

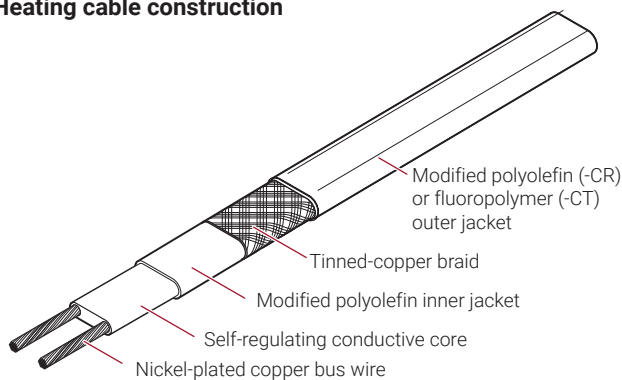
XL-Trace Edge

CONNECT AND PROTECT

Self-regulating heating cable for pipe freeze protection and flow maintenance

PRODUCT OVERVIEW

Heating cable construction



nVent RAYCHEM XL-Trace Edge is designed for pipe freeze protection and flow maintenance in the following applications:

- Freeze protection of general water piping (aboveground and buried)
- Freeze protection of fire sprinkler system piping, including sprinklers
- Flow maintenance of greasy waste lines (aboveground and buried)
- Flow maintenance of fuel lines (aboveground)

The heating element in the XL-Trace Edge heating cable consists of a continuous core of conductive polymer extruded between two copper bus wires. The XL-Trace Edge heating cable regulates its power output in response to pipe temperature changes. This self-regulating technology allows XL-Trace Edge heating cable to be overlapped or installed on plastic pipes without overheating.

Low total installed cost

The XL-Trace Edge heating cable's parallel circuitry allows it to be cut to the exact length required, with no wasted cable. Its flexibility allows it to be wrapped around complex fittings and valves.

All of these characteristics simplify and streamline the design of a heat-tracing system. Installation is quick and simple.

Low total operating cost

Building operators are assured of optimal energy efficiency and low maintenance costs when an XL-Trace Edge system is specified.

The same features that make an XL-Trace Edge system easy to install the first time also simplify additions or changes to the system during building renovations.

For additional information, contact your nVent representative or call (800) 545-6258.

| Catalog Number | 3XLE1-CR | 3XLE2-CR | 5XLE1-CR/CT | 5XLE2-CR/CT | 8XLE1-CR/CT | 8XLE2-CR/CT | 12XLE2-CR/CT |
|----------------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|--|
| Voltage | 120 V | 208–277 V | 120 V | 208–277 V | 120 V | 208–277 V | 208–277 V |
| Maximum Operating Temperature | 154°F (68°C) | 154°F (68°C) | 154°F (68°C) | 154°F (68°C) | 154°F (68°C) | 154°F (68°C) | 150°F (65°C) |
| Maximum Exposure Temperature | 185°F (85°C) ¹ | 185°F (85°C) ¹ | 185°F (85°C) ¹ | 185°F (85°C) ¹ | 185°F (85°C) ¹ | 185°F (85°C) ¹ | 185°F ¹ (85°C) ¹ |
| Minimum Installation Temperature | 0°F (–18°C) | 0°F (–18°C) | 0°F (–18°C) | 0°F (–18°C) | 0°F (–18°C) | 0°F (–18°C) | 0°F (–18°C) |
| Minimum Bend Radius | 1/2 in (12 mm) | 1/2 in (12 mm) | 1/2 in (12 mm) | 1/2 in (12 mm) | 1/2 in (12 mm) | 1/2 in (12 mm) | 1/2 in (12 mm) |

¹ When the design requires 185°F (85°C) exposure temperature, all connections must be installed off the pipe.

