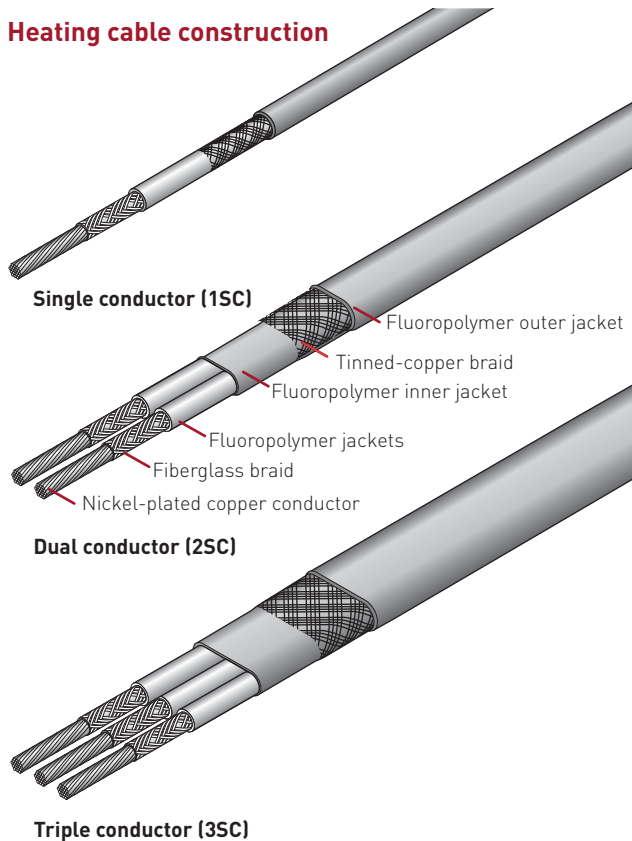


# Raychem SC, SC/H

## SERIES-RESISTANCE HEATING CABLES FOR LONGLINE SYSTEMS

Electrical freeze protection for long pipelines in both nonhazardous and hazardous locations

### Heating cable construction



### PRODUCT OVERVIEW

SC and SC/H series-resistance technology provides freeze protection and high-temperature maintenance for longline applications.

This series-resistance type heating cable can withstand continuous exposure temperatures up to 482°F (250°C), and is suitable for use in hazardous locations and in areas exposed to corrosives. SC heating cables can be used for continuous circuit lengths to 12,000 feet (3659 m), powered from a single source.

Raychem brand SC heating cables meet the requirements of the U.S. National Electrical Code and the Canadian Electrical Code.

For additional information, contact your Pentair Thermal Management representative or call (800) 545-6258.

### APPLICATION

Area classification	Nonhazardous and hazardous locations; 1SC cables for use in low mechanical abuse areas only.
Chemical resistance	Organic and aqueous inorganic chemicals and corrosives

### SUPPLY VOLTAGE

Maximum 600 Vac

### TEMPERATURE RATING

	SC	SC/H
Maximum continuous exposure (Power off)	400°F (204°C)	482°F (250°C)
Minimum installation temperature	-40°F (-40°C)	-40°F (-40°C)

### TEMPERATURE ID NUMBER (T-RATING)

Established by calculating the maximum sheath temperature for the application. Contact Pentair Thermal Management for assistance.

**APPROVALS**

**1SC**

**Nonhazardous Locations**



**Hazardous Locations**



Ex e II T<sup>(1)</sup> (2)

<sup>(1)</sup> for T-Rating, see design documentation  
<sup>(2)</sup> for 1SC60-CT, 1SC70-CT, and 1SC80-CT only

