POWER TRACE
Commercial & Industrial
Heat Trace Products

EHTM

Product Datasheet

up to 392°F

Medium Temperature Self-Regulating Heating Cable

Overview:

POWER TRACE EHTM is a medium-temperature, industrial-grade, self-regulating heating cable that can be safely used for freeze protection and process temperature maintenance with or without steam purge applications where the heating cable exposure temperature from the pipeline or vessel is lower than 392°F (200°C). The maximum maintenance temperature will be up to 302°F (150°C). EHTM heating cable is built to perform in the harshest of environments to safely and reliably maintain the temperature of the medium being transported or processed in the pipeline or vessel. Factory Mutual (FM) and North American CSA Group have certified EHTM heating cable and approved for use in ordinary and hazardous areas as defined according to the relative standard for the United States.

1. Nickel-plate copper bus wire (16AWG)
2. PTC self-regulating conductive core
3. Fluoropolymer inner insulation layer
4. Tinned copper braid
5. Outer jacket: Fluoropolymer or Modified Polyolefin

Product Ratings:

EHTM heating cable is certified by Factory Mutual (FM) United States and CSA Group (US) for the safe use in hazardous and ordinary locations including explosion-proof applications.

Class I, Zone 1, AEx 60079-30-1 IIC T3 Gb
Zone 21, AEx 60079-30-1 IIIC T200°C Db
Class I, Division 2, Groups A, B, C, D T3
Class II, Division 2, Groups F, G T3
Ta = -40°C to +55°C
Voltage: 1 or 2

FM APPROVED

SA US

Product Structure:

The extruded core tape, made with parallel nickel-plate copper bus wire and PTC semiconductor polymer heating material, and a inner insulation layer of fluoropolymer added with a tinned copper braid and the outer jacket form a complete structure of EHTM heating cable, in which the outer jacket can be made of fluoropolymer material (CT) or Outer jacket: Fluoropolymer or Modified Polyolefin (CR).

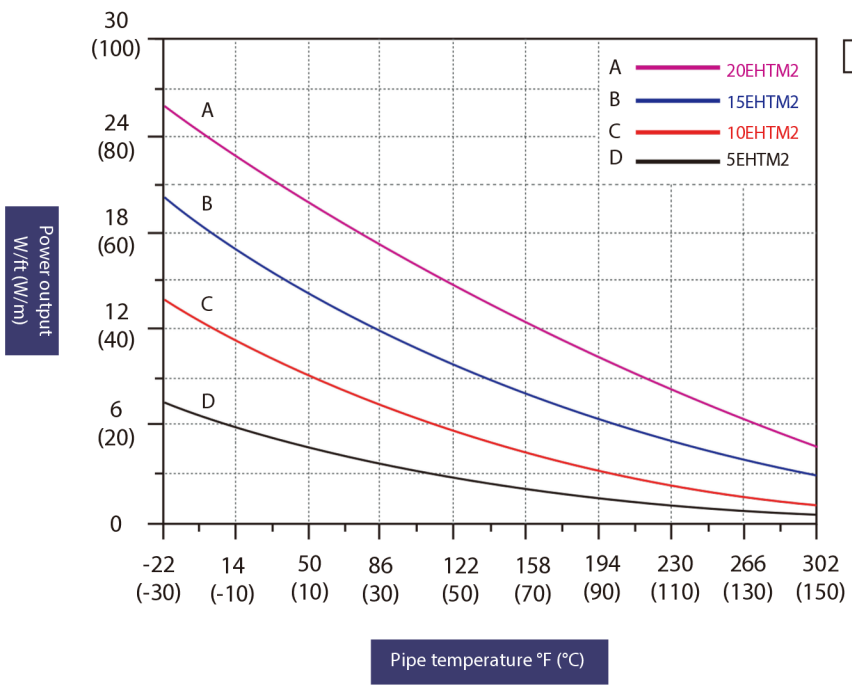
Product Feature:

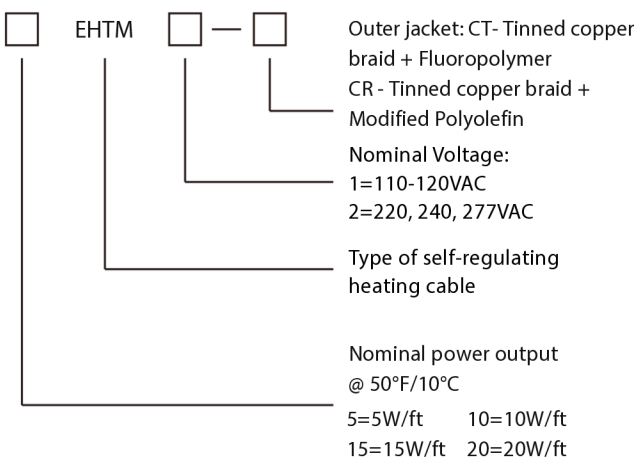
- Designed for Ciritical Process Temperature Maintenance and Freeze Protection of Piping, Tanks, Vessels and other Equipment.
- The characteristics of self-regulating heat trace automatically adjusts the cables power output based on the cables surrounding temperature, as the temperature decreases the power output increases, likewise the power output will decrease as the cable temperature increases.
- Overheating or burning of the cable is avoided even in the case of an overlapping installation. Simultaneously this feature can increase the efficiency of the heat tracing system and reduce energy consumption.
- It is permitted to connect with compliant accessories and cut the cable to the length required within the given maximum circuit length range.
- EHTM heat trace has a complete series of accessories, including a standard power box, splice/tee connection box and lighted end seal box etc, which can ensure the long service life of the product.

