

Beau® Barrier Terminal Strips

E E E E E E E E



VERNITRON CORPORATION
BEAU PRODUCTS DIVISION

Beau® Barrier Terminal Strips: consider the advantages of thermoplastics.

In the past several years, Vernitron has made significant additions to its line of barrier terminal strips. The most obvious advance is the introduction of thermoplastic, the material that solves the primary fault of phenolic strips: barrier breakage. And it also attained UL's highest flame retardant rating, 94V-0.

But Vernitron didn't stop there. When we designed our new thermoplastic series, we incorporated a number of other significant improvements. We've ultrasonically welded the terminals in the thermoplastic insulator, so that you can't pull them out. At the same time, this design eliminates solder joint fatigue from twisting the tail when torqueing the screws. And we've enclosed the contact tails to give you the greatest circuit isolation and the least possibility of trapping foreign material.

With all this, we've also designed a 20-amp double-row strip (76000 Series) that actually fits in the same panel space as 15-amp units. And we have a high-barrier style (72000 Series) with an advantage over all the others — lower overall height.

Still, there's more to be said. The principal advantages are fully described on the next three pages. And there are other differences. Like the quality of our hardware.

Terminals with clean, smooth edges, and bright uniform, highly solderable plating. Insulators that exceed all the electrical/mechanical performance standards. These differences are the result of maintaining constant control over the manufacturing processes. And constant attention to tool maintenance. We have a fetish for quality. So, when you buy from Vernitron, you can expect the finest barrier terminal strips available — anywhere.

The basics:

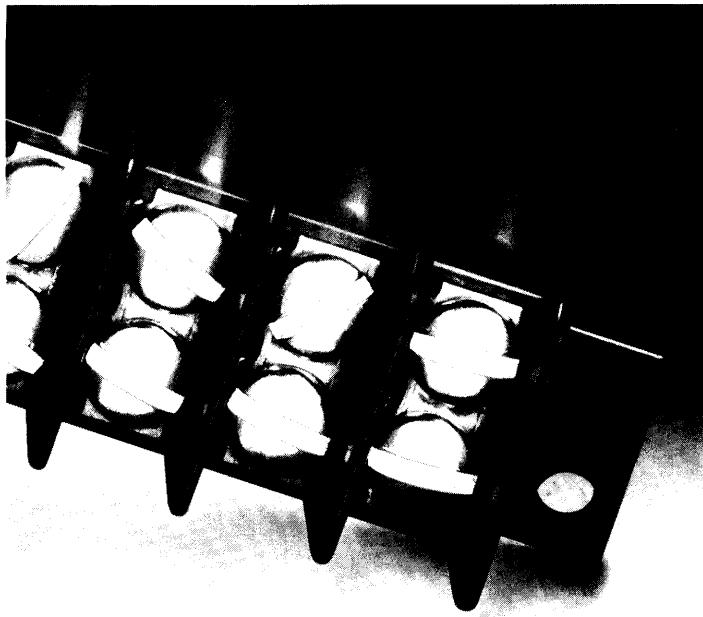
when to use barrier terminal strips

Barrier terminal strips are one of the most widely used and accepted devices for terminating wires. They have achieved this status because of their versatility and cost effectiveness—both initial cost and installed cost.

They provide increased insulation to stop leaks and short circuits. Wiring work is simplified because time-consuming splicing is eliminated. They offer the easiest and most convenient method for field wiring—only a screwdriver is needed. Usually, a higher density of circuitry can be attained, saving panel space. The end

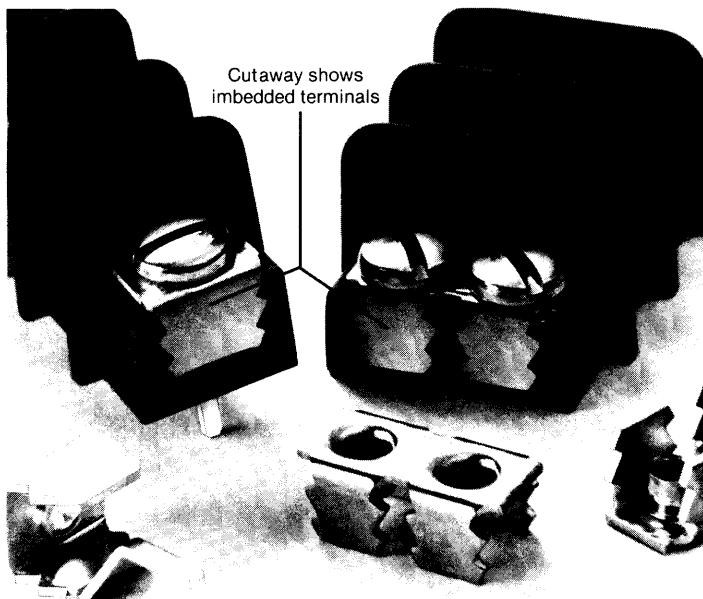
result is a professional looking termination rather than a jumble of wires. A great variety of top and bottom termination styles add to their versatility.

Barrier terminal strips also allow for convenient future changes. Circuit changes can usually be made just by rearranging wires. The barrier terminal strips also offer a good test point area for troubleshooting. Circuit tracing is especially easy when the strips are imprinted with circuit designations.



The barriers you can bend without breaking

Vernitron's flexible barrier terminal strips reduce breakage dramatically because they are made of a highly resilient glass-filled thermoplastic. Its impact strength is many times greater than phenolic materials. Because the barriers can actually bend without breaking, production line and in-field damage is virtually eliminated. Time-consuming component replacement and re-wiring, and its high cost, is no longer a problem.



Screw terminals that won't pull out

All our thermoplastic barrier strips feature screw terminal plates that are ultrasonically imbedded into the walls of the terminal blocks. The result: a dramatic improvement in pull-out strength.

Single-row types have the terminals imbedded into the walls of the insulator on both sides (photo). This provides a pull-out strength over twice as great as competitive designs, which retain the terminal only by twisting the terminal tail.

Double-row styles eliminate the problem of insecure terminal retention commonly found in closed back styles. The eyelets and nails have been eliminated. Instead, terminal plates (photo) are ultrasonically welded (imbedded) into the barrier strip—making it virtually impossible to pull them out.

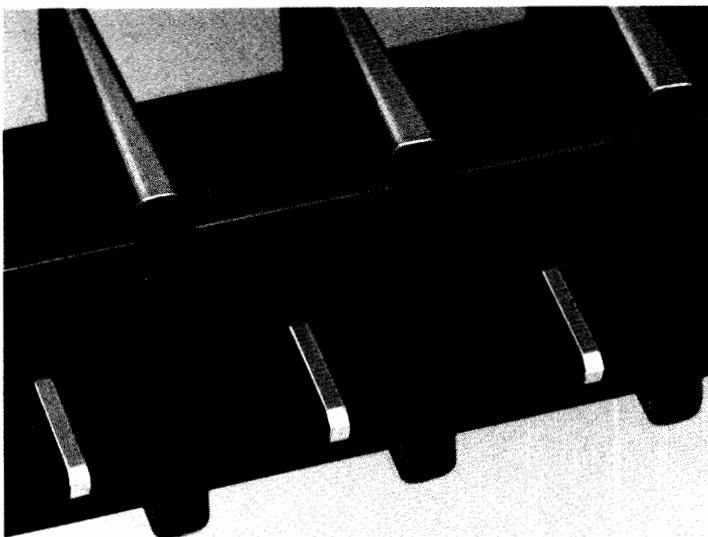


Solder joint fatigue eliminated

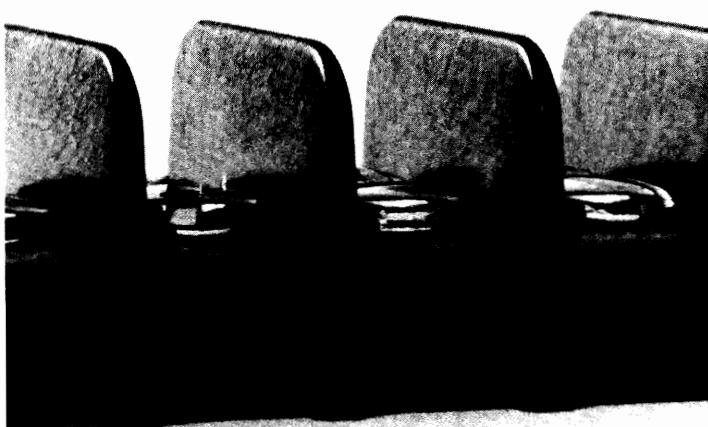
Because our barrier strips have the terminals welded in both sides, you get this additional advantage: solder joint fatigue from twisting the tail while torqueing the screws or laying the wire bundle is eliminated. This design also resists fatigue under vibration conditions.

Highest UL flame retardant rating

The thermoplastic material attains the highest flame retardant rating (self extinguishing) assigned by Underwriters Laboratories, 94V-0. It also offers negligible water absorption, high dielectric strength and low heat transfer.

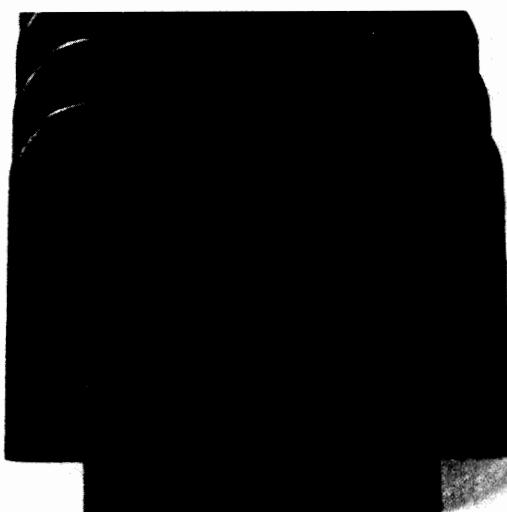


Contact tails enclosed for maximum circuit isolation
Take a look at the bottom side of our thermoplastic barrier terminal strips (photo). You'll notice the absence of a large size hole required to allow for the twisting action needed to retain ordinary terminals. In Vernitron's design, the terminals are welded in, so the hole can be virtually the same size as the contact tail. With the cavities around dip solder contact tails eliminated, the terminal strip can be mounted directly against a PC board without affecting circuit isolation. This also eliminates entrapment of foreign matter—and reduces solder wicking.



High barrier styles offer maximum circuit isolation with minimum overall height

Our high barrier styles provide maximum circuit isolation—even when using large wire sizes. In addition, the 72000 high-barrier strip offers an overall height that is less than any others. The reason: our special design does not require twisting of the contact tail for terminal retention, and makes it possible to reduce the height of the base—thus saving valuable space. The shorter terminal also reduces heat generation.



No insulating strips needed

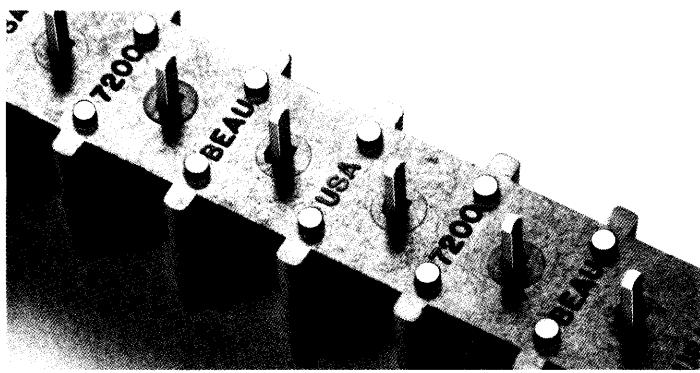
Because all our thermoplastic series have closed backs, you can get the electrical rating you want—without the expense of buying and installing insulating strips.

Neat, accurate mounting ends

All our thermoplastic terminal strips are molded to length. None are cut down from longer strips. The result is a neater strip without ugly saw cuts, and strips that are precisely the same length every time.

A 20-amp double-row strip in the same space as 15

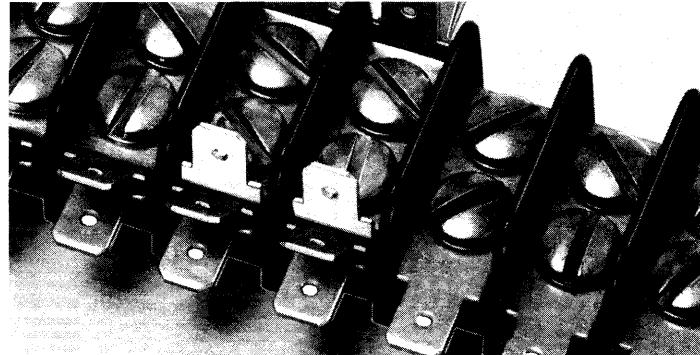
Our Series 76000 and 77000 are 20-amp strips that have been designed to take the same panel space as any double-row 15-amp barrier terminal strip. They are $\frac{7}{8}$ " wide and have screw terminals $\frac{3}{8}$ " on centers—just like the strips they are designed to replace, as listed on page 21.



Standoffs reduce cleaning time

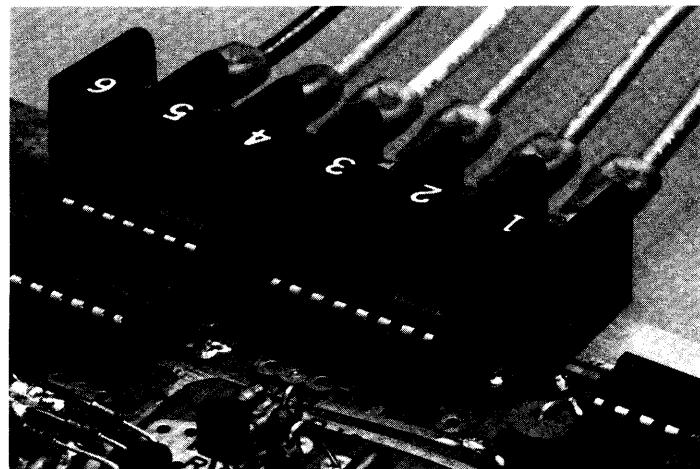
The bottom of our single-row barrier terminal strips can be molded with standoffs (option-P).

They provide a space between the bottom and the mounting surface. This further reduces entrapment of foreign materials during soldering and reduces cleaning time to a minimum.



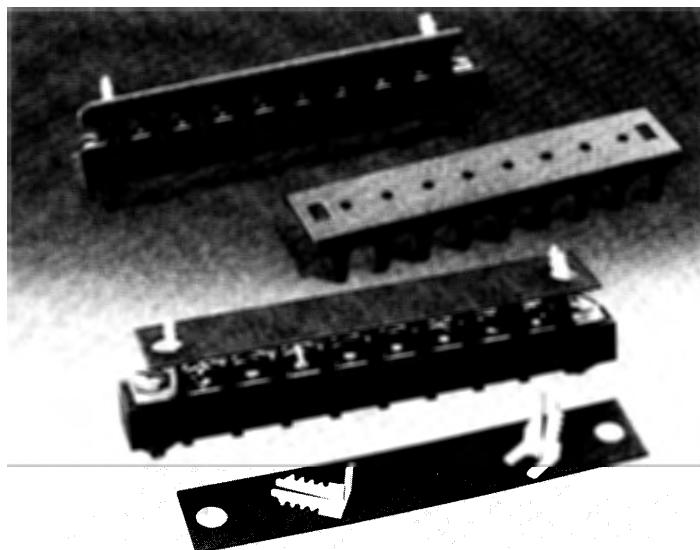
Quick-connect terminals save assembly time, cut costs

Beau quick-connect terminals speed your assembly time, cut costs, and improve your connections. Cold solder joints are also eliminated. Quick-connect terminals offer one of the fastest ways to make circuitry changes. A variety of single and two sided styles are available for top-side terminations. As many as three can be stacked in a single section—to attain up to six terminations. In addition, Series 72000 and 73000 are available with an insulated quick connect on the bottom.



Closed-side strips serve as wire stop—and save PC board space

The 75000 Series strips have a closed side which stops wires from passing through. Board components can be positioned closer to the barrier terminal strip, resulting in a more efficient use of PC board space. Accidental damage to closely mounted components is also prevented. Bottom terminal tails are offset to permit mounting close to edge of PC board, also saving board space.



Snap-on covers add protection at low cost

Two styles of covers are available which are easily snapped onto barrier terminal strips, providing the required protection at low cost. Flat covers protect the top of the strip and are the most economical type available. Wrap-around covers protect the top and both sides. Both types are easily removed for quick access, yet cannot be accidentally dislodged.

Conversion Chart

How to convert phenolic styles to thermoplastic

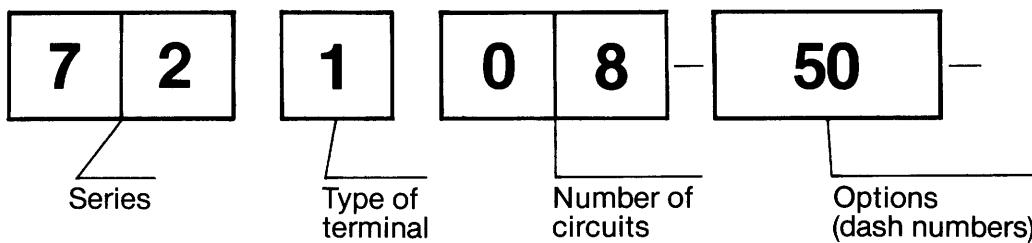
You can obtain all the advantages of bendable thermoplastic barrier terminal strips by converting from fragile phenolic types. The Vernitron thermoplastic styles shown in the right hand column are designed to replace the styles listed in the center column.

Manufacturer	Convert from these phenolic styles...	...to these thermoplastic styles from Vernitron
Cinch	140 141 164 174 540 541	76000, 77000 78000 76000, 77000 71000, 72000 76000, 77000 78000
Curtis	GBP GBS GFT 1500	73500 73100 73200 76000, 77000
ETC	14000 34000 27000 37000 57000 67000 28000 38000	71000, 72000 71000, 72000 76000, 77000 76000, 77000 76000, 77000 76000, 77000 78000 78000
General Electric	CR151-D1 CR151-D2 CR151-D7	76000, 77000 78000 76000, 77000
Kulka	599 600 600A 601 670 670A 671 699 1590 1690 2590 2690	71000, 72000 76000, 77000 76000, 77000 78000 76000, 77000 76000, 77000 78000 73000 71000, 72000 73000 71000, 72000 73000
Marathon	100 200	76000, 77000 78000
Vernitron (Beau)	12000 13000 14000 15000 16000 17000 18000 19000	71000, 72000 73000 76000, 77000 76000, 77000 76000, 77000 76000, 77000 78000 78000

Selection Guide

Terminal centers	Current rating amps (UL)	Voltage rating, rms — UL Recognized		Insulator material	Series No.	Pages
		General industrial	Commercial equipment			
SINGLE-ROW BARRIER TERMINAL STRIPS						
.325"	20	150	250	Thermoplastic	70000	9-10
3/8"	15	150	250	G. F. Phenolic	12000	11-13
3/8"	20	150	250	Thermoplastic	71000	11-13
3/8"	20	150	250	Thermoplastic	72000	11-13
7/16"	20	150	250	G. F. Phenolic	13000	16-18
7/16"	20	300	250	G. F. Thermoplastic	73000	16-18
SINGLE-ROW, CLOSED-SIDE BARRIER TERMINAL STRIPS						
3/8"	20	150	250	Thermoplastic	75000	14-15
DOUBLE-ROW BARRIER TERMINAL STRIPS						
1/4"	10	150	250	Phenolic	10000	19
3/8"	15	150	250	Phenolic	14000	20-23
3/8"	20	150	250	Thermoplastic	76000	20-23
3/8"	20	150	250	Thermoplastic	77000	20-23
7/16"	20	300	250	Phenolic	18000	24-26
7/16"	20	300	250	Phenolic	19000	24-26
7/16"	20	300	250	Thermoplastic	78000	24-26
9/16"	30	600	600	Phenolic	21000	27-28
9/16"	30	600	600	Phenolic	22000	27-28
GUIDE TO UNDERWRITERS LABORATORIES RATINGS 8						
SNAP-ON COVERS 29						
MARKER STRIPS 30						
IMPRINTING 31						
CUSTOM DESIGNS 32						

How to Order



The basic catalog number contains five digits. As many options as are desired may be obtained by adding the appropriate dash numbers. For choices of terminals, number of circuits, and options available, refer to individual series.

