

Foundation Heating

RSX Self-Regulating Heating Cable

Product Specifications

Application . . .

FrostHeave Protection

Thermon RSX parallel self-regulating heating cables provide frostheave protection of cryogenic storage vessels. RSX heating cables offer the power output needed to maintain the substrate of cryogenic tanks above freezing temperatures. With cut-to-length parallel circuitry, RSX cables can be field fabricated, eliminating the need for specific circuit lengths to be provided for the application. The heat output of RSX cable varies in response to the surrounding conditions along the entire length of a circuit which make it ideally suited for foundation heating applications where the heat demand may vary.

The superior construction of RSX with 2.1 mm² (14 AWG) bus wires, provide durability and large geometry to effectively transfer power output in conduit. The fluoropolymer overjacket provides corrosion resistance, durability for installation in conduit, and lowers the friction factor for pulling.

RSX is approved for use in ordinary (nonclassified) areas, hazardous (classified) areas and are certified to the ATEX directive for use in Category 2 and 3 (Zone 1 and 2) classified areas.

Ratings . . .

Nominal power output in conduit¹

RSX 10-2..... 30 W/m (9 W/ft)

RSX 15-2..... 40 W/m (12 W/ft)

Available supply voltage² 208-240 Vac nominal

Minimum installation temperature..... -60°C (-76°F)

Maximum circuit length

RSX 10-2..... 180 m (590 ft)

RSX 15-2..... 120 m (394 ft)

Minimum bend radius

@ -15°C (5°F)..... 10mm (0.38")

@ -60°C (-76°F)..... 32 mm (1.25")

Pull strength..... 500 N (112 lb_f)

Friction coefficient 0.25-0.35

Weight 0.191 kg/m (0.058 lb/ft)

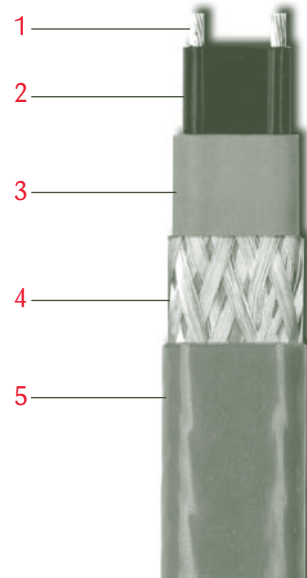
T-rating..... T6/T5

Basic Accessories . . .

Power Connection/End of Circuit Termination:

All RSX cables for foundation heating require the use of the FHT1-R-10 Power and End Termination Kit. The kit is designed to fabricate (10) power connections and (10) end connections.

Along with these components, Thermon has a complete line of installation accessories specifically for foundation heating applications.



Construction . . .

- 1 Nickel-Plated Copper Bus Wires 2.1 mm² (14 AWG)
- 2 Radiation Cross-Linked Semiconductive Heating Matrix
- 3 Radiation Cross-Linked Dielectric Insulation
- 4 Tinned Copper Braid
- 5 Fluoropolymer overjacket

Note . . .

1. Nominal power output for substrate temperature of 5°C (41°F) and operating voltage of 240 Vac.
2. For other voltages up to 277 Vac, contact Thermon.

Certifications/Approvals . . .

CENELEC European Organisation for Electrotechnical Standardisation
Hazardous (Classified) Locations

CE **Ex** II 2 G Ex e II T5 KEMA 07ATEX0179

IEC Ex International Electrotechnical Commission
IEC Certification Scheme for Explosive Atmospheres
KEM 07.0052

FM Approved FM Approvals
Hazardous (Classified) Locations

UL LISTED Underwriters Laboratories Inc.
Hazardous (Classified) Locations

ATEX Certification is to EN 60079-0: 2004 and EN 60079-30-1: 2007
IECEx certification is to IEC 60079-0: 2004 and IEC 60079-30-1: 2007

RSX cable has additional hazardous area approvals including:

- CCE/CMRS
- CSA

Contact Thermon for additional approvals and specific information.

