Components

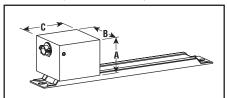
Strip & Ring Heaters

Accessories

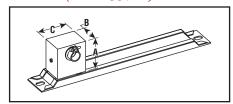
- Protective Terminal Covers
- · Shims
- Ceramic Post Terminal Insulators
- · Porcelain Hi-Temp Insulation

Protective Terminal Covers — Types OT, PT, SE, WS and Seamless Types SSE, SSEM, SSNH and SSNHM. Helps guard terminals from spillovers, dripping. Removable sheet-metal cover, with Bx fitting, is shipped separately.

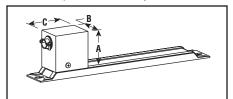
OT-AC-1 (PCN 129242)



PT-AC-1 (PCN 255724)



SE-AC-1 (PCN 256727)



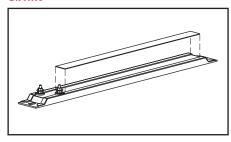
Protective Terminal Covers

	Dimensions (In.)				
Model	Α	В	C		
OT-AC-1	2	2-1/2	2-1/2		
PT-AC-1	1-7/8	1-1/8	1-3/4		
SE-AC-11	2-1/16	1-1/2	2		
Used on type WS (mounted sideways).					

Shims

Shims — Types OT, PT, S, SE and TH. Provide same advantage as flush-top construction and can be used with stock heaters. Shims are 0.031" thick, 29/32" wide and lengths to fit heater.

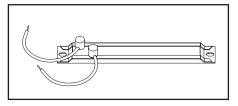
Shims



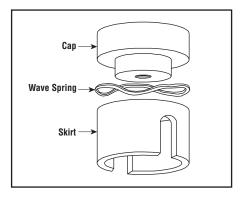
Ceramic Post Terminal Insulaters

Ceramic Post Terminal Insulators — All types except NS and SN. Use with insulated wire to help protect against electrical shock. Wires can leave terminal at any angle.

Ceramic Post Terminal Insulators



PCN 259805 (Nickel plated steel hardware) PCN 255732 (Stainless steel hardware)



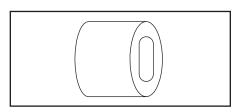
Porcelain Beads

	Dimensions (In.)		Wire Size	No. Beads	No. Beads		
Bead Size	A	В	C	Solid	Per Ft.	(Pieces)	PCN
2	0.17	0.068	0.17	14 B&S	88	4,535	263880
3	0.2	0.092	0.2	12 B&S	69	2,900	263900
4	0.26	0.156	0.26	8 B&S	51	1,500	263927
5	0.33	0.124	0.33	10 B&S	45	650	263943
6	0.4	0.156	0.4	8 B&S	38	360	263960
To Order—Specify PCN and quantity.							

Porcelain Hi-Temp Insulation

Porcelain Hi-Temp Insulation —

For insulating buss bars spec. 51 porcelain insulators 1/2 L x 13/16" W with 1/8 x 9/16" slot. 95 pieces per lb.



To Order — Specify pounds, PCN 269780 and porcelain insulators.

For Insulating Bare Wires — Two types available:

Porcelain Tubing — 3/8" O.D. x 1/8" I.D. x 6" L (may be broken for shorter lengths). Suitable for 10-gauge or smaller; 8-gauge takes No. 6 porcelain bead.

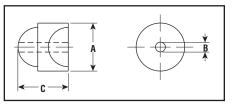
To Order — Specify quantity and PCN 263863.

Porcelain Tubing



Porcelain Beads — Listed in table below. Can be used when wiring does not permit straight tubing.

Porcelain Beads



3. When selecting porcelain beads for stranded wire, use next larger gauge wire and use bead for that size (i.e., 10 gauge stranded wire requires a No. 6 bead).

Components

Strip & Ring Heaters

Wire & Accessories (cont'd.)

- · High Temperature (Bare) Wire
- · Insulated Wire
- Buss Bar
- Silicone Boot Termination Kit
- Silicone Boot Termination Kit with Thermostat

Ambient Temperature Corrections for Insulated Wires — Multiply ampacity values, in tables below, by the following correction factors to determine current-carrying capacity at higher ambient temperatures.