Guide to U.L. ratings

Precautions on comparing electrical ratings

The electrical ratings shown in this catalog are clearly marked to indicate which are recognized by Underwriters Laboratories. When comparing the ratings for Beau Barrier Terminal Strips with another brand, **be sure** that you are comparing our **UL ratings** against their **UL ratings**. Some manufacturers show voltage ratings that are considerably higher than the UL ratings. These manufacturers may be showing voltage ratings based on their own tests. While their products could be recognized by UL, the voltage ratings shown by some of them are not UL ratings.

All terminal blocks are rated under the same UL standard, 1059. Voltage and current rating guidelines from this standard are shown below. All terminal blocks that have UL recognition must fit into one of the classifications shown. For example, note that the highest voltage

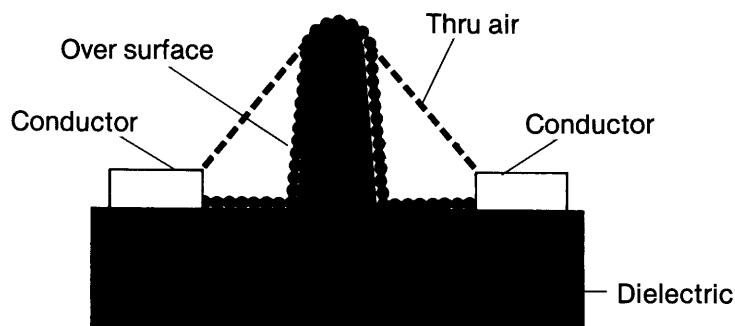
rating in any class is 600V. Terminal blocks by themselves are never given a higher UL rating than that. However, it is possible to obtain higher ratings than those listed, depending upon the specific application. UL will consider requests for higher ratings on a case-by-case basis.

To aid the designer, Beau Products also includes a rating for **withstand volts, rms** for each series of barrier terminal strips. Based on our own tests, these are conservative ratings that will assist in selection of the most appropriate series for your application.

Beau Barrier Terminal Strips are recognized by Underwriters Laboratories under UL Standard 1059. They are listed under File No. E48521, Guide No. XCFR2.

UL 1059 Basic Voltage Rating

The voltage ratings of terminal blocks will be based upon the minimum spacing between electrically conductive parts of opposite polarity or between an electrically conductive part and a metal mounting surface measured under two conditions: through air, defined as the distance an arc must take through air to go from one live conductor to another or from a live conductor to ground; and over surface, defined as the distance an arc must take over the surface of the insulating material going from one terminal to ground, or from one terminal to another, assuming the arc will travel along the surface rather than through air. The chart at right reflects UL 1059 spacing requirements, in inches.



	Voltage	Spacing requirements	
		Thru air	Over surface
Class A	51-125	.50	.75
	126-250	.75	1.25
	251-600	1.00	2.00
Class B	51-125	.06	.06
	126-250	.09	.09
	251-600	.38	.50
Class C	51-150	.12	.25
	151-300	.25	.38
	301-600	.38	.50

Class A. Service equipment including deadfront switchboards, panel boards, service entrance devices, etc.

Class B. Commercial appliances including business equipment, electronic data processing equipment and the like.

Class C. General industrial and machine tool controls which can be further defined as equipment falling under UL 508.

UL 1059 Basic Current Rating

A terminal block shall be capable of carrying continuously a current having a value in accordance with the maximum size of wire or cable for which the terminal is designed, or a current equal to

the terminal block rating, without exceeding a temperature rise of 30°C (54°F).

Single Row

**20 amps
.325" centers (8,3)
thermoplastic
70000**

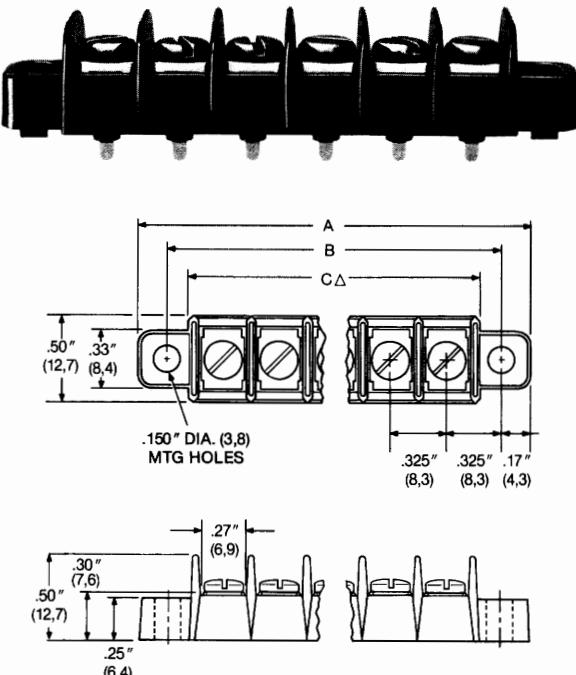
Specifications

Series No.	70000
Construction	High barrier; closed back or feed thru
Terminal centers	.325" (8,3)
Current rating, amps (UL)	20
Voltage rating, rms	
1. UL Recognized...	
Class B: Comm'l equip	250
Class C: Gen'l ind'l	150
2. CSA certified	300 @ 10 amps; 150 @ 15 amps
3. Withstand volts, rms	8500
Insulator material	Thermoplastic. UL temp index 80°C. UL flame retardant rating 94V-0. Color, black.
Width x height	1/2" x 1/2" (12,7 x 12,7)
Wire size recommended, max AWG	14
Terminal screws (standard; also see options below)	No. 6-32 x 1/4" pan head screws. Steel, cadmium plated
Top-side terminals (The 1 becomes 3rd digit of Cat. No.; 3-digit number is dash number)▲	1 Closed back, screws only -701 One-sided solder
Bottom terminals (3rd digit of Cat. No.)▲	5 PC 7 Wire wrap 8 Right angle PC
No. of circuits (4th & 5th digits of Cat. No.)▲	1 to 30
Options (add dash numbers to Cat. No.)▲	-10A thru -11D Imprinting (on side opposite feed thru) -12A thru -13B Imprinting (both sides) -49 Nickel-plated brass pan head screws -50 Rising surface clamp screws -51 Internal lock washer screws -52 External lock washer screws -53 Phillips head screws -58 Barrier supplied without screws -59 Screws supplied, unassembled -C Without mounting ends -M Metric screws -P With standoff pads, .125" DIA x .040" H (3,2 x 1,0) -V Valox insulator material, UL temp index 130°C
Top-side hardware (option; indicate circuit positions)	7033 Jumper, edge on

Small size saves space

At .325" center-to-center, it's the smallest single row barrier terminal strip we make. Saves valuable space on PC boards, in wire wrap applications, etc.

Dimensions



No. of circuits	A in. mm	B in. mm	C△ in. mm
1	.98	24,9	—
2	1.31	33,1	.73 18,4
3	1.63	41,4	1.05 26,7
4	1.96	49,7	1.38 34,9
5	2.28	57,9	1.70 43,2
6	2.61	66,2	2.03 51,4
7	2.93	74,4	2.35 59,7
8	3.26	82,7	2.68 67,9
9	3.58	90,9	3.00 76,2
10	3.91	99,2	3.33 84,5
11	4.23	107	3.65 92,7
12	4.56	116	3.98 101
13	4.88	124	4.30 109
14	5.21	132	4.63 117
15	5.53	140	4.95 126
16	5.86	149	5.28 134
17	6.18	157	5.60 142
18	6.51	165	5.93 151
19	6.83	173	6.25 159
20	7.16	182	6.58 167
21	7.48	190	6.90 175
22	7.81	198	7.23 184
23	8.13	207	7.55 192
24	8.46	215	7.88 200
25	8.78	223	8.20 208
26	9.11	231	8.53 217
27	9.43	240	8.85 225
28	9.76	248	9.18 233
29	10.08	256	9.50 241
30	10.41	264	9.83 250

Tolerance on length ± .015"

△ Overall length without mounting ends.

70000 continued

Dimensions in parenthesis are millimeters.

▲ HOW TO ORDER: SEE PAGE 7.

Avoid breakage with tough thermoplastic strips
 Vernitron's flexible barrier terminal strips reduce breakage dramatically because they are made of a highly resilient thermoplastic. Its impact strength is many times greater than phenolic. The barriers can bend without breaking, virtually eliminating production line and in-field damage. Costly component replacement and re-wiring are no longer a problem.

Double the pull-out strength

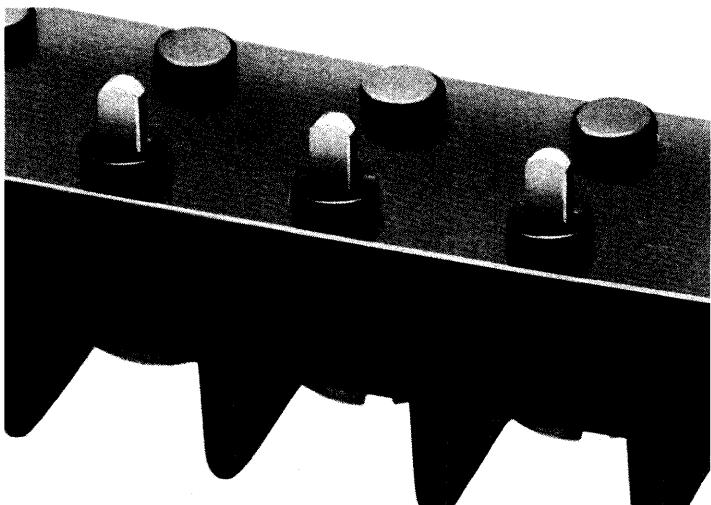
With our unique design, terminals are imbedded into the walls of the terminal block on both sides. This provides a pull-out strength much greater than competitive designs, which retain the terminal only by twisting or staking the terminal tail. Imbedding the terminals also eliminates solder joint fatigue from twisting the tail while torqueing the screws, and resists fatigue under vibration conditions.

Contact tails enclosed for maximum circuit isolation

Because our terminals are ultrasonically welded in, there's no need to twist the tails to secure them. As a result, the large hole usually required to allow for the twisting action can be made virtually the same size as the contact tail. With the cavities around dip solder contact tails eliminated, the terminal strip can be mounted directly against a PC board without affecting circuit isolation. This also eliminates entrapment of foreign matter — and reduces solder wicking.

Interchangeable with other makes

The 70000 series is designed to be interchangeable with other barrier terminal strips having .325" screw centers. You can easily switch to Beau and get exclusive advantages such as better terminal retention and maximum circuit isolation.



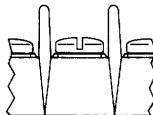
Standoff pads reduce cleaning time

The bottom of two styles (with PC terminals and wire wrap terminals) can be molded with .125" diameter standoff pads (option -P). They provide a space of .040" between the bottom and the mounting surface. This further reduces entrapment of foreign materials during soldering and reduces cleaning time to a minimum.

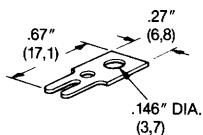
Top side terminals

Material: .032" (0.8) brass,
bright electro-tinned

1 Closed back



-701* One-sided solder

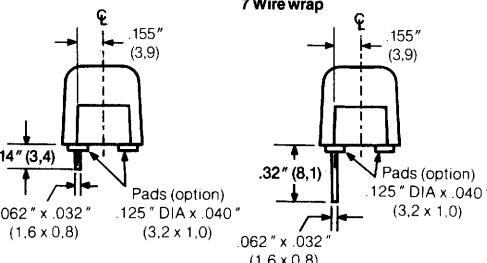


*Option; order by dash number.
To order in bulk, use this catalog
number without the dash.

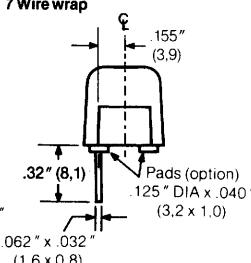
Bottom terminals

Material: .032" (0.8) brass,
bright electro-tinned

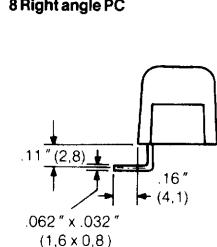
5 PC



7 Wire wrap



8 Right angle PC

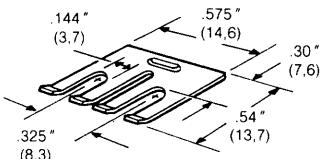


Jumper

Material: .020" (0.5)
brass, nickel plated

7033/ Jumper, edge on

For jumping 2 to 30 adjacent terminals



To order in a continuous strip, indicate
number of circuits.

Single Row

15 amps
3/8" centers (9,5)

12000

20 amps
3/8" centers (9,5)
thermoplastic

71000

20 amps
3/8" centers (9,5)
thermoplastic

72000

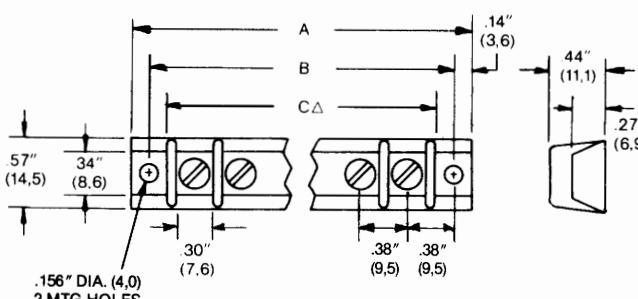
Specifications

Series No.	12000	71000	72000
Construction	Closed back or feed thru	Closed back or feed thru	High barrier; closed back or feed thru
Terminal centers	3/8" (9,5)	3/8" (9,5)	3/8" (9,5)
Current rating, amps (UL)	15	20	20
Voltage rating, rms			
1. UL Recognized...			
Class B: Comm'l equip	250	250	250
Class C: Gen'l ind'l	150	150	150
2. CSA Certified	300 @ 15 amps	150 @ 20 amps	300 @ 20 amps
3. Withstand volts, rms	8500	8500	10500
Insulator material	Glass-filled phenolic. UL temp index 150°C. Color, dark green.	Thermoplastic, glass-filled. UL temp index 95°C. UL flame retardant rating 94V-0. Color, black.	
Width x height	9/16" x 7/16" (14,5 x 11,1)	5/8" x 9/16" (16 x 14,2)	5/8" x 21/32" (16 x 16,8)
Wire size recommended, max AWG	16	14	14
Terminal screws (standard; also see options below)	No. 5-40 x 3/16" binding head screws. Steel, cadmium plated	No. 6-32 x 1/4" binding head screws. Steel, cadmium plated	
Top-side terminals (The 1 becomes 3rd digit of Cat. No.; 3-digit numbers are dash numbers)▲	1 Closed back, screws only -121 One-sided solder -122 Two-sided solder		
Bottom terminals (3rd digit of Cat. No.)▲	5 PC, .090" DIA. (2,3) 6 Solder turret 9 PC, .062" DIA. (1,6)	2 Insulated solder turret 3 Insulated PC 5 PC 6 Solder turret 7 Wire wrap 8 Right angle PC 9 Insulated quick-connect	
No. of circuits (4th & 5th digits of Cat. No.)▲	1 to 31	1 to 26	
Options (add dash numbers to Cat. No.)▲	-10A thru -11D Imprinting, one side -12A thru -13B Imprinting, both sides -49 Nickel-plated brass binding head screws -58 Barrier supplied without screws -59 Screws supplied, unassembled -C Without mounting ends -M Metric screws	-10A thru -11D Imprinting, one side -12A thru -13B Imprinting, both sides -49 Nickel-plated brass binding head screws -50 Rising surface clamp screws -51 Internal lock washer screws -52 External lock washer screws -53 Phillips head screws -56 Stainless steel screws -58 Barrier supplied without screws -59 Screws supplied, unassembled -C Without mounting ends -E Solid molded mounting ends (dimension drawing on next page) -M Metric screws -P With standoff pads, .070" DIA. x .040" H (1,8 x 1,0) (for 72000) -V Valox insulator material, UL temp index 130°C	
Top-side hardware (options; indicate circuit positions)	1210 thru 1218 Quick-connect terminals, .187" tab 1219 Quick-connect terminals, .110" tab 1431 Jumper, hole (for 12000) 1432 Jumper, slotted (for 12000) 7231 Jumper, hole (for 71000 & 72000) 7232 Jumper, slotted (for 71000 & 72000) 7233 Jumper, edge on		

Dimensions in parenthesis are millimeters.

12000, 71000, 72000 continued

Dimensions - 12000



No. of circuits

in.

mm

A

B

in.

mm

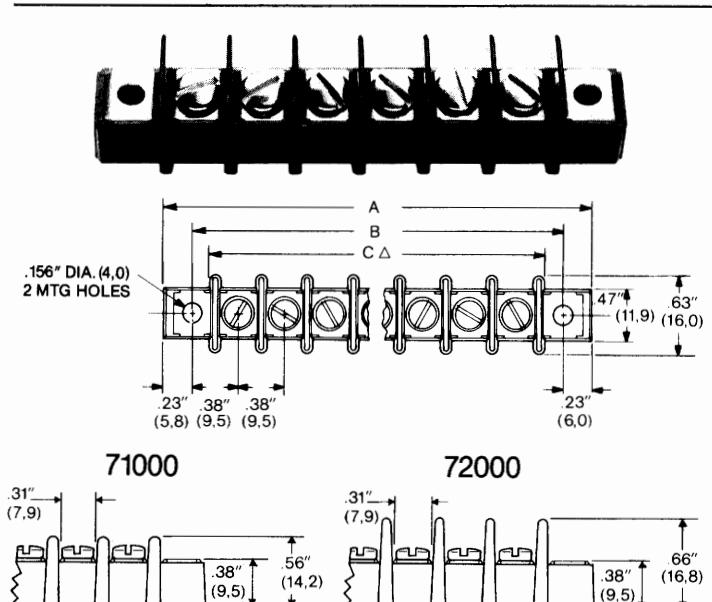
CΔ

in.

mm

1	1.03	26.2	.75	19.1	.52	13.1
2	1.41	35.8	1.13	28.7	.89	22.6
3	1.78	45.2	1.50	38.1	1.27	32.1
4	2.16	54.9	1.88	47.8	1.64	41.7
5	2.53	64.3	2.25	57.2	2.02	51.2
6	2.91	73.9	2.63	66.8	2.39	60.7
7	3.28	83.3	3.00	76.2	2.77	70.2
8	3.66	93.0	3.38	85.9	3.14	79.8
9	4.03	102	3.75	95.3	3.52	89.3
10	4.41	112	4.13	105	3.89	98.8
11	4.78	121	4.50	114	4.27	108
12	5.16	131	4.88	124	4.64	118
13	5.53	140	5.25	133	5.02	127
14	5.91	150	5.63	143	5.39	137
15	6.28	160	6.00	152	5.77	146
16	6.66	169	6.38	162	6.14	156
17	7.03	179	6.75	171	6.52	166
18	7.41	188	7.13	181	6.89	175
19	7.78	198	7.50	191	7.27	185
20	8.16	207	7.88	200	7.64	194
21	8.53	217	8.25	210	8.02	204
22	8.91	226	8.63	219	8.39	213
23	9.28	236	9.00	229	8.77	223
24	9.66	245	9.38	238	9.14	232
25	10.03	255	9.75	248	9.52	242
26	10.41	264	10.13	257	9.89	251
27	10.78	274	10.50	267	10.27	261
28	11.16	283	10.88	276	10.64	270
29	11.53	293	11.25	286	11.02	280
30	11.91	303	11.63	295	11.39	289

Dimensions - 71000 & 72000

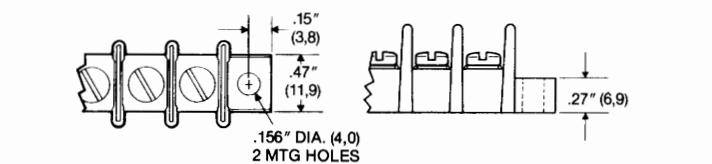


1	1.20	30.5	.75	19.1	.45	11.4
2	1.58	40.1	1.13	28.7	.83	21.1
3	1.95	49.5	1.50	38.1	1.20	30.5
4	2.33	59.2	1.88	47.8	1.58	40.1
5	2.70	68.6	2.25	57.2	1.95	49.5
6	3.08	78.2	2.63	66.8	2.33	59.2
7	3.45	87.6	3.00	76.2	2.70	68.6
8	3.83	97.3	3.38	85.9	3.08	78.2
9	4.20	107	3.75	95.3	3.45	87.6
10	4.58	116	4.13	105	3.83	97.3
11	4.95	126	4.50	114	4.20	107
12	5.33	135	4.88	124	4.58	116
13	5.70	145	5.25	133	4.95	126
14	6.08	154	5.63	143	5.33	135
15	6.45	164	6.00	152	5.70	145
16	6.83	173	6.38	162	6.08	154
17	7.20	183	6.75	171	6.45	164
18	7.58	193	7.13	181	6.83	173
19	7.95	202	7.50	191	7.20	183
20	8.33	212	7.88	200	7.58	193
21	8.70	221	8.25	210	7.95	202
22	9.08	231	8.63	219	8.33	212
23	9.45	240	9.00	229	8.70	221
24	9.83	250	9.38	238	9.08	231
25	10.20	259	9.75	248	9.45	240
26	10.58	269	10.13	257	9.83	250

Tolerance on length $\pm .015''$

\triangle Overall length without mounting ends.

