

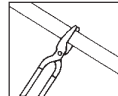
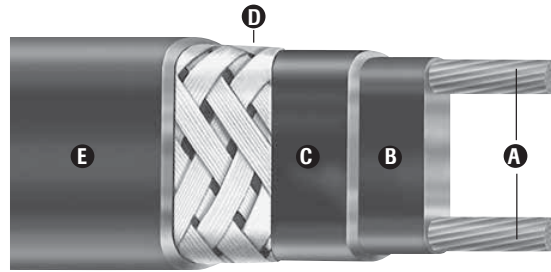
# COMMERCIAL HEAT TRACE

## CPM Self-Regulating Medium Temperature

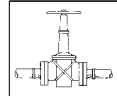
- Self-Regulating, Energy Efficient
- 16 AWG Buss Wire
- Circuit Lengths to 675 Feet
- Process Temperature Maintenance to 302°F (150°C)
- Maximum Continuous Exposure Temperature, Power Off, 420°F (215°C)
- Flow Maintenances
  - Caustic & Soda Piping
  - Diesel Fuel Piping
  - Chemical Feed Piping
- Pipe Freeze Protection
- Steam Cleanable on Process Equipment Up to 300 PSIG
- 5, 8, 10, 15 and 20 W/Ft.
- 120 and 208 - 277 Volt From Stock
- Approximate Size .47"W x .20"H
- Minimum Bend Radius 1-1/8"
- For Use on Metallic Pipes Only

Per IEEE 515.1 for Commercial Heating Device installation Type A, B, C or D including on insulated surfaces, outdoor exposed areas, installation with embedded trace heating and installation with trace heater inside conduit or piping.

**WARNING** — A ground fault protection device is required by NEC to minimize the danger of fire if the heating cable is damaged or improperly installed. A minimum trip level of 30mA is recommended to minimize nuisance tripping.



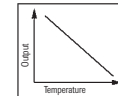
Cut to Length in Field



Can be Overlapped



Exposure



Self Regulating Output

### Description

Chromalox CPM is a multi-purpose self regulating heating cable provides safe, reliable heat tracing for caustic, soda, diesel fuel and freeze protection of pipes, valves, and tanks. Chromalox's CPM is constructed of 16 AWG buss wire with metal braid and over-jacketing that varies its heat output based on sensed temperature along its entire length. It can be easily cut to length, spliced, tee to more easily follow piping networks.

CPM ensures operating integrity in most hostile environments. The 420°F (215°C) maximum exposure temperature rating allows steam cleaning of process equipment with up to 300 psig steam.

Chromalox's CPM is truly a versatile heating cable solution.

### Features

- Energy efficient, self-regulating CPM uses less energy when less heat is required.
- Easy to install, CPM can be cut to any length (up to max. circuit length) in the field.
- Field splices can be performed easily in minutes with no scrap or wasted cold sections.
- With lower installed cost than steam tracing, CPM features less maintenance expense and downtime.
- CPM can be overlapped without burnout, which simplifies heat tracing of in-line process equipment such as valves, elbows and pumps.
- Because CPM is self-regulating, overtemperature conditions are minimized.
- Chromalox termination, splice, tee and end seal kits reduce installation time.

### Construction

- A** Twin 16 AWG Copper Buss Wires — Provide reliable electrical current capability.
- B** Semi-Conductive Polymer Core Matrix — "Self-Regulating" component of the cable, its electrical resistance varies with temperature. As process temperature drops, the core's heat output increases; as process temperature rises, the heat output decreases.
- C** High Temperature Fluoropolymer Jacket Flame retardant, electrically insulates the matrix and provides corrosion resistance.
- D** Metallic Braid — Provides additional mechanical protection in any environment and a positive ground path.
- E** High Temperature Fluoropolymer Overjacket — Corrosion resistant, flame retardant overjacket is highly effective in hostile, aqueous and chemically active environments. It also protects against abrasion and impact damage.

### Approvals

CSA certified for ordinary areas, and approved for hazardous (classified) areas when used with DL, and EL accessories.

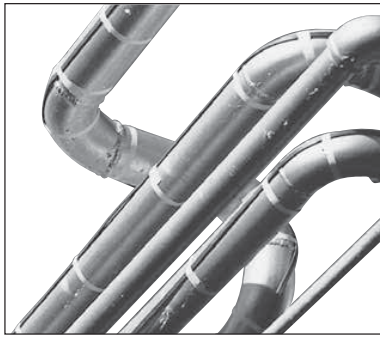
#### CSA Approved:

- Class I\*\*, Div. 1 & 2 Groups A\*, B, C, D (gases, vapors)
- Class II, Div. 2 Groups E\*, F, G (combustible dust)
- Class III, Div. 2 (easily ignitable fibers and fillings)
- 5 and 8 Watt Rated T3 Temperature Class
- 10, 15, and 20 Watt Rated T2D Temperature Class

