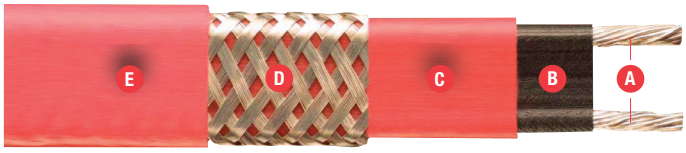
HSRM SELF-REGULATING MEDIUM-TEMPERATURE HEATING CABLE

PRODUCT OVERVIEW



- **A** Twin 16 AWG Copper Bus Wires
- **B** Semiconductive Polymer Core Matrix
- **C** Fluoropolymer Jacket
- **D** Metallic Braid
- **E** High-Temperature Fluoropolymer Overjacket

Chromalox® HSRM self-regulating medium-temperature heating cable provides the most versatility in industrial process heat trace designs and applications, delivering safe, reliable heat for freeze protection and temperature maintenance of metal pipes, valves, tanks, and similar applications in Division 1 hazardous locations. HSRM self-regulating cables are flexible, can be cut-to-length and spliced in the field, and can be single-overlapped without fear of burnout in areas where complex piping and equipment require additional heat trace cable. The self-regulating cable adjusts its output to independently respond to temperatures along its length. It is for use on 120 and 208 to 277 V. Chromalox HSRM self-regulating cables are third-party tested and approved for use in ordinary, harsh corrosive, and hazardous area applications.

DESCRIPTION

The heating cable consists of two (2) 16 AWG nickel-plated copper bus wires embedded in a self-regulating polymeric core that controls power output so that the cable can be used directly on metal pipes and tanks. A flame-retardant, high-temperature fluoropolymer jacket electrically insulates the matrix and bus wires and provides corrosion resistance. A metallic braid covering serves added mechanical protection in any environment and a positive ground path. A high-temperature, flame-retardant, corrosion-resistant fluoropolymer overjacket provides additional protection in most hostile, chemically active environments and against abrasion and impact damage.

WARNING — A ground fault protection device is required by Chromalox, agency certifications, and NEC to minimize the danger of fire if the heating cable is damaged or improperly installed. A minimum trip level of 30 mA is recommended to minimize nuisance tripping. All intelliTRACE control and monitoring systems meet the ground-fault protection requirement.

APPLICATION

Trace Surface Type	Metal
Chemical Resistance	Exposure to aqueous solutions of inorganic compounds
	Exposure to liquids, organic chemicals, acids, or bases

VOLTAGE SUPPLY

120 Vac
208 to 277 Vac

TEMPERATURE RATING

Maximum Maintenance Temperature	302°F (150°C)
Maximum Exposure Temperature, Power Off	420°F (215°C)
Minimum Installation Temperature	-76°F (-60°C)

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APPROVALS

- Ordinary Areas
- Class I, Division 1, Groups B, C, D
- Class II, Division 1 Groups E, F, G
- Class III, Division 1*
- T-Rating**

* FM only
** T3C: 320F (160C), HSRM 5, 8
T3A: 356F (180C), HSRM 10
T2C 446F (230C), HSRM 15, 20

DESIGN AND INSTALLATION

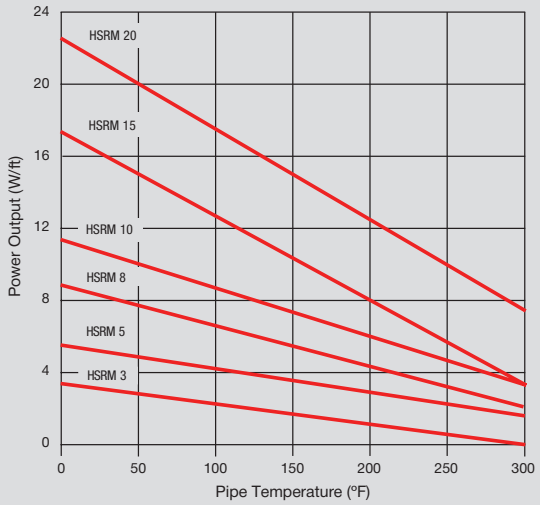
For proper design and installation, use ChromaTrace Heat Trace Project Design Software. Additional resources include the Chromalox Heat Trace Design Guide (PJ130), Pipe Heat Tracing Design Worksheet (PJ305), and Chromalox Industrial Heating Cable Products Installation Instructions (PJ438). These resources are available on the Chromalox website, www.chromalox.com.

