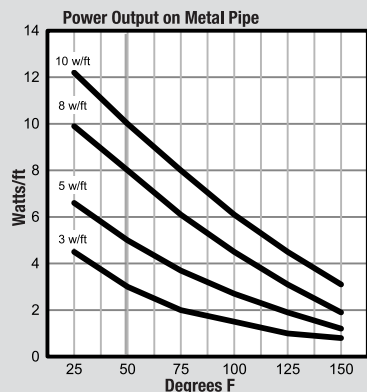


Self-Regulating Pipe Trace Cable



1,000 ft. Reel

Model Code:

SR 12 3 -250
A B C D

A: Self Regulating Cable

B: 12 - 120V

24 - 240V

C: Watts per foot

D: Linear Length in feet

SR Series Self-Regulating Heating Cable is designed for a variety of industrial and commercial pipe trace applications.

SR Self-Regulating Heating Cable Features

- Stops pipe and valve freeze down to -40°F
- Cable will not overheat or burn out when overlapped
- Suitable for use on metal and plastic pipes
- 2 year warranty



AVAILABLE LENGTHS

	VOLTS	PIPE RATING** WATTS/FT.	100 FT. LENGTH MODEL / UPC	250 FT. LENGTH MODEL / UPC	500 FT. LENGTH MODEL / UPC	1000 FT. LENGTH MODEL / UPC	WEIGHT/FT.
120V	120	3	SR123-100 / 40513	SR123-250 / 40414	SR123-500 / 48735	SR123-1000 / 40416	0.080 LBS./FT.
	120	5	SR125-100 / 40514	SR125-250 / 40418	SR125-500 / 48736	SR125-1000 / 40420	0.080 LBS./FT.
	120	8	SR128-100 / 40515	SR128-250 / 40422	SR128-500 / 48737	SR128-1000 / 40424	0.080 LBS./FT.
	120	10	SR1210-100 / 40516	SR1210-250 / 40426	SR1210-500 / 48742	SR1210-1000 / 40428	0.080 LBS./FT.
	VOLTS	PIPE RATING** WATTS/FT.	100 FT. LENGTH MODEL / UPC	250 FT. LENGTH MODEL / UPC	500 FT. LENGTH MODEL / UPC	1000 FT. LENGTH MODEL / UPC	WEIGHT/FT.
240V	240*	3	SR243-100 / 40517	SR243-250 / 40430	SR243-500 / 48739	SR243-1000 / 40432	0.080 LBS./FT.
	240*	5	SR245-100 / 40518	SR245-250 / 40434	SR245-500 / 48740	SR245-1000 / 40436	0.080 LBS./FT.
	240*	8	SR248-100 / 40519	SR248-250 / 40438	SR248-500 / 48741	SR248-1000 / 40440	0.080 LBS./FT.
	240*	10	SR2410-100 / 40520	SR2410-250 / 40442	SR2410-500 / 48746	SR2410-1000 / 40444	0.080 LBS./FT.

*Approved for 208, 220, 240, 277 volt operation, refer to wattage adjustment tables for output rating. (See Page 191, Table 4)

**Wattage rating for pipe freeze protection application is determined at 50°F (10°C).

Controls and thermostats should always be used with King heating cable systems.

SR ACCESSORIES Refer to page ?? for Pipe Freeze Protection Accessories

MODEL	UPC	DESCRIPTION	WEIGHT
SRK02	40461	Connection kit, includes end seal	0.3 lbs.
SRK04	61713	2.5" x 50 yards 2 Mil Foil tape	1.0 lbs.
SRK08	40466	Plug in 120V connection kit with GFEP device, includes end seal	1.0 lbs.
SRK10	40468	Weatherproof splice/tee kit, includes end seal	0.2 lbs.
SRK12	40470	End seal kit (2 per package)	0.1 lbs.
SRK13	40472	SR accessory cable roof clips (25 per package)	0.2 lbs.
SRK14	40473	3M VHB double sided acrylic foam pads (25 per package)	0.1 lbs.
SRK15	40476	Downspot hanger and cable ties	0.3 lbs.
SRK17	40477	11 & 13mm Gel end seal	0.1 lbs.
SRK18	40512	Lighted end seal, 85-277V	0.3 lbs.
IFC12	40490	Plug in fixed thermostat, 120V, 15 amp, on at 35°F off at 45°F (12/case)	0.3 lbs.
TRF-115-005	40477	Freeze protection thermostat, weatherproof with 5ft. remote bulb & capillary, 25 amp at 120/208/240V, 22 amp at 277V, adjustable temp 0°F, suitable for 24 VAC operation (w/Power-On indicator light)	0.3 lbs.