**2SC**

**Hazardous Locations**



Class I, Div. 2, Groups A, B, C, D  
 Class II, Div. 2, Groups F, G  
 Class III

For T-Rating, see design documentation



II 2 GD Ex e II T\* (see schedule) Ex tD A21 IP66  
 Baseefa06ATEX0189X

**IECEX**

Ex e II T\* (see schedule) Ex tD A21 IP66  
 IECEX BAS 06.0049X



Ex e II T<sup>(1)</sup>



09-IEEx-0008X  
 Ex e IIC T\* (see Observation b) Gb

**3SC**

**Hazardous Locations**



Class I, Div. 2, Groups A, B, C, D  
 Class II, Div. 2, Groups F, G  
 Class III

For T-Rating, see design documentation



II 2 GD Ex e II T\* (see schedule) Ex tD A21 IP66  
 Baseefa06ATEX0189X

**IECEX**

Ex e II T\* (see schedule) Ex tD A21 IP66  
 IECEX BAS 06.0049X



Ex e II T<sup>(1)</sup>



09-IEEx-0008X  
 Ex e IIC T\* (see Observation b) Gb

**DESIGN AND INSTALLATION**

SC and SC/H applications must be designed and approved by Pentair Thermal Management. Series heating cable technology requires that SC cables must not be overlapped. The use of appropriate control and monitoring equipment specified by Pentair Thermal Management is required.

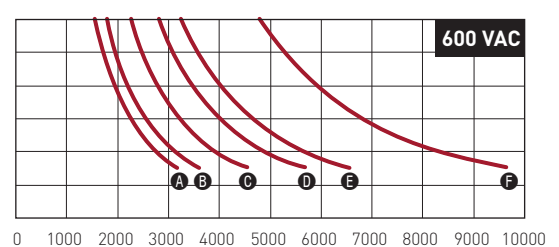
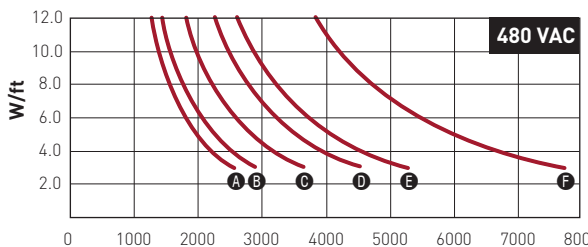
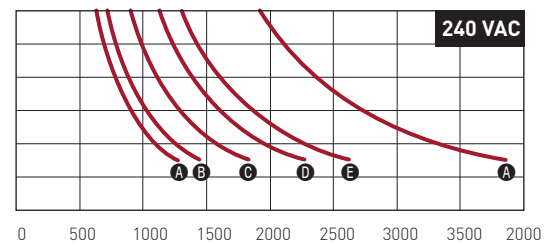
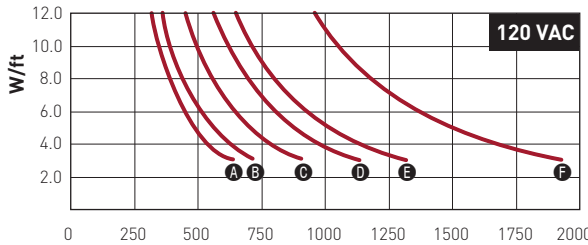
**NOMINAL POWER OUTPUT RATING**

These graphs are general guides to selection. Actual designs require consideration of other important variables and must be confirmed by Pentair Thermal Management. Also, many other voltages and electrical configurations are possible.

