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## Series-resistance heating cables for longline systems

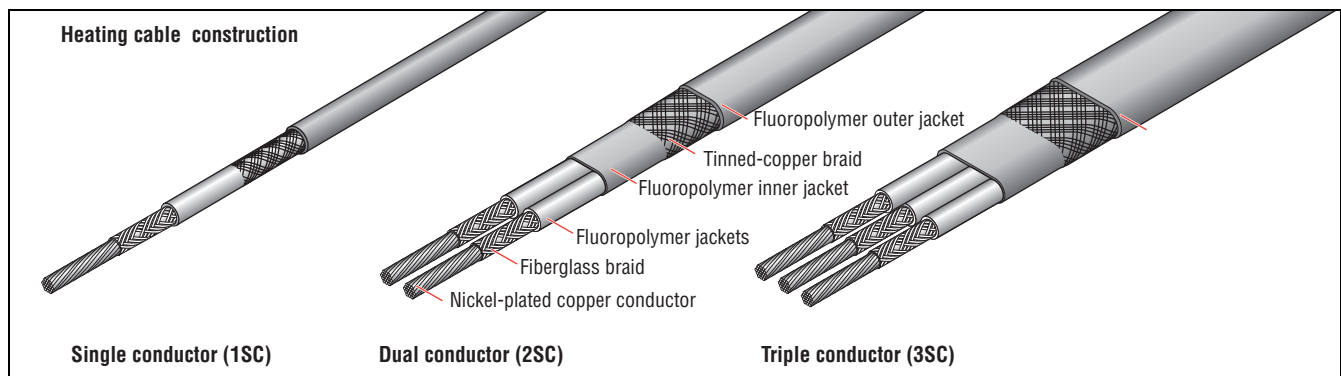
### Electrical freeze protection for long pipelines in both nonhazardous and hazardous locations.

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 Tyco Thermal Controls representative or call Tyco Thermal Controls at (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 Tyco Thermal Controls for assistance.

### Approvals

#### 1SC

##### Nonhazardous Locations



##### Hazardous Locations



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

(1) for T-Rating, see design documentation  
(2) 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



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



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



09-IEEx-0008X  
BR-Ex e II T\* (see Observation b)

