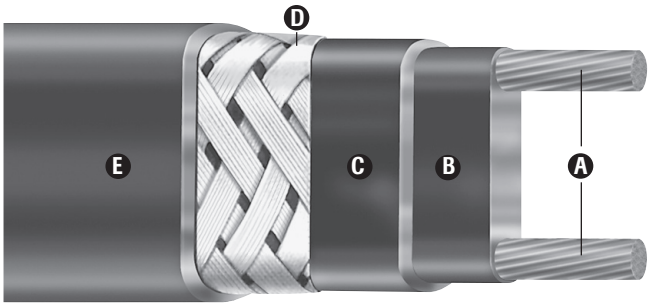
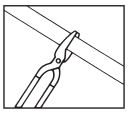
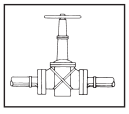
SRF
Self-Regulating Freeze Protection

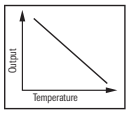
- **Self-Regulating, Energy Efficient**
- **Max. Exposure Temp. 185°F (Power Off)**
- **Cost Effective for Commercial Freeze Protection Applications**
- **Freeze Protection of Fire Supression System Mains and Branches**
- **Grease Waste Flow Maintenance**
- **TPR or TPE Overjackets**
- **Circuit Lengths, Up to 660 Ft.**
- **3, 5, 8 and 10 W/Ft.**
- **120, 208 - 277 Volt From Stock**
- **Approximate Size .47"W x .20"H**
- **Minimum Bend Radius 1-1/8"**
- **For Use on Metal and Plastic Pipes**

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 Single Overlapped



Self Regulating Output

Description

Chromalox SRF cable is ideal for keeping metal and plastic pipes warm in commercial construction and institutional buildings. SRF cable is constructed of a self-regulating polymer core that varies its output along its entire length, saving energy and eliminating hot spots along the pipe. Parallel construction makes it easier to install than zone or series types of cable since it can be cut-to-length at any point on the pipe.

Features

- Energy efficient, self-regulating SRF uses less energy when less heat is required.
- Easy to install, SRF 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.
- SRF can be overlapped without burnout, which simplifies heat tracing of in-line process equipment such as valves, elbows and pumps.
- Because SRF is self-regulating, over-temperature conditions are minimized.
- Chromalox termination, splice, tee and end seal kits reduce installation time.

Construction

Ⓐ **Twin Nickel Plated 16 AWG Copper Buss Wires —** Provide high electrical current capability.

Ⓑ **Semiconductive Polymer Core Matrix —** its electrical resistance varies with temperature. As process temperature drops, the core's heat output increases; conversely, as process temperature rises, the heat output decreases.

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

Ⓓ **Tinned Copper Braid —** The braid covering the jacket provides additional mechanical protection in any environment and a positive ground path.

Ⓔ **High Temperature Fluoropolymer or TPR Overjacket —** Corrosion resistant, flame retardant overjacket is highly effective in many environments. TPR coatings protect against certain inorganic chemical solutions. Fluoropolymer coatings are used for exposure to organic or corrosive solutions. These coatings also protect against abrasion and impact damage.

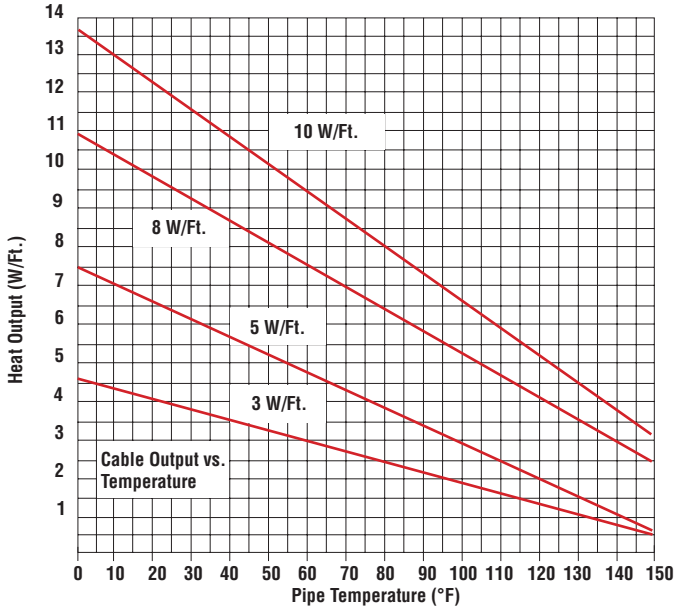
Approvals

UL Listed for ordinary areas and fire suppression system piping.