MAXIMUM CIRCUIT LENGTH IN FEET

| Start-up temperature (°F) | CB size (A) | 40°F / 110°F Maintain* | | | | | | | | | | | | | | | | | | | | |
|---------------------------|-------------|------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------------|-------------|-------------|-------------|-------------|-------------|-------|-------|-------|--------|--|--|
| | | 3XLE1 | | | 5XLE1 | | | 8XLE1 | | | 3XLE2 | | | 5XLE2 | | | 8XLE2 | | | 12XLE2 | | |
| | | 120 V | 120 V | 120 V | 208 V | 240 V | 277 V | 208 V | 240 V | 277 V | 208 V | 240 V | 277 V | 208 V | 240 V | 277 V | 208 V | 240 V | 277 V | | | |
| –20°F | 15 | 134 | 96 | 75 | 258 | 250 | 247 | 201 | 209 | 221 | 138 | 116 | 99 | 127 | 129 | 130 | | | | | | |
| | 20 | 179 | 129 | 100 | 344 | 334 | 329 | 268 | 279 | 294 | 210 | 180 | 148 | 169 | 171 | 174 | | | | | | |
| | 30 | 269 | 193 | 150 | 517 | 501 | 494 | 402 | 419 | 441 | 316 | 341 | 370 | 253 | 257 | 260 | | | | | | |
| | 40 | 335 | 207 | 151 | 689 | 668 | 644 | 469 | 474 | 487 | 339 | 359 | 384 | 338 | 343 | 347 | | | | | | |
| 0°F | 15 | 156 | 112 | 84 | 307 | 298 | 294 | 227 | 237 | 250 | 170 | 142 | 120 | 129 | 131 | 133 | | | | | | |
| | 20 | 209 | 149 | 113 | 410 | 397 | 392 | 303 | 316 | 333 | 236 | 239 | 190 | 172 | 175 | 177 | | | | | | |
| | 30 | 313 | 223 | 169 | 615 | 596 | 587 | 455 | 474 | 499 | 354 | 382 | 414 | 258 | 262 | 265 | | | | | | |
| | 40 | 368 | 245 | 173 | 696 | 732 | 708 | 535 | 544 | 558 | 384 | 407 | 435 | 340/ 344 | 349 | 354 | | | | | | |
| 20°F | 15 | 189 | 132 | 98 | 376 | 365 | 359 | 262 | 273 | 288 | 200 | 185 | 154 | 144 | 146 | 148 | | | | | | |
| | 20 | 252 | 176 | 131 | 501 | 486 | 479 | 349 | 364 | 383 | 267 | 288 | 276 | 192 | 194 | 197 | | | | | | |
| | 30 | 368 | 264 | 196 | 696 | 729 | 718 | 523 | 546 | 575 | 400 | 432 | 469 | 287 | 292 | 296 | | | | | | |
| | 40 | 368 | 287 | 205 | 696 | 732 | 776 | 535 | 584 | 642 | 407/ 442 | 452/ 467 | 499 | 340/ 383 | 360/ 389 | 380/ 394 | | | | | | |
| 40°F | 15 | 242 | 160 | 117 | 492 | 478 | 471 | 311 | 324 | 342 | 232 | 250 | 221 | 162 | 165 | 167 | | | | | | |
| | 20 | 323 | 214 | 156 | 656 | 637 | 628 | 414 | 432 | 456 | 309 | 334 | 362 | 216 | 219 | 222 | | | | | | |
| | 30 | 368 | 287 | 223 | 696 | 732 | 776 | 535 | 584 | 642 | 407/ 464 | 452/ 500 | 504/ 543 | 324 | 329 | 333 | | | | | | |
| | 40 | 368 | 287 | 223 | 696 | 732 | 776 | 535 | 584 | 642 | 407/ 526 | 452/ 555 | 504/ 591 | 340/ 430 | 360/ 439 | 380/ 444 | | | | | | |
| 50°F | 15 | – | – | – | – | – | – | – | – | – | 253 | 273 | 296 | 173 | 176 | 178 | | | | | | |
| | 20 | – | – | – | – | – | – | – | – | – | 337 | 364 | 395 | 231 | 234 | 237 | | | | | | |
| | 30 | – | – | – | – | – | – | – | – | – | 506 | 546 | 592 | 346 | 352 | 356 | | | | | | |
| | 40 | – | – | – | – | – | – | – | – | – | 586 | 617 | 656 | 430 | 460 | 475 | | | | | | |
| 65°F | 15 | – | – | – | – | – | – | – | – | – | 296 | 319 | 347 | 192 | 195 | 197 | | | | | | |
| | 20 | – | – | – | – | – | – | – | – | – | 395 | 426 | 462 | 256 | 260 | 263 | | | | | | |
| | 30 | – | – | – | – | – | – | – | – | – | 592 | 639 | 693 | 384 | 390 | 395 | | | | | | |
| | 40 | – | – | – | – | – | – | – | – | – | 686 | 756 | 801 | 430 | 460 | 490 | | | | | | |