SOLID MOLDED MOUNTING ENDS (Option -E)

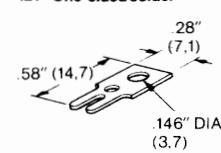


Top-side terminals

Material: .032" (.08) brass (Style 1, cadmium plated; others solder plated)

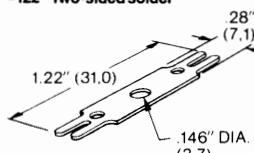
1 Closed back

-121* One-sided solder



(12000 shown)

-122* Two-sided solder



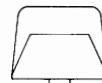
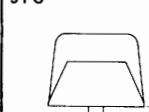
Bottom terminals - for 12000

Material: Brass, bright electro-tinned

5 PC
9 PC

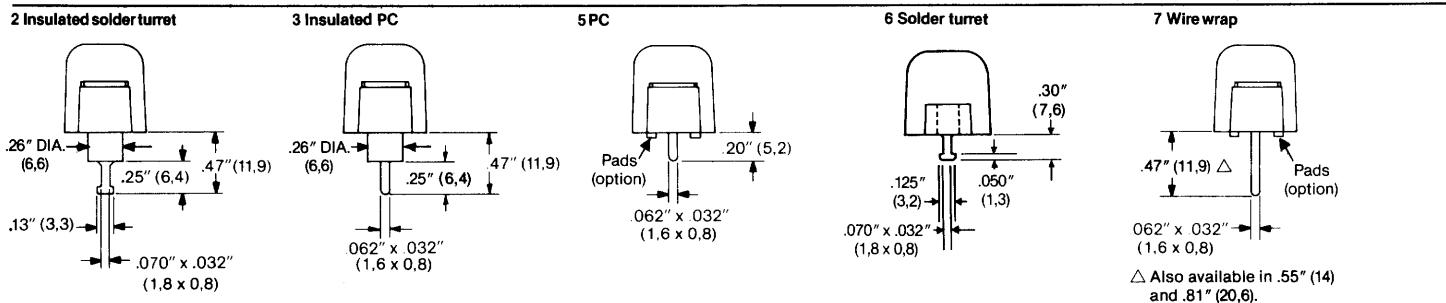
6 Solder turret

5 PC, .090" DIA. (2.3) X .125" L (3,2)
9 PC, .062" DIA. (1.6) X .20" L (5,2)



Bottom terminals - for 71000 & 72000

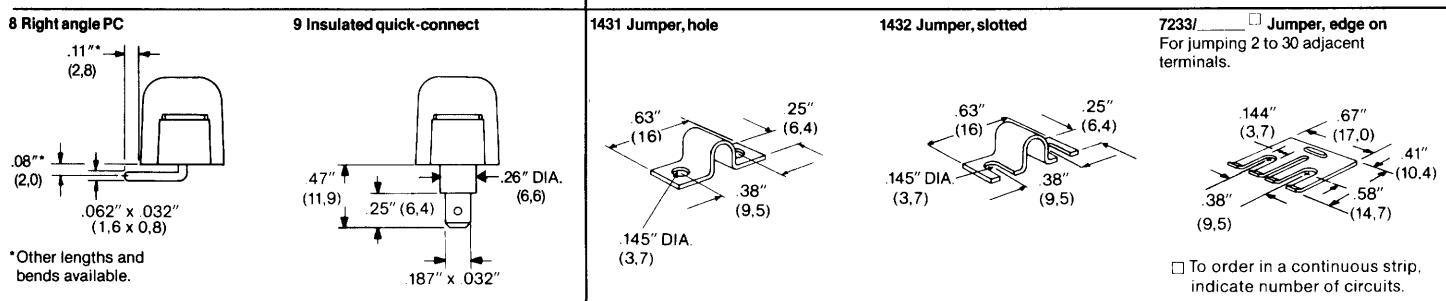
Material: .032" (0.8) brass (Style 9, cadmium plated;
others bright electro-tinned)



△ Also available in .55" (14) and .81" (20.6).

Jumpers - for 12000

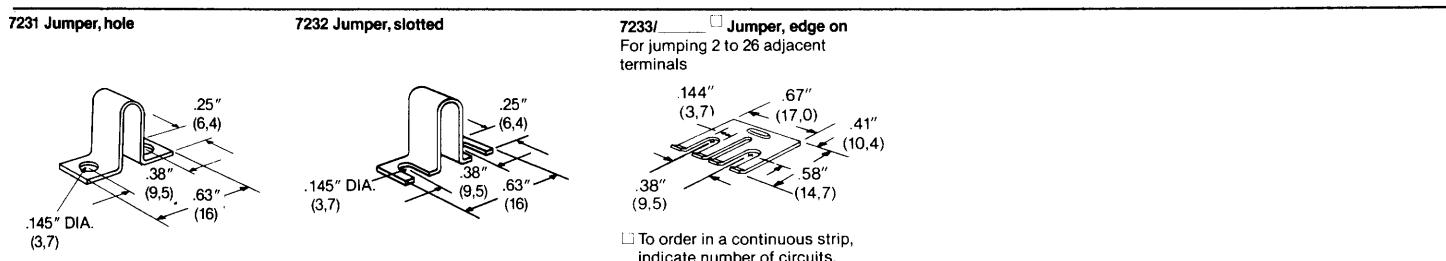
Material: .015" (0.4) brass, nickel plated; 7233 is .032" (0.8)
Options; when ordering, indicate circuit positions



To order in a continuous strip,
indicate number of circuits.

Jumpers - for 71000 & 72000

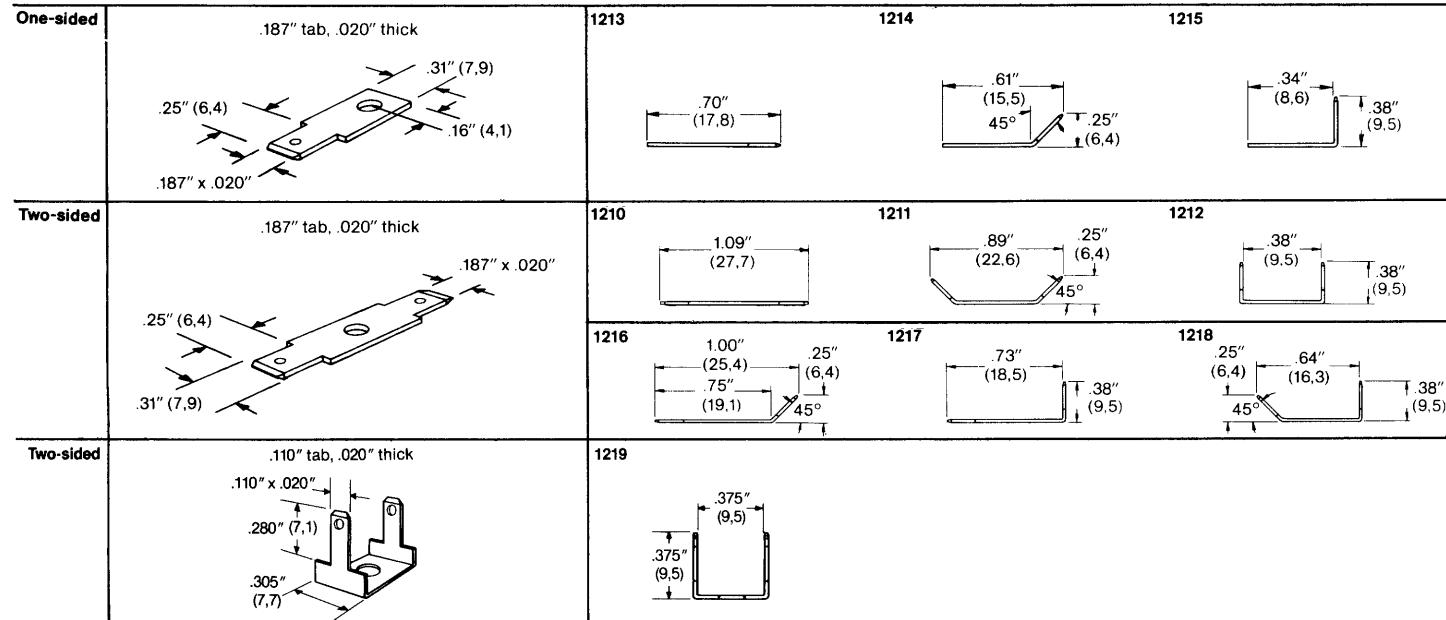
Material: .015" (0.4) brass, nickel plated; 7233 is .032" (0.8)
Options; when ordering, indicate circuit positions



To order in a continuous strip,
indicate number of circuits.

Quick-connect terminals

Material: Cadmium-plated brass
Options; when ordering, indicate circuit positions



Single Row, Closed Side

20 amps
3/8" centers (9,5)
thermoplastic

75000

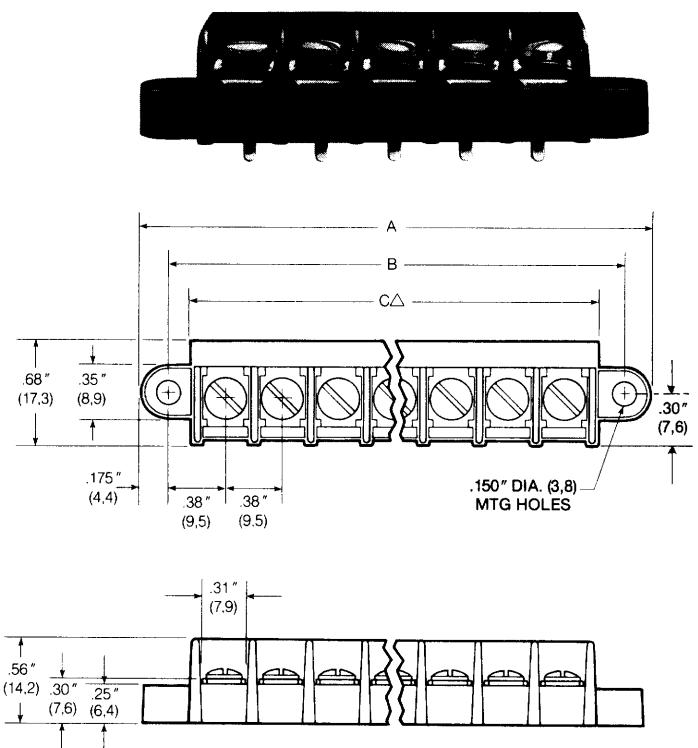
Specifications

Series No.	75000
Construction	Closed side; closed back or feed thru
Terminal centers	3/8" (9,5)
Current rating, amps (UL)	20
Voltage rating, rms	
1. UL Recognized...	
Class B: Comm'l equip	250
Class C: Gen'l ind'l	150
2. CSA certified	150 @ 20 amps; 300 @ 10 amps
3. Withstand volts, rms	10500
Insulator material	Thermoplastic. UL temp index 80°C. UL flame retardant rating 94V-0. Color, black.
Width x height	.68" x .56" (17,3 x 14,2)
Wire size recommended, max AWG	14
Terminal screws (standard; also see options below)	No. 6-32 x 1/4" binding head screws. Steel, cadmium plated
Top-side terminals (The 1 becomes 3rd digit of Cat. No.; 3-digit number is dash number) ▲	1 Closed back, screws only -121 One-sided solder
Bottom terminals (3rd digit of Cat. No.) ▲	5 PC 7 Wire wrap 8 Right angle PC
No. of circuits (4th & 5th digits of Cat. No.) ▲	1 to 26
Options (add dash numbers to Cat. No.) ▲	-10A thru -11D Imprinting (on the open side) -10AT thru -11DT Imprinting (on top) -49 Nickel-plated brass binding head screws -50 Rising surface clamp screws -51 Internal lock washer screws -52 External lock washer screws -53 Phillips head screws -56 Stainless steel screws -58 Barrier supplied without screws -59 Screws supplied, unassembled -C Without mounting ends -M Metric screws -N Bottom terminal for PC, .045" x .032" (1,1 x 0,8) -P With standoff pads, .070" DIA. x .040" H (1,8 x 1,0) -V Valox insulator material, UL temp index 130°C
Top-side hardware (option; indicate circuit positions)	1213, 1214, 1215 Quick-connect terminals, .187" tab 7231 Jumper, hole 7232 Jumper, slotted 7233 Jumper, edge on

New closed-side strips offer extra protection

Vernitron's closed-side barrier terminal strips offer all the advantages of a back barrier, as listed on the next page—including additional safety due to shorts being virtually eliminated, and more compact packaging on wire wrap and PC boards.

Dimensions



No. of circuits	A in. mm	B in. mm	C△ in. mm
1	1.10	.27.9	.48
2	1.48	.37.5	.82
3	1.85	.47.0	1.20
4	2.23	.56.5	1.57
5	2.60	.69.9	1.95
6	2.98	.75.6	2.32
7	3.35	.85.1	2.70
8	3.73	.94.6	3.07
9	4.10	.104	3.45
10	4.48	.114	3.82
11	4.85	.123	4.20
12	5.23	.133	4.57
13	5.60	.142	4.95
14	5.98	.152	5.32
15	6.35	.161	5.70
16	6.73	.171	6.07
17	7.10	.180	6.45
18	7.48	.190	6.82
19	7.85	.199	7.20
20	8.23	.209	7.57
21	8.60	.218	7.95
22	8.98	.228	8.32
23	9.35	.237	8.70
24	9.73	.247	9.07
25	10.10	.257	9.45
26	10.48	.266	9.82

Tolerance on length ± .015"

△ Overall length without mounting ends.

Dimensions in parenthesis are millimeters.

▲ HOW TO ORDER: SEE PAGE 7.

75000 continued

Closed side serves as a wire stop

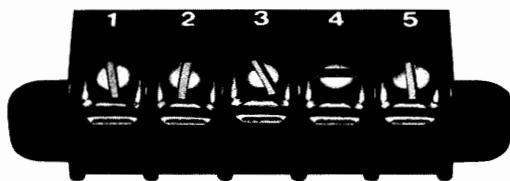
The closed side of the barrier terminal strip stops the wire in proper position, minimizing installation time. Shorts are prevented because wires can't pass through the closed side, or make contact with other wires or PC board components. Because breakdowns are avoided, time is no longer wasted on circuit testing.

Closed side saves space on PC boards

The closed side serves as an effective barrier which allows components to be positioned close to the barrier strip. This is possible because the closed side prevents shorts between terminal wires and board components. The result: a more compact PC board.

Closed side protects PCB components from damage

Screwdrivers can't slip through the closed side to cause shorts or damage to adjacent components. Thus, repair or replacement costs are virtually eliminated.



Easy identification on top or side

Imprinting can be done either on the top of the closed side of the barrier terminal strip, and/or on the open side directly on the side of the strip. Imprinting character height is .094".

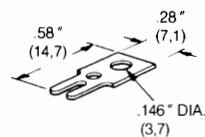
Top and side imprinting are fully illustrated on page 31.

Top-side terminals

Material: .032" (0,8) brass, (Style 1, bright electro-tinned; other solder plated)

1 Closed back

-121° One-sided solder

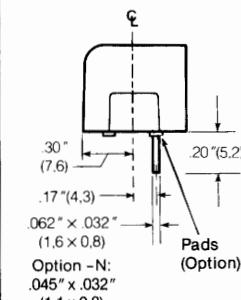


*Option; order by dash number. To order in bulk, use this catalog number without the dash.

Bottom terminals

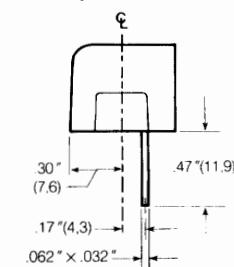
Material: .032" (0,8) brass, bright electro-tinned

5 PC



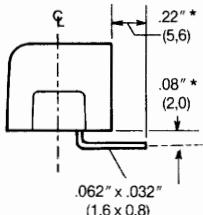
Option -N:
.045" x .032"
(1.1 x 0.8)

7 Wire wrap



.062" x .032"
(1.6 x 0.8)

8 Right angle PC



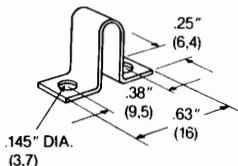
* Other lengths and bends available.

Jumpers

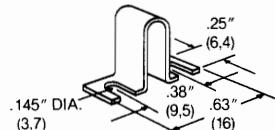
Material: .015" (0,4) brass, nickel plated; 7233 is .032" (0,8)

Options: when ordering, indicate circuit positions

7231 Jumper, hole

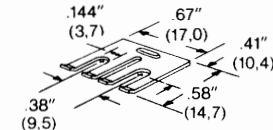


7232 Jumper, slotted



7233/□ Jumper, edge on

For jumping 2 to 26 adjacent terminals



□ To order in a continuous strip, indicate number of circuits.

