

## Danfoss GX Constant Wattage Heating Cable Specification for Snow and Ice Melting

### 1.0 GENERAL

Supply and Install a complete CSA certified system of heating cables, accessories and controls to (select one: prevent snow and ice accumulation for driveways, parking lots, handicap ramps, loading ramps, steps or paths).

### 2.0 MATERIAL

- 2.1 Series Heating Cable Set, Cat no. "GX", 2-conductor construction with FEP/XLPE insulation, shielding, and PVC or Polyolefin (PO) jacket, in 'MAT' assembly, usages "G", "S", "W", "WS" embedded application (in Canada) and Type C embedded installation (in U.S.A.), maximum temperature rating 220°F (105°C), maximum voltage 277V ac, up to 12W/ft (40W/m), maximum 16A/cct.
- 2.2 Lead free ¼" round heating cable that is both flexible and UV protected.
- 2.3 Shall include 20' cold lead, single point connection.
- 2.4 Shall operate on line voltage of (select 208V, 240V or 277V).
- 2.5 Power connection, end seal, splice, and tee connection kit, shall be able to be applied on site.
- 2.6 Heating cable circuit shall be protected by a ground fault device in accordance with section 47-22 of the NEC 2005.

### 3.0 COMPONENT

All heating cable components shall be CSA certified for use as a part of the system to provide (select one: prevent snow and ice accumulation for driveways, parking lots, handicap ramps, loading ramps, steps or paths). Component enclosure shall be rated NEMA 4X to prevent water ingress and corrosion.

### 4.0 SYSTEM CONTROL

The control system shall be able to control electric radiant heating system for maximum efficiency and minimum power consumption. The heat output shall be able to be switched on or off with a difference of 0.7°F ( 0.4°C).

The system temperature shall be controlled by Danfoss GX850 controller with external digital temperature and moisture sensors and appropriate contactor.

### 5.0 EXECUTION

#### 5.1 Installation

- a. System must be installed per manufacturer's recommendation using method described in installation guide.
- b. Place the heating mats and sensors in the surface material as per the installation guide.
- c. Secure the heating to the rebar or ground.
- d. Maker plaque must indicate presence of embedded heating cables as per NEC 426-13.

- e. Inspect the cable and controls upon receiving the shipment. Note any damage and ensure materials received match the order and shipping documents.

## 5.2 Tests

- a. Refer to the manufacturer's literature for requirements for testing and documenting cable resistance and insulation-to-ground readings.
- b. Take tests as outlined in the Installation Manual.
- c. If problems are discovered, consult the manufacturer.
- d. If unable to correct problems notify the Engineer before proceeding with installation.
- e. Keep record of all readings for inspection by the Engineer or for submittal to the manufacturer to ensure a valid warranty.

End.