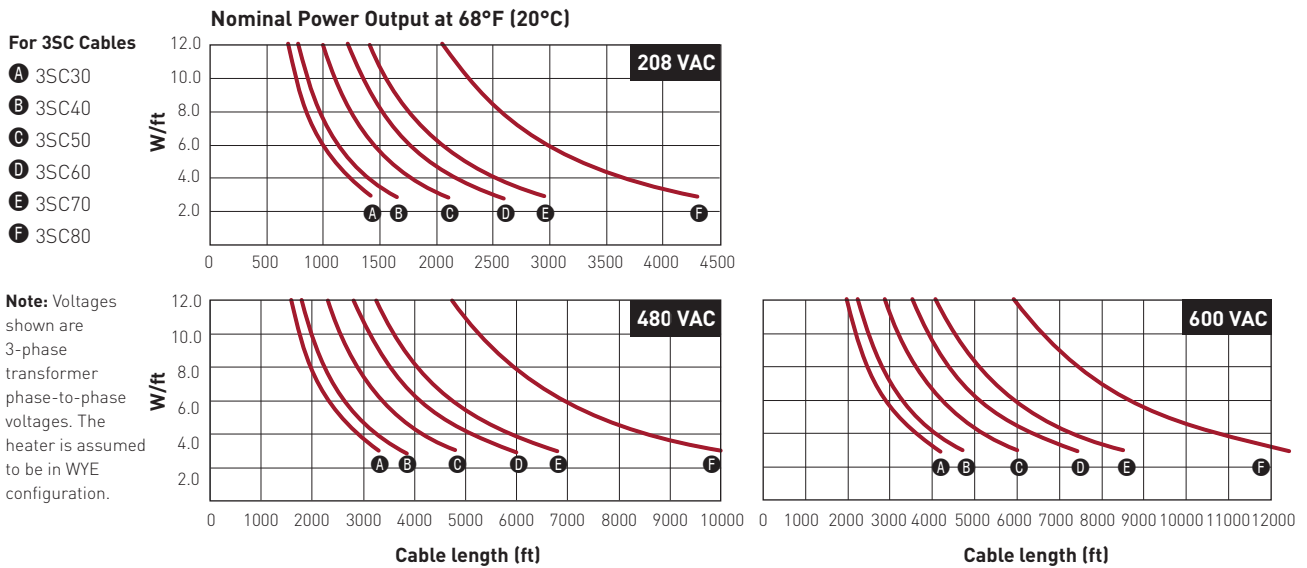
**Nominal Power Output at 68°F (20°C)**

For 2SC Cables

- A 2SC30
- B 2SC40
- C 2SC50
- D 2SC60
- E 2SC70
- F 2SC80



**NOMINAL POWER OUTPUT RATING**



**PRODUCT CHARACTERISTICS**

SC or SC/H	Conductor size	Cable resistance (nominal) @ 68°F (20°C)		Weight (nominal) lb/10 ft	Maximum circuit breaker size	Cable dimensions (nominal) (in)	Minimum bend radius (in)
		ohms/ft	ohms/m				
<b>(Single conductor cable)</b>							
1SC30-CT	18	0.00590	0.01935	0.4	30	0.22 diameter	1
1SC40-CT	16	0.00458	0.01502	0.5	30	0.23 diameter	1
1SC50-CT	14	0.00290	0.00951	0.6	30	0.24 diameter	1
1SC60-CT	12	0.00187	0.00613	0.7	60	0.26 diameter	1
1SC70-CT	10	0.00120	0.00394	0.9	80	0.29 diameter	1
1SC80-CT	8	0.00065	0.00213	1.2	100	0.32 diameter	1
<b>(Dual conductor cable)</b>							
2SC30-CT	18	0.01180	0.03869	0.8	40	0.41 x 0.27	1
2SC40-CT	16	0.00916	0.03004	1.0	40	0.42 x 0.28	1
2SC50-CT	14	0.00580	0.01902	1.2	40	0.45 x 0.29	1
2SC60-CT	12	0.00374	0.01226	1.4	60	0.5 x 0.31	1
2SC70-CT	10	0.00240	0.00787	1.8	80	0.55 x 0.34	1
2SC80-CT	8	0.00130	0.00426	2.4	100	0.61 x 0.37	1
<b>(Triple conductor cable, resistance per conductor)</b>							
3SC30-CT	18	0.00590	0.01935	1.2	40	0.56 x 0.27	1
3SC40-CT	16	0.00458	0.01502	1.5	40	0.58 x 0.28	1
3SC50-CT	14	0.00290	0.00951	1.8	40	0.62 x 0.29	1
3SC60-CT	12	0.00187	0.00613	2.1	60	0.68 x 0.31	1
3SC70-CT	10	0.00120	0.00394	2.7	80	0.75 x 0.34	1
3SC80-CT	8	0.00065	0.00213	3.6	100	0.85 x 0.37	1

**CONNECTION KITS**

Pentair Thermal Management offers a full range of connection kits for power connections, splices, and end termination. These connection kits must be used to ensure proper functioning of the product and compliance with warranty, code, and approvals requirements.

## **GROUND-FAULT PROTECTION**

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To minimize the danger of fire from sustained electrical arcing if the heating cable is damaged or improperly installed, and to comply with the requirements of Pentair Thermal Management, agency certifications, and national electrical codes, ground-fault equipment protection must be used on each heating cable branch circuit. Arcing may not be stopped by conventional circuit protection. Many DigiTrace control and monitoring systems meet the ground-fault protection requirement.



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