

3.1 ELECTRICAL CONNECTIONS

3.11 POWER CONNECTION

After heating cable and related accessories are installed, install power connection components according to installation instructions included in connection components.

Visually inspect the entire circuit and perform insulation resistance tests for each circuit before connecting heating cable to power.

3.12 DRIP LOOP

Create drip loops to prevent water from trailing into any electrical equipment, junction boxes, or controls.

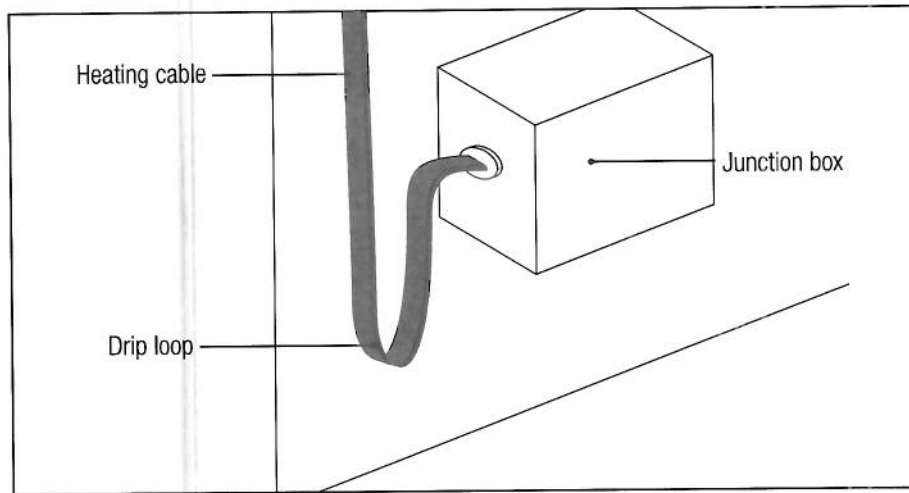
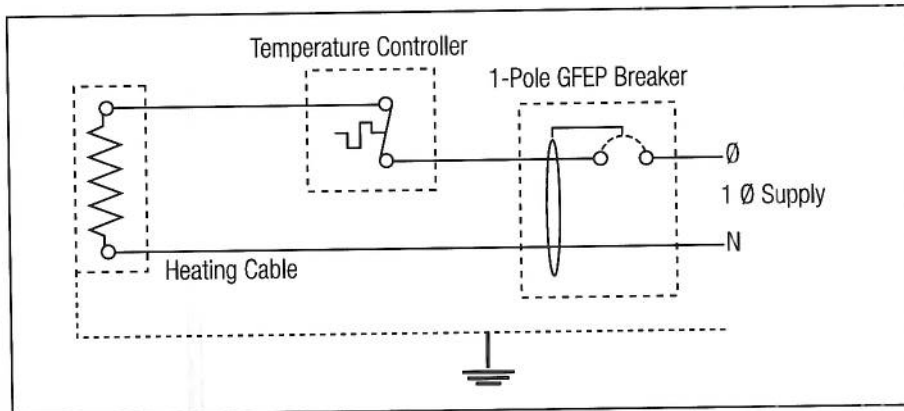


