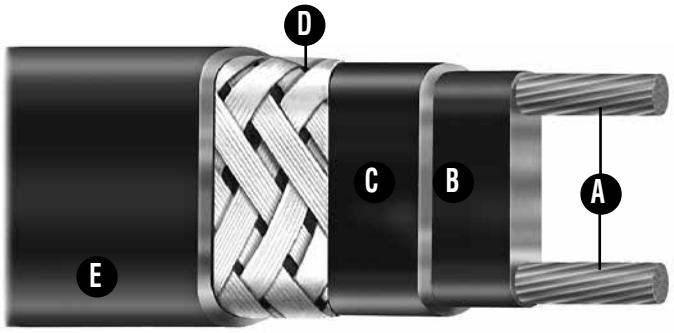
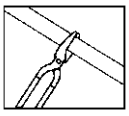
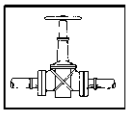
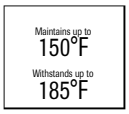
HSRL
Self-Regulating Low Temperature

- **Self- Regulating, Energy Efficient**
- **16 AWG Buss Wire**
- **Circuit Lengths to 660 Feet**
- **Process Temperature Maintenance to 150°F (65°C)**
- **Maximum Continuous Exposure Temperature, Power Off, 185°F (85°C)**
- **Freeze Protection of Fire Protection System Piping**
- **Available in 3, 5, 8, and 10 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 Metal & Plastic Pipes**

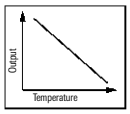



Cut to Length in Field


Can be Single Overlapped



Low Temperature



Self Regulating Output

Description

Chromalox HSRL 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, HSRL ensures operating integrity in Div. 1 hazardous environments. HSRL heating cable has a maximum maintenance temperature rating of 150°F (65°C) and a maximum exposure temperature of 185˚F (85˚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 30 mA is recommended to minimize nuisance tripping.

Features

- Energy efficient, self-regulating HSRL uses less energy when less heat is required.
- Easy to install, HSRL can be cut to any length (up to max circuit length) in the field.
- HSRL features lower installed cost than steam tracing, less maintenance expense and less down time.
- HSRL 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

A **Twin 16 AWG Copper Buss Wires—** Provide reliable electric current capability.

B **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.

C **Polyolefin Jacket—** Flame retardant, electrically insulates the matrix and buss wires and provides resistance to water and some inorganic chemical solutions.

D **Tinned Copper 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 many environments. Protects against exposure to organic or corrosive solutions. The overjacket also protects against abrasion and impact damage.

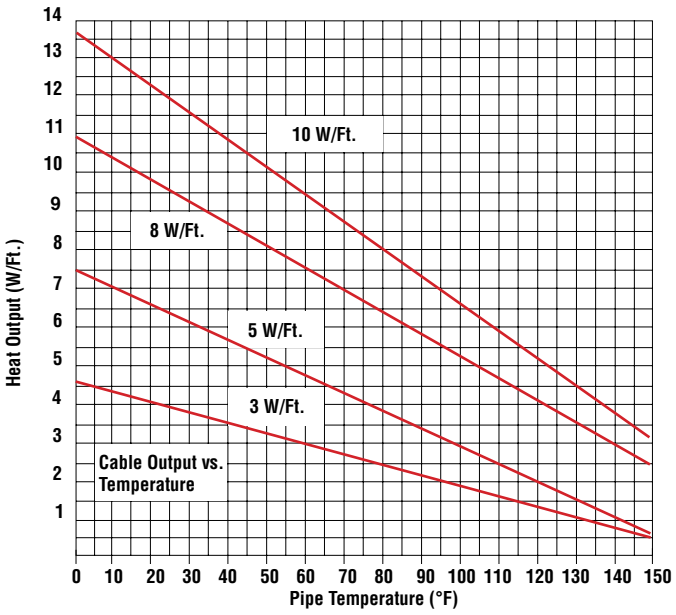
Approvals

FM Approved
- Class I, Division 1, Groups B, C, D
- Class II, Division 1, Groups E, F, G
- Class III, Division 1
- 3 Watt rated T6 temperature class
- 5 and 8 Watt rated T5 temperature class
- 10 Watt rated T4A temperature class

CSA Approved
- Class I, Division 1, Groups B, C, D
- Class II, Division 1, Groups E, F, G
- 3 Watt rated T6 temperature class
- 5 and 8 Watt rated T5 temperature class
- 10 Watt rated T4A temperature class

