



PRODUCT SPECIFICATIONS

# HTSX™ SELF-REGULATING HEATING CABLE

## APPLICATION

HTSX self-regulating heating cables are designed specifically for process temperature maintenance or freeze protection where high temperature exposure capability is required. HTSX withstands the temperature exposures associated with steam purging.

The heat output of HTSX cable varies in response to the surrounding temperature. Variations in the ambient temperature or heat lost through the thermal insulation are compensated for automatically along the entire length of a heat-traced pipe.

HTSX cables are certified for use in ordinary (nonclassified) areas and in potentially explosive atmospheres in accordance with the ATEX Directive and the IECEx Scheme.

## RATINGS

Available watt densities	..9, 19, 29, 38, 48, 64 W/m @ 10°C
Nominal supply voltages <sup>1</sup>	.....230 Vac
Max. maintenance temperature	..... 150°C
Max. exposure temperature	
Intermittent power-on or off	.....250°C
Continuous power-off	.....204°C
Minimum installation temperature	.....-60°C
Minimum bend radius	
@ -15°C	..... 10 mm
@ -60°C	..... 32 mm
T-rating <sup>2</sup>	.....
HTSX 3-2, 6-2, 9-2, 12-2, 15-2	..... T3
HTSX 20-2	..... T2
Based on stabilised design <sup>3</sup>	..... T3 to T6

## Notes

1. Cable may be energised at other voltages; contact Thermon for design assistance.
2. T-rating per internationally recognised testing agency guidelines.
3. 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. The T-rating may be determined using CompuTrace® Electric Heat Tracing Design Software or contact Thermon for design assistance..



## CONSTRUCTION

- 1 Nickel-plated copper bus wires (1.3 mm<sup>2</sup>)
- 2 Heating matrix and fluoropolymer dielectric insulation
- 3 Plated copper braid
- 4 Fluoropolymer overjacket provides additional protection to cable and braid where exposure to chemicals or corrosives is expected.

## BASIC ACCESSORIES

Thermon offers system accessories designed specifically for rapid, trouble-free installation of Thermon heating cables.

All cables require a suitably certified connection kit to comply with approval requirements.

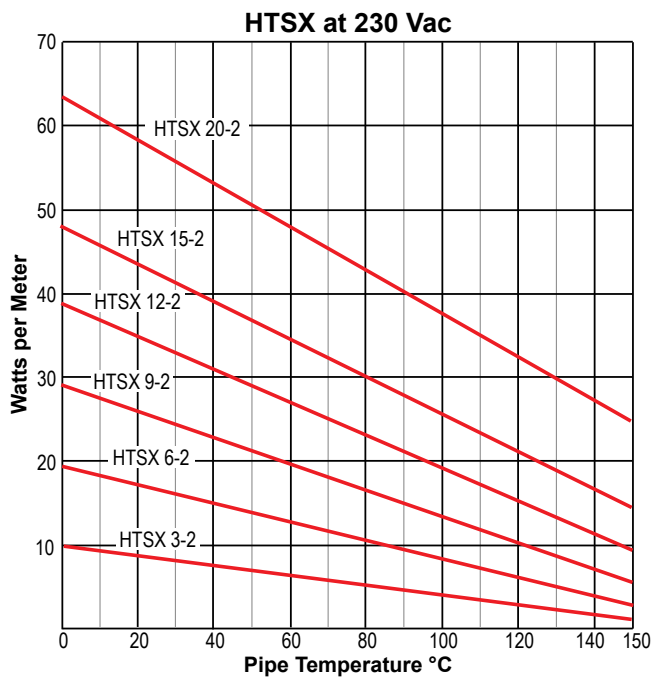
Hot end terminations > 230°C must be completed using the Terminator ZS/ZE or Terminator ZE-B kits.



## POWER OUTPUT CURVES 1

The power outputs shown apply to overjacketed cable installed on insulated metallic pipe at the service voltage stated below.

Product Type 230 Vac Nominal	Power Output at 10°C W/m
HTSX 3-2	9
HTSX 6-2	19
HTSX 9-2	29
HTSX 12-2	38
HTSX 15-2	48
HTSX 20-2	64



## CERTIFICATIONS/APPROVALS

**CE** Certificate FM12 ATEX 0014X  
in accordance with the EU ATEX Directive 94/9/EC

**IEC** International Electrotechnical Commission  
**IECEx** IEC Certification Scheme for Explosive Atmospheres  
FMG 12.0004X

HTSX has additional hazardous area approvals including:  
• DNV • Lloyd's • TIIS • CCE/CSIR • TRCU  
Contact Thermon for additional approvals and specific information.

## CIRCUIT BREAKER SIZING AND TYPE 2

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. For information on design and performance on other voltages, contact Thermon.

Earth-fault protection of equipment should be provided for each branch circuit supplying electric heating equipment.

### Type B Circuit Breakers

Product Type	230 Vac Service Voltage Start-Up Temperature 3 °C	Max. Circuit Length 4 vs. Breaker Size Metres		
		16 A	25 A	32 A
HTSX 3-2	10	177	215	215
	0	177	215	215
	-20	171	215	215
	-40	134	215	215
HTSX 6-2	10	114	152	152
	0	114	152	152
	-20	114	152	152
	-40	95	152	152
HTSX 9-2	10	82	123	123
	0	82	123	123
	-20	82	123	123
	-40	72	120	123
HTSX 12-2	10	65	106	106
	0	65	106	106
	-20	64	106	106
	-40	57	94	106
HTSX 15-2	10	47	77	94
	0	45	74	94
	-20	41	67	89
	-40	37	60	79
HTSX 20-2	10	34	55	73
	0	33	52	69
	-20	30	48	62
	-40	27	43	57

### Type C Circuit Breakers

Product Type	230 Vac Service Voltage Start-Up Temperature 3 °C	Max. Circuit Length 4 vs. Breaker Size Metres		
		16 A	25 A	32 A
HTSX 3-2	10	177	215	215
	0	177	215	215
	-20	171	215	215
	-40	134	215	215
HTSX 6-2	10	114	152	152
	0	114	152	152
	-20	114	152	152
	-40	95	152	152
HTSX 9-2	10	82	123	123
	0	82	123	123
	-20	82	123	123
	-40	73	123	123
HTSX 12-2	10	65	106	106
	0	65	106	106
	-20	65	106	106
	-40	58	96	106
HTSX 15-2	10	47	77	94
	0	47	77	94
	-20	47	76	94
	-40	42	69	91
HTSX 20-2	10	39	64	81
	0	39	64	81
	-20	36	59	78
	-40	33	53	70

### Note

- For more precise power output values as a function of pipe temperature, refer to CompuTrace®.
- Maximum circuit lengths shown are based on an instantaneous trip current characteristic per IEC 60898 at the referenced start-up temperature and a 10°C maintenance temperature. For maximum circuit lengths with other trip current characteristics contact Thermon.
- While a heat tracing system is generally designed to keep the contents of a pipe at the desired maintain temperature, the cable may be energized at lower temperatures. For design data with lower start-up temperatures than represented above contact Thermon for design assistance.
- The maximum circuit length is for one continuous length of cable, not the sum of segments of cable. Refer to CompuTrace® design software or contact Thermon for current loading of segments.