Technical Specification:

Nominal voltage:	110-120V (EHTM1) / 220-277V (EHTM2)
Maximum maintaince temperature:	+150°C (302°F)
Maximum continuous exposure temperature:	+200°C (392°F)
Temperature classification:	T3
IP level:	IP66/67
Minimum installation temperature:	-60°C (-76°F)
Minimum bending radius:	30mm
Nominal power output @10°C :	5W/ft, 10W/ft, 15W/ft, 20W/ft
Dimension:	CT: 12.4mm (W) ×4.8mm (T)
Approvals mark:	FM APPROVED, CSA US

Power output curve:





120Vac Service Voltage:

CB size(A)	Start-up temperature °C (°F)	Max Circuit Length Vs Breaker Size (ft)			
		5EHTM1	10EHTM1	15EHTM1	20EHTM1
15	10 (50)	219	134	111	103
	0 (32)	208	134	111	99
	-10 (14)	191	111	111	87
	-20 (-4)	177	101	110	77
	-40 (-40)	154	77	103	68
20	10 (50)	264	134	111	103
	0 (32)	259	134	111	103
	-10 (14)	238	134	111	103
	-20 (-4)	220	134	111	103
	-40 (-40)	191	134	106	92
25	10 (50)	294	134	111	103
	0 (32)	288	134	111	103
	-10 (14)	267	134	111	103
	-20 (-4)	255	134	111	103
	-40 (-40)	236	134	111	103
30	10 (50)	305	134	111	103
	0 (32)	305	134	111	103
	-10 (14)	305	134	111	103
	-20 (-4)	305	134	111	103
	-40 (-40)	305	134	111	103
40	10 (50)	305	134	111	103
	0 (32)	305	134	111	103
	-10 (14)	305	134	111	103
	-20 (-4)	305	134	111	103
	-40 (-40)	305	134	111	103

240V Service Voltage:

CB size(A)	Start-up temperature ℃ (℉)	Max Circuit Length Vs Breaker Size (ft)			
		5EHTM2	10EHTM2	15EHTM2	20EHTM2
15	10 (50)	438	294	211	157
	0 (32)	417	264	208	153
	-10 (14)	383	240	190	142
	-20 (-4)	354	209	176	133
	-40 (-40)	308	178	152	118
20	10 (50) 0	527	366	263	196
	(32) -10	518	339	260	191
	(14)	476	308	238	178
	-20 (-4)	440	281	220	166
	-40 (-40)	383	229	191	147
25	10 (50)	589	421	346	245
	0 (32)	575	407	325	238
	-10 (14)	534	380	297	222
	-20 (-4)	510	325	275	208
	-40 (-40)	472	283	238	184
30	10 (50)	609	421	346	308
	0 (32) -10	609	421	346	305
	(14)	609	421	346	284
	-20 (-4)	609	401	325	266
	-40 (-40)	609	370	305	235
40	10 (50)	609	421	346	308
	0 (32)	609	421	346	308
	-10 (14)	609	421	346	308
	-20 (-4)	609	421	346	308
	-40 (-40)	609	421	346	294

Description:
The maximum circuit length shown is in accordance with NEC article 427 and other relevant sections of the NEC, with Ground Fault Equipment Protection Device (EPD) circuit breakers as standard, at reference start-up temperature and 10℃ Experimental data obtained from instantaneous trip current characteristics under maintenance temperature conditions. For the maximum loop length corresponding to other trip current characteristics or other types of circuit breakers, please contact a technical representative of the Power Trace Company.

Although the heat tracing system is generally used to maintain the medium in the pipe or vessel at the required temperature level, the self-regulating heat tracing cable may be at a lower temperature level when it is energized. For design data when the starting temperature is lower than the above temperature, please contact a technical representative of the Power Trace Company.

Maximum loop length refers to the continuous length of the heating cable, not the sum of the lengths of multiple sections. Relating to current load for each section, please contact a technical representative of the Power Trace Company.