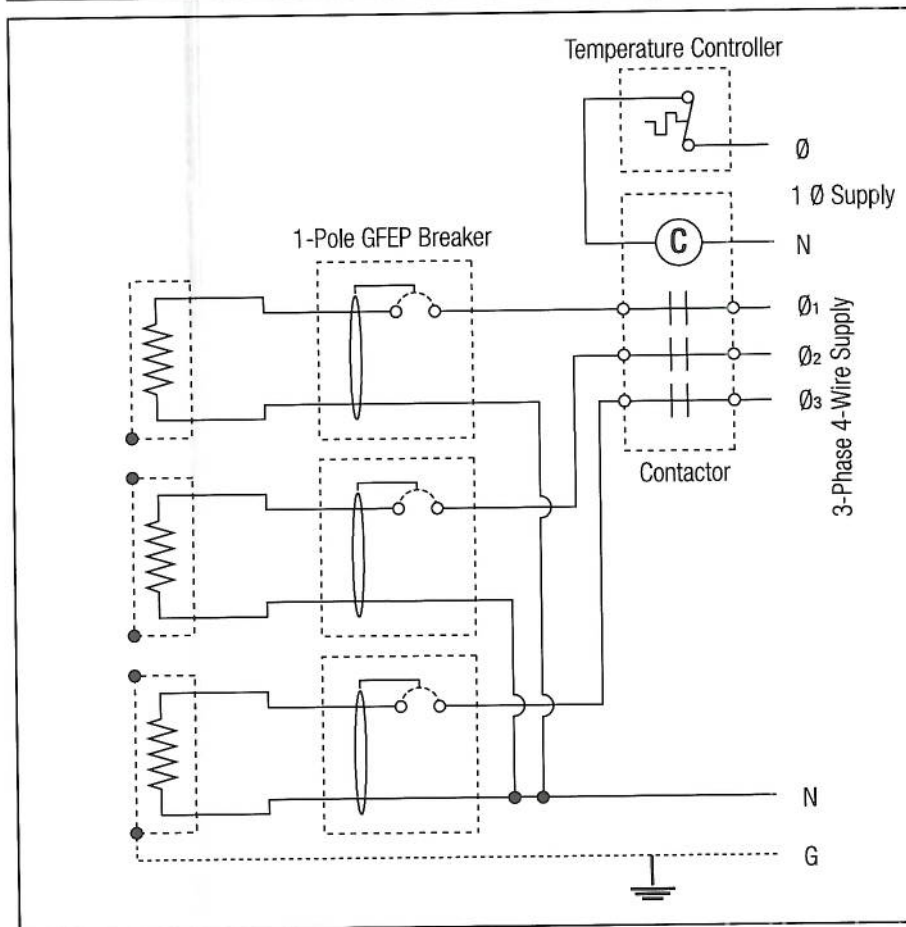
FIGURE 3.12: Drip Loop

3.2 TYPICAL WIRING DIAGRAM

3.21 SINGLE CIRCUIT CONTROL



3.22 GROUP CIRCUIT CONTROL



NUHEAT INDUSTRIES AND NEC REQUIRE 30 mA EQUIPMENT GROUND-FAULT PROTECTION ON EACH HEATING CABLE BRANCH CIRCUIT.

3.3 CONTROL OPTIONS

There are several options available to control the Nuheat Roof and Gutter De-icing Cables. Consult the electrical contractor to determine the most suitable option. Selecting the proper control option will limit the power consumption of the de-icing system by turning on the heating cables only when it is needed.

3.31 AUTOMATIC SNOW CONTROLLER

- > Activates system when precipitation AND low temperatures are detected
- > System remains "ON" once precipitation or low temperature have ceased, allowing the surface to completely dry, preventing the formation of surface ice
- > When combined with a slab-sensing thermostat, the system will de-energize once the slab has reached the preset or user-defined temperature setpoint

3.32 AMBIENT SENSING THERMOSTAT

- > Turns on the heating cable when the ambient temperature drops below a preset or user-defined temperature (usually set at freezing point)
- > Not as energy efficient as ambient temperature may be below freezing but no precipitation/snowfall is present

3.33 MANUAL ON/OFF CONTROL

- > Low initial cost
- > Recommended only for small areas
- > Requires manual monitoring
- > Prone to be left on accidentally

Install the controls as per installation instructions that accompany control unit. Ensure controller or contactor being used is appropriate for electrical load.

3.4 REPAIRS AND MAINTENANCE

If any part of the cable becomes damaged at any time, please contact Nuheat Customer Care Team immediately at 1.800.778.WARM (9276).

Perform visual inspection, and insulation and continuity tests annually before each winter season. Ensure control system is functioning before each winter season.