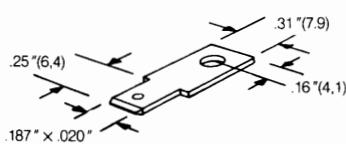
Quick-connect terminals

Material: Cadmium-plated brass

Options: when ordering, indicate circuit positions

One-sided

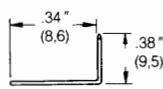
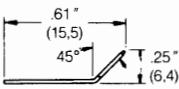
.187" tab, .020" thick



1213

1214

1215



Single Row

**20 amps
7/16" centers (11,1)**

13000

**20 amps
7/16" centers (11,1)
thermoplastic
73000**

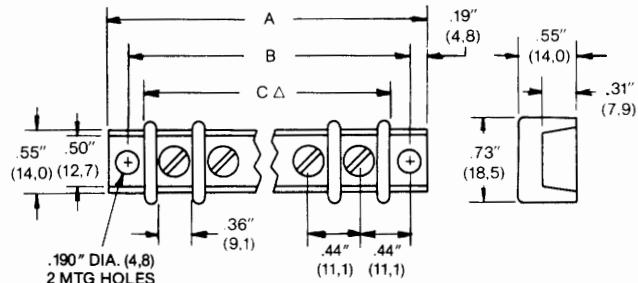
Specifications

Series No.	13000	73000
Construction	Closed back or feed thru	High barrier; closed back or feed thru
Terminal centers	7/16" (11,1)	7/16" (11,1)
Current rating, amps (UL)	20	20
Voltage rating, rms		
1. UL Recognized, Class...		
B. Comm'l equip	250	250
C. Gen'l ind'l	150	300
2. CSA Certified	300 @ 20 amps	300 @ 20 amps
3. Withstand volts	10500 Vrms	10500 Vrms
Insulator material	Glass-filled phenolic. UL temp index 150°C. Color, dark green.	Thermoplastic, glass-filled. UL temp index 95°C. UL flame retardant rating 94V-0. Color, black.
Width x height	47/64" x 35/64" (18.5 x 14)	3/4" x 3/4" (19.1 x 19.1)
Wire size recommended, max AWG	14	14
Terminal screws, std (also see options)	No. 6-32 x 1/4" binding head screws. Steel, cadmium plated	
Top-side terminals (3rd digit of Cat. No.)▲	1 Closed back, screws only	
Bottom terminals (3rd digit of Cat. No.)▲	0 Insulated screw 2 Insulated turret 2A Insulated turret with No. 8-32 screw 3 Insulated PC 4 Insulated taper pin, No. 53 5 PC, .062" DIA. (1,6) 6 Solder turret 9 PC, .090" DIA. (2,3)	2 Insulated solder turret 3 Insulated PC 5 PC 6 Solder turret 7 Wire wrap 8 Right angle PC 9 Insulated quick-connect
No. of circuits (4th & 5th digits of Cat. No.)▲	1 to 26	1 to 30
Options (add dash numbers to Cat. No.)▲	-10A thru -11D Imprinting one side -12A thru -13B Imprinting, both sides -49 Nickel-plated brass binding head screws -50 Rising surface clamp screws -51 Internal lock washer screws -52 External lock washer screws -53 Phillips head screws -56 Stainless steel screws -58 Barrier supplied without screws -59 Screws supplied, unassembled -A Oversize screws (73000 only) -C Without mounting ends -M Metric screws -P With standoff pads (73000 only), .070" x .078" x .040" H (1.8 x 2.0 x 1.0) -V Valox insulator material (73000 only), UL temp index 130°C	
Top-side hardware (options; indicate circuit positions)	1310 thru 1318 Quick-connect terminals, .250" tab 1831 Jumper, hole 1832 Jumper, slotted 7833 Jumper, edge on	7310 thru 7318 Quick-connect terminals, .250" tab 7331 Jumper, hole 7332 Jumper, slotted 7833 Jumper, edge on

Dimensions in parenthesis are millimeters.

▲HOW TO ORDER: SEE PAGE 7.

Dimensions -13000

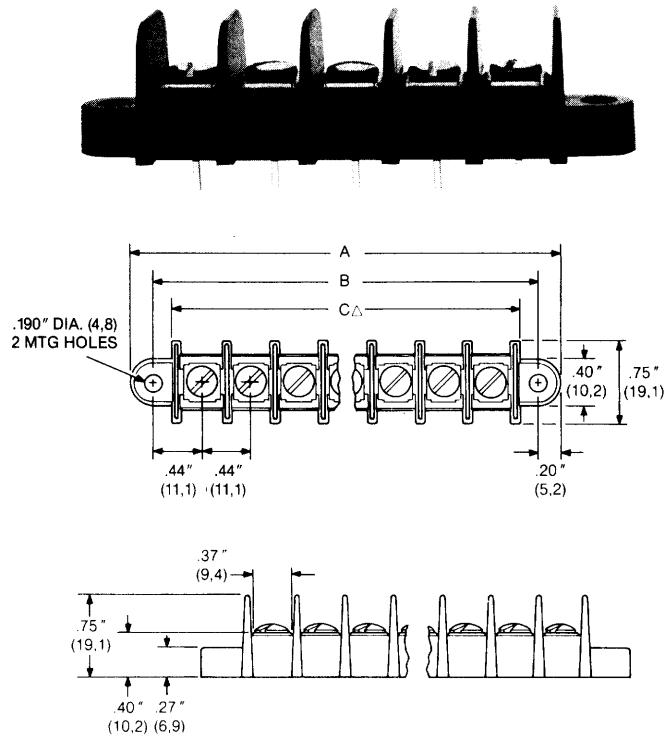


No. of circuits	A in. mm	B in. mm	C△ in. mm
1	1.25	.88	.53
2	1.89	1.31	.97
3	2.13	1.75	1.41
4	2.56	2.19	1.84
5	3.00	2.63	2.28
6	3.44	3.06	2.72
7	3.88	3.50	3.16
8	4.31	3.94	3.59
9	4.75	4.38	4.03
10	5.19	4.81	4.47
11	5.63	5.25	4.91
12	6.06	5.69	5.34
13	6.50	6.13	5.78
14	6.94	6.56	6.22
15	7.38	7.00	6.66
16	7.81	7.44	7.09
17	8.25	7.88	7.53
18	8.69	8.31	7.97
19	9.13	8.75	8.41
20	9.56	9.19	8.84
21	10.00	9.63	9.28
22	10.44	10.06	9.72
23	10.88	10.50	10.16
24	11.31	10.94	10.59
25	11.75	11.38	11.03
26	12.19	11.81	11.47

Tolerance on length ± .015"

△Overall length without mounting ends.

Dimensions - 73000



No. of circuits	A in. mm	B in. mm	CΔ in. mm
1	1.28	32.4	.88
2	1.71	43.5	1.31
3	2.15	54.6	1.75
4	2.59	65.7	2.19
5	3.03	76.8	2.63
6	3.46	88.0	3.06
7	3.90	99.1	3.50
8	4.34	110	3.94
9	4.78	121	4.38
10	5.21	132	4.81
11	5.65	144	5.25
12	6.09	155	5.69
13	6.53	166	6.13
14	6.96	177	6.56
15	7.40	188	7.00
16	7.84	199	7.44
17	8.28	210	7.88
18	8.71	221	8.31
19	9.15	232	8.75
20	9.59	244	9.19
21	10.03	255	9.63
22	10.46	266	10.06
23	10.90	277	10.50
24	11.34	288	10.94
25	11.78	299	11.38
26	12.22	310	11.81
27	12.65	321	12.25
28	13.09	332	12.69
29	13.53	344	13.13
30	13.96	355	13.56

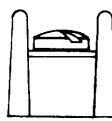
Tolerance on length $\pm .015"$

△Overall length without mounting ends.

Top-side terminal

Material: .032" (0.8) brass, cadmium plated (73000 bright electro-tinned)

1 Closed back

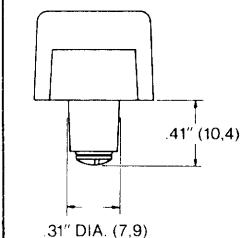


(13000 shown)

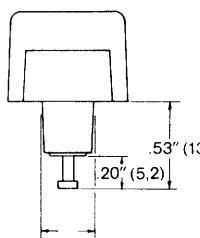
Bottom terminals - for 13000

Material: brass (Style 0, cadmium plated; others bright electro-tinned)

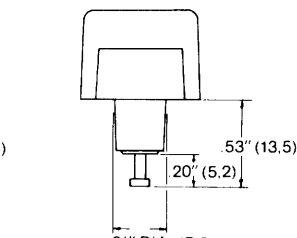
0 Insulated screw



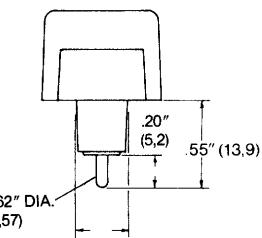
2 Insulated turret



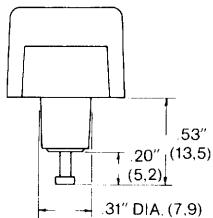
2A Insulated turret with 8-32 screw



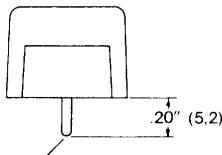
3 Insulated PC



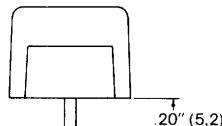
4 Insulated taper pin, No. 53



5 PC
9 PC



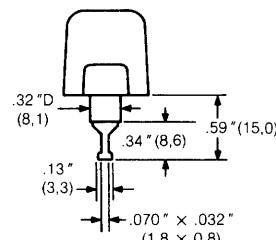
6 Solder turret



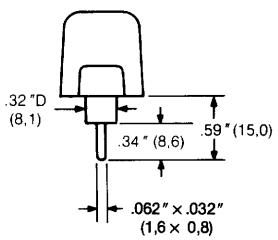
Bottom terminals - for 73000

Material: .032" (0.8) brass, bright electro-tinned

2 Insulated solder turret

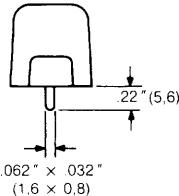


3 Insulated PC

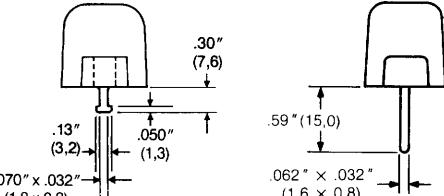


5 PC

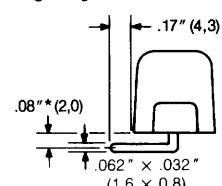
6 Solder turret



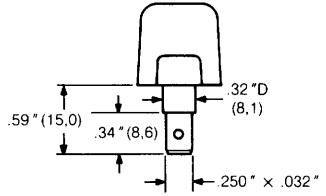
7 Wire wrap



8 Right angle PC



9 Insulated quick-connect



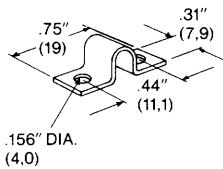
*Right angles can be formed to customer requirements

13000, 73000 continued

Jumpers

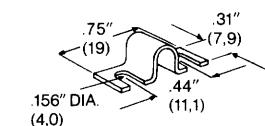
Material: .015" (0.4) brass, nickel plated; 7833 is .032" (0.8)
Option; when ordering, indicate circuit positions

1831 Jumper, hole



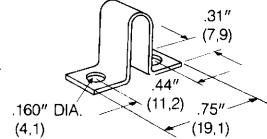
(for 13000 only)

1832 Jumper, slotted



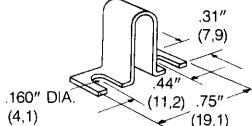
(for 13000 only)

7331 Jumper, hole



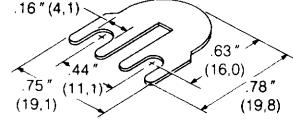
(for 73000 only)

7332 Jumper, slotted



(for 73000 only)

7833 Jumper, edge on
For jumping adjacent terminals

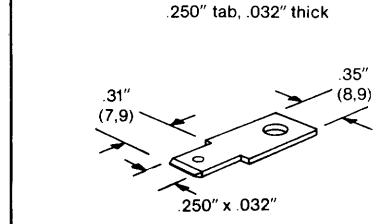


.78" (19.8) overall length

Quick-connect terminals - for 13000

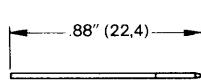
Material: Cadmium-plated brass
Options; when ordering, indicate circuit positions

One-sided

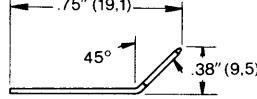


.250" tab, .032" thick

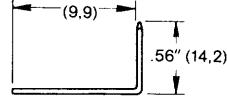
1313



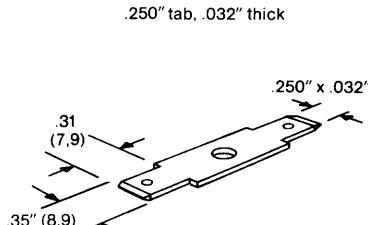
1314



1315

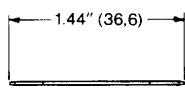


Two-sided

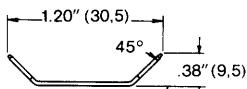


.250" tab, .032" thick

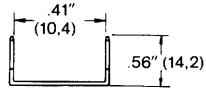
1310



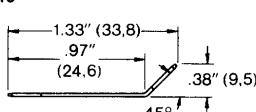
1311



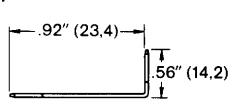
1312



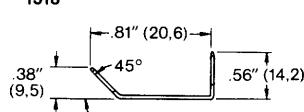
1316



1317



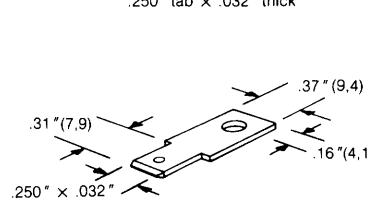
1318



Quick-connect terminals - for 73000

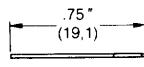
Material: Brass, bright electro-tinned
Options; when ordering, indicate circuit positions

One-sided

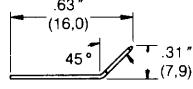


.250" tab x .032" thick

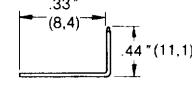
7313



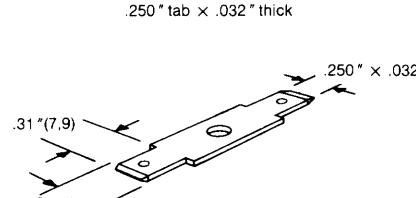
7314



7315

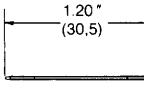


Two-sided

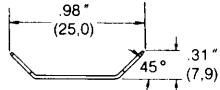


.250" tab x .032" thick

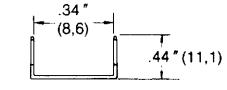
7310



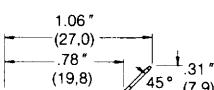
7311



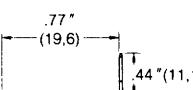
7312



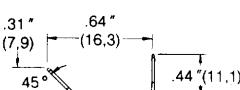
7316



7317



7318



Double Row

10 amps
1/4" centers (6,4)
10000

Specifications

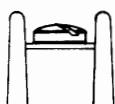
Series No.	10000
Construction	Open back and feed thru
Terminal centers	1/4" (6,4)
Current rating, amps (UL)	10
Voltage rating, rms	
1. UL Recognized...	
Class B: Comm'l equip	250
Class C: Gen'l ind'l	150
2. CSA Certified	150 @ 5 amps
3. Withstand volts, rms	3000
Insulator material	General purpose phenolic. UL temp index 150°C. Color, black. (Other materials available.)
Width x height	5/8" x 5/16" (16 x 7,9)
Wire size recommended, max AWG	22
Terminal screws, (standard; also see options below)	No. 2-56 x 3/16" binding head screws. Brass, nickel plated
Top-side terminals (3rd digit of Cat. No.)▲	0 Screws only 1 One-sided solder 2 Two-sided solder
Bottom terminal (3rd digit of Cat. No.)▲	3 Solder 4 PC, short
No. of circuits (4th & 5th digits of Cat. No.)▲	1 to 20
Options (add dash numbers to Cat. No.)▲	-10A thru -11D Imprinting, one side -12A thru -13B Imprinting, both sides -56 Stainless steel screws -58 Barrier supplied without screws -59 Screws supplied, unassembled -60 One row screws assembled, one row screws bulk -61 One row screws assembled, one row screws not supplied -66 Marker strip bonded to barrier -C Without mounting ends -M Metric screws
Top-side hardware (options; indicate circuit positions)	1031 Jumper, hole 1032 Jumper, slotted

Dimensions in parenthesis are millimeters.

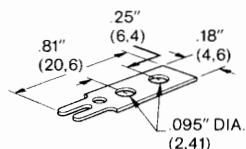
Top-side terminals

Material: .032" (0,8) brass (Style 0, nickel plated;
Styles 1 and 2 solder plated)

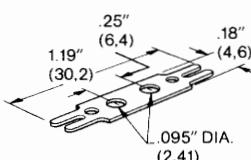
0 Screws only



1* One-sided solder

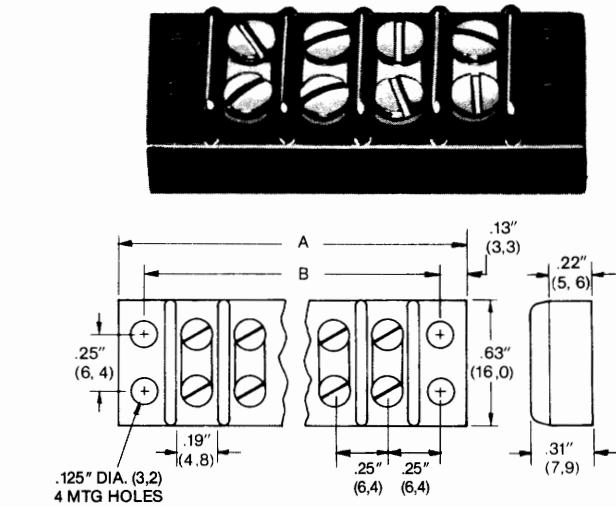


2* Two-sided solder



*To order in bulk, use Cat. No. 101 (one-sided) or 102 (two-sided).

Dimensions



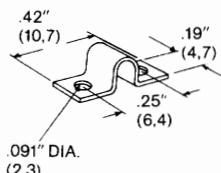
No. of circuits	A in. mm	B in. mm	No. of circuits	A in. mm	B in. mm
1	.75	19.1	.50	12.7	82.6
2	1.00	25.4	.75	19.1	88.9
3	1.25	31.8	1.00	25.4	95.3
4	1.50	38.1	1.25	31.8	102
5	1.75	44.5	1.50	38.1	108
6	2.00	50.8	1.75	44.5	114
7	2.25	57.2	2.00	50.8	121
8	2.50	63.5	2.25	57.2	127
9	2.75	69.9	2.50	63.5	133
10	3.00	76.2	2.75	69.9	140

Tolerance on length $\pm .015"$

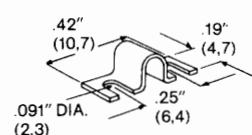
Jumpers

Material: .015" (0,4) brass, nickel plated
Options: when ordering, indicate circuit positions

1031 Jumper, hole



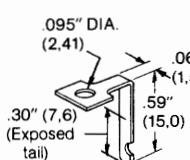
1032 Jumper, slotted



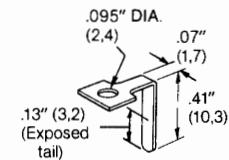
Bottom terminals

Material: .032" (0,8) brass, solder plated

3 Solder



4 PC, short



To order in bulk use Cat. No. 103

To order in bulk use Cat. No. 104

▲HOW TO ORDER: SEE PAGE 7.

