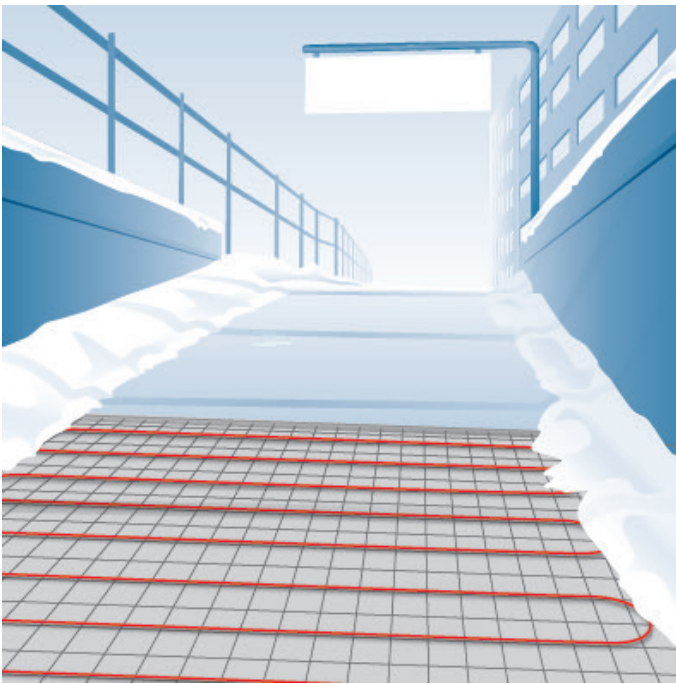


SPECIFICATION GUIDELINE SNOW AND ICE MELTING SYSTEM FOR RAMPS & ACCESS WAYS



MULTI-CIRCUIT CONTROL & MONITORING

- All ramps/access way heating circuits shall be controlled and monitored via an integrated, electrically protected multi circuit control panel, SBS-xx-VV-20, by nVent. The panel should be purpose built and approved for the control and monitoring of EM2-XR self regulating heating cables, by nVent. The panel shall incorporate the energy efficient control and monitoring device, RAYCHEM VIA-DU-20, by nVent and have 3 sensor control logic, sensing.
 - Ground Temperature
 - Ground Moisture
 - Ambient/Air Temperature

PRODUCT, TECHNICAL, AND PERFORMANCE REQUIREMENTS:

The control and monitoring panel shall have, as a minimum

- EN60204-1/EN60439-1 compliance, CE approved for use with RAYCHEM heat tracing systems
- RAL7035 (Light Grey) Coated Metal Housing – IP54 rated
- A volt free alarm contact to indicate:
 - RCD or circuit breaker failure mode
 - Loss of power to the unit
 - Controller or sensor error mode
- VIA-DU-20 multi-sensor control unit as the central control device for standard heating/economy functions
- Separate circuit connection for a drainage channel heater, switch by the VIA-DU-20
- Type C circuit protection and residual current device (30 mA rated) per heating circuit
- Mounted terminal blocks for easy connection of the heating circuits within the panel
- In addition to 3 sensor control and monitoring capability, the controller must have the following functions
- Freezing rain precaution function to switch heating circuits ON when there is a risk of freezing rain or sleet
- Programmable controller and digital display
- Monitoring of sensor defects
- Alarm relay for remote monitoring at the BMS

- The ramp heating circuits shall be switched via a contactor and be protected with an MCB (BS EN 60898 type C or D or equivalent) and RCD (30 mA sensitivity, tripping within 100 ms). Isolators shall be provided for each circuit.
- All heat tracing circuits shall be controlled and monitored via a multi-circuit control panel, SBS-xx-SV, by nVent, with integrated circuit protection, MCB's (BS EN 60898 type C/D) and RCD (30 mA sensitivity, tripping within 100 ms). The control panel shall be EN60204-1/EN60439-1 compliant, CE approved for use with heat tracing systems.
- The control panel shall have an integrated power load management algorithm device to avoid peak power loading, with phased switch-on of heating circuits to manage the power loading. The panel shall include, for ambient sensing, an integrated proportional ambient sensing controller (PASC), or for line sensing, a line sensing controller with a minimum of 1 sensor per 3 heating circuits.

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