



PRODUCT SPECIFICATIONS

TubeTrace® Type SEI/MEI - HT

WITH ELECTRICAL HEAT TRACE

Isolated from High Temperature Extremes

APPLICATION

Freeze protection 40°F (5°C) of steam lines. Continuous exposure to 750°F (399°C). TubeTrace HT is a pre-engineered electric traced tube bundle for steam sample lines and impulse lines to pressure transmitters. TubeTrace HT will provide water freeze protection in ambient conditions down to -50°F (-45°C) with 25 mph (40 kph) wind conditions.

In the past, tubing subject to high temperature exposure was heat traced with series resistance mineral insulated (MIQ) heat trace. MIQ heaters are custom made to fit each application, so long lead times and specific field measurements are often required. TubeTrace HT solves this with Thermon parallel resistance HPT heat trace isolated from direct contact with high temperature tubing.

TubeTrace HT bundles are designed to withstand continuous 750°F (399°C) steam exposure temperature even when power is applied to the heat trace during ambient conditions of 40°F (5°C).

RATINGS

Watt density	10 w/ft @ 50°F (33 W/m @ 10°C)
Supply voltages ¹	120 or 240 Vac Nominal
Maintain temperature	40°F (5°C) (Freeze protection)
Minimum design ambient	-50°F (-45°C)
Max. continuous exposure temp.	750°F (399°C)
Minimum bend radius	16" (406 mm)

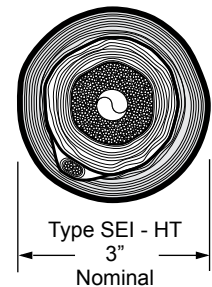
PRODUCT FEATURES

- "Touch safe" jackets protect personnel
- "Cut-to-length" for faster installation
- Rated for 750°F (399°C) continuous exposure temperatures
- Designed for ambient sensing control at +40°F (5°C)
- Freeze protect in ambient of -50°F (-45°C)



CONSTRUCTION

- 1 Process tube(s)
- 2 High temperature woven glass fiber thermal insulation
- 3 Heat reflective foil
- 4 HPT heat trace
- 5 Thermal diffusion foil
- 6 Non-hygroscopic glass fiber insulation
- 7 Polymer outer jacket (ATP or TPU)



BASIC ACCESSORIES

END SEAL KIT

FAK-7HTS-HT/HTX-1

- Up to 3.50" o.d.
- Single tube, single tracer

FAK-7HTS-HT/HTX-2

- Up to 3.50" o.d.
- Dual tube, single tracer



Note

1. Higher voltages up to 480 Vac may be possible: contact Thermon for design assistance.



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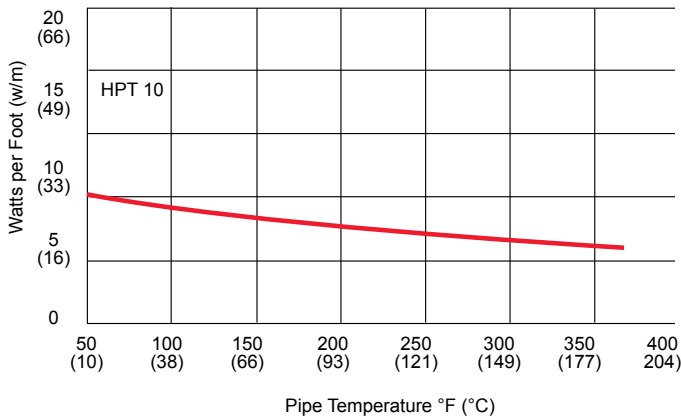
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POWER OUTPUT CURVES

The power outputs shown apply to cable installed on insulated metallic pipe (using the procedures outlined in IEEE Standard 515) at the service voltages stated below. For use on other service voltages, contact Thermon.