Double Row

15 amps
3/8" centers (9,5)

14000

20 amps
3/8" centers (9,5)
thermoplastic

76000

20 amps
3/8" centers (9,5)
thermoplastic

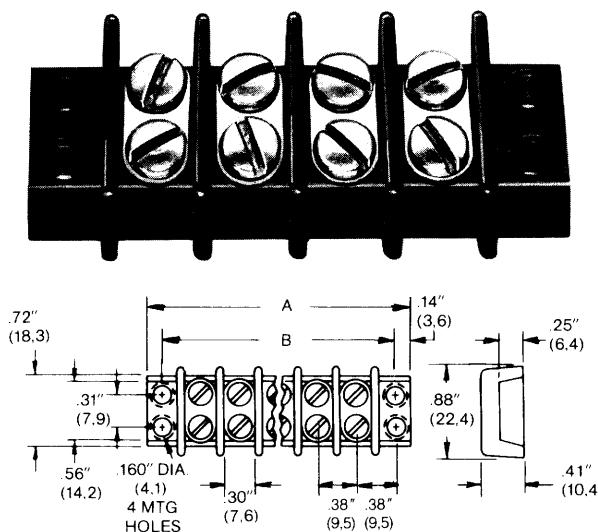
77000

Specifications

Series No.	14000	76000	77000
Construction	Open back & feed thru	High barrier; closed back or feed thru	Closed back or feed thru
Terminal centers	3/8" (9,5)	3/8" (9,5)	3/8" (9,5)
Current rating, amps (UL)	15	20	20
Voltage rating, rms			
1. UL Recognized...			
Class B: Comm'l equip	250	250	250
Class C: Gen'l ind'l	150	150	150
2. CSA Certified	300 @ 15 amps	300 @ 20 amps	150 @ 20 amps
3. Withstand volts, rms	8500	10500	7500
Insulator material	General purpose phenolic. UL temp index 150°C. Color, black. (Other materials available.)	Thermoplastic, glass filled. UL temp index 95°C. UL flame retardant rating 94V-0. Color, black.	
Width x height	7/8" x 13/32" (22,4 x 10,4)	7/8" x 5/8" (22 x 16)	7/8" x 7/16" (22 x 11,1)
Wire size recommended, max AWG	16	14	14
Terminal screws (standard; also see options below)	No. 5-40 x 1/4" binding head screws. Steel, cadmium plated.	No. 6-32 x 1/4" binding head screws. Steel, cadmium plated.	
Top-side terminals (3rd digit of Cat. No.)▲	0 Screws only 1 One-sided solder 2 Two-sided solder		
Bottom terminals (3rd digit of Cat. No.)▲	3 Solder, short 4 PC, short 5 Solder, long 6 PC, long 7 Wire wrap 8 Z terminal, over-the-side PC		
No. of circuits (4th & 5th digits of Cat. No.)▲	1 to 30	2 to 30	
Options (add dash numbers to Cat. No.)▲	-10A thru -11D Imprinting, one side -12A thru -13B Imprinting, both sides -49 Brass, nickel-plated binding head screws -50 Rising surface clamp screws -51 Internal lock washer screws -52 External lock washer screws -53 Phillips head screws -56 Stainless steel screws -58 Barrier supplied without screws -59 Screws supplied, unassembled -60 One row screws assembled, one row screws bulk -61 One row screws assembled, one row screws not supplied -66 Marker strip bonded to barrier -C Without mounting ends -M Metric screws (for 76000 & 77000 only) -R Rivet construction (for 14000 only) -V Valox insulator material (for 76000 & 77000 only), UL temp index 130°C		
Top-side hardware (options; indicate circuit positions)	1410 thru 1418 Quick-connect terminals, .187" tab 1410A thru 1418A Quick-connect terminals, .205" tab 1430 Straddle plate (for 14000 only) 1431 Jumper, hole (for 14000 & 77000 only) 1432 Jumper, slotted (for 14000 & 77000 only) 7233 Jumper, edge on 7631 Jumper, hole (for 76000 only) 7632 Jumper, slotted (for 76000 only)		

Dimensions in parenthesis are millimeters.

Dimensions - 14000



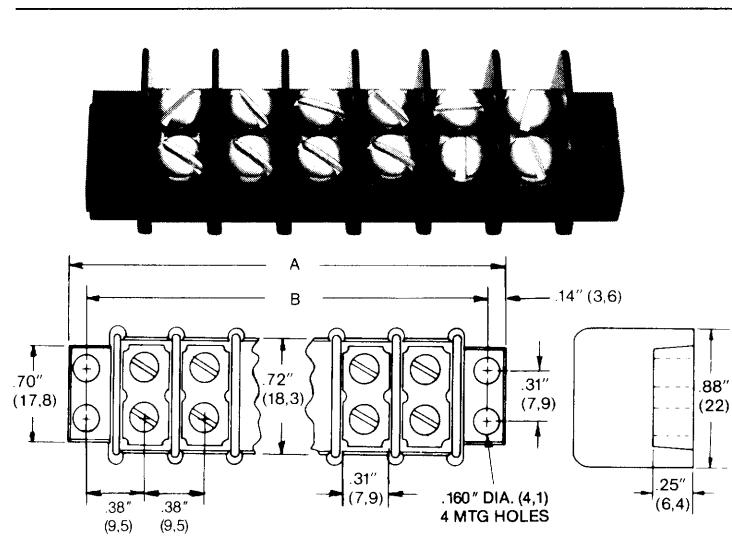
No. of circuits

A
in. mm

B
in. mm

1	1.03	26.2	.75	19.1
2	1.41	35.8	1.13	28.7
3	1.78	45.2	1.50	38.1
4	2.16	54.9	1.88	47.8
5	2.53	64.3	2.25	57.2
6	2.91	73.9	2.63	66.8
7	3.28	83.3	3.00	76.2
8	3.66	93.0	3.38	85.9
9	4.03	102	3.75	95.3
10	4.41	112	4.13	105
11	4.78	121	4.50	114
12	5.16	131	4.88	124
13	5.53	140	5.25	133
14	5.91	150	5.63	143
15	6.28	160	6.00	152
16	6.66	169	6.38	162
17	7.03	179	6.75	171
18	7.41	188	7.13	181
19	7.78	198	7.50	191
20	8.16	207	7.88	200
21	8.53	217	8.25	210
22	8.91	226	8.63	219
23	9.28	236	9.00	229
24	9.66	245	9.38	238
25	10.03	255	9.75	248
26	10.41	264	10.13	257
27	10.78	274	10.50	267
28	11.16	283	10.88	276
29	11.53	293	11.25	286
30	11.91	303	11.63	295

Dimensions - 76000 & 77000

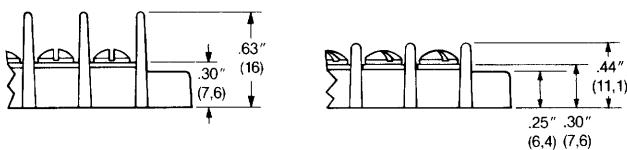


2	1.41	35.7	1.13	28.6
3	1.78	45.2	1.50	38.1
4	2.16	54.8	1.88	47.6
5	2.53	64.3	2.25	57.2
6	2.91	73.8	2.63	66.7
7	3.28	83.3	3.00	76.2
8	3.66	92.9	3.38	85.7
9	4.03	102	3.75	95.3
10	4.41	112	4.13	105
11	4.78	121	4.50	114
12	5.16	131	4.88	124
13	5.53	140	5.25	133
14	5.91	150	5.63	143
15	6.28	160	6.00	152
16	6.66	169	6.38	162
17	7.03	178	6.75	171
18	7.41	188	7.13	181
19	7.78	198	7.50	191
20	8.16	207	7.88	200
21	8.53	217	8.25	210
22	8.91	226	8.63	219
23	9.28	236	9.00	229
24	9.66	245	9.38	238
25	10.03	255	9.75	248
26	10.41	264	10.13	257
27	10.78	274	10.50	267
28	11.16	283	10.88	276
29	11.53	293	11.25	286
30	11.91	303	11.63	295

76000

77000

Tolerance on length $\pm .015"$



Get 20 amps in the same space as 15

These 20-ampere strips are designed to take the same panel space as any double-row 15-ampere barrier terminal strip. They are 7/8" wide and have screw terminals 3/8" on centers—just like the following strips they are designed to replace:

Cinch: 140; 164; 240

Curtis: 1500

ETC/Cannon: 27000; 37000; 57000; 67000

General Electric: CR151-Type D1 and D7

Kulka: 600; 600A; 620A; 670; 670A; 800

Marathon: Series 100

Vernitron (Beau): 14000; 15000; 16000; 17000

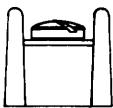
14000, 76000, 77000 continued

14000, 76000, 77000 continued

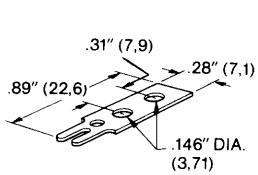
Top-side terminals - for 14000

Material: .032" (0.8) brass (Style 0, nickel plated; Styles 1 and 2 solder plated)

0 Screws only

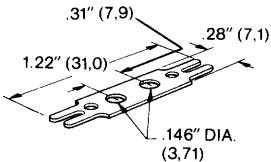


1 One-sided solder



To order in bulk,
use Cat. No. 141

2 Two-sided solder

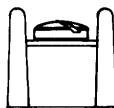


To order in bulk,
use Cat. No. 142

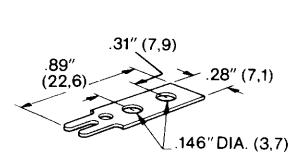
Top-side terminals - for 76000 and 77000

Material: .032" (0.8) brass (Style 0, nickel plated; Styles 1 and 2 solder plated)

0 Screws only



1 One-sided solder

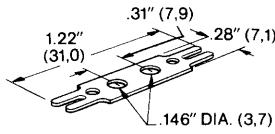


To order in bulk,
use Cat. No. 141

Bottom terminals - for 14000

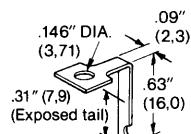
Material: .032" (0.8) brass (Styles 3 and 5 solder plated;
4, 6 and 8 bright electro-tinned; 7 bright electro-tinned or nickel)

2 Two-sided solder



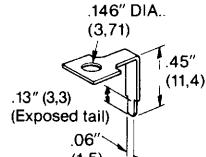
To order in bulk,
use Cat. No. 142

3 Solder, short



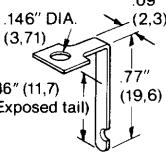
To order in bulk,
use Cat. No. 143

4 PC, short



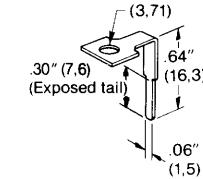
To order in bulk,
use Cat. No. 144

5 Solder, long



To order in bulk,
use Cat. No. 145

6 PC, long

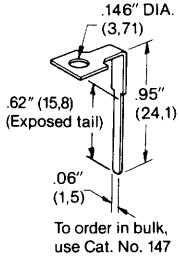


To order in bulk,
use Cat. No. 146

Bottom terminals - for 76000 & 77000

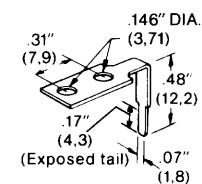
Material: .032" (0.8) brass (Styles 3 and 5 solder plated;
4, 6 and 8 bright electro-tinned; 7 bright electro-tinned or nickel)

7 Wire wrap



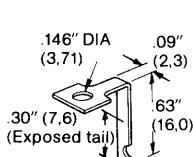
To order in bulk,
use Cat. No. 147

8 Z-terminal, over-the-side PC



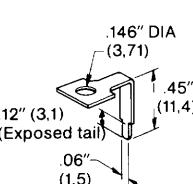
To order in bulk,
use Cat. No. 148

3 Solder, short



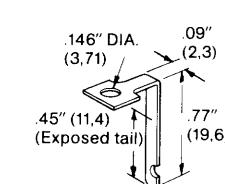
To order in bulk,
use Cat. No. 143

4 PC, short



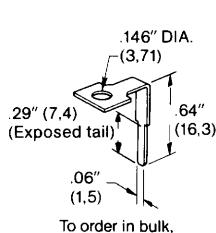
To order in bulk,
use Cat. No. 144

5 Solder, long



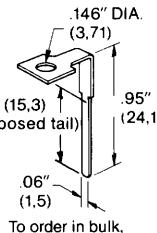
To order in bulk,
use Cat. No. 145

6 PC, long



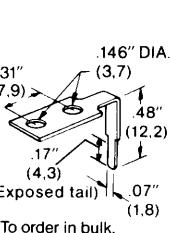
To order in bulk,
use Cat. No. 146

7 Wire wrap



To order in bulk,
use Cat. No. 147

8 Z-terminal, over-the-side PC

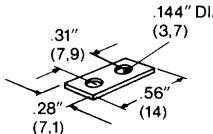


To order in bulk,
use Cat. No. 148

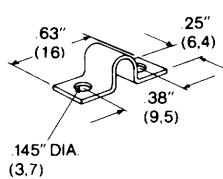
Jumpers/Straddle plate - for 14000

Material: Jumpers .015" (0.4) brass, nickel plated; 7233 is .032" (0.8) Straddle plates .032" (0.8) stainless steel
Options: when ordering, indicate circuit positions.

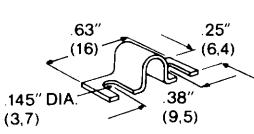
1430 Straddle plate



1431 Jumper, hole



1432 Jumper, slotted



7233/ Jumper, edge on

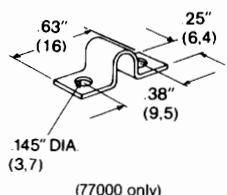
For jumping 2 to 30 adjacent terminals

To order in a continuous strip,
indicate number of circuits.

Jumpers-for 76000 & 77000

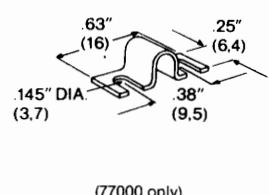
Material: .015" (0.4) brass, nickel plated; 7233 is .032" (0.8)
Options; when ordering, indicate circuit positions

1431 Jumper, hole



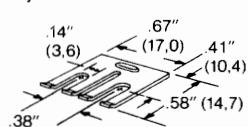
(77000 only)

1432 Jumper, slotted



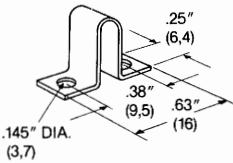
(77000 only)

7233/ Jumper, edge on
for jumping 2 to 30
adjacent terminals



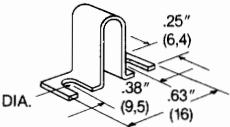
To order in a continuous strip,
indicate number of circuits.

7631 Jumper, hole



(76000 only)

7632 Jumper, slotted



(76000 only)

Quick-connect terminals

Material: Cadmium-plated brass

Options; when ordering, indicate circuit positions

One-sided	Series 1400 .187" tab, .020" thick	Series 1400A .205" tab, .032" thick	1413 and 1413A	1414 and 1414A	1415 and 1415A
Two-sided	Series 1400 .187" tab, .020" thick	Series 1400A .205" tab, .032" thick	1410 and 1410A 1.39" (35.3) width	1411 and 1411A 1.19" (30.2) width, .25" (6.4) height, and 45° angle	1412 and 1412A .69" (17.5) width, .36" (9.1) height, and .36" (9.1) thickness

Double Row

20 amps
7/16" centers (11,1)

18000

20 amps
7/16" centers (11,1)

19000

20 amps
7/16" centers (11,1)
thermoplastic

78000

Specifications

Series No.	18000	19000	78000
Construction	Open back and feed thru	Closed back or feed thru	Closed back or feed thru
Terminal centers	7/16" (11,1)	7/16" (11,1)	7/16" (11,1)
Current rating, amps (UL)	20	20	20
Voltage rating, rms			
1. UL Recognized...			
Class B: Comm'l equip	250	250	250
Class C: Gen'l ind'l	300	300	300
2. CSA Certified	300 @ 20 amps	300 @ 20 amps	300 @ 20 amps
3. Withstand volts, rms	7500	8500	7500
Insulator material	General purpose phenolic. UL temp index, 150°C. Color, black. (Other materials available)	General purpose phenolic. UL temp index, 150°C Color, black. (Other materials available)	Thermoplastic, glass-filled. UL temp index, 95°C. UL flame retardant rating 94V-0. Color, black.
Width x height	1 1/8" x 1/2" (28,7 x 12,7)	1 1/8" x 35/64" (28,7 x 13,9)	1 1/8" x 35/64" (28,7 x 13,9)
Wire size recommended, max AWG	14	14	14
Terminal screws (standard; also see options below)	No. 6-32 x 1/4" binding head screws. Steel, cadmium plated	No. 6-32 x 1/4" binding head screws. Steel, cadmium plated	No. 6-32 x 1/4" binding head screws. Steel, cadmium plated
Top-side terminals (3rd digit of Cat. No.)▲	0 Screws only 1 One-sided solder 2 Two-sided solder		0 Screws only
Bottom terminals (3rd digit of Cat. No.)▲	3 Solder, short 5 Solder, long 6 PC, long 7 Wire wrap		
No. of circuits (4th & 5th digits of Cat. No.)▲	1 to 30		
Options (add dash numbers to Cat. No.)▲	-10A thru -11D Imprinting, one side -12A thru -13B Imprinting, both sides -49 Nickel-plated brass binding head screws -50 Rising surface clamp screws -51 Internal lock washer screws -52 External lock washer screws -53 Phillips head screws -56 Stainless steel screws -58 Barrier supplied without screws -59 Screws supplied, unassembled -60 One row screws assembled, one row screws bulk -61 One row screws assembled, one row screws not supplied -66 Marker strip bonded to barrier (for 18000 only) -C Without mounting ends -M Metric screws -R Rivet construction (for 18000 only) -V Valox insulator material, UL temp index 130°C (for 78000 only)		
Top-side hardware (options; indicate circuit positions)	1810 thru 1818 Quick-connect terminals, 250" tab 1830 Straddle plate 1831 Jumper, hole 1832 Jumper, slotted 7833 Jumper, edge on		

Dimensions in parenthesis are millimeters.

Interchangeable with phenolic strips

Series 78000 has been designed to be interchangeable with several series of phenolic strips, allowing users to gain the advantages of high resiliency, non-pull-out screw terminals, etc. It will occupy the same panel space as the following strips:

Cinch: 141, 541
 ETC/Cannon: 28000, 38000
 General Electric: CR151 - Type D2
 Kulk: 601, 671
 Marathon: 200
 Vernitron (Beau): 18000, 19000

Now a closed back strip with screw terminals that won't pull out

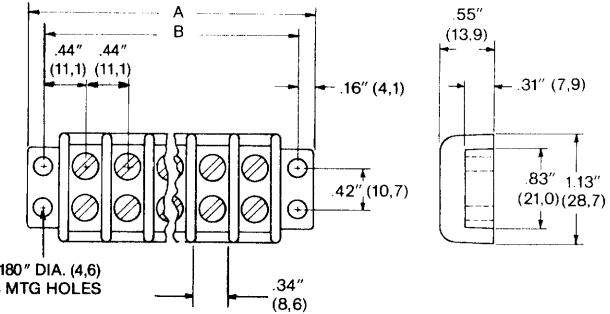
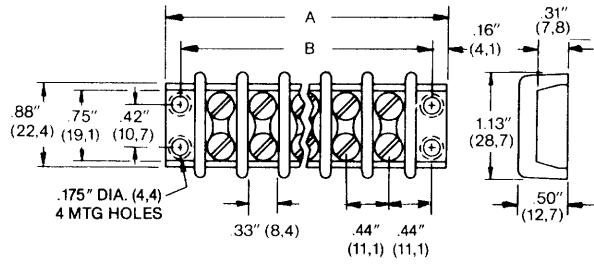
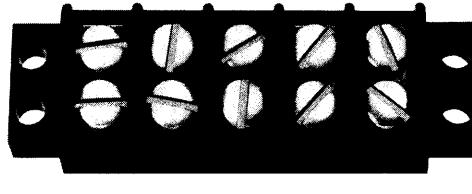
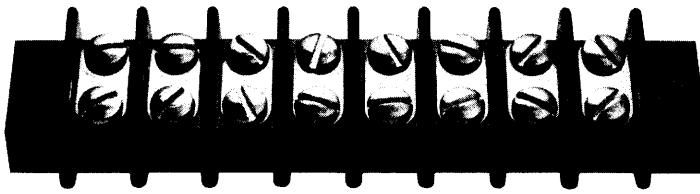
The 78000 series eliminates the problem of insecure terminal retention commonly found in closed back double-row barrier terminal strips. The eyelets and drive pins have been eliminated. Instead, terminal plates are ultrasonically welded (imbedded) into the barrier strip, making it virtually impossible to pull them out. Another result: it's a more rugged strip, and has a greater creep path.

Other features of thermoplastic types — see page 2-5.