NOMINAL POWER OUTPUT RATINGS

Output Wattage at Alternate Voltages, 50°F (10°C), W/ft (W/m)

Model	208 V	% Change in Output	220 V	% Change in Output	277 V	% Change in Output
HSRM 5-2	3.85 (12.63)	-23	4.25 (13.94)	-15	6.45 (21.16)	+23
HSRM 8-2	6.40 (20.99)	-20	6.88 (22.57)	-14	10.24 (33.59)	+22
HSRM 10-2	8.30 (27.22)	-17	8.80 (28.86)	-12	12.50 (41.00)	+20
HSRM 15-2	12.75 (41.82)	-15	13.50(44.28)	-10	18.45 (60.52)	+19
HSRM 20-2	17.60 (57.73)	-12	18.40(60.35)	-8	24.40 (80.03)	+19

Thermal Output Ratings on Insulated Metal Pipe*



*Thermal output is determined per IEC / IEEE 62395-1 Electrical Resistance Trace Heating Systems for Industrial and Commercial Applications

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MAXIMUM CIRCUIT LENGTHS

Model	Ambient Temperature at Startup	Maximum Circuit Length in Feet (Meters) per Circuit Breaker									
		120 Vac					208 to 277 Vac				
		15 A	20 A	30 A	40 A	50 A	15 A	20 A	30 A	40 A	50 A
HSRM 5	50°F (10°C)	180 (55)	240 (73)	360 (110)	375 (114)	NR	360 (110)	480 (146)	720 (219)	750 (229)	NR
	0°F (-18°C)	165 (50)	220 (67)	330 (101)	375 (114)	NR	325 (99)	430 (131)	645 (197)	750 (229)	NR
	-20°F (-29°C)	155 (47)	210 (64)	310 (64)	375 (114)	NR	310 (94)	415 (126)	620 (189)	750 (229)	NR
HSRM 8	50°F (10°C)	145 (44)	190 (58)	285 (87)	325 (99)	NR	285 (87)	380 (116)	575 (175)	650 (198)	NR
	0°F (-18°C)	135 (41)	175 (53)	265 (81)	325 (99)	NR	255 (78)	345 (105)	520 (158)	650 (198)	NR
	-20°F (-29°C)	130 (40)	165 (50)	250 (76)	325 (99)	NR	245 (75)	335 (102)	490 (149)	650 (198)	NR
HSRM 10	50°F (10°C)	95 (29)	125 (38)	190 (58)	250 (76)	NR	190 (58)	255 (78)	385 (117)	490 (149)	NR
	0°F (-18°C)	90 (27)	110 (34)	175 (53)	250 (76)	NR	165 (50)	225 (69)	345 (105)	490 (149)	NR
	-20°F (-29°C)	85 (26)	100 (30)	170 (52)	245 (75)	250 (76)	155 (47)	215 (66)	330 (101)	470 (143)	490 (128)
HSRM 15	50°F (10°C)	70 (21)	95 (29)	145 (44)	190 (58)	210 (64)	145 (44	190 (58)	290 (88)	385 (117)	420 (128)
	0°F (-18°C)	65 (20)	85 (26)	125 (38)	165 (51)	210 (64)	120 (37)	175 (53)	270 (82)	360 (110)	420 (128)
	-20°F (-29°C)	60 (18)	80 (24)	120 (37)	150 (46)	210 (448)	115 (35)	165 (50)	260 (79)	340 (104)	420 (107)
HSRM 20	50°F (10°C)	60 (18)	75 (23)	115 (35)	155 (47)	160 (48)	115 (35)	155 (47)	230 (70)	305 (93)	350 (107)
	0°F (-18°C)	50 (15)	65 (20)	105 (32)	140 (43)	160 (48)	100 (30)	135 (41)	200 (61)	270 (82)	350 (107)
	-20°F (-29°C)	45 (14)	65 (29)	100 (30)	135 (41)	160 (48)	90 (37)	130 (40)	195 (59)	255 (78)	335 (102)

PRODUCT CHARACTERISTICS

Minimum Bend Radius, in. (mm).....1.125 (28.5)

Bus Wire Size.....16 AWG

Heating Cable Dimensions WxH, in. (mm).....0.48 x 0.21 (12.1 x 5.3)

Weight, lb per 1,000 ft (kg per 300 m).....80 (36)

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CONNECTION KITS

Chromalox has a complete line of accessories specifically designed for use with SRM/E cable. Use only Chromalox accessories to ensure the performance of the heat trace system, compliance with warranty, codes, and approval requirements.

Connection Kits and Thermostats		HL Series
Power Connection	Heat trace to electrical service connection	HL-PC
Splice & Tee	Electrical connection for 3 cables	HL-T
In-Line Splice	Electrical connection for 2 cables	HL-S
End Seal	For terminating cable	HL-ES
Thermostat	Ambient air sensing thermostat	TXL
	Line sensing mechanical thermostat	TXR

ORDERING INFORMATION

Model	Volts	Output (W/ft.)	PCN
HSRM 5-1CT	120	5 @ 50F	382176
HSRM 5-2CT	208-277	5 @ 50F	382168
HSRM 8-1CT	120	8 @ 50F	382150
HSRM 8-2CT	208-277	8 @ 50F	382141
HSRM 10-1CT	120	10 @ 50F	382133
HSRM 10-2CT	208-277	10 @ 50F	382125
HSRM 15-1CT	120	15 @ 50F	382117
HSRM 15-2CT	208-277	15 @ 50F	382109
HSRM 20-1CT	120	20 @ 50F	382096
HSRM 20-2CT	208-277	20 @ 50F	382088

CHROMALOX

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LaVergne, TN 37086

TECHNICAL SUPPORT
412-967-3940

email: sales@chromalox.com
www.chromalox.com

*press 1 to be directed to heat trace support