Charts & Tables SR Pipe Trace Cable

Technical Data Table

Maximum operating temperature	150°F (65°C)
Maximum exposure temperature	185°F (85°C)
Minimum installation temperature	-40°F (-40°C)
Minimum bending radius	1" (24mm)
Dimensions	0.496" x 0.236" (12.6mm x 6mm)
Service Voltage	110V-120V, 208V-277V
Wattage rating temperature	50°F (10°C)
Hazardous Location Rating (-CT Outer Jacket only)	Class I, Div. 2 Class II, Div. 2 Class III



For Pipe Freeze Protection and Roof & Gutter De-Icing



Heating Cable Selection for Pipe Freeze Protection

Pipe	Type	5'	10'	15'	20'	25'	30'	35'	40'	45'	50'	55'	60'	65'	70'	75'	80'	85'	90'	95'	100'	125'	150'	175'	200'
1/2"	M	A	B	C	D	E	E	E	F	F	F	G	G	H	H	H	I	I	J	J	J	K	L	M	N
	P	A	B	C	D	E	E	F	F	F	G	G	H	H	H	I	I	J	J	J	K	L	M	N	-
1"	M	A	B	C	D	E	E	E	F	F	F	G	G	H	H	H	I	I	J	J	J	K	L	M	N
	P	B	B	C	D	E	E	F	F	F	G	G	H	H	H	I	I	J	J	J	K	L	M	N	-
1 1/2"	M	A	B	C	D	E	E	E	F	F	F	G	G	H	H	H	I	I	J	J	J	K	L	M	N
	P	B	C	D	E	E	F	F	F	G	G	H	H	H	I	I	J	J	J	K	K	M	N	-	-
2"	M	A	B	C	D	E	E	E	F	F	G	G	H	H	H	I	I	J	J	J	K	L	M	N	-
	P	B	C	E	E	F	G	H	H	I	J	J	K	K	L	L	L	M	M	M	N	-	-	-	-
2 1/2"	M	A	C	C	D	E	F	F	F	G	G	H	H	I	I	J	J	K	K	K	K	L	N	-	-
	P	B	D	E	F	G	H	I	J	K	K	L	L	M	M	N	N	-	-	-	-	-	-	-	-

A	B	C	D	E	F	G	H	I	J
SRP126-6	SRP126-12	SRP126-18	SRP126-24	SRP126-37.5	SRP126-50	SRP126-62.5	SRP126-75	SRP126-87.5	SRP126-100
SRP246-6	SRP246-12	SRP246-18	SRP246-24	SRP246-37.5	SRP246-50	SRP246-62.5	SRP246-75	SRP246-87.5	SRP246-100
						K	L	M	N
						SRP126-125	SRP126-150	SRP246-175	SRP246-200
						SRP246-125	SRP246-150		

M = Metal Pipe / P = Plastic Pipe

Add 1 foot to the cable length for each valve or spigot.

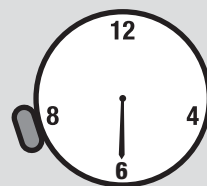
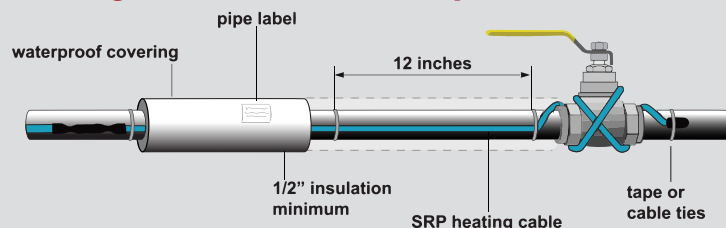
Chart is based on the lowest outside temperature of 0°F (-18°C)

with a minimum of 1/2" thick fiberglass insulation. Use 1" insulation for protection down to -20°F (-29°C).

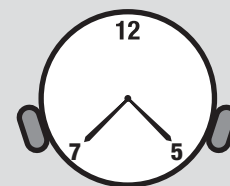


Charts & Tables SR Pipe Trace Cable

Heating Cable Selection for Pipe Freeze Protection



Single Cable Location



Double Cable Location

For a single cable, run it straight along the bottom of the pipe in the 4 or 8 o'clock position. If two cables are required, attach them at the 4 and 8 o'clock positions as shown in the figure above.

Use Table 1 to select the cable size for metal pipes and use Table 2 for plastic pipes. Read across the table to find the pipe size, then drop down to the row corresponding to the design air temperature and the thickness of the insulation that will be used. The cell that intersects will give the power (watts/ft.) of the heating cable required, it may also have a (2) in the cell which means 2 cables are required.