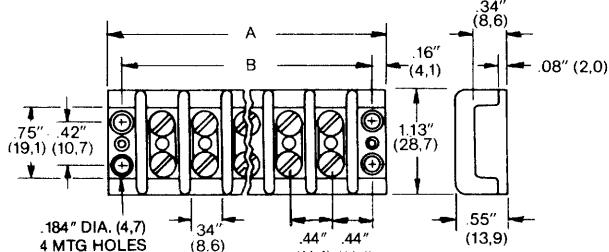
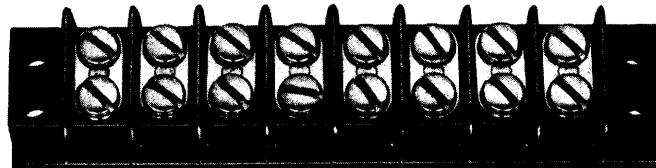
Dimensions

18000

78000



19000



No. of circuits	A in. mm.	B in. mm.
1	1.19	30.2
2	1.63	41.4
3	2.06	52.3
4	2.50	63.5
5	2.94	74.7
6	3.38	85.9
7	3.81	96.8
8	4.25	108
9	4.69	119
10	5.13	130
11	5.56	141
12	6.00	152
13	6.44	164
14	6.88	175
15	7.31	186
16	7.75	197
17	8.19	208
18	8.63	219
19	9.06	230
20	9.50	241
21	9.94	252
22	10.38	264
23	10.81	275
24	11.25	286
25	11.69	297
26	12.13	308
27	12.56	319
28	13.00	330
29	13.44	341
30	13.88	353

Tolerance on length $\pm .015"$

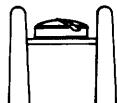
18000, 19000, 78000 continued

18000, 19000, 78000 continued

Top-side terminals

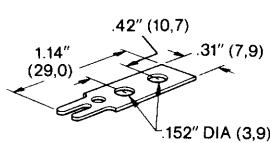
Material: .032" (0.8) brass (Style 0, nickel plated; Styles 1 and 2 solder plated)

0 Screws only



(18000 shown)

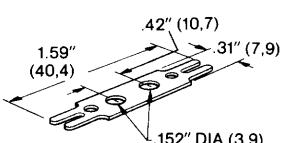
1 One-sided solder



(For 18000 & 19000 only)

To order in bulk,
use Cat. No. 181

2 Two-sided solder



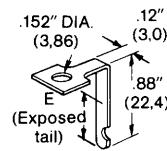
(For 18000 & 19000 only)

To order in bulk,
use Cat. No. 182

Bottom terminals

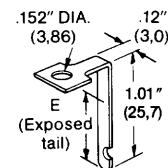
Material: .032" (0.8) brass (Styles 3 and 5 solder plated; 6 bright electro-tinned; 7 bright electro-tinned or nickel)

3 Solder, short



To order in bulk,
use Cat. No. 183

5 Solder, long



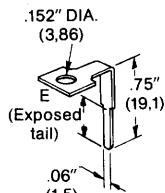
To order in bulk,
use Cat. No. 185

Jumpers/Straddle plate

Material: As noted under drawings.

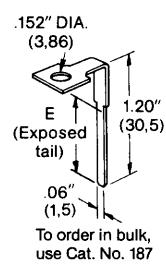
Options; when ordering, indicate circuit positions

6 PC, long



To order in bulk,
use Cat. No. 186

7 Wire wrap



To order in bulk,
use Cat. No. 187

Series No.

Terminal style

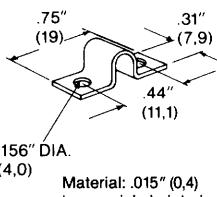
Dimension E

in.

mm

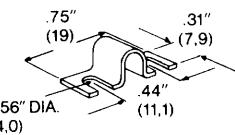
18000 and 78000	3	.51	13.0
	5	.63	16.0
	6	.39	9.9
	7	.83	21.1

1831 Jumper, hole



Material: .015" (0.4)
brass, nickel plated

1832 Jumper, slotted

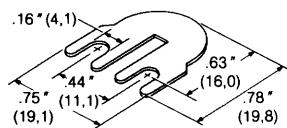


Material: .015" (0.4)
brass, nickel plated

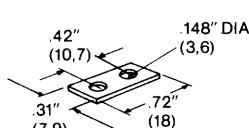
7833 Jumper, edge on

For jumping adjacent terminals

1830 Straddle plate



Material: .032" (0.8)
brass, nickel plated



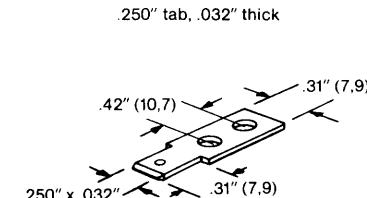
Material: .032" (0.8)
stainless steel

Quick-connect terminals

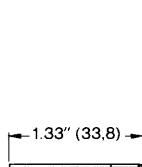
Material: Cadmium-plated brass

Options, when ordering, indicate circuit positions

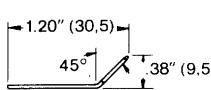
One-sided



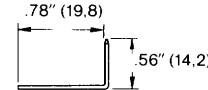
1813



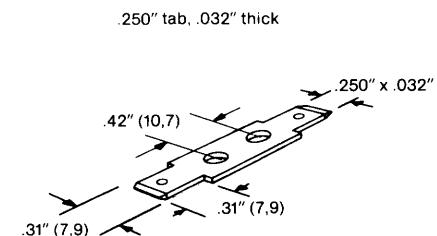
1814



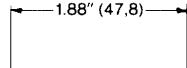
1815



Two-sided



1810



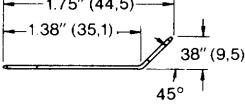
1811



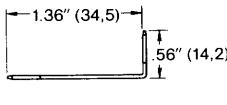
1812



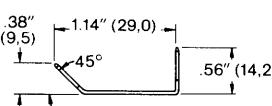
1816



1817



1818



Double Row

30 amps
9/16" centers (14,2)
21000

30 amps
9/16" centers (14,2)
22000

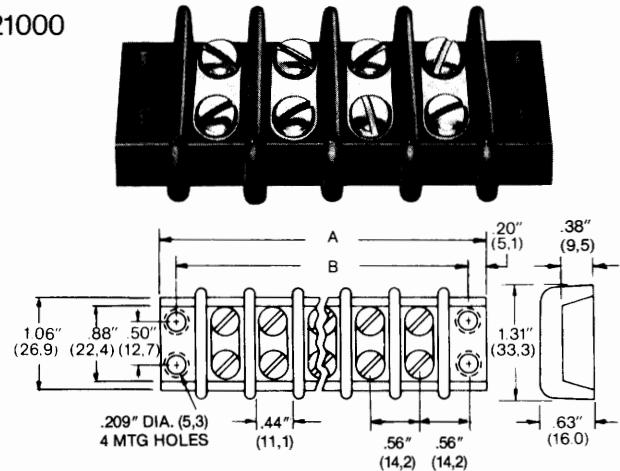
Specifications

Series No.	21000	22000
Construction	Open back and feed thru	Closed back or feed thru
Terminal centers	9/16" (14,2)	9/16" (14,2)
Current rating, amps (UL)	30	30
Voltage rating, rms		
1. UL Recognized...		
Class B: Comm'l equip	600	600
Class C: Gen'l ind'l	600	600
2. CSA Certified	300 @ 30 amps	300 @ 30 amps
3. Withstand volts, rms	10500	9000
Insulator material	General purpose phenolic. UL temp index 150°C. Color black. (Other materials available)	General purpose phenolic. UL temp index 150°C. Color black. (Other materials available)
Width x height	1 5/16" x 5/8" (33.3 x 16)	1 5/16" x 21/32" (33.3 x 16.8)
Wire size recommended, max AWG	12	12
Terminal screws (standard; also see options below)	No. 8-32 x 5/16" binding head screws. Steel, cadmium plated	No. 8-32 x 5/16" binding head screws. Steel, cadmium plated
Top-side terminals (3rd digit of Cat. No.)▲	0 Screws only 1 One-sided solder 2 Two-sided solder	0 Screws only 1 One-sided solder 2 Two-sided solder
Bottom terminals (3rd digit of Cat. No.)▲	3 Solder, short 5 Solder, long	3 Solder, short 5 Solder, long
No. of circuits (4th & 5th digits of Cat. No.)▲	1 to 25	1 to 26
Options (add dash numbers to Cat. No.)▲	-10A thru -11D Imprinting, one side -12A thru -13B Imprinting, both sides -49 Nickel-plated brass binding head screws -50 Rising surface clamp screws -51 Internal lock washer screws -52 External lock washer screws -53 Phillips head screws -58 Barrier supplied without screws -59 Screws supplied, unassembled -60 One row screws assembled, one row screws bulk -61 One row screws assembled, one row screws not supplied -66 Marker strip bonded to barrier (for 21000 only) -C Without mounting ends -M Metric screws -R Rivet construction (for 21000 only)	
Top-side hardware (options; indicate circuit positions)	2110 thru 2118 Quick-connect terminals, .250" tab 2130 Straddle plate 2131 Jumper, hole 2132 Jumper, slotted	

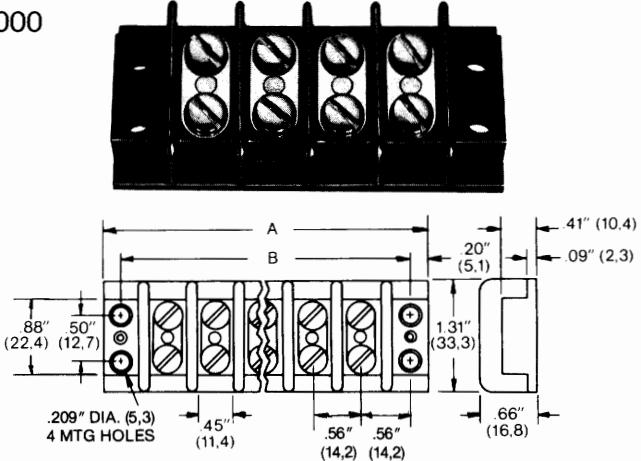
Dimensions in parenthesis are millimeters.

Dimensions

21000



22000



No. of circuits	A in. mm	B in. mm
1	1.53	38.9
2	2.09	53.1
3	2.66	67.6
4	3.22	81.8
5	3.78	96.0
6	4.34	110
7	4.91	125
8	5.47	139
9	6.03	153
10	6.59	167
11	7.16	182
12	7.72	196
13	8.28	210
14	8.84	225
15	9.41	239
16	9.97	253
17	10.53	267
18	11.09	282
19	11.66	296
20	12.22	310
21	12.78	325
22	13.34	339
23	13.91	353
24	14.47	368
25	15.03	382
26	15.59	396

Tolerance on length ± .015"

21000, 22000 continued

▲HOW TO ORDER: SEE PAGE 7.

21000, 22000 continued

Top-side terminals

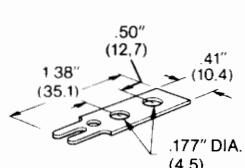
Material: .032" (0.8) brass (Style 0, nickel plated;
Styles 1 and 2 solder plated)

0 Screws only



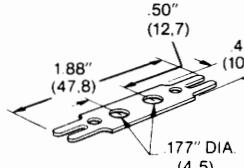
(21000 shown)

1 One-sided solder



To order in bulk,
use Cat. No. 211

2 Two-sided solder

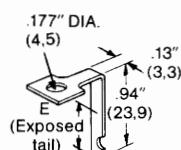


To order in bulk,
use Cat. No. 212

Bottom terminals

Material: .032" (0.8) brass,
solder plated

3 Solder, short

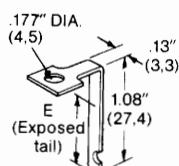


To order in bulk,
use Cat. No. 213

Jumpers/Straddle plate

Material: Jumpers .015" (0.4) brass, nickel plated. Straddle plate .032" (0.8) stainless steel
Options: when ordering, indicate circuit positions

5 Solder, long



To order in bulk,
use Cat. No. 215

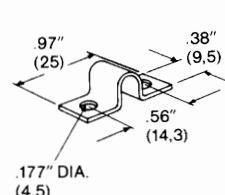
Series No.

Terminal style

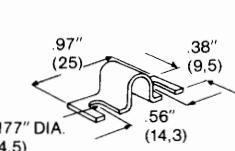
Series No.	Terminal style	Dimension E in. mm
21000	3	.50 12.7
	5	.63 16.0

Series No.	Terminal style	Dimension E in. mm
22000	3	.46 11.7
	5	.59 15.0

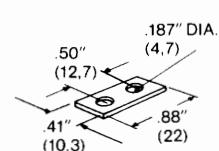
2131 Jumper, hole



2132 Jumper, slotted



2130 Straddle plate



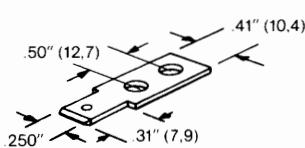
Quick-connect terminals

Material: Cadmium-plated brass

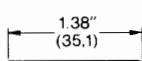
Option: when ordering, indicate circuit positions

One-sided

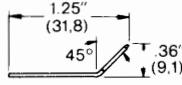
250" tab, .032" thick



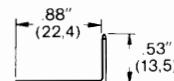
2113



2114

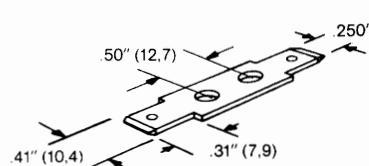


2115

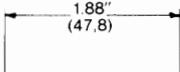


Two-sided

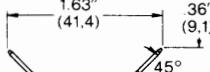
250" tab, .032" thick



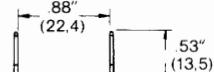
2110



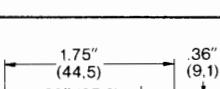
2111



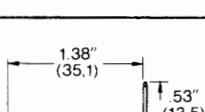
2112



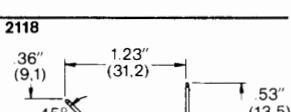
2116



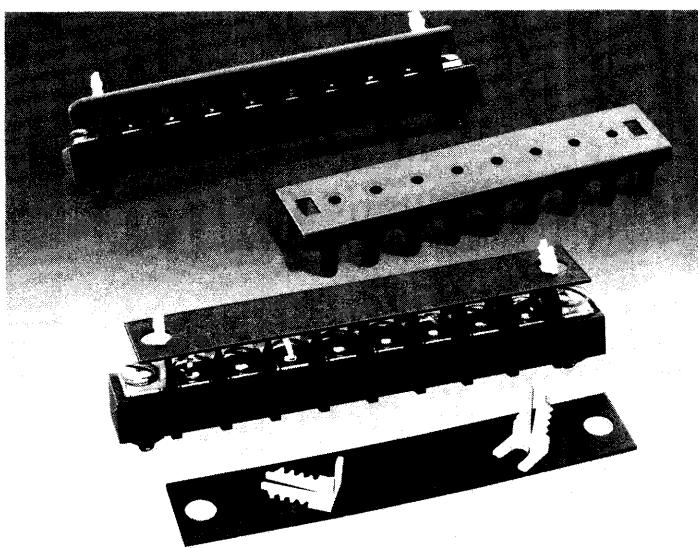
2117



2118



Snap-On Covers



Beau adds new wrap-around covers to line of flat cover assemblies

Now Vernitron offers wrap-around covers for barrier terminal strips in addition to flat covers.

Both styles snap on easily and provide the required protection at low cost.

Beau Snap-On Covers fit most makes, sizes and lengths of barrier terminal strips. The chart below indicates which cover to use with each Beau strip. For help in determining what other brands they fit, contact our sales department.

Specifications

Flat cover material: Vulcanized fiber, .032" (0.8) thick, black.

Wrap-around

cover material: Thermoplastic, .050" (1.3) thick, black.

Latch material: Acetal, .040" (1.0) thick. Color, natural.

Imprinting: On special order.

Beau barrier terminal strip Series No.	Snap-on cover kit ▲ Cat. No.	No. of circuits	Cover width in. mm	A in. mm
--	------------------------------	-----------------	--------------------	----------

Single-row style — with wrap-around cover

72000	CW01-*	1 to 26	.75	19.1	—	—
75000	CW05-*	1 to 26	.61	15.5	—	—

Single-row style — with flat cover

12000	CA01-*	2 to 30	.63	15.9	—	—
13000	CA02-*	2 to 26	.69	17.5	—	—
72000	CA01-*	2 to 26	.63	15.9	—	—
71000	CA01-*	2 to 26	.63	15.9	—	—

Double-row style — with flat cover

14000	CA03-*	2 to 30	.88	22.2	.31	7.9
16000	CA03-*	2 to 30	.88	22.2	.31	7.9
15000	CA03-*	2 to 31	.88	22.2	.31	7.9
17000	CA03-*	2 to 31	.88	22.2	.31	7.9
76000	CA03-*	2 to 30	.88	22.2	.31	7.9
77000	CA03-*	2 to 30	.88	22.2	.31	7.9
18000	CA04-*	2 to 30	1.13	28.6	.42	10.7
19000	CA04-*	2 to 30	1.13	28.6	.42	10.7
78000	CA04-*	2 to 30	1.13	28.6	.42	10.7

Two styles: flat and wrap around

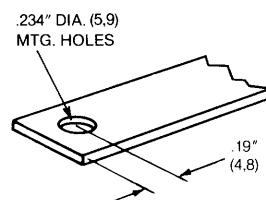
Beau flat covers protect the top of the strip and are the most economical type available.

Beau wrap-around covers protect the top and both sides of 72000 strips. Side guards prevent contact with live circuits, and the access holes in the top simplify circuit checking with test probes. For 75000 closed-side strips, the covers have one side guard to protect the open side of the strip.

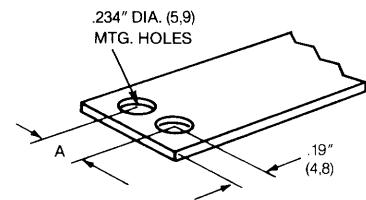
Covers are easily removed for quick access, yet cannot be accidentally dislodged.

Dimensions

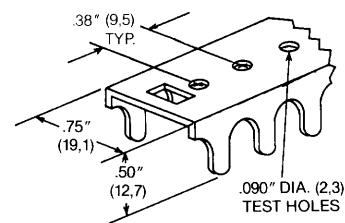
Flat cover for single-row strips



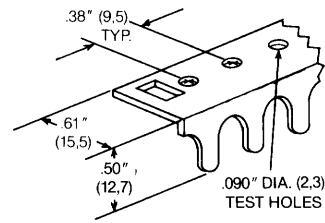
Flat cover for double-row strips



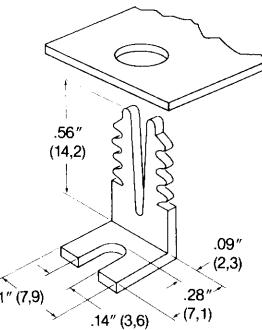
Wrap-around cover for 72000 strips



Wrap-around cover for 75000 closed-side strips



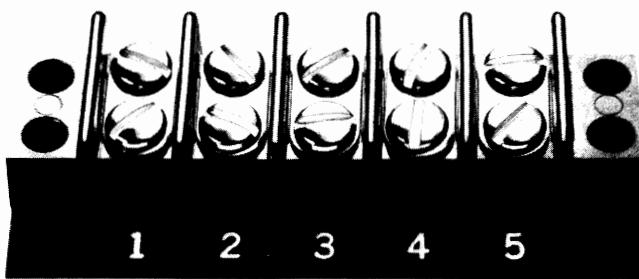
Latch (same for all cover styles)



Simple installation

To install, fasten the slotted foot of the L-shaped latch to the mounting hole at the end of the barrier terminal strip. Secure one latch at each end. (For double-row styles, only one latch is needed at each end.) Squeeze the two serrated legs together and insert them in the hole at one end of the cover, pushing down the cover until it butts against the top of the barriers. Repeat at other end.

