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APPLIED PRODUCTS Thermal Products Group // Also proudly represents: TraceTek, ETI technologies, & Nuheat
Pipe Freeze Protection Application
A pipe freeze protection system is designed to maintain water temperature at a minimum of 40°F to prevent freezing.

**XL-Trace®**

**Product Number**
- 5XL1-CR/CT 5XL2-CR/CT 8XL1-CR/CT 8XL2-CR/CT 12XL2-CR/CT

**Voltage**
- 120 V 208-277 V 120 V 208-277 V 208-277 V

**Start-up temperature (°F)**
- -20°F
  - 15 101 101 174 178 183 131 138 146 111 114 117
  - 20 134 134 232 237 245 175 184 194 148 151 156
  - 30 201 201 345 356 367 242 251 271 223 227 234
  - 40 270 270 465 478 489 389 396 416 323 327 334

**40°F Maintain Temperature**
- 120 V
  - 15 158 158 261 267 280 213 220 237 176 180 186
  - 20 191 191 338 344 367 282 290 307 233 237 244
  - 30 250 250 440 452 474 377 385 402 271 275 282
  - 40 270 270 465 478 489 389 396 416 323 327 334

**0°F**
- 120 V
  - 15 158 158 261 267 280 213 220 237 176 180 186
  - 20 191 191 338 344 367 282 290 307 233 237 244
  - 30 250 250 440 452 474 377 385 402 271 275 282
  - 40 270 270 465 478 489 389 396 416 323 327 334

**Maximum Exposure Temperature**
- 150°F

For additional maintain temperatures, contact us at 800.485.4123.

Heating Cable
- for XL-Trace and IceStop
  - Fluoropolymer (-CT or -XT) or Modified Polyolefin (-CR or -X) outer jacket
  - Modified Polyolefin inner jacket
  - Self-regulating conductive core
  - Nickel-plated copper bus wire

**Product Number**
- GM-1XT and GM-1X
  - GM-2XT and GM-2X

**Voltage**
- 120 Vac 208–277 Vac

**Power Output (nominal)**
- 6 watts per/ft at 32°F dry
  - 12 watt per/ft in ice or snow

**Maximum Circuit Length in Feet**
- Start-up temperature
  - 15 A 20 A 30 A *40 A
  - GM-1XT and GM-1X at 120 volts
    - 29°F 165 165 165 200
    - 0°F 80 100 135 220
  - GM-2XT and GM-2X at 208 volts
    - 29°F 205 205 205 340
    - 0°F 115 155 205 400
  - GM-2XT and GM-2X at 240 volts
    - 29°F 205 205 205 340
    - 0°F 115 155 205 400
  - GM-2XT and GM-2X at 277 volts
    - 29°F 205 205 205 340
    - 0°F 115 155 205 400

* Only FTC-P power connection kits may be used with 40-A circuits.

De-Icing System Applications Include:
- Roof & Gutter
- Drains
- Rain Leaders
- and more...

**IceStop™**
**POWERED KITS**

- **RayClic-PC** Power connection kit with one end seal.
- **RayClic-PS** Power splice kit with two end seals.
- **RayClic-PT** Power connection kit with three end seals.
- **FTC-P** Power connection and end seal; required for circuits requiring 40A circuit breakers. Junction box NOT included.

**UN-POWERED KITS**

- **RayClic-S** Splice kit
- **RayClic-T** Tee kit with one end seal.
- **RayClic-X** Cross kit with two end seals.
- **RayClic-LE** Lighted end seal kit.
- **FTC-HST** Two low profile splice/tees.
- **RayClic-E** Extra end seal.

**Pipe Straps**

- Used to secure connection components and brackets to pipes. Order by pipe diameter.
- **PS-03** For components on pipes with dimensions ≤ 2”
- **PS-10** For components on pipes with dimensions 2” - 10”
- **PS-20** For components on pipes with dimensions 10” - 19.5”

**Accessories - XL-Trace & IceStop**

- **RayClic-SB-02** Wall mounting bracket for RayClics.
- **RayClic-SB-04** Pipe mounting bracket for RayClics.
- **GT-66** Glass Cloth tape, 66ft.
- **GS-54** Glass Cloth tape, 54ft. Cold weather and stainless steel pipes.
- **AT-180** Aluminum tape, 180ft.
- **GMK-RC** Roof clips, 50/box
- **GMK-RAKE** Hanger bracket
- **ATL** “Electric Traced” label for identifying traced pipes and tanks.