Table 1 - SR Cable Selection for Metal Pipes (w/ft.)¹

Lowest Air Temp.	Insulation Thickness	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	6"	8"
0°F (-18°C)	1/2"	3	3	3	3	5	5	5	5	8	8	10
	1"	3	3	3	3	3	3	3	5	5	8	8
	1-1/2"	3	3	3	3	3	3	3	3	5	5	5
	2"	3	3	3	3	3	3	3	3	3	5	5
-20°F (-29°C)	1/2"	3	5	5	5	5	5	8	8	10	10	*
	1"	3	3	3	3	3	5	5	5	8	8	10
	1-1/2"	3	3	3	3	3	3	3	5	5	8	8
	2"	3	3	3	3	3	3	3	3	5	5	8
-40°F (-40°C)	1/2"	5	5	5	5	8	8	10	(2) 8	(2) 8	(2) 10	*
	1"	3	3	3	5	5	5	8	8	8	10	(2) 8
	1-1/2"	3	3	3	3	3	5	5	5	8	8	10
	2"	3	3	3	3	3	3	3	5	5	8	8
	3"	3	3	3	3	3	3	3	3	3	5	5

Table 2 - SR Cable Selection for Plastic Pipes (w/ft.)¹

Lowest Air Temp.	Insulation Thickness	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	6"	8"
0°F (-18°C)	1/2"	3	5	5	5	8	8	8	10	(2) 8	(2) 10	*
	1"	3	3	3	5	5	5	5	5	5	8	8
	1-1/2"	3	3	3	3	3	3	5	8	8	8	10
	2"	3	3	3	3	3	3	3	5	5	8	8
-20°F (-29°C)	1/2"	5	5	8	8	10	10	(2) 8	(2) 8	(2) 10	*	*
	1"	3	3	5	5	5	8	8	8	10	(2) 8	(2) 10
	1-1/2"	5	5	5	5	5	5	5	8	8	10	(2) 8
	2"	3	3	3	3	3	5	5	5	8	8	10
-40°F (-40°C)	1/2"	8	8	8	8	10	10	(2) 8	(2) 10	*	*	*
	1"	5	5	5	8	8	8	10	10	(2) 8	*	*
	1-1/2"	5	5	5	5	5	8	8	8	10	(2) 8	(2) 10
	2"	5	5	5	5	5	5	5	8	8	10	(2) 8
	3"	3	3	5	5	5	5	5	5	5	8	10

1. Tables are based on using fiberglass insulation or equivalent while maintaining a 40°F (4°C) pipe temperature with a 10% safety factor and 20 mph wind speed.

*Contact King for proper cable selection.

Charts & Tables SR Pipe Trace Cable

SR Heating Cable Selection and Design

CALCULATE THE TOTAL HEATING CABLE LENGTH

$$\text{Cable length} = A+B+C+D+E+F$$

- A. Pipe length x number of cables
- B. 4 ft. x number of valves
- C. 2 ft. x number of flanges, supports, etc.
- D. 1 ft. for each power connection
- E. 2 ft. for each splice connection
- F. 3 ft. for each tee connection

= Total heating cable length

MAXIMUM CIRCUIT LENGTH ALLOWED

Ensure that your circuits do not exceed the maximum circuit length listed in table 3. If necessary, use additional shorter circuits

EXAMPLE

Pipe Size: 2" metal pipe

Lowest air temp: -20°F

Insulation thickness: 1"

Cable selection: (1) 5w/ft. (from table 1)

Pipe length: 80 ft.

Valves: 2

Pipe supports: 12

Power connections: 1

Splice connections: 1

HEATING CABLE REQUIRED

A. Pipe length x number of cables

B. 4 ft. x number of valves

C. 2 ft. x number of flanges, supports, etc.

D. 1 ft. for each power connection

E. 2 ft. for each splice connection

F. 3 ft. for each tee connection

80 ft. x 1 = 80 ft.

4 ft. x 2 = 8 ft.

2 ft. x 12 = 24 ft.

1 ft. x 1 = 1 ft

1 ft. x 1 = 1 ft

3 ft. x 0 = 0 ft

= Total heating cable length

114 ft.

Table 3 - Maximum Single Cable Length

Model	Volts	Watts/ft	Maximum Single Run Length
SR123	120V	3 w/ft.	318 ft. (96M)
SR243	240V	3 w/ft.	636 ft. (193M)
SR125	120V	5 w/ft.	246 ft. (75M)
SR245	240V	5 w/ft.	499 ft. (152M)
SR128	120V	8 w/ft.	197 ft. (60M)
SR248	240V	8 w/ft.	394 ft. (120M)
SR1210	120V	10 w/ft.	174 ft. (53M)
SR2410	240V	10 w/ft.	344 ft. (104M)

Table 4 - Wattage Adjustment (w/ft.)

Model	240V	208V	220V	277V
SR243	3.0	2.5	2.7	3.4
SR245	5.0	4.3	4.6	5.5
SR248	8.0	7.0	7.44	8.6
SR2410	10.0	9.0	9.4	10.5

The maximum length of a single cable run is noted in Table 3 and cannot be exceeded. If the application requires a longer cable run, then multiple cables and additional power circuits must be used.