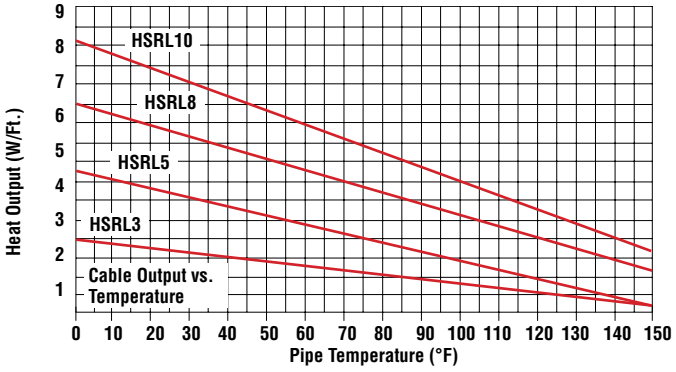
HSRL
Self-Regulating Low Temperature *(cont'd.)*

Thermal Output Ratings on Insulated Metal Pipe[1]



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.

Thermal Output Ratings on Plastic Pipe with Aluminum Tape



Output Wattage at Alternate Voltages (W/Ft.)

Model	208V	% Change In Output	220V	% Change In Output	277V	% Change In Output
HSRL 3	2.4	-20	2.6	-13	3.4	+15
HSRL 5	4.1	-18	4.5	-10	5.6	+13
HSRL 8	6.88	-14	7.28	-9	8.96	+12
HSRL 10	8.7	-13	9.2	-8	11.1	+10

SELF-REGULATING

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.)					
	10A	15A	20A	25A	30A	40A	10A	15A	20A	25A	30A	40A	10A	15A	20A	25A	30A	40A
HSRL3-1CT	205	305	360	NR	NR	NR	135	200	270	330	360	NR	120	185	245	300	360	NR
HSRL3-2CT	400	600	660	NR	NR	NR	275	415	555	660	NR	NR	245	370	495	600	660	NR
HSRL5-1CT	125	185	250	270	NR	NR	90	135	180	225	270	NR	80	120	160	205	245	270
HSRL5-2CT	250	375	505	540	NR	NR	180	270	360	450	540	NR	160	245	325	405	490	540
HSRL8-1CT	100	150	200	215	NR	NR	70	110	145	180	215	NR	65	100	130	165	200	210
HSRL8-2CT	185	285	375	420	NR	NR	135	200	265	335	395	420	120	175	235	300	350	420
HSRL10-1CT	60	95	130	160	180	NR	50	80	105	130	155	180	45	70	95	120	140	180
HSRL10-2CT	100	160	210	260	315	360	80	125	170	210	255	340	75	120	160	195	240	320

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

HSRL
Self-Regulating Low Temperature *(cont'd.)*

Ordering Information

Output (W/Ft.)	Volts	Model	Stock	PCN	Wt./1000' (Lbs.)
3 @ 50°F	120	**HSRL 3-1CT**	**S**	**382070**	66
	208 - 277	**HSRL 3-2CT**	**S**	**382061**	66
5 @ 50°F	120	**HSRL 5-1CT**	**S**	**382053**	66
	208 - 277	**HSRL 5-2CT**	**S**	**382045**	66
8 @ 50°F	120	**HSRL 8-1CT**	**S**	**382037**	66
	208 - 277	**HSRL 8-2CT**	**S**	**382029**	66
10 @ 50°F	120	**HSRL 10-1CT**	**S**	**382010**	66
	208 - 277	**HSRL 10-2CT**	**S**	**382022**	66

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

Accessories

Description		Model
Power Connection	Heat trace to electrical service connection	HL-PC
T- Splice	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
		E-122

— Please refer to HL Connection Accessories page

Ordering Information

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

Model	Hazardous Location Self-Regulating Low Temperature			
HSRL	Self-Regulating, Low Temperature Heating Cable			
	Code	**Output (W/Ft.)**		
	3	Three		
	5	Five		
	8	Eight		
	10	Ten		
		Code	**Voltage**	
		1	120	
		2	240	
			Code	**Standard Braid & Overjacket**
			CT	Tinned copper metallic braid for ground path fluoropolymer corrosion resistant overjacket. Specifically tested for Division I environments.
HSRL	**3**	**1**	**CT**	**Typical Model Number**

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