



Visit www.tycothermal.com for more information on our ten-year extended warranty.

Self-regulating floor heating and freezer frost heave prevention heating cable

The Raychem RaySol system is designed for the following floor heating applications.

Heat-loss replacement — replaces heat in concrete floors built over garages, loading docks, arcades, and other cold spaces. The cable is typically attached to the bottom of concrete floors.

Comfort floor heating — warms concrete, tile, stone and marble floors in lobbies, foyers, bathrooms, kitchens and gymnasiums. The cable is typically embedded in a thick mortar bed or concrete.

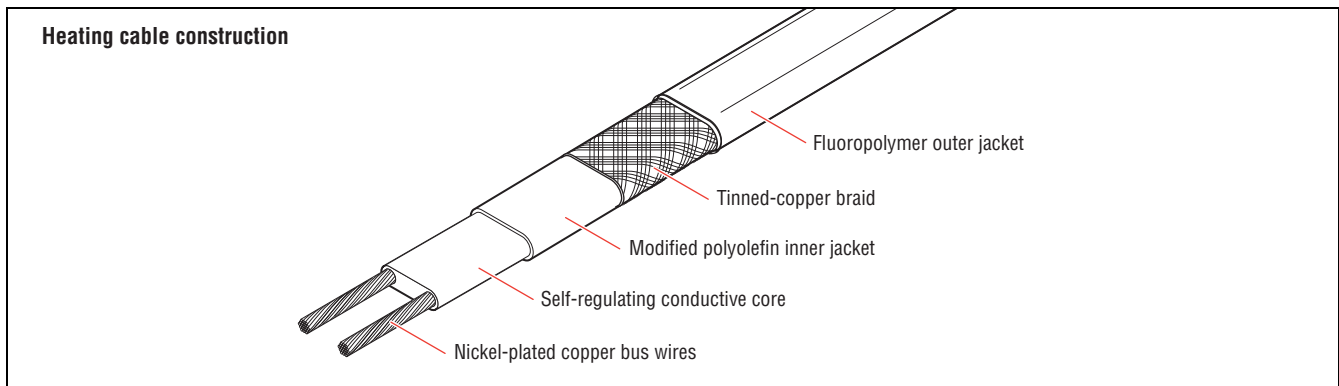
Radiant space heating — provides primary space heating for rooms with concrete floors. The cable is typically embedded in concrete or a thick mortar bed.

Freezer frost heave prevention — prevents heaving in soils under freezers, refrigerated warehouses, and cold rooms. The cable is placed in conduit buried in soil or in the subflooring under the freezer floor.

Efficient and economical to operate

Because it's self-regulating, a RaySol system will supply the right heat only where and when it is needed. The radiant heat provided by the RaySol heating cable allows you to feel comfortable at lower air temperatures, resulting in lower heating costs.

Tyco Thermal Controls representatives can provide design assistance and help you install the product that meets your goals for an efficient, cost-effective floor heating system.



| Catalog Number | RAYSOL-1 | RAYSOL-2 |
|---------------------|----------------|----------------|
| Voltage | 120 V | 208–277 V |
| Minimum Bend Radius | 5/8 in (16 mm) | 5/8 in (16 mm) |

Maximum Circuit Length in Feet (Meters)

| | Circuit breaker rating (A) | Cable operating voltage | | | |
|--|----------------------------|-------------------------|-------------|-------------|-------------|
| | | 120 V | 208 V | 240 V | 277 V |
| Installed in conduit (at 40°F start-up temperature) | 15 | 180 (54.9) | 305 (93.0) | 335 (102.1) | 375 (114.3) |
| | 20 | 240 (73.2) | 410 (125.0) | 450 (137.2) | 500 (152.4) |
| | 30 | 240 (73.2) | 410 (125.0) | 450 (137.2) | 500 (152.4) |
| | 40 | 240 (73.2) | 410 (125.0) | 450 (137.2) | 500 (152.4) |
| Surface mounted (at 40°F start-up temperature) | 15 | 120 (36.6) | 205 (62.5) | 210 (64.0) | 215 (65.5) |
| | 20 | 160 (48.8) | 275 (83.8) | 285 (86.9) | 290 (88.4) |
| | 30 | 240 (73.2) | 410 (125.0) | 425 (129.5) | 430 (131.1) |
| | 40 | 240 (73.2) | 410 (125.0) | 425 (129.5) | 430 (131.1) |
| Embedded in concrete or mortar (at 40°F start-up temperature) | 15 | 80 (24.4) | 135 (41.1) | 140 (42.7) | 145 (44.2) |
| | 20 | 105 (32.0) | 185 (56.4) | 185 (56.4) | 195 (59.4) |
| | 30 | 160 (48.8) | 275 (83.8) | 280 (85.3) | 290 (88.4) |
| | 40 | 170 (51.8) | 280 (85.3) | 320 (97.5) | 360 (109.7) |

Bus Wires 16 AWG nickel-plated copper

Braid/Outer Jacket Tinned-copper braid with fluoropolymer outer jacket

Dimensions

Maximum width 0.56 in (14 mm)

Maximum thickness 0.24 in (6 mm)

Nominal Weight 92 lb/1000 ft (137 kg/1000 m)

Connection Kits Raychem RayClic-E, FTC-P, FTC-XC, and FTC-HST connection kits must be used to connect and to terminate RaySol heating cables. Refer to the *Freezer Frost Heave Prevention Design Guide* (H58139) and the *Floor Heating Design Guide* (H58157) for proper connection kit selection.