When using 240 volt SR cable on 208, 220 or 277 volt applications, the power output (wattage) must be adjusted. Refer to Table 4 for the adjusted watts/ft. of the cable when operated at a voltage other than 240 volt.

Circuit protection depends on the length of cable required and the start-up temperature since the cable will draw more power (wattage) when cold. Multiple cables can be run from a single power circuit up to a maximum combined length as noted in Table 5. Larger amperage circuit breakers can handle longer combined cable lengths, but the maximum length for a single cable run does not change. The NEC requires the use of ground fault protection breakers for heating cable.

NOTE: 240 volt cable lengths in Table 5 are also good for 208, 220 and 277 volt.

Table 5 - Circuit Protection Per Combined Cable Length for Pipe Freeze Protection

Cable	Volts	Start up Temp.	15 Amp (ft.)	20 Amp (ft.)	30 Amp (ft.)	40 Amp (ft.)
SR123 3 w/ft.	120V	50°F (10°C)	318	318	318	318
		0°F (-18°C)	265	274	274	274
		-20°F (-29°C)	258	258	258	258
SR125 5 w/ft.	120V	50°F (10°C)	246	246	246	246
		0°F (-18°C)	199	218	218	218
		-20°F (-29°C)	175	205	205	205
SR128 8 w/ft.	120V	50°F (10°C)	164	197	197	197
		0°F (-18°C)	126	167	173	173
		-20°F (-29°C)	112	148	162	162
SR1210 10 w/ft.	120V	50°F (10°C)	120	160	174	174
		0°F (-18°C)	92	122	153	153
		-20°F (-29°C)	83	109	146	146
SR243 3 w/ft.	240V	50°F (10°C)	636	636	636	636
		0°F (-18°C)	548	548	548	548
		-20°F (-29°C)	515	515	515	515
SR245 5 w/ft.	240V	50°F (10°C)	499	499	499	499
		0°F (-18°C)	398	437	437	437
		-20°F (-29°C)	351	410	410	410
SR248 8 w/ft.	240V	50°F (10°C)	328	394	394	394
		0°F (-18°C)	252	334	345	345
		-20°F (-29°C)	225	296	325	325
SR2410 10 w/ft.	240V	50°F (10°C)	240	320	344	344
		0°F (-18°C)	184	244	306	306
		-20°F (-29°C)	166	219	292	292

SR/SRP Pipe Freeze Protection Accessories



SRK00 Hard Wired Power Connection Kit

Contains labels, pipe mounting bracket, box connector, wire nuts and heat shrink tubing to make electrical supply connection to a metal junction box. Includes one end seal.



SRK02 Connection Kit

Contains heat shrink tubing and woven braid. Also includes one end seal.



SRK10 Splice and Tee Kit

Contains heat shrink tubing and other materials to make one splice or one tee connection. Also includes one end seal.



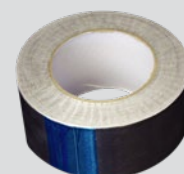
SRK08 Plug in 120V Connection Kit with GFEP Device

Contains labels, GFEP protection device with 120V plug, cable ties, crimp type connectors, heat shrink tubing and labels. Includes one end seal.



SRK12 End Seal Kit

Contains heat shrink tubing and other materials to make two end seals.



SRK04

2.5" x 50 yards 2 mil Foil tape



SRK03 Tape

Pipe trace tape and labels.



IFC12

Plug in fixed thermostat



TRF115-005

Freeze Protection Thermostat



SRK17

11 & 13mm Gel end seal



SRK18

Lighted end seal

MODEL	UPC	DESCRIPTION	WEIGHT
SRK00	40462	Hard wired power connection kit, includes end seal	0.3 lbs.
SRK02	40461	Connection kit, includes end seal	0.3 lbs.
SRK03	40464	Pipe trace tape (66ft) and 10 labels per package	1.0 lbs.
SRK04	61713	2.5" x 50 yards 2 mil foil tape	1.6 lbs.
SRK08	40466	Plug in 120V connection kit with GFEP device, includes end seal	1.0 lbs.
SRK10	40468	Weatherproof splice/tee kit, includes end seal	0.2 lbs.
SRK12	40470	End seal kit (2 per package)	0.1 lbs.
SRK17	40477	11 & 13mm Gel end seal	0.1 lbs.
SRK18	40512	Lighted end seal, 85-277V	0.3 lbs.
IFC12	40490	Plug in fixed thermostat, 120V, 15 amp, on at 35°F off at 45°F (12/case)	0.3 lbs.
TRF-115-005	40486	Freeze protection thermostat, weatherproof with 5 ft. remote bulb & capillary, 25 amp at 120/208/240V, 22 amp at 277V, adjustable temp 0°F, suitable for 24 VAC operation (w/Power-On indicator light)	0.3 lbs.