Ambient			Nickel			
<u>Ter</u>	np.	Nickel-Plated			MGS-	
°C	°F	Copper Teflon® Insulated	Silicone Glass	Teflon® Glass	Mica Glass	
30	86	_	_	_	1.36	
50	122	0.98	0.97	0.98		
60	140	0.95	0.94	0.95	- I	
70	158	0.93	0.9	0.93	- I	
80	176	0.9	0.87	0.9	-	
90	194	0.87	0.83	0.87		
100		0.85	0.79	0.85	1.22	
120		0.79	0.71	0.79		
140	284	0.72	0.61	0.72		
149	300	0.65	0.5	0.65	1.12	
177	350	0.58	0.35	0.58		
204	400	0.49	—	0.49	1	
232		0.35	—	0.35		
260		_	_	—	0.87	
269	550	–	—	—		
300	572	_	-	—	0.7	

Note — After exposure to high temperatures, all wire insulation becomes brittle and will not withstand repeated flexing.

Wire & Buss Bar

High-temperature wire and buss bar are recommended for connections to heater terminals and for runs in heated zones. When ambient temperature exceeds maximum allowed for insulated wire, use bare wire or buss bar with porcelain insulators. Current-carrying capacities should be carefully noted.

Buss bar is solid or perforated to facilitate wiring, especially when terminals are in line. Perforated buss bar, has 11/32 x 7/32" slots on 7/16" centers. When connecting elements with buss bar, provide expansion loops between elements. Buss bars may be used in multiples for higher ampacity (approx. 33-1/2% per buss bar) than listed above, center.

High Temperature (Bare) Wire

Size AWG	Solid/S Strand/F		Nom. O.D.	Model	PCN		
	550°F Max. Wire Temp. Nickel-plated Copper, Uninsulated						
14 10 8	<i></i>	41 70 93	.102	CSB-14 CSB-10 CSB-8	263839 263812 263804		
	1000°F Max. Wire Temp. Manganese-Nickel, Uninsulated						
14 14 12 12 10	FSFSS	12 12 15 15 20	.075 .064 .097 .081 .102	AFB-14 ASB-14 AFB-12 ASB-12 ASB-10	269317 269309 269296 269288 269261		
To Order — Specify PCN and quantity.							

Insulated Wire

			Nom.				
Size AWG	Solid/S Strand/F	Amp- acity ¹	O.D. Insul In.	Model	PCN		
392°F Max. Wire Temp. Type A Nickel Wire							
Silicone Rubber Treated Glass Braid							
Insulated 600V UL Listed							
16	F	27	.224	3-CFI-16	263759		
16	S	27	.224	3-CSI-16	263740		
14	F	36	.237	3-CFI-14	263732		
14	S	36	.237	3-CSI-14	263724		
12	F	45	.263	3-CFI-12	263716		
12	S	45	.263	3-CSI-12	263708		
10	F	60	.29	3-CFI-10	263695		
10	S	60	.29	3-CSI-10	263687		
482°F Max. Wire Temp. Type TGT, Nickel-plated Copper, Teflon® Impregnated Glass Braid Insulated 600V UL Listed							
Glas	s Braid I	nsulat	ed 600V	/ UL Listed			
Glas 14	s Braid I F	nsulat 39	ed 600V .121	UL Listed 6-CFI-14	263791		
		nsulat	ed 600V	UL Listed			
14	F	nsulat 39	.121	UL Listed 6-CFI-14	263791		
14 14	F S	39 39	ed 600V .121 .112	6-CFI-14 6-CSI-14	263791 295398		
14 14 12	F S F	39 39 54	.121 .112 .112 .141	6-CFI-14 6-CSI-14 6-CFI-12	263791 295398 263783		
14 14 12 12	F S F S	39 39 54 54	ed 600V .121 .112 .141 .13	6-CFI-14 6-CSI-14 6-CFI-12 6-CSI-12	263791 295398 263783 295400		
14 14 12 12 10	F S F S	39 39 54 54 73	ed 600V .121 .112 .141 .13 .17	6-CFI-14 6-CSI-14 6-CFI-12 6-CSI-12 6-CFI-10	263791 295398 263783 295400 263775		
14 14 12 12 10 10 8 482° Silic	F S F S F	39 39 54 54 73 73 93 Vire Telegnate	.121 .112 .141 .13 .17 .156 .212 mp. Tefled Glas	6-CFI-14 6-CSI-14 6-CSI-12 6-CSI-12 6-CSI-10 6-CSI-10 6-CSI-10 6-CFI-8	263791 295398 263783 295400 263775 295419 263767		
14 14 12 12 10 10 8 482° Silic	F S F Max. Wone Impr	39 39 54 54 73 73 93 Vire Telegnate	.121 .112 .141 .13 .17 .156 .212 mp. Tefled Glas	6-CFI-14 6-CSI-14 6-CSI-12 6-CSI-12 6-CSI-10 6-CSI-10 6-CSI-10 6-CFI-8	263791 295398 263783 295400 263775 295419 263767		
14 14 12 12 10 10 8 482° Silic Insu	F S F S F F Max. W one Imprilated 600	39 39 54 54 73 73 93 //ire Teregnate/	ed 600V .121 .112 .141 .13 .17 .156 .212 mp. Teffed Glas Listed	6-CFI-14 6-CSI-14 6-CSI-14 6-CFI-12 6-CFI-10 6-CFI-10 6-CSI-10 6-CFI-8 lon® Tape as Braid	263791 295398 263783 295400 263775 295419 263767 nd		