CSA Certified for ordinary areas, fire suppression system piping and grease waste flow maintenance.

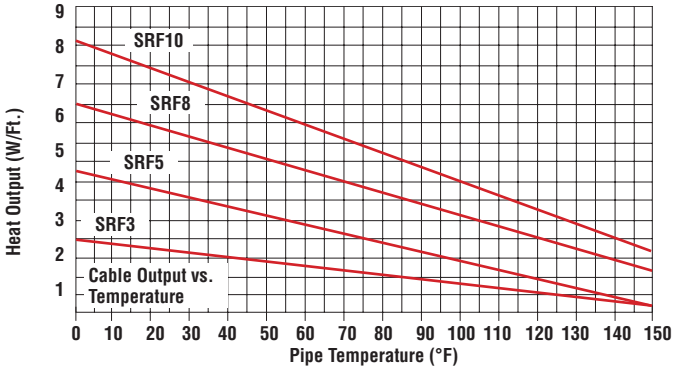
SRF
Self-Regulating Freeze Protection *(cont'd.)*

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
SRF 3	2.4	-20	2.6	-13	3.4	+15
SRF 5	4.1	-18	4.5	-10	5.6	+13
SRF 8	6.88	-14	7.28	-9	8.96	+12
SRF 10	8.7	-13	9.2	-8	11.1	+10

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

Cable Rating	40°F Start-Up (Ft.)			0°F Start-Up (Ft.)			-40°F Start-Up (Ft.)		
	20A	30A	40A	20A	30A	40A	20A	30A	40A
SRF 3-1	350	360	NR	270	360	NR	220	325	340
SRF 3-2	660	NR	NR	555	660	NR	445	595	625
SRF 5-1	230	270	NR	180	270	NR	145	220	255
SRF 5-2	450	540	NR	360	540	NR	290	440	510
SRF 8-1	180	215	NR	145	215	NR	115	180	195
SRF 8-2	330	420	NR	265	395	420	210	315	400
SRF 10-1	105	160	210	90	135	180	85	125	170
SRF 10-2	210	315	420	185	275	365	145	215	300

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.

SRF
Self-Regulating Freeze Protection *(cont'd.)*

Ordering Information

Output (W/Ft.)	Volts	Model	Stock	PCN	Wt./1000' (Lbs.)
3 @ 50F	120	**SRF 3-1CR**	**S**	**386100**	64
		SRF 3-1CT	**S**	**387428**	66
	208-277	**SRF 3-2CR**	**S**	**386118**	64
		SRF 3-2CT	**S**	**387436**	66
5 @ 50F	120	**SRF 5-1CR**	**S**	**386142**	64
		SRF 5-1CT	**S**	**387444**	66
	208-277	**SRF 5-2CR**	**S**	**386150**	64
		SRF 5-2CT	**S**	**387452**	66
8 @ 50F	120	**SRF 8-1CR**	**S**	**386062**	64
		SRF 8-1CT	**S**	**387460**	66
	208-277	**SRF 8-2CR**	**S**	**386070**	64
		SRF 8-2CT	**S**	**387479**	66
10 @ 50F	120	**SRF 10-1CR**	**S**	**386388**	64
		SRF 10-1CT	**S**	**386409**	66
	208-277	**SRF 10-2CR**	**S**	**386396**	64
		SRF 10-2CT	**S**	**386417**	66
To Order - Specify length, model, PCN and Installation accessories					

Accessories

Accessories		U Series	DL	EL
Power Connection	Heat trace to electrical service connection	UPC	RTPC	SSK/HSK-PC
Splice & Tee		UMC	RTST	RT-RST
End Seal	For terminating cable	UES	RTES	RT-RES
Thermostat	Ambient air sensing thermostat	UAS	RTAS	THL/TXL
	Line sensing mechanical thermostat	UBC	RTBC	THR/TXR

General Application & Installation Accessories such as tape, pipe straps, warning labels, etc., refer to the U Series and 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				
SRF	Self-Regulating, Freeze Protection Heating Cable				
	Code	**Output (W/Ft.)**			
	3	Three			
	5	Five			
	8	Eight			
	10	Ten			
		Code	**Voltage**		
		1	120		
		2	208 - 277		
			Code	**Overjacket Options**	
			CR	TPR overjacket over braid for hostile/corrosive environments	
			CT	TPE overjacket over braid for protection against certain inorganic chemical solutions	
SRF	**5**	**–** **1**	**CT**	**Typical Model Number**	

FREEZE PROTECTION