Approvals

9J86 Radiant Heating Cable



The RaySol system is UL Listed for heat loss replacement, comfort floor heating and radiant space heating applications.

The RaySol system is CSA Certified for comfort floor heating and radiant space heating applications. For heat loss replacement applications where the cable is attached to the bottom of the concrete floor, contact Tyco Thermal Controls for additional information.

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 Tyco Thermal Controls, 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 DigiTrace control and monitoring systems meet the ground-fault protection requirement.

**Worldwide Headquarters
Tyco Thermal Controls**

7433 Harwin Drive
Houston, TX 77036
USA
Tel: 800-545-6258
Tel: 650-216-1526
Fax: 800-527-5703
Fax: 650-474-7711
info@tycothermal.com
www.tycothermal.com

**Canada
Tyco Thermal Controls**

250 West St.
Trenton, Ontario
Canada K8V 5S2
Tel: 800-545-6258
Fax: 800-527-5703

**Latin America
Tyco Thermal Controls**

7433 Harwin Drive
Houston, TX 77036
United States
Tel: 713-868-4800
Tel: 713-735-8645
Fax: 713-868-2333

**Europe, Middle East, Africa (EMEA)
Tyco Thermal Controls**

Romeinse Straat 14
3001 Leuven
België / Belgique
Tel: +32 16 213 511
Fax: +32 16 213 603

**Asia Pacific
Tyco Thermal Controls**

20F, Innovation Building,
1009 Yi Shan Rd,
Shanghai 200233,
P.R.China
Tel: +86 21 2412 1688
Fax: +86 21 5426 2937 / 5426 3167

Tyco, Alliance Integrated Systems, AMC, AutoMatrix, AutoSol, BTV, CapaciSense, Chemelex, DHSX, DigiTrace, DigiTrace logo, DigiTrace Supervisor, Duoterm, ElectroMelt, EM2XR, FHSM, FHSC, FlexFit, FlexiClic, Flowguard, FreezeTrace, FreezGuard, Frostex, Frostex Plus, Frostguard, FroStop, FSE, Gardian, HAK, Handvise, HBTv, HCCL, HotCap, HQTv, HTPG, HTPi, HWAT, HXTv, IceStop, Interlock, Isocable, Isodrum, Isoheat, Isomantle, Isopad, Isopad Frostguard, Isopad logo, Isopanel, Isotape, Isotherm, JBM, JBS, K-Flex, K-Flex logo, KHE, KHH, KHL, KHP, KTV, Labsafe, LBTv, LHC, LHFV, LHRV, Metabond, Mini WinterGard, Miser WinterGard, MoniTrace, Multi-plus, NGC, PetroTrace, PLI, PolyMatrix, Pyro CiC, PyroFLX, Pyromaster, Pyropak, Pyrosil, PyroSizer, Pyrotenax, Pyrotenax Designer, Pyrotenax logo, QTVR, QuickNet, QuickNet logo, QuickStat, QuickTerm, RayClic, RaySol, RayStat, Retro WinterGard, RHS, RHSC, RHSM, RMM2, SBF, SBV, SC, SHC, Sheathmaster, ShowerGuard, SLBTv, Smart Heat for Comfort and Safety, SnoCalc, SnoCalc logo, STS, System 500, System 1850, System 1850-SE, System 2000, System 2200, T2, T2 logo, T2Blue, T2QuickNet, T2Red, T2Reflecta, TankCalc Plus, TempBus, Thermoheat, ThermoLimit, Thermo-Line, Total Care in Heat-tracing, Touch, Trac-Loc, Trac Calc, TraceCalc Net, TraceCalc Net logo, TraceCalc Pro logo, TraceGuard 277, TraceMaster, Tracer, Tracer logo, TRACERLYNX, TRACERLYNX logo, TraceStat, TraceTek, TraceTek logo, TruckPak, VLBTv, VLKTv, VPL, We manage the heat you need, WinterGard, WinterGard logo, WinterGard Plus, WinterGard Wet, XL-ERATE, XL-ERATE logo, XL-Trace, XTV and Zero EMI are registered and/or unregistered trademarks of Tyco Thermal Controls LLC or its affiliates.

All other trademarks are the property of their respective owners.



Important: All information, including illustrations, is believed to be reliable. Users, however, should independently evaluate the suitability of each product for their particular application. Tyco Thermal Controls makes no warranties as to the accuracy or completeness of the information, and disclaims any liability regarding its use. Tyco Thermal Controls' only obligations are those in the Tyco Thermal Controls Standard Terms and Conditions of Sale for this product, and in no case will Tyco Thermal Controls or its distributors be liable for any incidental, indirect, or consequential damages arising from the sale, resale, use, or misuse of the product. Specifications are subject to change without notice. In addition, Tyco Thermal Controls reserves the right to make changes—without notification to Buyer—to processing or materials that do not affect compliance with any applicable specification.