#### 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



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



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



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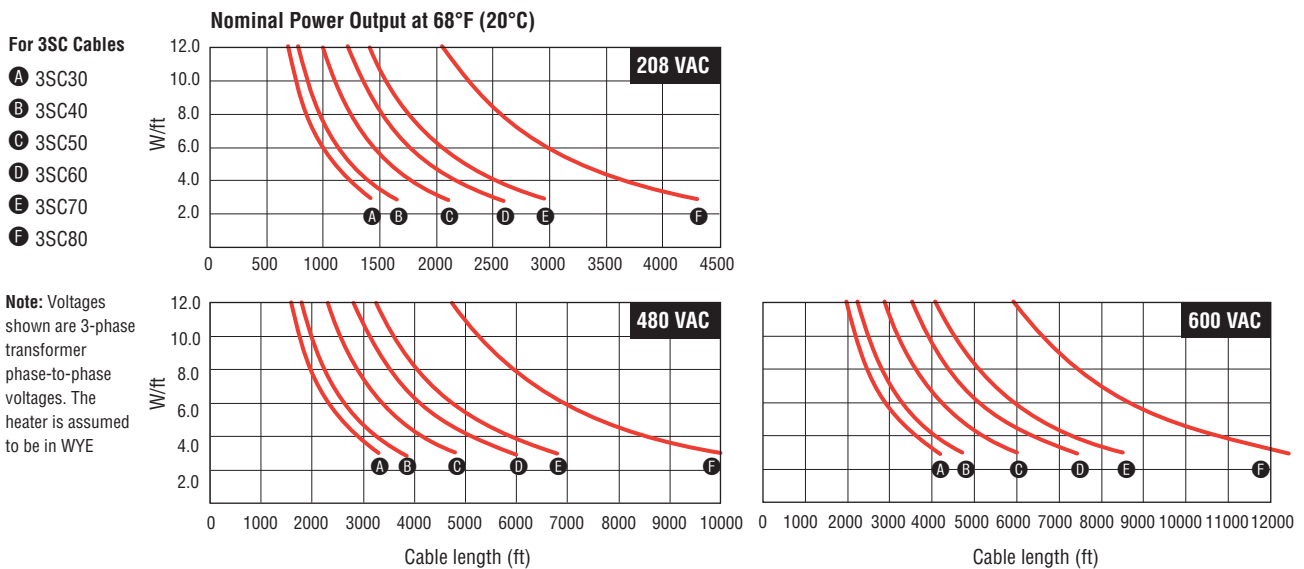
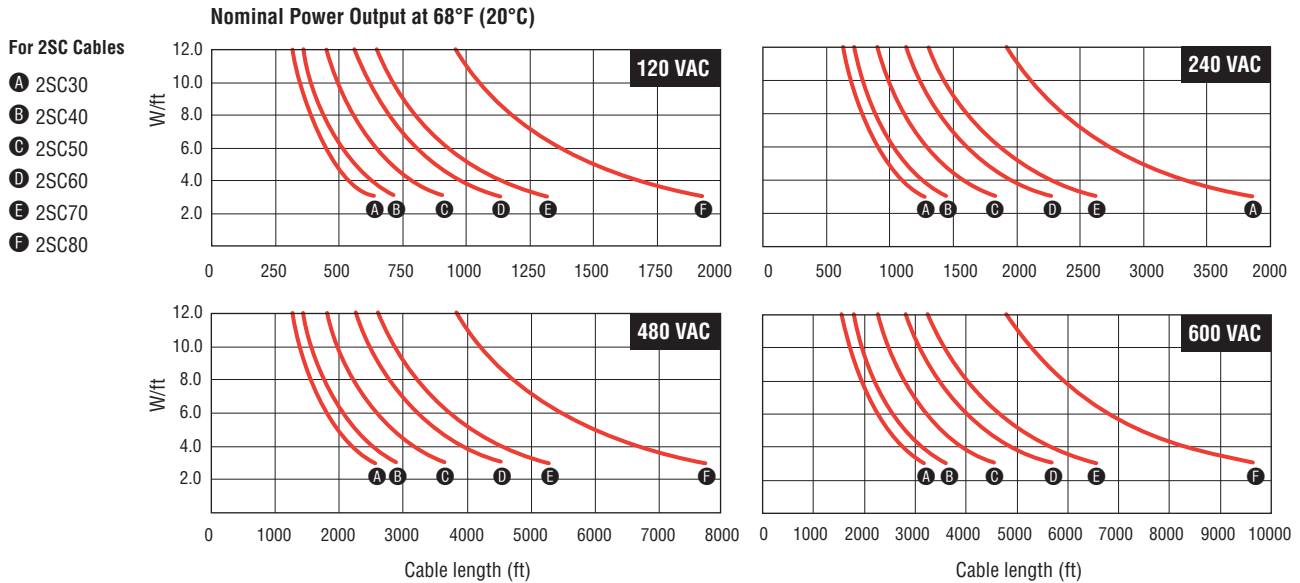
**Application**

**Design and Installation**

SC and SC/H applications must be designed and approved by Tyco Thermal Controls. Series heating cable technology requires that SC cables must not be overlapped. The use of appropriate control and monitoring equipment specified by Tyco Thermal Controls 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 Tyco Thermal Controls. Also, many other voltages and electrical configurations are possible.



**Ground-Fault Protection**

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 Tyco Thermal Controls, agency certifications, and national electrical codes, ground-fault 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.

## 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)	Minimum bend radius
		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

Tyco Thermal Controls 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.

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Thermal Controls

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