Catalog Number	Zone Length in (cm)	Catalog Number	Zone Length in (cm)	Power Output at 50°F (10°C)
HPT 10-1	18 (46)	HPT 10-2	24 (61)	10 (33)



CIRCUIT BREAKER SIZING

Maximum circuit lengths for various circuit breaker amperages are shown below. Breaker sizing should be based on the National Electrical Code, Canadian Electrical Code or any other applicable code. The National Electrical Code and Canadian Electrical Code require ground-fault protection of equipment for each branch circuit supplying electric heating equipment. Check local codes for ground-fault protection requirements.

Catalog Number	Start-Up Temperature °F (°C)	Max. Circuit Length vs. Breaker Size ft (m)			
		20A	30A	40A	50A
HPT 10-1	50 (10)	155 (47)	240 (73)	300 (91)	--
	0 (-18)	145 (44)	215 (66)	300 (91)	--
	-20 (-29)	135 (41)	210 (64)	290 (88)	300 (91)
	-40 (-40)	130 (40)	200 (61)	275 (84)	300 (91)

Catalog Number	Start-Up Temperature °F (°C)	Max. Circuit Length vs. Breaker Size ft (m)			
		20A	30A	40A	50A
HPT 10-2	50 (10)	310 (95)	485 (148)	600 (183)	--
	0 (-18)	280 (85)	435 (133)	600 (183)	--
	-20 (-29)	270 (82)	420 (128)	580 (177)	600 (183)
	-40 (-40)	260 (79)	400 (122)	550 (168)	600 (183)

HOW TO SPECIFY

SEI-4F1-52-7-ATP-065-HT

<p>Bundle Type</p> <p>SEI = Single Tube MEI = Multiple Tubes</p>	<p>Process Tube O.D.</p> <p>2 = 1/4" 3 = 3/8" 4 = 1/2"</p>	<p>Process Tube Material</p> <p>A = 316 SS Welded D = Monel¹ E = Titanium F = 316 SS Seamless G = 304 SS Welded H = 304 SS Seamless J = Alloy C276 K = Alloy 825 L = Alloy 20 X = Special</p>	<p>Number of Tubes</p> <p>1 2</p>	<p>Heat Trace Type</p> <p>52 = HPT 10 w/ft. 120 Vac 53 = HPT 10 w/ft. 240 Vac</p>	<p>Heat Trace Option</p> <p>7 = OJ/Fluoropolymer NEC Ordinary/D2 Areas and CEC D1 & D2 Areas 8 = NEC Division 1 Areas</p>	<p>Bundle Jacket</p> <p>ATP² TPU</p>	<p>High Temperature</p> <p>HT = 750°F (399°C) Continuous</p> <p>Process Tube(s) Wall Thickness</p> <p>035 = .035" 049 = .049" 065 = .065" 083 = .083"</p>
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Notes

1. Monel is a trademark of Inco Alloys International, Inc.
2. Black ATP is standard.

CERTIFICATIONS/APPROVALS



FM Approvals
Ordinary Locations
Hazardous (Classified) Locations
Class I, Division 2, Groups B, C and D
Class II, Division 2, Groups F and G*
Class III, Divisions 1 and 2 G*
Division 1 Locations
Requires Heater Cable Option 8:
Class I, Division 1, Groups B, C and D
Class II, Division 1, Groups E, F and G



Underwriters Laboratories Inc.
Ordinary Locations
Hazardous (Classified) Locations
Class I, Division 2, Groups B, C and D
Class II, Division 2, Groups E, F and G
Class III, Divisions 1 and 2
Class I, Zone 1, AExe II
Class I, Zone 2, AExe II
Division 1 Locations
Requires Heater Cable Option 8:
Class I, Division 1, Groups B, C and D
Class II, Division 1, Groups E, F and G



Canadian Standards Association
Ordinary Locations
Hazardous (Classified) Locations
Class I, Division 2, Groups A, B, C and D
Class II, Division 2, Groups E, F and G
Class I, Division 1, Groups A, B, C and D
Class II, Division 1, Groups E, F and G
Ex e II

* CL. II, Div. 2 requires Thermon design