# **Heating Cable**

# **HSRM** Self-Regulating **Medium Temperature**

- Self- Regulating, Energy Efficient
- 16 AWG Buss Wire
- Circuit Lengths to 750 Feet
- Process Temperature Maintenance to 302°F (150°C)
- Maximum Continuous Exposure Temperature, Power Off, 420°F (215°C)
- Freeze Protection of Fire **Protection System Piping**
- Available in 5, 8, 10, 15 and 20 Watts per Foot
- 120 and 208-277 Volts Available
- Division 1 Hazardous Locations
- Approximate Size 3/8"W x 1/8"H
- Minimum Bend Radius 1-1/8"
- For Use on Metallic Pipes Only

### Description

Chromalox HSRM self-regulating heating cable provides safe, reliable heat tracing for freeze protection of pipes, valves, tanks and similar applications. Constructed of industrial grade 16 AWG buss wire with a tinned copper braid and fluoropolymer overjacket, HSRM ensures operating integrity in Div. 1 hazardous environments. HSRM heating cable has a maximum maintenance temperature rating of 302°F (150°C) and a maximum exposure temperature of 420°F (215°C).

Note: Due to the nature of Division 1 hazardous location applications consultation with a factory representative is required.

**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.





302°F

420°F

perature



Can be Overlapped

Medium Tem-



Features

- Energy efficient, self-regulating HSRM uses less energy when less heat is required.
- Easy to install, HSRM can be cut to any length (up to max circuit length) in the field.
- HSRM features lower installed cost than steam tracing, less maintenance expense and less down time.
- HSRM can be overlapped without burnout, which simplifies heat tracing of in-line process equipment such as valves, elbows and pumps.
- · Chromalox HL Connection Kits reduce installation time.

#### Construction

- Twin 16 AWG Copper Buss Wires— Provide reliable electric current capability.
- Semiconductive 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.
- Fluoropolymer Jacket— Flame retardant electrically insulates the matrix and provides corrosion resistance.

- Tinned Copper Braid— Provides additional mechanical protection in any environment and a positive ground path.
- High Temperature Fluoropolymer Overjacket— Corrosion resistant, flame retardant overjacket is highly effective in many environments. Protects against exposure to organic or corrosive solutions. The overjacket also protects against abrasion and impact damage.

### Approvals

#### FM Approved

- Class I, Division 1, Groups B, C, D
- Class II, Division 1, Groups E, F, G
- Class III, Division 1
- 5 and 8 Watt rated T3C Temperature Class
- 10 Watt rated T3A Temperature Class
- 15 and 20 Watt rated T2C Temperature Class

#### **CSA** Approved

- Class I, Division 1, Groups B, C, D
- Class II, Division 1, Groups E, F, G
- 5 and 8 Watt rated T3C Temperature Class
- 10 Watt rated T3A Temperature Class
- 15 and 20 Watt rated T2C Temperature Class

### **Heating Cable**

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

#### 24 Cable Output vs. . Temperature 20 20 W/Ft. 16 Heat Output (W/Ft.) 15 W/Ft. 12 10 W/Ft. 8 8 W/Ft. 5 W/Ft. 4 0 30 50 70 90 110 130 150 170 190 210 230 250 270 290 300 Pipe Temperature (°F)

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.

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

Output Wattage at Alternate Voltages (W/Ft.)

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

Cable 50°F			Start-U	p (Ft.)		0°F Start-Up (Ft.) -20°F Start-Up (Ft.)				p (Ft.)					
Rating	15A	20A	30A	40A	50A	15A	20A	30A	40A	50A	15A	20A	30A	40A	50A
HSRM 5-1	180	240	360	375	NA	165	220	330	375	NA	155	210	310	375	NA
HSRM 5-2	360	480	720	750	NA	325	430	645	750	NA	310	415	620	750	NA
HSRM 8-1	145	190	285	325	NA	135	175	265	325	NA	130	165	250	325	NA
HSRM 8-2	285	380	575	650	NA	255	345	520	650	NA	245	335	490	650	NA
HSRM 10-1	95	125	190	250	NA	90	110	175	250	NA	85	100	170	245	250
HSRM 10-2	190	255	385	490	NA	165	225	345	490	NA	155	215	330	470	490
HSRM 15-1	70	95	145	190	210	65	85	125	165	210	60	80	120	150	210
HSRM 15-2	145	190	290	385	420	120	175	270	360	420	115	165	260	340	420
HSRM 20-1	60	75	115	155	160	50	65	105	140	160	45	65	100	135	160
HSRM 20-2	115	155	230	305	350	100	135	200	270	350	90	130	195	255	335
NR = Not Required. Maximum circuit length has been reached in a smaller breaker size.															

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



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

### **Ordering Information**

Output (W/Ft.)	Volts	Model	Stock	PCN	Wt./1000' (Lbs.)
	120	HSRM5-1CT	S	382176	80
5 @ 50°F	208 - 277	HSRM5-2CT	S	382168	80
0 @ 5005	120	HSRM8-1CT	S	382150	80
8 @ 50°F	208 - 277	HSRM8-2CT	S	382141	80
	120	HSRM10-1CT	S	382133	80
10 @ 50°F	208 - 277	HSRM10-2CT	S	382125	80
	120	HSRM15-1CT	S	382117	80
15 @ 50°F	208 - 277	HSRM15-2CT	S	382109	80
	120	HSRM20-1CT	s	382096	80
20 @ 50°F	208 - 277	HSRM20-2CT	s	382088	80
To Order – S	Specify length, m	odel, PCN and insta	allation acce	ssories.	

#### Accessories

	Model						
Power Connection	Heat trace to electrical service connection	HL-PC					
T- Splice	Electrical connection for 3 circuits	HL-T					
In-Line Splice	Electrical connection for 2 circuits	HL-S					
End Seal	For terminating cable	HL-ES					
Thermostat	Ambient air sensing thermostat	TXL					
	Line sensing mechanical thermostat	TXR					
E-122							
<b>To Order</b> — Please refer to HL Connection Accessories page.							

### Ordering Information

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

**Note** — Due to the nature of Division 1 hazardous location applications consultation with a factory representative is required.

Model	Haz	ardo	us Loca	tion Self-F	Regulating Medium Temperature
HSRM	Self	-Reg	ulating,	Medium T	emperature Heating Cable
	Cod	e	Outpu	t (W/Ft.)	
	5 8 10 15 20		Five Eight Ten Fifteen Twenty		
			Code	Voltage	
			1 2	120 240	
				Code	Standard Braid & Overcoat Options
				CT	Tinned copper braid for ground path fluoropolymer overjacket specifically tested for Division I environments
HSRM	8	-	1	CT	Typical Model Number

