

Specification: Raychem® ElectroMelt® Snow Melting System

1 General

Furnish and install a UL Listed and CSA Certified snow-melting system complete with heating cable, termination components, junction boxes, contactors, and controls.

2 Products

- 2.1 The heating cable and termination components shall be UL Listed as De-icing and Snow-melting Equipment and CSA Certified as Designation 1B, 2B.
- 2.2 The heating cable shall consist of two 14-gauge nickel-coated-copper bus wires embedded in parallel in a self-regulating polymer core. Power output shall vary in response to temperature all along its length, allowing the heating cable to be crossed over itself without overheating, to be cut to length in the field, and to have no heater-to-cold-lead connections buried in the pavement. The heating cable shall be covered by a crosslinked dielectric jacket and protected by a tinned-copper braid and a 70-mil-thick modified polyolefin outer jacket.
- 2.3 The heating cable shall be of parallel circuit construction to allow the cable to be spliced if it is inadvertently cut during or after construction, and to be powered from both ends if it becomes advantageous to divide a circuit in two.
- 2.4 The heating cable shall operate on (select: 208, 200, 240, or 277) volts without the use of transformers.
- 2.5 The heating cable shall be ElectroMelt EM2-XR as manufactured by Raychem Corporation.
- 2.6 The system shall be controlled by (select: a switch, an ambient sensing thermostat, or an automatic snow controller) through an appropriate contactor.
- 2.7 The heating cable power connection and end seal terminations shall be made in an ElectroMelt EMK-XJB junction box.
- 2.8 Each circuit shall be protected by a 30-mA ground-fault protection device.

3 Installation

- 3.1 The heating cable shall be installed according to the manufacturer's recommendations, the instructions supplied with the heating cable and components, and the instructions in the ElectroMelt Installation and Operation Manual (H53392)
- 3.2 The heating cable shall be installed only in concrete pavement designed for long-term structural integrity. The pavement shall be reinforced with rebar or wire mesh and the reinforcing supported such that the location of the reinforcing and the attached heating cable is not disturbed during the concrete placement. The rebar shall be placed at the heating-cable depth whenever possible.
- 3.3 The heating cable shall be protected from where it leaves the pavement to the junction box by installing the cable in 1-inch rigid metal conduit. Use one conduit for each heating cable.
- 3.4 The power connection and end seal junction box shall be mounted above grade. The junction box shall be installed so that water can not enter it.
- 3.5 Heating-cable repairs and splices shall be made using a splice kit provided by the manufacturer and specifically approved for the purpose. They shall pass the Megger test after installation.

4 Testing

The heating cable shall be tested for insulation resistance with a 2500-Vdc Megger after installation, during the concrete pour, and annually thereafter according to the manufacturer's recommendations and following the instructions provided in the ElectroMelt Installation and Operation Manual (H53392).

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