Marker Strips



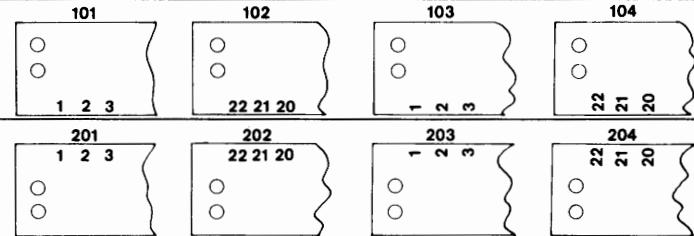
Insulating/marker strips are available in bulk; or they may be bonded to the bottom of open back barrier terminal strip (option -66). They can be furnished in vulcanized fiber (VF) or phenolic (XXXP). Lengths and mounting centers are the same as for the barrier terminal strip. The marker strips are available for the barrier terminal strips listed in the table at right.

They are available with or without clearance holes for feed thru terminals, and in a variety of imprinting arrangements (as shown). Style 101 is standard for non-feed-thru; style 301 is standard for feed-thru; the others are available on special order.

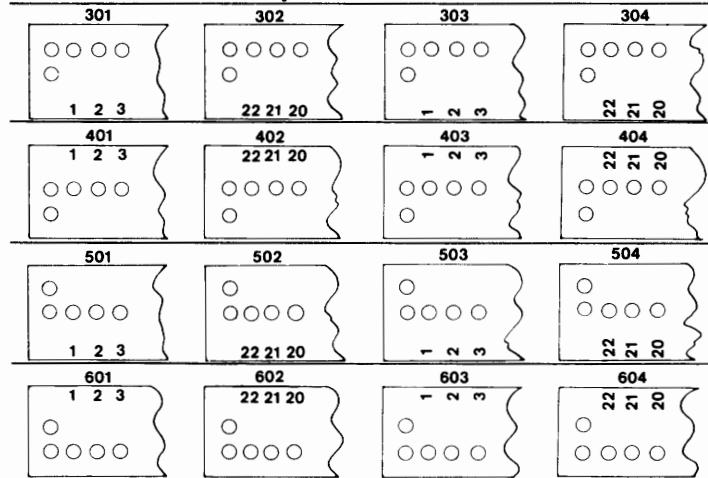
To order: For standard marker strips bonded to the barrier terminal strip, add dash number (-66) to catalog number along with material designation (VF or XXP) and imprint style number. Example: -66-VF-101. To order marker strips separately, form catalog number as in this example: VF-14012-101.

Barrier terminal strip Catalog No.		10000	14000	18000 78000	21000	76000 77000
Marker strip width	in.	0.75	1.13	1.31	1.50	1.13
	mm	19.1	28.6	33.3	38.1	28.6
Imprinting character height	in.	0.06	0.13	0.13	0.13	0.13
	mm	1.5	3.2	3.2	3.2	3.2

Non-feed-thru marker strips

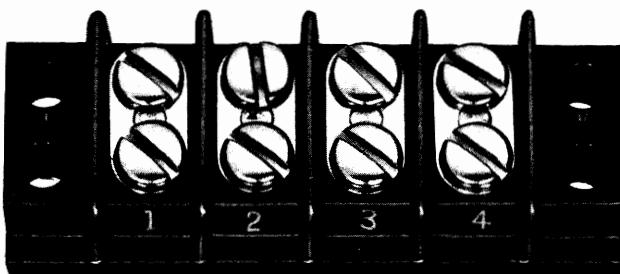


Feed-thru marker strips

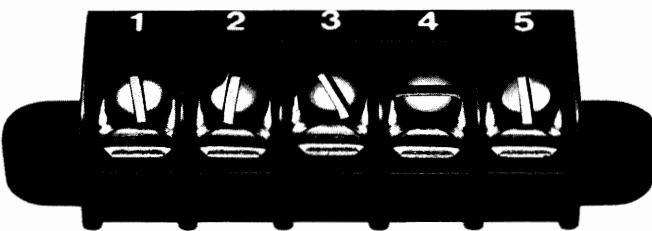


Information in this catalog is subject to change without notice. The information is believed to be accurate, however, Vernitron disclaims any liability for errors beyond the purchase price of the products shown.

Imprinting



All Beau barrier terminal strips may be furnished with imprinting (option) directly on the side of the strips. Imprinting on both sides is also available, except for 75000 Series. In the case of the 75000 Series closed side barrier terminal strips, they may be imprinted on the open side and/or on the top of the closed side.

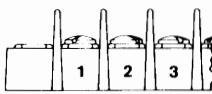


Imprinting character height is 0.06" for Series 10000, .094" for Series 75000, and 0.125" for all others. Styles available for imprinting are illustrated.

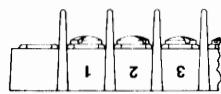
To order, add dash number to catalog number.

Imprinting on one side

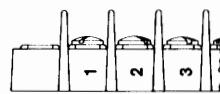
Style -10A



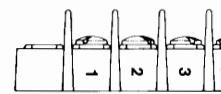
Style -10B



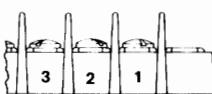
Style -10C



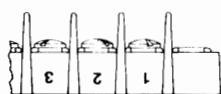
Style -10D



Style -11A



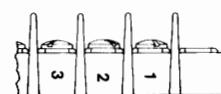
Style -11B



Style -11C

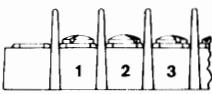


Style -11D

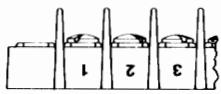


Imprinting on both sides

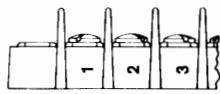
Style -12A



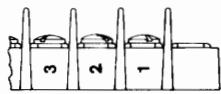
Style -12B



Style -13A

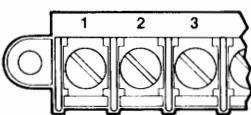


Style -13B

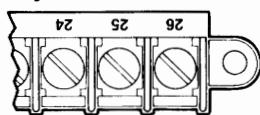


Imprinting on top of closed side

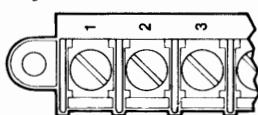
Style -10AT



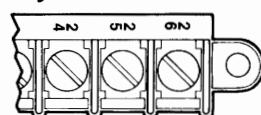
Style -10BT



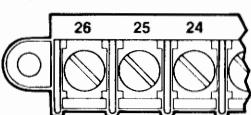
Style -10CT



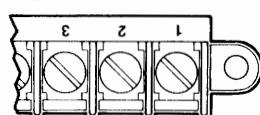
Style -10DT



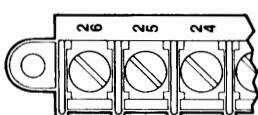
Style -11AT



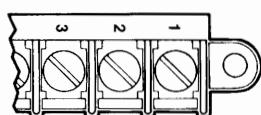
Style -11BT



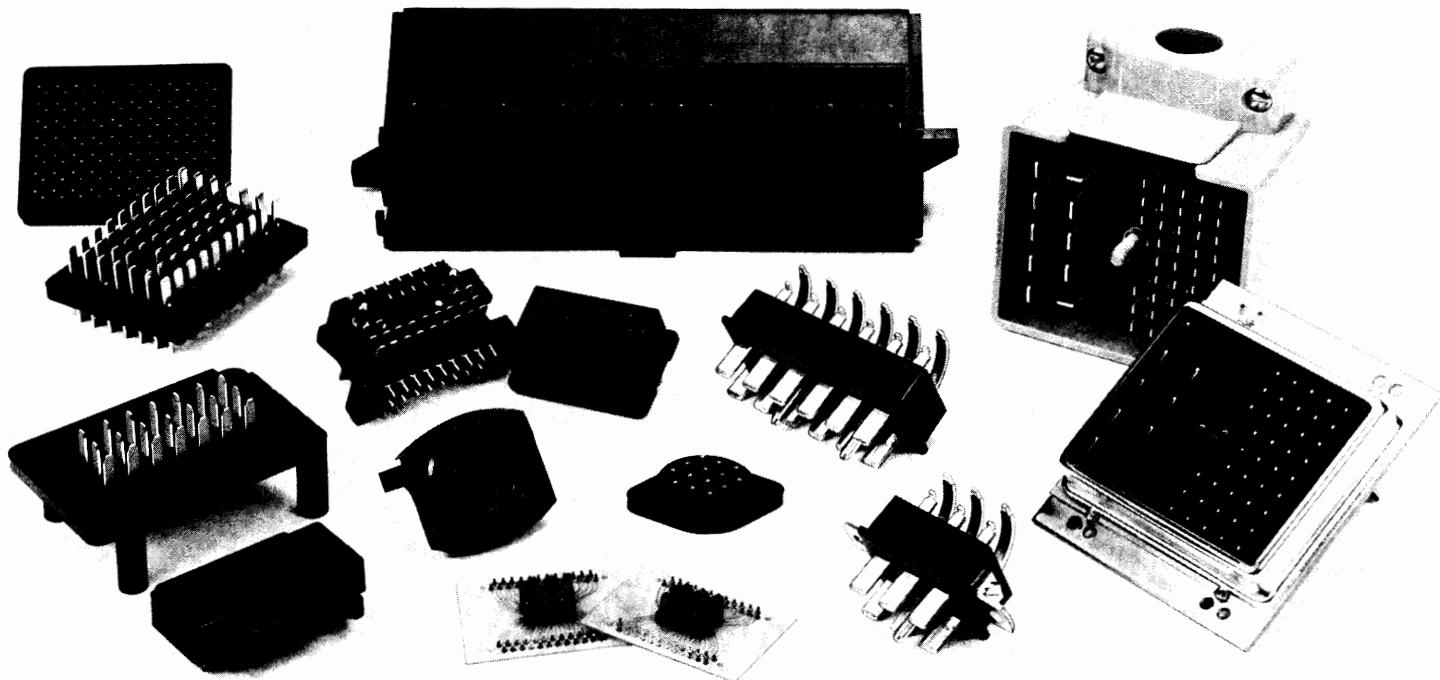
Style -11CT



Style -11DT



Custom Designs



Solving difficult interconnection problems is a Vernitron specialty

You have a special interconnection problem. Standard components don't solve the particular requirements of your application. There is one place you can go where you will find a top management commitment to solving special design problems: Vernitron Corporation.

Specials get the involvement of our most experienced design engineers—including the President of the Beau Products Division. What makes our design capabilities unique is a two-fold talent:

- (1) the ability to conceive interconnection designs that effectively solve the application problems, and
- (2) the ability to relate the design to standard manufacturing capabilities—or to rethink the manufacturing processes to fit the needs of the new component.

Because Vernitron's top engineers spend as much time designing our manufacturing and assembly equipment as they do designing new components, they have developed a very practical approach. An overdesigned part is a taboo—we automatically relate our designs to cost saving.

Interconnection components are typically labor intensive, because of the number and variety of metal inserts. At the Vernitron plant, the degree of automation is unusually high. This engineering ingenuity translates into lower unit costs for you.

The result: our specials may be more cost-effective than you would expect. So, tell us about your interconnection problems. You'll also find that our turn around time is usually faster than you'd expect. Pick up the phone and see.



VERNITRON CORPORATION
BEAU PRODUCTS DIVISION

Box 10, Laconia, New Hampshire 03246
Tel: (603) 524-5101 TWX: 710-364-1843

Also available in Canada, England, Europe and Japan.

3107-7001-0000

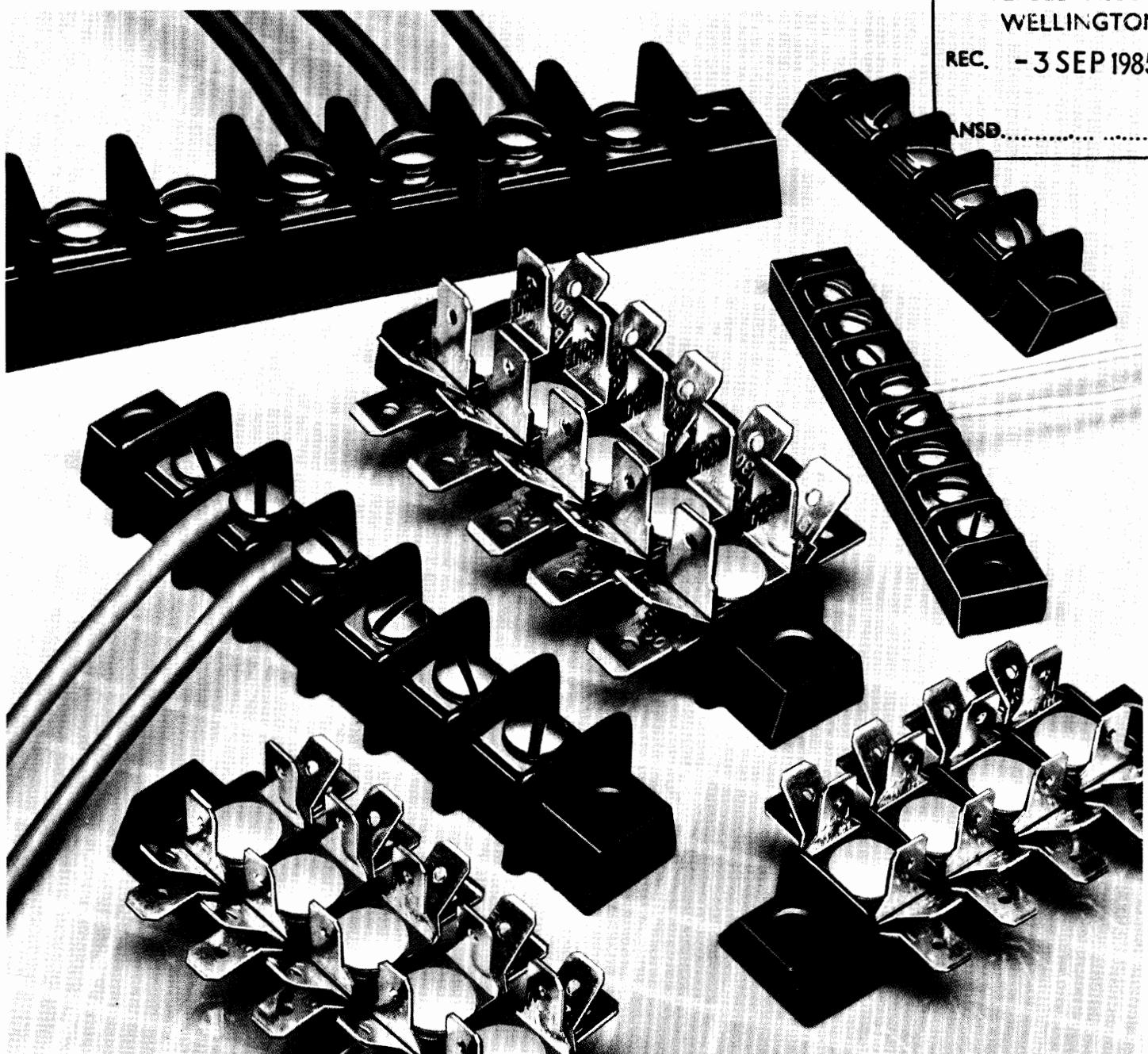
DEVERELL ASSOCIATES
WELLINGTON

REC. - 3 SEP 1985

ANSID.....

Beau® Barrier Terminal Strips

DEVEREUX ASSOCIATE
WELLINGTON
REC. - 3 SEP 1985



CROSS REFERENCE GUIDE

BEAU-screws	BEAU-rivets	KULKA-screws	KULKA-rivets	CINCH-screws
23000	23000-R	411	511	171
24000	24000-R	599	799	174
25000	25000-R	699	899	—
26000	26000-R	812	912	—



VERNITRON CORPORATION
BEAU PRODUCTS DIVISION

Single Row

**10 amps
1/4" centers (6,4)**

23000

**15 amps
3/8" centers (9,5)**

24000

**20 amps
7/16" centers (11,1)**

25000

**30 amps
9/16" centers (14,3)**

26000

Specifications

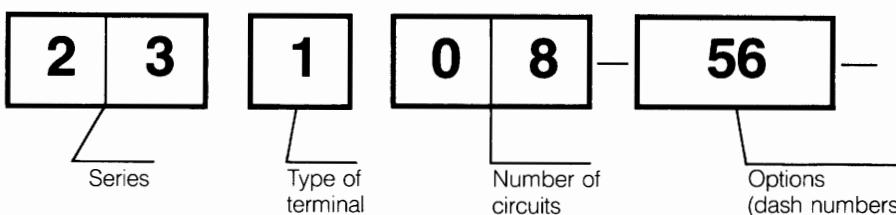
Series No.	23000	24000	25000	26000
Construction	Open back	Open back	Open back	Open back
Terminal centers	1/4" (6.4)	3/8" (9.5)	7/16" (11.1)	9/16" (14.3)
Current rating, amps (UL)	10*	15*	20*	30*
Voltage rating, rms	750	1100	1100	1600
1. UL Recognized...				
Class B: Comm'l equip	250*	250*	250*	250*
Class C: Gen'l ind'l	150*	150*	150*	300*
2. CSA Certified	150@5 amps*	300@15 amps*	300@20 amps*	300@30 amps*
3. Withstand volts, rms	3000	8500	10500	10500
Insulator material	General purpose phenolic. UL temp index 150°C. Color, black.	General purpose phenolic. UL temp index 150°C. Color, black.	General purpose phenolic. UL temp index 150°C. Color, black.	General purpose phenolic. UL temp index 150°C. Color, black.
Width x height	.41" x .31" (10.4 x 7.9)	.56" x .41" (14.2 x 10.5)	.69" x .50" (17.4 x 12.7)	.75" x .72" (19.1 x 18.2)
Wire size recommended, max AWG	22	16	14	12
Terminal screws (standard; also see options below)	No. 2-56 x 3/16" binding head screws. Brass, nickel plated	No. 5-40 x 1/4" binding head screws. Steel, cadmium plated	No. 6-32 x 1/4" binding head screws. Steel, cadmium plated	No. 8-32 x 5/16" binding head screws. Steel, cadmium plated
Top-side terminals (3rd digit of Cat. No.)▲	0 Screws only 1 One-sided solder 2 Two-sided solder	0 Screws only 1 One-sided solder 2 Two-sided solder	0 Screws only 1 One-sided solder 2 Two-sided solder	0 Screws only 1 One-sided solder 2 Two-sided solder
Over-the-side terminals (3rd digit of Cat. No.)▲	3 Solder 4 PC	3 Solder, short* 4 PC, short 5 Solder, long 6 PC, long 7 Wire wrap	3 Solder, short 5 Solder, long 6 PC, long 7 Wire wrap	3 Solder, short 5 Solder, long
No. of circuits (4th & 5th digits of Cat. No.)▲	1 to 22	1 to 30	1 to 30	1 to 18
Options (add dash numbers to Cat. No.)▲	-10A thru -11D Imprinting, one side -12A thru -13B Imprinting, both sides -56 Stainless steel screws -58 Barrier supplied without screws -59 Screws supplied, unassembled -C Without mounting ends -Q Quick-connect assembly -R Rivet construction	-10A thru -11D Imprinting, one side -12A thru -13B Imprinting, both sides -49 Nickel plated brass binding head screws -50 Rising surface clamp screws -51 Internal lock washer screws -52 External lock washer screws	-53 Phillips head screws -56 Stainless steel screws -58 Barrier supplied without screws -59 Screws supplied, unassembled -C Without mounting ends -M Metric screws -Q Quick-connect assembly -R Rivet construction	Dimensions in parentheses are millimeters.
Top-side hardware (options; indicate circuit positions)	2310 thru 2318 Quick- connect terminals, .110" tab 1031 Jumper, hole 1032 Jumper, slotted	1210 thru 1218 Quick- connect terminals, .187" tab 1219 Quick-connect terminal, .110" tab 1431 Jumper, hole 1432 Jumper, slotted 7233 Jumper, edge on	1310 thru 1318 Quick- connect terminals, .250" tab 1831 Jumper, hole 1832 Jumper, slotted 7833 Jumper, edge on	2610 thru 2618 Quick- connect terminals, .250" tab 2131 Jumper, hole 2132 Jumper, slotted

*Vernitron estimates of UL and CSA ratings. UL recognition and CSA certification have been applied for.

