

KSR™ Self-Regulating Heating Cable

Product Specifications

Application: Snow and Ice Melting

KSR self-regulating heating cables are an integral part of Thermon's SnoTrace™ snow and ice melting systems. Designed and approved specifically for direct burial, KSR cable withstands the abuse encountered during concrete placement.

The self-regulating heat output of KSR cable varies in response to the surrounding concrete temperatures. When the concrete is at or below freezing temperatures, KSR will deliver the maximum power output. As the concrete warms-up, the power output of the cable will decrease. Energy efficiency can be accomplished without special or sophisticated controls.

KSR cables are approved for use in ordinary (non-classified) areas and are certified to the ATEX directive for use in Category 2 and 3 (Zone 1 and 2) classified areas.

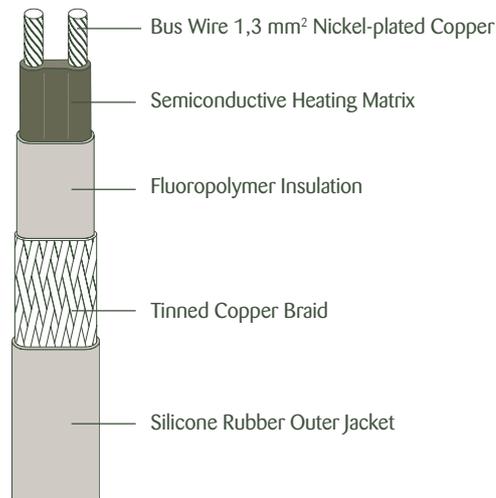
Easy to Design and Install . . .

Determining the circuit layout of KSR cable for a snow and ice melting system is easy. With cut-to-length parallel circuitry, KSR cables are easily adapted to variations in design found at the job site. This can reduce or eliminate the need to redesign circuits off-site without details or sufficient time to react.

Installing and terminating the cable is easy. Simply unreel the amount of cable needed for the area/circuit and terminate with Thermon circuit fabrication kits and accessories. Power connection, end termination and expansion joint kits are all designed specifically for the demanding application.

Characteristics . . .

Minimum bend radius	32 mm
Supply voltage	230 Vac
Circuit protection	30 mA ground-fault protection
Max. continuous exposure temp	121°C
Minimum Installation Temperature	-60°C
T-rating ¹	T3



Certifications/Approvals . . .



European Organisation for Electrotechnical
Standardisation
Hazardous (Classified) Locations



II 2 G/D EEx e II T3 Ⓧ 04 ATEX 136794X

Note . . .

1. Thermon heating cables are approved for the listed T-ratings using the stabilised design method. This enables the cable to operate in hazardous areas without limiting thermostats.



THERMON . . . The Heat Tracing Specialists®

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Power Output Curves . . .

Power output shown applies to cable buried in concrete where the surface of the slab is 0°C. Contact Thermon for other conditions.

Product Type 230 Vac Nominal	Power Output Slab at 0°C W/m
KSR-2	90

Product Features . . .

- Withstands continuous flammability testing according to IEC 60332-1: 1993
- Allows cable to be installed at temperatures to -60°C
- Termination for system tested for ozone stability, UV stability and flammability testing according to ISO/IEC requirements
- Meet or exceed the requirements of IEEE515.1

Basic Accessories . . .

Power Connection: All KSR cables require a TBX-3L power connection boot for terminating the circuit before connecting to power.
End-of-Circuit Termination: KSR cables require the ET-6 end cap and ET-60 overcap for terminating at the end of the circuit.



PETK... circuit fabrication kit for use in hazardous and industrial areas. Terminates SX heating cables in a JB-K-0-M25 (or other) junction box. Kit includes a power boot, end cap, over end cap, RTV adhesive, yellow/green earth wire sleeve and the necessary wire pins/lugs.

KSR-ETK-DB... termination kit for use in hazardous and industrial areas.



KSR-EJK... expansion joint kits are designed to allow cable to cross a concrete expansion or construction joint. When installed, the kit will allow normal expansion and contraction of the substrate without straining or damaging the heating circuit. Easy-to-use kit includes a reinforced flexible sleeve and RTV adhesive.



JB-K-0-M25... rugged, impact-resistant nonmetallic junction box suitable for use in harsh industrial environments and has an IP66 degree of protection.

- Features of the JB-K-0-M25 include:
- Exposure temperatures to -30°C
 - Stainless steel screws (captured) and inserts
 - Four M25 threaded openings (glands and/or blind plugs available separately)
 - Four 6-mm² line/load terminals
 - Two 6-mm² earth terminals
 - Terminals rated to 22 amps (T6 85°C) or 46 amps (T4 135°C)
 - Maximum voltage rating of 750 Vac
 - Box dimensions of 126 x 126 x 95 mm



TED-Ambient... thermostat is designed to provide ambient sensing control of electric heat tracing circuits. This adjustable thermostat can be used to control a single heating circuit or as pilot control of a contactor switching multiple heat tracing circuits. A rugged nonmetallic enclosure provides watertight and dusttight protection (per IP66). The TED-Ambient thermostat is approved for use in ordinary (nonclassified) areas and are certified to the ATEX directive for use in Category 2 and 3 (Zone 1 and 2) classified areas.



Terminator ZP-WP... kits are designed for rapid, trouble-free installation for use in harsh industrial environments and has an IP66 degree of protection.

- Features of the Terminator include:
- Minimum installation temperature -60°C
 - Corrosion resistant
 - UV resistant
 - High impact resistant (7 joule at -60°C)
 - Easy access to terminal block for wiring
 - Snap-on DIN rail for permanent mounting
 - Multiple cable entry capacity
 - Independent sealing for each heating cable
 - Built-in cable guide with power compression provides strain-relief of the cable.



M25-SXL-Ex... EEx e approved nonmetallic gland for use with JB-K-0-M25 junction boxes.

M25-HPT/PWR-Ex... power gland is suitable for securing power cables with diameters between 8 and 17 mm.

CL... vinyl-based peel-and-stick caution labels are intended for direct exposure to industrial environments. Additional languages are available; contact Thermon.

Circuit Breaker Sizing and Type . . .

Maximum circuit lengths for various circuit breaker amperages are shown below. Circuit breaker sizing and earth-fault protection should be based on applicable local codes.

Type B Circuit Breakers

230 Vac Service Voltage	Product Type	Start-Up Temperature °C	Max. Circuit Length vs. Breaker Size Metres			
			16 A	25 A	32 A	40 A
	KSR-2	0	30	47	62	70
	KSR-2	-20	27	43	56	70

Type C Circuit Breakers

230 Vac Service Voltage	Product Type	Start-Up Temperature °C	Max. Circuit Length vs. Breaker Size Metres			
			16 A	25 A	32 A	40 A
	KSR-2	0	31	50	65	70
	KSR-2	-20	31	50	65	70

