

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 preengineered 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 measurments 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)

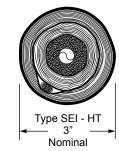
PRODUCT FEATURES

- "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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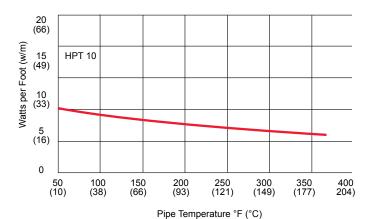
WITH ELECTRICAL HEAT TRACE

Isolated from High Temperature Extremes

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 120 Vac	Zone Length in (cm)	Catalog Number 240 Vac	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.

120 Vac Service Voltage		Max. Circuit Length vs. Breaker Size			
Catalog Number	Start-Up Temperature °F (°C)	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)

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

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
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



2. Black ATP is standard.

1. Monel is a trademark of Inco Alloys International, Inc.

Notes

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 review.