PRODUCT SPECIFICATIONS

VSX™-HT

SELF-REGULATING HEATING CABLE

APPLICATION

High performance VSX-HT self-regulating heating cables are designed specifically for process temperature maintenance or freeze protection where high maintain temperatures or high temperature exposures are required. VSX-HT withstands the temperature exposures associated with steam purging.

The heat output of VSX-HT cable varies in response to the surrounding temperature by reducing its thermal output with increasing temperature and can be overlapped without temperature upset damage to the cable.

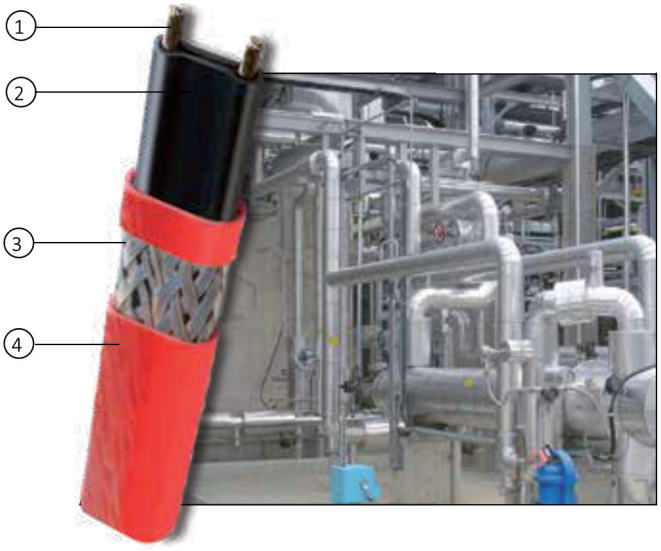
VSX-HT cables are certified for use in ordinary (nonclassified) areas and in potentially explosive atomospheres in accordance with the ATEX Directive and the IEC Ex Scheme.

RATINGS

Available Watt densities..... 15, 32, 48, 64 W/m at 10°C
Nominal supply voltage [1] ..... 230 Vac
Maximum maintenance temperature ..... 200°C
Maximum exposure temperature
  Intermittent power-on or off ..... 250°C
Minimum installation temperature ..... -60°C
Minimum bend radius
  @-15°C ..... 10 mm
  @-60°C ..... 32 mm
T-rating [2]
  15 and 32 W/m ..... T3 200°C
  48 and 64 W/m ..... T2 230°C
  Based on stabilised design [3] ..... T2 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.
4. Information on additional accessories to complete a heater circuit installation and to comply with approval requirements can be found in the "Self-Regulating Cables Systems Accessories" product specification sheet (Form TEP0010U).



CONSTRUCTION

1 Nickel-plated copper bus wires (2.1 mm [2])
2 Semiconductive heating matrix and fluoropolymer dielectric insulation
3 Nickel-plated copper braid
4 Fluoropolymer overjacket provides additional protection to cable and braid where exposure to chemicals or corrosives is expected.

BASIC ACCESSORIES [4]

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

All cables require a connection kit to comply with approval requirements. Information on accessories to complete a heater circuit installation can be found in the "Heating Cable Systems Accessories" product specification sheet (Form TEP0010U).

Hot end terminations > 220°C must be completed using the Terminator DS/DE, ZS/ZE, DE-B, ZE-B kits.

Note:

"D" Kits Division 2 and Zone 2 Areas

"Z" Kits Zone 1 Areas

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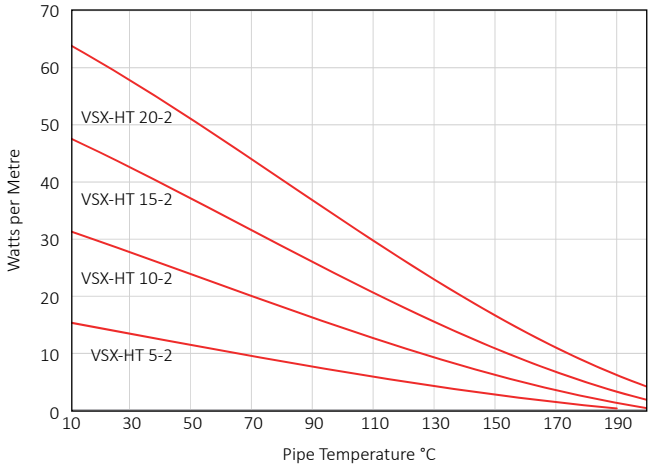
SELF-REGULATING HEATING CABLE

POWER OUTPUT CURVES

The power outputs shown apply to cable installed on insulated metallic pipe (using the procedures outlined in IEC/IEEE 60079-30-1) at the service voltages stated below. For use on other service voltages, contact Thermon.

Product Type 230 Vac Nominal	Power Output at 10°C W/m
VSX-HT 5-2	15
VSX-HT 10-2	32
VSX-HT 15-2	48
VSX-HT 20-2	64

VSX-HT at 230 Vac



CERTIFICATIONS/APPROVALS

Certificate FM 18ATEX0009X
In accordance with the ATEX Directive 2014/34/EU

International Electrotechnical Commission
IEC Certification Scheme for Explosive Atmospheres
FMG 18.0002X

Factory Mutual Research
Ordinary and Hazardous (Classified) Locations

VSX-HT has additional hazardous area approvals including:
DNV • Lloyd's • JIS • CCE/CMRS • GGTN • CSA • TR CU • TR-Fire
ABS • CIMFR • CQST • CLASS NK • JIS • KOSHA RM RS • TIIS
Contact Thermon for latest status of approvals and specific information.

CIRCUIT BREAKER SIZING AND TYPE [1]

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

230 Vac Service Voltage		Max. Circuit Length [3] vs. Breaker Size - Meters			
Product Type	Start-Up Temperature [2] °C	16A	25A	32A	40A
VSX-HT 5-2	10	98	167	203	203
	0	98	167	203	203
	-20	98	167	203	203
	-40	98	167	203	203
VSX-HT 10-2	10	64	105	144	144
	0	64	105	144	144
	-20	63	105	144	144
	-40	59	98	144	144
VSX-HT 15-2	10	40	65	86	114
	0	39	62	82	109
	-20	36	58	76	101
	-40	34	54	72	94
VSX-HT 20-2	10	28	45	60	77
	0	28	44	57	74
	-20	26	41	53	69
	-40	24	39	51	65

Type C Circuit Breakers

230 Vac Service Voltage		Max. Circuit Length [3] vs. Breaker Size - Meters			
Product Type	Start-Up Temperature [2] °C	16A	25A	32A	40A
VSX-HT 5-2	10	98	167	203	203
	0	98	167	203	203
	-20	98	167	203	203
	-40	98	167	203	203
VSX-HT 10-2	10	64	105	144	163
	0	64	105	144	163
	-20	64	105	144	163
	-40	62	103	144	163
VSX-HT 15-2	10	46	76	102	139
	0	46	76	102	139
	-20	44	72	97	132
	-40	42	68	91	124
VSX-HT 20-2	10	36	58	77	102
	0	35	56	74	98
	-20	32	52	69	91
	-40	31	49	65	85

Notes

1. 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.
2. 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.
3. 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..