* When maximum circuit length is listed in:

- black type, the value is for applications with a 40°F maintain
- red type, the value is for applications with a 110°F maintain

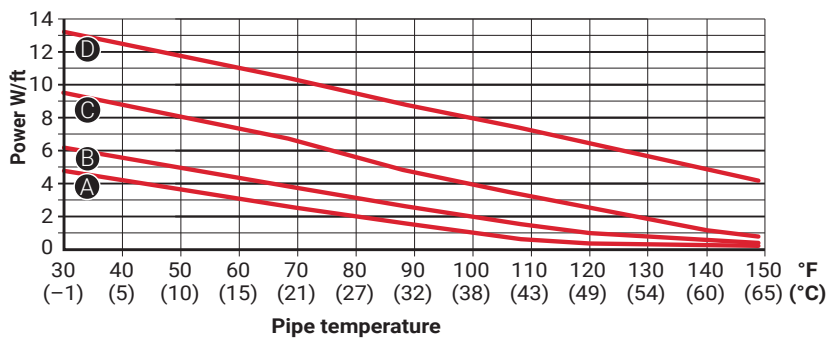
MAXIMUM CIRCUIT LENGTH IN METERS

| Start-up temperature (°C) | CB size (A) | 4°C / 43°C Maintain* | | | | | | | | | | | | | | | | | | | | |
|---------------------------|-------------|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------------|-------------|-------------|-------------|-------------|-------------|-------|-------|-------|--------|--|--|
| | | 3XLE1 | | | 5XLE1 | | | 8XLE1 | | | 3XLE2 | | | 5XLE2 | | | 8XLE2 | | | 12XLE2 | | |
| | | 120 V | 120 V | 120 V | 208 V | 240 V | 277 V | 208 V | 240 V | 277 V | 208 V | 240 V | 277 V | 208 V | 240 V | 277 V | 208 V | 240 V | 277 V | | | |
| -29°C | 15 | 41 | 29 | 23 | 79 | 76 | 75 | 61 | 64 | 67 | 42 | 35 | 30 | 39 | 39 | 40 | | | | | | |
| | 20 | 55 | 39 | 30 | 105 | 102 | 100 | 82 | 85 | 90 | 64 | 55 | 45 | 52 | 52 | 53 | | | | | | |
| | 30 | 82 | 59 | 46 | 158 | 153 | 151 | 123 | 128 | 134 | 96 | 104 | 113 | 77 | 78 | 79 | | | | | | |
| | 40 | 102 | 63 | 46 | 210 | 204 | 196 | 143 | 145 | 148 | 103 | 109 | 117 | 103 | 105 | 106 | | | | | | |
| -18°C | 15 | 48 | 34 | 26 | 94 | 91 | 90 | 69 | 72 | 76 | 52 | 43 | 37 | 39 | 40 | 41 | | | | | | |
| | 20 | 64 | 45 | 34 | 125 | 121 | 120 | 92 | 96 | 102 | 72 | 73 | 58 | 52 | 53 | 54 | | | | | | |
| | 30 | 95 | 68 | 52 | 188 | 182 | 179 | 139 | 145 | 152 | 108 | 116 | 126 | 79 | 80 | 81 | | | | | | |
| | 40 | 112 | 75 | 53 | 212 | 223 | 216 | 163 | 166 | 170 | 117 | 124 | 133 | 104/ 105 | 106 | 108 | | | | | | |
| -7°C | 15 | 58 | 40 | 30 | 115 | 111 | 109 | 80 | 83 | 88 | 61 | 56 | 47 | 44 | 45 | 45 | | | | | | |
| | 20 | 77 | 54 | 40 | 153 | 148 | 146 | 106 | 111 | 117 | 81 | 88 | 84 | 59 | 59 | 60 | | | | | | |
| | 30 | 112 | 80 | 60 | 212 | 222 | 219 | 159 | 166 | 175 | 122 | 132 | 143 | 88 | 89 | 90 | | | | | | |
| | 40 | 112 | 88 | 63 | 212 | 223 | 237 | 163 | 178 | 196 | 124/ 135 | 138/ 142 | 152 | 104/ 117 | 110/ 119 | 116/ 120 | | | | | | |
| 4°C | 15 | 74 | 49 | 36 | 150 | 146 | 144 | 95 | 99 | 104 | 71 | 76 | 67 | 49 | 50 | 51 | | | | | | |
| | 20 | 98 | 65 | 48 | 200 | 194 | 191 | 126 | 132 | 139 | 94 | 102 | 110 | 66 | 67 | 68 | | | | | | |
| | 30 | 112 | 88 | 68 | 212 | 223 | 237 | 163 | 178 | 196 | 124/ 160 | 138/ 169 | 154/ 180 | 99 | 100 | 102 | | | | | | |
| | 40 | 112 | 88 | 68 | 212 | 223 | 237 | 163 | 178 | 196 | 124/ 160 | 138/ 169 | 154/ 180 | 104/ 131 | 110/ 134 | 116/ 135 | | | | | | |
| 10°C | 15 | - | - | - | - | - | - | - | - | - | 77 | 83 | 90 | 53 | 54 | 54 | | | | | | |
| | 20 | - | - | - | - | - | - | - | - | - | 103 | 111 | 120 | 70 | 71 | 72 | | | | | | |
| | 30 | - | - | - | - | - | - | - | - | - | 154 | 166 | 180 | 105 | 107 | 109 | | | | | | |
| | 40 | - | - | - | - | - | - | - | - | - | 179 | 188 | 200 | 131 | 140 | 145 | | | | | | |
| 18°C | 15 | - | - | - | - | - | - | - | - | - | 90 | 97 | 106 | 59 | 59 | 60 | | | | | | |
| | 20 | - | - | - | - | - | - | - | - | - | 120 | 130 | 141 | 78 | 79 | 80 | | | | | | |
| | 30 | - | - | - | - | - | - | - | - | - | 180 | 195 | 211 | 117 | 119 | 120 | | | | | | |
| | 40 | - | - | - | - | - | - | - | - | - | 209 | 230 | 244 | 131 | 140 | 149 | | | | | | |