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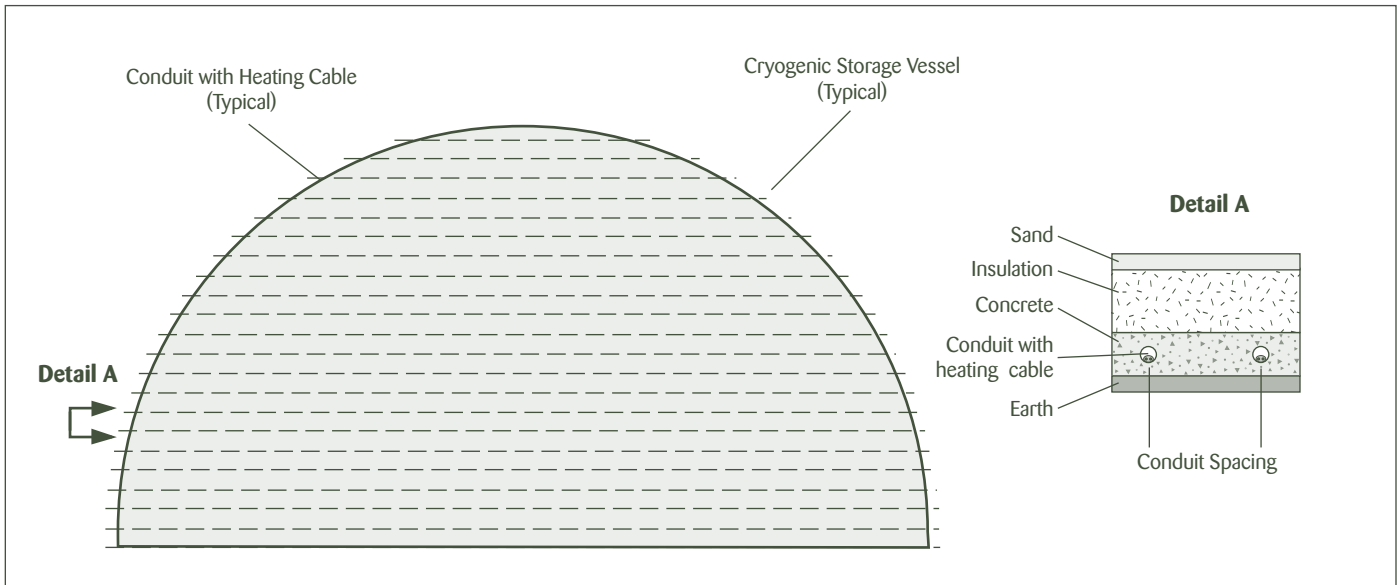
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Conventional Foundation Heating System . . .



Circuit Breaker Sizing and Circuit Length¹ . . .

Maximum current draws based on start-up temperatures are shown below. Circuit breaker sizing should be based on local regulations. Ground-fault protection of equipment should be provided for each branch circuit supplying electric heating equipment.

Start-Up Temperature °C (°F)	Maximum Current Draw 230/240 Vac	
	RSX 10-2 A/m (A/ft)	RSX 15-2 A/m (A/ft)
20 (68)	0.133 (0.041)	0.187 (0.057)
10 (50)	0.154 (0.047)	0.225 (0.069)
0 (32)	0.173 (0.053)	0.252 (0.077)

Note . . .

1. Circuit length is dependent on ampacity and characteristics of the circuit breaker.
2. Current draw values are based on dry conduit conditions. For wet conduit conditions, contact Thermon.

Temperature Control . . .

From both energy saving and operational standpoints, the heating system should include an effective and versatile temperature control system.

Contact Thermon for recommendations on a suitable control system.

Power and End Termination Kit . . .



FHT1-R-10 . . . contains components to fabricate 10 power connections and 10 end terminations for RSX foundation heating cable. (Components for a single circuit shown.)

Kit includes:

- (10) Ring terminals
- (10) ET End caps
- (10) TBX Power connection boots
- (10) 3" (76 mm) Polyolefin shrink tubes
- (10) 4-3/4" (121 mm) Polyolefin shrink tubes
- (1) Rolls of Teflon[®] tape
- (3) Rolls of mastic tape
- (10) RTV silicone tubes