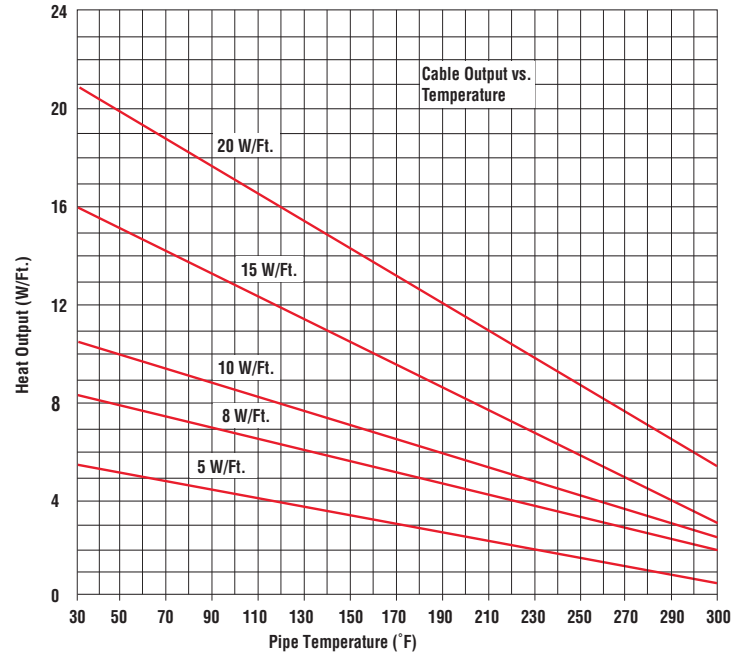
**Note 1 Exception** — Cable Surface Temperature shall not exceed 190°C in Class II, Div. 2, Group F; 165°C in Class II, Div. 2 Group G.

# COMMERCIAL HEAT TRACE

## CPM Self-Regulating Medium Temperature (cont'd.)



### Thermal Output Ratings on Insulated Metal Pipe<sup>1</sup>



**Note 1** — Thermal output is determined per IEEE 515-2011 Standard for testing, design installation, and maintenance of electrical resistance heat tracing section 4.1.11 Method C.

### Output Wattage at Alternate Voltages (W/Ft.)

Model	208V	% Change In Output	220V	% Change In Output	277V	% Change In Output
CPM-5	3.85	-23	4.25	-15	6.45	+23
CPM-8	6.4	-20	6.88	-14	10.24	+22
CPM-10	8.3	-17	8.80	-12	12.50	+20
CPM-15	12.75	-15	13.50	-10	18.45	+19
CPM-20	17.6	-12	18.40	-8	24.40	+19

### Circuit Breaker Selection (Max. Circuit Lengths in Ft.)

Cable Rating	50°F Start-Up (Ft.)				0°F Start-Up (Ft.)				-20°F Start-Up (Ft.)			
	15A	20A	30A	40A	15A	20A	30A	40A	15A	20A	30A	40A
CPM 5-1	162	216	324	338	149	198	297	338	140	189	279	338
CPM 5-2	324	432	648	675	293	387	581	675	279	374	558	675
CPM 8-1	131	171	257	293	122	158	239	293	117	149	225	293
CPM 8-2	257	342	518	585	230	311	468	585	221	302	441	585
CPM 10-1	86	113	171	225	81	99	158	225	77	90	153	221
CPM 10-2	171	230	347	441	149	203	311	441	140	194	297	423
CPM 15-1	63	86	131	171	59	77	113	149	54	72	108	135
CPM 15-2	131	171	261	347	108	158	243	324	104	149	234	306
CPM 20-1	54	68	104	140	45	59	95	126	41	59	90	122
CPM 20-2	104	140	207	275	90	122	180	243	81	117	176	230

NR = Not Required. Maximum circuit length has been reached in a smaller breaker size.

Note — Thermal magnetic circuit breakers are recommended since magnetic circuit breakers could "nuisance trip" at low temperature.

# COMMERCIAL HEAT TRACE

## CPM Self-Regulating Medium Temperature (cont'd.)

### Ordering Information

Output (W/Ft.)	Volts	Model	Stock	PCN	Wt./1000' (Lbs.)
5 @ 50°F	120	CPM5-1CT	S	514298	100
	208 - 277	CPM5-2CT	S	514300	100
8 @ 50°F	120	CPM8-1CT	S	514319	100
	208 - 277	CPM8-2CT	S	514327	100
10 @ 50°F	120	CPM10-1CT	S	514335	100
	208 - 277	CPM10-2CT	S	514343	100
15 @ 50°F	120	CPM15-1CT	S	514351	100
	208 - 277	CPM15-2CT	S	514360	100
20 @ 50°F	120	CPM20-1CT	S	514378	100
	208 - 277	CPM20-2CT	S	514386	100

**To Order** — Specify length, model, PCN and installation accessories.

### Accessories

Accessories		DL	EL
Power Connection	Heat trace to electrical service connection	RTPC	SSK
Splice & Tee		RTST	RT-TST
End Seal	For terminating cable	RTES	N/A
Lighted End Seal		RTST-SL	N/A
Thermostat	Ambient air sensing thermostat	RTAS	TPR
	Line sensing mechanical thermostat	RTBC	TPR

**To Order** — General Application & Installation Accessories such as tape, pipe straps, warning labels, etc., refer to the U Series, DL & EL General Application Accessories page at the end of this section.

### Ordering Information

**To Order** — Complete the Model Number using the Matrix provided.

Model	Self-Regulating Medium Temperature
CPM	Self-Regulating, Medium Temperature Enhanced Heating Cable
	<b>Code</b> <b>Output (W/Ft.)</b>
	5        Five
	8        Eight
	10       Ten
	15       Fifteen
	20       Twenty
	<b>Code</b> <b>Voltage</b>
	1        120
	2        208 - 277
	<b>Code</b> <b>Overjacket Options</b>
	CT       Fluoropolymer corrosion resistant overjacket over braid for hostile/corrosive environments
CPM	<input type="checkbox"/> - <input type="checkbox"/> CT <b>Typical Model Number</b>



More Information  
is Available Online  
on Heat Trace.

Bookmark Your Browser to  
[www.chromalox.com](http://www.chromalox.com)  
and Select **Manuals**.