* When maximum circuit length is listed in:

- black type, the value is for applications with a 40°F maintain
- red type, the value is for applications with a 110°F maintain

NOMINAL POWER OUTPUT ON METAL PIPES AT 120 V/240 V



- A** 3XLE1-CR (120 V)
3XLE2-CR (240 V)
- B** 5XLE1-CR and 5XLE1-CT (120 V)
5XLE2-CR and 5XLE2-CT (240 V)
- C** 8XLE1-CR and 8XLE1-CT (120 V)
8XLE2-CR and 8XLE2-CT (240 V)
- D** 12XLE2-CR and 12XLE2-CT (240 V)

BUS WIRES

16 AWG nickel-plated copper

BRAID/OUTER JACKET

Tinned-copper braid with modified polyolefin jacket (-CR) or fluoropolymer jacket (-CT)

DIMENSIONS

| | 3XLE, 5XLE and 8XLE | 12XLE |
|-------------------|---------------------|-----------------|
| Maximum width | 0.56 in (14 mm) | 0.62 in (16 mm) |
| Maximum thickness | 0.24 in (6 mm) | 0.24 in (6 mm) |

NOMINAL WEIGHT

| | | |
|--|---------------|----------------|
| | 92 lb/1000 ft | 104 lb/1000 ft |
|--|---------------|----------------|

CONNECTION KITS

nVent RAYCHEM RayClic or FTC connection kits must be used with XL-Trace Edge heating cables. Refer to the Pipe Freeze Protection and Flow Maintenance Design Guide (H55838) for proper connection kit selection.

APPROVALS



Refer to the Pipe Freeze Protection and Flow Maintenance Design Guide (H55838) and the Fire Sprinkler Freeze Protections Design Guide (H58489) for specific product approval details.

Note: The XL-Trace Edge system is not UL listed for plastic fire sprinkler pipes.

GROUND FAULT PROTECTION

To minimize the danger of fire from sustained electrical arcing if the heating cable is damaged or improperly installed, and to comply with the requirements of nVent, agency certifications, and national electrical codes, ground fault equipment protection must be used on each heating cable branch circuit. Arcing may not be stopped by conventional circuit protection. Many nVent RAYCHEM control and monitoring systems meet the ground fault protection requirement.

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