

# HSX<sup>®</sup> Self-Regulating Heating Cable

## Product Specifications

### Application: Hot Water Temperature Maintenance

HSX heating cables, the heart of Thermon's WarmTrace™ system, are specifically designed to maintain hot water supply piping at desired nominal maintenance temperatures. With 14 AWG bus wires (larger than any other system available), HSX can reduce the number of circuits required to install an electric heat-traced system.

### Easy to Design . . .

A WarmTrace system replaces the complex recirculation network of return pipes, circulating pumps and balancing valves. For each hot water supply line, simply match the hot water maintenance temperature with the corresponding color-coded cable and insulate per the design guide.

HSX self-regulating cable automatically maintains desired water temperatures. Changes in pipe diameters, flow rates and use patterns will not affect the design. Even variations in ambient or water temperature are compensated for as the cable adjusts its heat output along the entire length of a heat-traced pipe.

### Easy to Install . . .

HSX heating cable is cut to length and installed directly on the supply piping under conventional thermal insulation with ordinary hand tools. Kits for power connection, end termination and splicing, plus other accessories, are designed for quick and easy installation. Increased circuit lengths with HSX mean less circuits to fabricate and fewer total circuits.

### Economical to Operate and Maintain . . .

Because a WarmTrace system replaces recirculation, it also eliminates the costs of continuously operating pumps, deliberately overheating the water and maintaining the recirculation system. Potential water savings can also be realized since the heat tracing can be installed up to the point of use; i.e., no waiting for hot water.



**THERMON . . . The Heat Tracing Specialists<sup>®</sup>**

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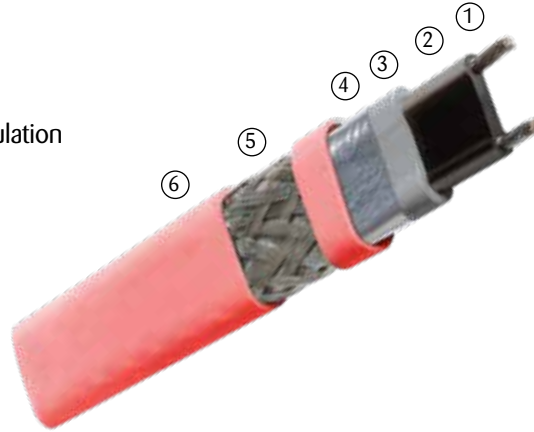
# HSX<sup>®</sup>

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### Characteristics . . .

- 1 14 AWG Nickel-Plated Copper Bus Wire
- 2 Radiation Cross-Linked Polyolefin Heating Core
- 3 Radiation Cross-Linked Polyolefin Primary Dielectric Insulation
- 4 Aluminum Foil
- 5 14 AWG (equivalent size) Tinned Copper Metallic Braid
- 6 Polyolefin Outer jacket



### Ratings . . .

0.38" @ 5°F, 1.25" @ -60°F Minimum Bend Radius  
 30 mA Ground-Fault Protection Required<sup>1</sup>  
 208 Vac Supply Voltage

### Cable Selection . . .

Catalog Number	Outer Jacket Color	Operating Voltage <sup>2</sup>	Nominal Maintain Temperature	Ambient Range	Max. Circuit Length vs. Breaker Size		
					15 Amp	20 Amp	30 Amp
HSX 2105-2	Blue	208 Vac	105°F (41°C)	75°-80°F (24°-27°C)	1085' (331 m)	1200' (366 m)	1200' (366 m)
HSX 2120-2	Green	208 Vac	120°F (49°C)	72°-80°F (22°-27°C)	480' (146 m)	640' (195 m)	960' (293 m)
HSX 2140-2	Red	208 Vac	140°F (60°C)	72°-80°F (22°-27°C)	275' (84 m)	370' (113 m)	555' (169 m)

### Note . . .

1. The National Electrical Code and the Canadian Electrical Code require ground-fault protection of equipment for each branch circuit supplying electric heating equipment.
2. HSX can be operated at 240 or 277 Vac with design assistance from Thermon.

### HSX Cables Meet or Exceed the Following Tests . . .

Test	Standard Followed
Abrasion Resistance	UL 1588 (8.3); IEEE 515.1 (4.3.4)
Elevated Temperature Deformation	IEEE 515.1 (4.2.5)
Dielectric Withstand	IEEE 515.1 (4.2.8)
Resistance to Impact	IEEE 515.1 (4.2.1)
Resistance to Cutting	UL 1588 (8.2)
Resistance to Crushing	IEEE 515.1 (4.3.3)
Vertical Flame	UL 15 (9.1-9.3) UL 1588 (8.5)

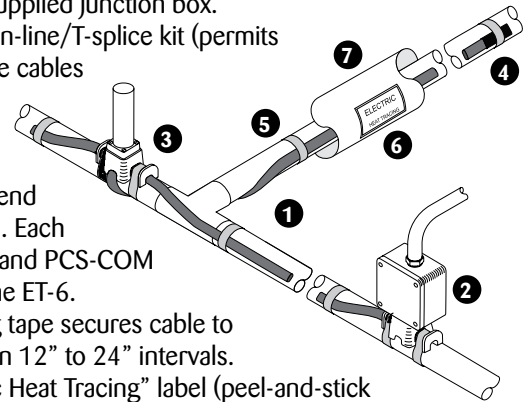
### Certifications/Approvals . . .



### Typical Installation . . .

A WarmTrace HSX 2100 hot water temperature maintenance system will typically include the following components:

1. **HSX 2100** self-regulating heating cable.
2. **PCA-COM** circuit fabrication kit shown with optional Thermon supplied junction box.
3. **PCS-COM** in-line/T-splice kit (permits two or three cables to be spliced together).
4. **ET-6** cable end termination. Each PCA-COM and PCS-COM includes one ET-6.
5. **FT-1L** fixing tape secures cable to pipe; use on 12" to 24" intervals.
6. **CL** "Electric Heat Tracing" label (peel-and-stick label attaches to insulation vapor barrier on 10' intervals or as required by code or specification).
7. Fiberglass thermal insulation and vapor barrier (by others).



### Components . . .

Thermon provides a full range of components for sealing and connecting these cables. Contact Thermon for full details.

### Installation Instructions . . .

Detailed installation instructions (Form No. CPD1014) is available on request.