To Order — Specify PCN and quantity. 1. See note 1 in Buss Bar Table. 2. These wiring recommendations are

6-CFIM-16 295355

6-CFIM-14 295363

6-CFIM-12 295371

842°F Max. Wire Temp. Nickel-clad

44¹

55¹ .118

16

Copper, MGS-Mica Glass Insulated 600V

.102

331 .065

These wiring recommendations are general in nature. Confirm actual wire size and selection in accordance with NEC (National Electrical Code).

Buss Bar

Buss Bar Monel	DIM (Width	In.) Thick	Amp- acity ¹	PCN		
700°F Max. Wire Temp.						
Solid						
	0.5 0.5	.032 .064	18 28	346124 346132		
Perforated S	lot Size	= 7/32	Dia.			
	0.5 0.5	.032 .064	9 16	346140 346159		
To Order — Specify PCN and number of feet. 1. These current values will cause the conductor to operate at 100°F above surrounding ambient. Values may also be used for bare wire with porcelain tubes or bead insulation. Monel max. limit is 800°F						



Silicone Boot Termination Kit

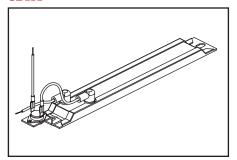
SBK — The silicone boot termination kit provides electrical insulation for strip heater terminals and leads with ring type insulated connector on one end for bringing power to the strip heaters.

Silicone Boot Termination Kit with Thermostat

SBKT — The silicone boot termination kit with thermostat used with strip heaters provides an inexpensive way to maintain temperature in control cabinets, panels and other small enclosures. In this application, strip heaters are used to prevent freezing and corrosion, and to control humidity in enclosures with humidity sensitive electronic components.

		Temperature (°F)	
Model	PCN	Closes	Opens
SBKT-1	386011	38	53
SBKT-2	386020	60	75
SBKT-3	386038	105	120
SBK	121890	N/A	N/A

SBKT



Components

Strip & Ring Heaters

Accessories (cont'd.)

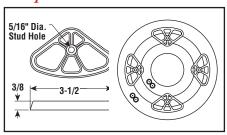
- · Element Clamps
- · Mounting Studs

Element Clamps

Cast-iron clamps, for use with Chromalox strip and ring elements, retain their strength at elevated temperatures to assure maximum sheath-to-surface contact. Resulting uniform efficient heat transfer from internal resistance wire to the heated material minimize hot spots on the element, contributing to long service life.

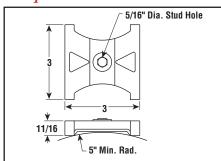
Clamp 6018 — Usually used in sets of two or more to clamp ring elements to flat surfaces. 5/16" flathead machine screws are normally used with head brazed or welded to work surface (PCN 263978).

Clamp 6018



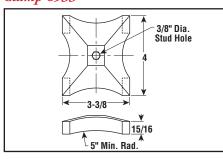
Clamp 5971 — Use to clamp two strip heaters on 2" centers using 5/16" studs spaced 5" apart (PCN 263636).

Clamp 5971



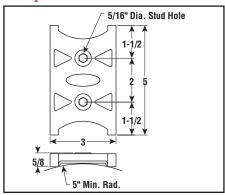
Clamp 6933 — Use to clamp two strip heaters on 3" centers using 3/8" studs at 5" intervals (PCN 263644).

Clamp 6933



Clamp 5970 — Use to clamp three strip heaters on 2" centers using 5/16" studs at 5" intervals (PCN 263652).

Clamp 5970



Mounting Studs

Mounting Studs — For use with Chromalox clamps. For all clamps except No. 6933, studs are $5/16 - 18 \times 1-1/2$ " Monel® (PCN 127845), steel washer (PCN 127853), Monel® nut (PCN 127861). For No. 6993 clamp; studs are 5/16" — 18×2 " Monel® (PCN 127837).

Installation — Fasten studs to the work surface by welding, brazing or threading. Use correct size stud to fit clamp. See Selection & Installation Guidelines in the Components section. For temperatures over 750°F, stainless steel studs are recommended.

Note — When tightening nuts, torsion should not exceed 10 foot pounds maximum. Heaters must be allowed to expand. One center clamp should hold heater. Nuts on other clamps should be backed off approximately 1/2 turn to allow for heater expansion.