**Pipe size (inch)**

- Feet of pipe per GT-66 roll: 60, 50, 40, 25, 20, 15
- Feet of pipe per GS-54 roll: 49, 41, 33, 20, 16, 12

**TECHNICAL SPECIFICATIONS**

- Power output: 24 W/ft at 40F for RIM-V, RIM-LPE panels, 36 W/ft for RIM-E panels
- Material Selection: Copper or Kynar® painted aluminum
- Color Selection (Alum.): 23 standard colors, 8 custom colors
- Heating Cable Supplied: Raychem IceStop cable, UL and CSA Certified for roof and gutter de-icing
- Panel Lengths: Up to 10 feet per panel
- Components Supplied: Power connection kit(s), splice and end termination kits

**RIM System**

RIM system is our premier offering where design factors like severe wind speed, elevation, low temperatures, heavy snow load areas, and roof snow accumulation over 15” (38 cm) and annual snowfall over 100” (254 cm) require the most robust system. RIM system consists of RIM panels that use high wattage self-regulating cable providing high power output required for heavy snow load areas. Other components of RIM System include connection kits, accessories, controllers and power distribution. RIM system mechanically protects the heating cable, is permanently attached to the roof using screws, provides continuous ice free roof edges and is aesthetically pleasing. RIM panels are specifically designed for eaves, valleys, channels, rakes and flat roof sections. A complete RIM System consists of connection kits, accessories and control systems.

**Avoid Ice Dams & Icicles W/ Efficient & Versatile Solutions**

**No Compromises on Aesthetics**
ElectroMelt®

**Control Systems & Power Distribution**

- **ECTS** Electronic thermostat
  - NEMA 4X enclosure
  - Includes a 25ft sensor

- **C910-485** Electronic control and monitoring device
  - Ground-fault
  - Temperature control and monitoring
  - Alarm indication and output
  - 2-Wire isolated RS-485 communication
  - Ordinary area

- **ECW-GF** Electronic thermostat
  - NEMA 4X enclosure
  - Includes a 20ft sensor and ground fault.

- **RTD's Resistance Temperature Device (w/ 1/2" NPT bushing)**
  - RTD-200 6ft ambient sensing
  - RTD3CS 3ft flexible armor
  - RTD10CS 10ft flexible armor

**Snow Melting Controllers // CALL US 800.485.4123**

- **APS-3C Controller**
- **APS-4C Controller**
- **SC-40C Satellite Contactor**
- **RCU-3** Control and status display for the APS-3C controller.

- **RCU-4** Control and status display for the APS-4C controller and SC-40C Satellite Contactor.

**PD Pro** Three-pole, 100 A per pole, 600 V maximum contactor housed in UL Listed, CSA Certified, NEMA 4X enclosure with two 1" conduit entries.

**GF Pro** Three-pole, 40 A per pole, 600 V maximum contactor housed in UL Listed, CSA Certified, NEMA 4X enclosure with two 1" conduit entries.
  - Includes ground fault.

**SMPG1** Single-phase power distribution panel that includes ground-fault protection, monitoring, and control for snow melting systems. Single-phase voltages include 208 and 277 V.

**HTPG** Heat-tracing power distribution panel with ground-fault and monitoring for group control.

**SMCS** Caution sign

**Connection Kits**

- **EMK-XP** Power connection & end seal kit
- **EMK-XEJ** Expansion joint kit
- **EMK-XJB** Junction box
- **EMK-XJR** Jacket repair kit
- **EMK-XS** Splice kit

**Maximum Circuit Length for Start-Up at 0°F in Feet**

<table>
<thead>
<tr>
<th>Circuit breaker (A)</th>
<th>208 V</th>
<th>240 V</th>
<th>277 V</th>
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</thead>
<tbody>
<tr>
<td>15</td>
<td>75</td>
<td>80</td>
<td>90</td>
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<tr>
<td>20</td>
<td>100</td>
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<td>240</td>
</tr>
<tr>
<td>50</td>
<td>245</td>
<td>265</td>
<td>300</td>
</tr>
</tbody>
</table>

**Snow Melting System**

A typical ElectroMelt system includes the components shown below. For detailed design information, refer to the Raychem ElectroMelt System Design Guide (H53393).

Contact us for a Mineral Insulated (MI) Surface Melting option, 800.485.4123.

**ElectroMelt® Connection Kits**

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