
Remote interface	RCU-3 Remote Control Unit (can operate up to 500 ft [152 m] from panel)
Building/Energy management computer interface	5 Vdc @ 10 mA

POWER DISTRIBUTION

Catalog Number Part Number Description

SMPG1 Snow Melting and De-Icing Power Distribution and Control Panel - NEMA 1/12

208 V 2-pole NEMA 1 enclosure

SMPG1-208-2-6/2P(XX)-1-100	P000000456	SMPG with (6) 15–50 A ground-fault breakers, 100 A contactor
SMPG1-208-2-12/2P(XX)-1-200	P000000457	SMPG with (12) 15–50 A ground-fault breakers, 200 A contactor
SMPG1-208-3-6/2P(XX)-1-100	P000000458	SMPG with (6) 15–50 A ground-fault breakers with alarm, 100 A contactor
SMPG1-208-3-12/2P(XX)-1-200	P000000459	SMPG with (12) 15–50 A ground-fault breakers with alarm, 200 A contactor

277 V 1-pole NEMA 1 enclosure

SMPG1-277-2-6/1P(XX)-1-100	P000000460	SMPG with (6) 15–50 A ground-fault breakers, 100 A contactor
SMPG1-277-2-12/1P(XX)-1-200	P000000461	SMPG with (12) 15–50 A ground-fault breakers, 200 A contactor
SMPG1-277-2-18/1P(XX)-1-200	P000000462	SMPG with (18) 15–50 A ground-fault breakers, 200 A contactor
SMPG1-277-3-6/1P(XX)-1-100	P000000463	SMPG with (6) 15–50 A ground-fault breakers with alarm, 100 A contactor
SMPG1-277-3-12/1P(XX)-1-200	P000000464	SMPG with (12) 15–50 A ground-fault breakers with alarm, 200 A contactor
SMPG1-277-3-18/1P(XX)-1-200	P000000465	SMPG with (18) 15–50 A ground-fault breakers with alarm, 200 A contactor

SMPG1 Snow Melting and De-Icing Power Distribution and Control Panel - NEMA 3R/4

208 V 2-pole NEMA 3R enclosure

SMPG1-208-2-6/2P(XX)-3R-100	P000000466	SMPG with (6) 15–50 A ground-fault breakers, 100 A contactor
SMPG1-208-2-12/2P(XX)-3R-200	P000000467	SMPG with (12) 15–50 A ground-fault breakers, 200 A contactor
SMPG1-208-3-6/2P(XX)-3R-100	P000000468	SMPG with (6) 15–50 A ground-fault breakers with alarm, 100 A contactor
SMPG1-208-3-12/2P(XX)-3R-200	P000000469	SMPG with (12) 15–50 A ground-fault breakers with alarm, 200 A contactor

277 V 1-pole NEMA 3R enclosure

SMPG1-277-2-6/1P(XX)-3R-100	P000000470	SMPG with (6) 15–50 A ground-fault breakers, 100 A contactor
SMPG1-277-2-12/1P(XX)-3R-200	P000000471	SMPG with (12) 15–50 A ground-fault breakers, 200 A contactor
SMPG1-277-2-18/1P(XX)-3R-200	P000000472	SMPG with (18) 15–50 A ground-fault breakers, 200 A contactor
SMPG1-277-3-6/1P(XX)-3R-100	P000000473	SMPG with (6) 15–50 A ground-fault breakers with alarm, 100 A contactor
SMPG1-277-3-12/1P(XX)-3R-200	P000000474	SMPG with (12) 15–50 A ground-fault breakers with alarm, 200 A contactor
SMPG1-277-3-18/1P(XX)-3R-200	P000000475	SMPG with (18) 15–50 A ground-fault breakers with alarm, 200 A contactor

ACCESSORIES

ETI Sensors	Catalog number	Part number
Pavement-mounted sensor	SIT-6E	P000000112
Aerial snow sensor	CIT-1	512289
Gutter ice sensor	GIT-1	126795

Replacement Controller

Snow melting and gutter de-icing controller	EUR-5A	T0001527
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North America

Tel +1.800.545.6258

Fax +1.800.527.5703

info@nvent.com



nVent.com

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