



PRODUCT SPECIFICATIONS

# HPT™ POWER-LIMITING HEATING CABLE

**APPLICATION**

High performance HPT power-limiting heating cables are designed specifically for process temperature maintenance or freeze protection where high maintain temperatures or high temperature exposure is required. HPT withstands the temperature exposures associated with steam purging.

A coiled resistor alloy heating element provides the power-limiting feature of HPT. This PTC (Positive Temperature Coefficient) characteristic decreases the cable’s power output as the heat-traced product temperature increases and allows the cable to be overlapped during installation. The composite construction of the heating element and fibre substrate, plus an additional fibre cushion layer, provides an exceptionally durable high performance heating cable.

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

**RATINGS**

Available Watt densities.....	15, 30, 45, 60 W/m at 10°C
Nominal supply voltage <sup>1</sup> .....	230 Vac
Maximum maintenance temperature	
HPT-5 .....	215°C
HPT-10 .....	195°C
HPT-15 .....	180°C
HPT-20 .....	150°C
Maximum continuous exposure temperature	
Power-off .....	260°C
Minimum installation temperature .....	-60°C
Minimum bend radius	
@ -15°C .....	10 mm
@ -60°C .....	32 mm
T-rating <sup>2</sup>	
Based on stabilised design <sup>3</sup> .....	T6 ... T2

**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 (3.3 mm<sup>2</sup>)
- 2 Composite metal alloy/fibre
- 3 Heater bus connection (not shown)
- 4 Fibreglass braid
- 5 Fluoropolymer dielectric insulation
- 6 Nickel-plated copper braid
- 7 Fluoropolymer overjacket

**BASIC ACCESSORIES**

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

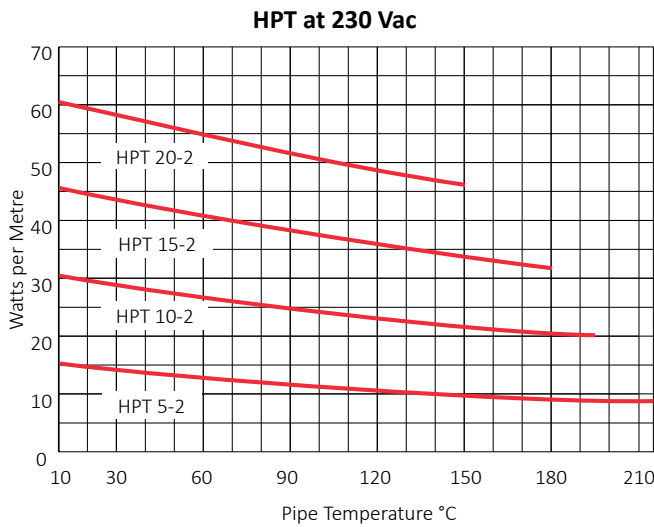
All HPT cables require connection kits to comply with approval requirements. Information on accessories to complete a heater circuit installation can be found in the “Heating Cable Systems Accessories” product specification sheet (Form TEP0010U).



**POWER OUTPUT CURVES**

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

Product Type 230 Vac Nominal	Zone Length cm	Power Output at 10°C W/m
HPT 5-2	76	15
HPT 10-2	61	30
HPT 15-2	61	46
HPT 20-2	61	61



**CIRCUIT BREAKER SIZING <sup>1</sup>**

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 and C Circuit Breakers**

Product Type	Start-Up Temperature <sup>2</sup> °C	Max. Circuit Length <sup>3</sup> vs. Breaker Size Metres				
		16 A	25 A	32 A	40 A	50 A
HPT 5-2	10	167	271			
	0	167	271			
	-20	167	271			
	-40	167	271			
HPT 10-2	10	85	136	180	191	
	0	85	136	180	191	
	-20	85	136	180	191	
	-40	85	136	180	191	
HPT 15-2	10	57	92	120	155	156
	0	57	92	120	155	156
	-20	57	92	120	155	156
	-40	57	92	120	155	156
HPT 20-2	10	44	70	91	117	130
	0	44	70	90	116	130
	-20	42	67	86	110	130
	-40	40	64	82	105	130

**CERTIFICATIONS/APPROVALS**



II 2 G Ex 60079-30-1 IIC T6...T2 Gb  
II 2 D Ex 60079-30-1 IIIC T85 °C...T300 °C Db  
DEKRA 16ATEX0093



International Electrotechnical Commission  
IEC Certification System for Explosive Atmospheres  
IECx DEK 16.0046



FM Approvals  
Ordinary and Hazardous (Classified) Locations



Underwriters Laboratories Inc.  
Hazardous (Classified) Locations

**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.