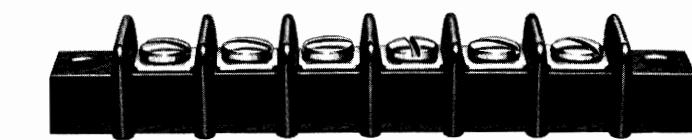
Dimensions in parentheses are millimeters.

How to Order

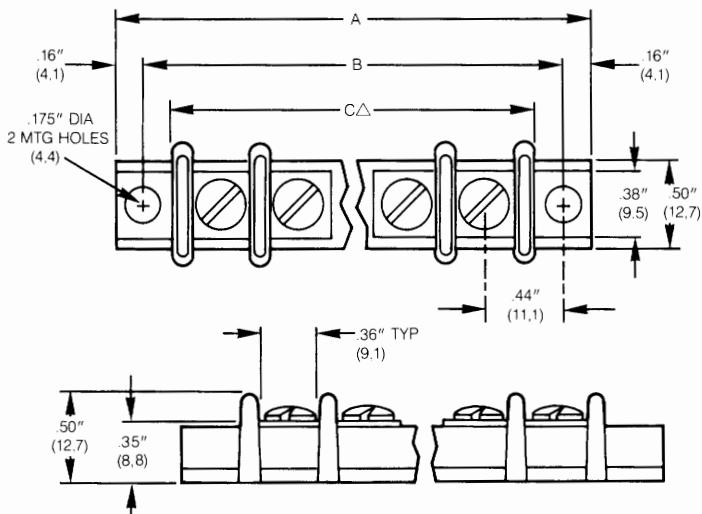
The basic catalog number contains five digits. As many options as are desired may be obtained by adding the appropriate dash numbers. For choices of terminals, numbers of circuits, and options available, refer to individual series.



Dimensions—25000



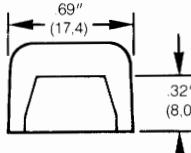
Actual size



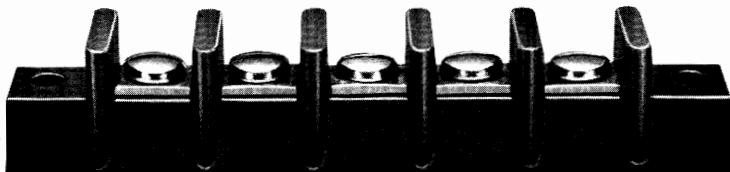
No. of circuits	A in.	B in.	CΔ in.
	mm	mm	mm
1	1.19	30.4	.88
2	1.63	41.3	1.31
3	2.06	52.3	1.75
4	2.50	63.6	2.19
5	2.94	74.8	2.63
6	3.38	85.7	3.06
7	3.81	96.6	3.50
8	4.25	108	3.94
9	4.69	119	4.38
10	5.13	130	4.81
11	5.56	141	5.25
12	6.00	153	5.69
13	6.44	164	6.13
14	6.88	175	6.56
15	7.31	186	7.00
16	7.75	197	7.44
17	8.19	208	7.88
18	8.63	219	8.31
19	9.06	230	8.75
20	9.50	241	9.19
21	9.94	253	9.63
22	10.38	264	10.06
23	10.81	275	10.50
24	11.25	286	10.94
25	11.69	297	11.38
26	12.12	308	11.81
27	12.56	319	12.25
28	13.00	330	12.69
29	13.44	341	13.13
30	13.88	353	13.56

Tolerance on length $\pm .015"$

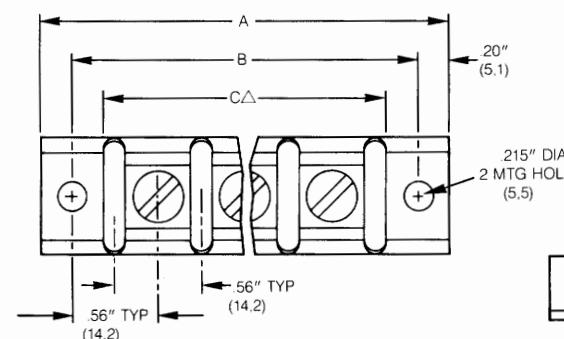
△Overall length without mounting ends.



Dimensions—26000



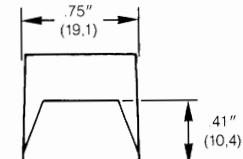
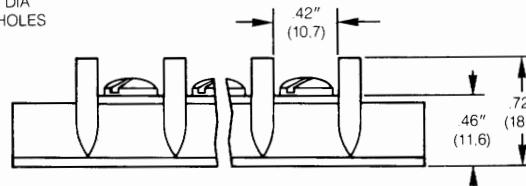
Actual size



No. of circuits	A in.	B in.	CΔ in.
	mm	mm	mm
1	1.53	38.9	1.13
2	2.09	53.2	1.69
3	2.66	67.5	2.25
4	3.22	81.7	2.81
5	3.78	96.0	3.37
6	4.34	110	3.94
7	4.91	125	4.50
8	5.47	139	5.06
9	6.03	153	5.62
10	6.59	167	6.19
11	7.16	182	6.75
12	7.72	196	7.31
13	8.28	210	7.88
14	8.84	225	8.44
15	9.41	239	9.00
16	9.97	253	9.56
17	10.53	268	10.13
18	11.09	282	10.69

Tolerance on length $\pm .015"$

△Overall length without mounting ends.



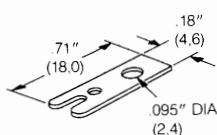
Top-side terminals—for 23000

Material: .020" (0.51) brass, solder plated (Styles 1 and 2)

0 Screws only

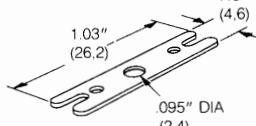


1 One-sided solder



To order in bulk
use Cat. No. 231

2 Two-sided solder

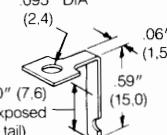


To order in bulk
use Cat. No. 232

Over-the-side terminals—for 23000

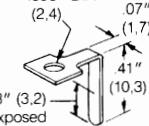
Material: .032" (0.8) brass, solder plated

3 Solder



To order in bulk
use Cat. No. 103

4 PC, short

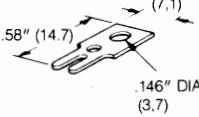
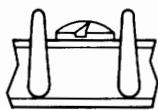


To order in bulk
use Cat. No. 104

Top-side terminals—for 24000

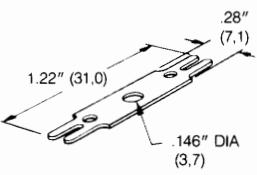
Material: .032" (0.8) brass, solder plated (Styles 1 and 2)

0 Screws only



To order in bulk
use Cat. No. 121

2 Two-sided solder

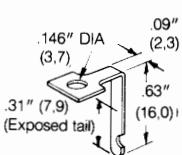


To order in bulk
use Cat. No. 122

Over-the-side terminals—for 24000

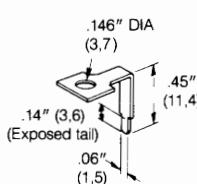
Material: .032" (0.8) brass (Style 3 solder plated; Style 4 bright electro-tinned)

3 Solder, short



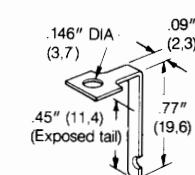
To order in bulk
use Cat. No. 143

4 PC, short



To order in bulk
use Cat. No. 144

5 Solder, long

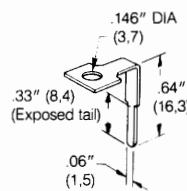


To order in bulk
use Cat. No. 145

Top-side terminals—for 25000

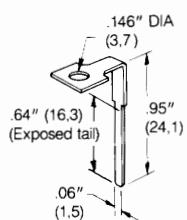
Material: .032" (0.8) brass, solder plated (Styles 1 and 2)

6 PC, long



To order in bulk
use Cat. No. 146

7 Wire wrap

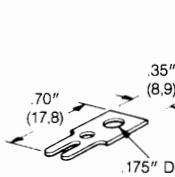


To order in bulk
use Cat. No. 147

0 Screws only

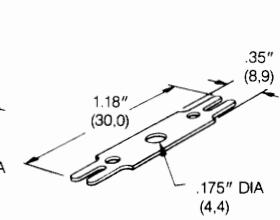


1 One-sided solder



To order in bulk
use Cat. No. 131

2 Two-sided solder

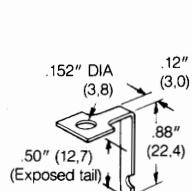


To order in bulk
use Cat. No. 132

Over-the-side terminals—for 25000

Material: .032" (0.8) brass (Style 3 solder plated)

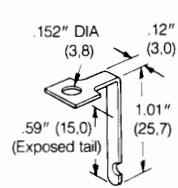
3 Solder, short



To order in bulk
use Cat. No. 183

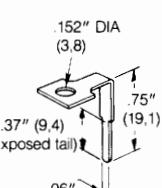
Material: .032" (0.8) brass (Styles 3 and 5 solder plated; Style 6 bright electro-tinned;
Style 7 bright electro-tinned or nickel)

5 Solder, long



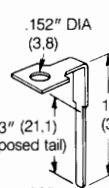
To order in bulk
use Cat. No. 185

6 PC, long



To order in bulk
use Cat. No. 186

7 Wire wrap

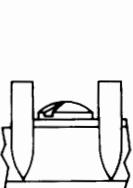


To order in bulk
use Cat. No. 187

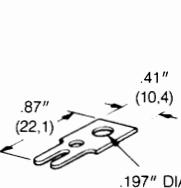
Top-side terminals—for 26000

Material: .032" (0.9) brass, solder plated (Styles 1 and 2)

0 Screws only

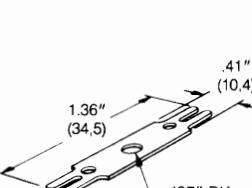


1 One-sided solder



To order in bulk
use Cat. No. 261

2 Two-sided solder

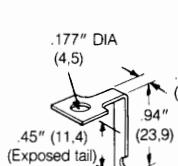


To order in bulk
use Cat. No. 262

Over-the-side terminals—for 26000

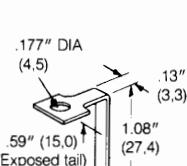
Material: .032" (0.8) brass, solder plated

3 Solder, short



To order in bulk
use Cat. No. 213

5 Solder, long



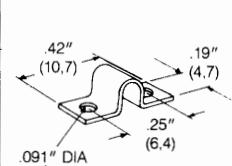
To order in bulk
use Cat. No. 215

Jumpers—for 23000

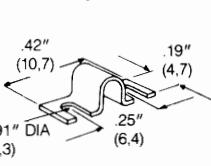
Material: .015" (0.4) brass, nickel plated

Options; when ordering, indicate circuit positions

1031 Jumper, hole



1032 Jumper, slotted

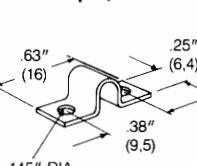


Jumpers—for 24000

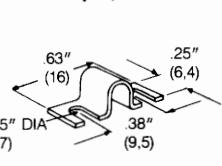
Material: .015" (0.4) brass, nickel plated; 7233 is .032" (0.8)

Options; when ordering, indicate circuit positions

1431 Jumper, hole



1432 Jumper, slotted



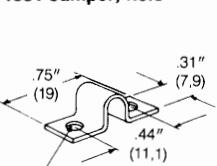
Jumpers—for 25000

Material: .015" (0.4) brass, nickel plated; 7833 is .032" (0.8)

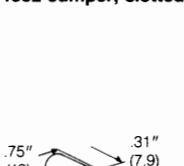
Options; when ordering, indicate circuit positions

Jumper, edge on

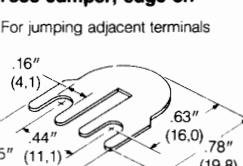
1831 Jumper, hole



1832 Jumper, slotted



7833 Jumper, edge on

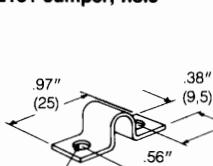


Jumpers—for 26000

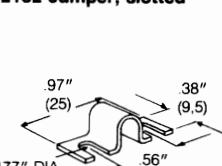
Material: .015" (0.4) brass, nickel plated

Options; when ordering, indicate circuit positions

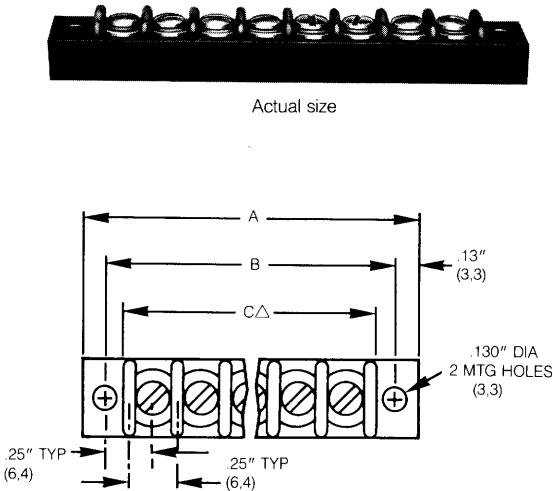
2131 Jumper, hole



2132 Jumper, slotted



Dimensions—23000

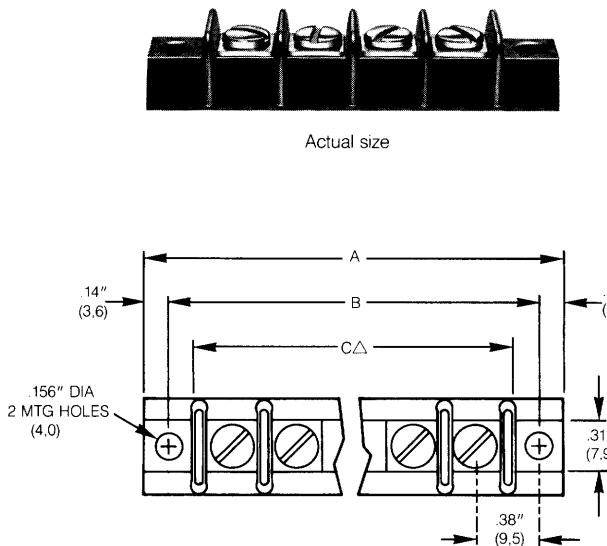


No. of circuits	A in. mm	B in. mm	C△ in. mm
1	.75	19.1	.31
2	1.00	25.4	.56
3	1.25	31.8	.81
4	1.50	38.1	1.06
5	1.75	44.5	1.31
6	2.00	50.8	1.56
7	2.25	57.2	1.81
8	2.50	63.5	2.06
9	2.75	69.9	2.31
10	3.00	76.2	2.56
11	3.25	82.6	2.81
12	3.50	88.9	3.06
13	3.75	95.3	3.31
14	4.00	102	3.56
15	4.25	108	3.81
16	4.50	114	4.06
17	4.75	121	4.31
18	5.00	127	4.56
19	5.25	133	4.81
20	5.50	140	5.06
21	5.75	146	5.31
22	6.00	152	5.56

Tolerance on length $\pm .015"$

△Overall length without mounting ends.

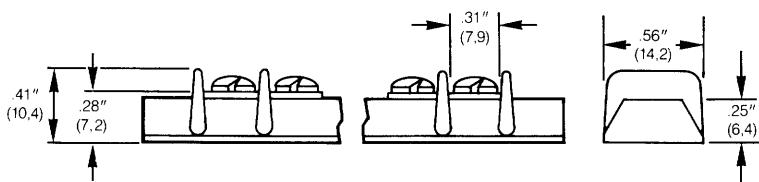
Dimensions—24000



No. of circuits	A in. mm	B in. mm	C△ in. mm
1	1.03	26.2	.52
2	1.41	35.8	.89
3	1.78	45.2	1.27
4	2.16	54.9	1.64
5	2.53	64.3	2.02
6	2.91	73.9	2.39
7	3.28	83.3	2.77
8	3.66	93.0	3.14
9	4.03	102	3.52
10	4.41	112	3.89
11	4.78	121	4.27
12	5.16	131	4.64
13	5.53	140	5.02
14	5.91	150	5.39
15	6.28	160	5.77
16	6.66	169	6.14
17	7.03	179	6.52
18	7.41	188	6.89
19	7.78	198	7.27
20	8.16	207	7.64
21	8.53	217	8.02
22	8.91	226	8.39
23	9.28	236	8.77
24	9.66	245	9.14
25	10.03	255	9.52
26	10.41	264	9.89
27	10.78	274	10.27
28	11.16	283	10.64
29	11.53	293	11.02
30	11.91	303	11.39

Tolerance on length $\pm .015"$

△Overall length without mounting ends.



Quick-connect terminals

Options; when ordering, indicate circuit positions

for 23000

Material: Brass, bright
tin plated
Tabs: .110" x .020"
thick

for 24000

Material: Cadmium-plated
brass
Tabs: .187" x .020"
thick (except No. 1219,
.110" x .020")

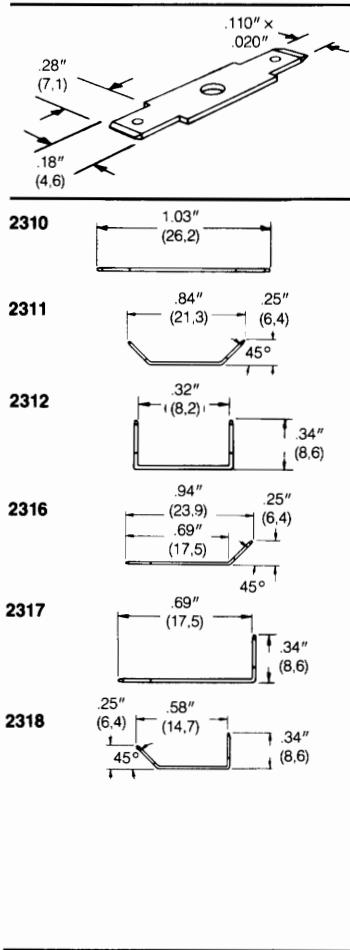
for 25000

Material: Cadmium-plated
brass
Tabs: .250" x .032"
thick

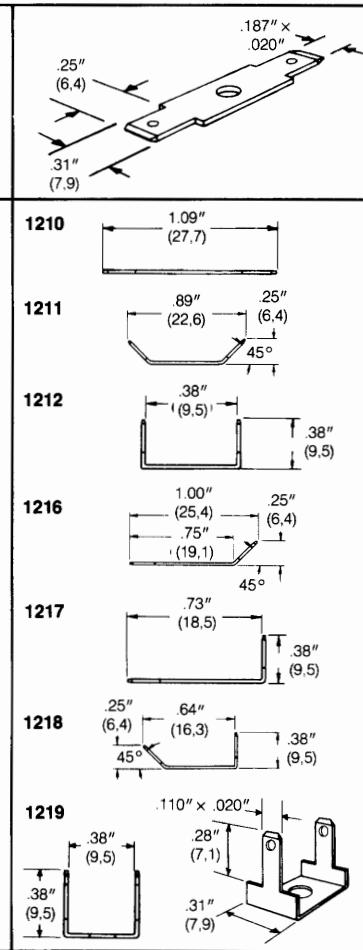
for 26000

Material: Brass, bright
electro-tinned
Tabs: .250" x .032"
thick

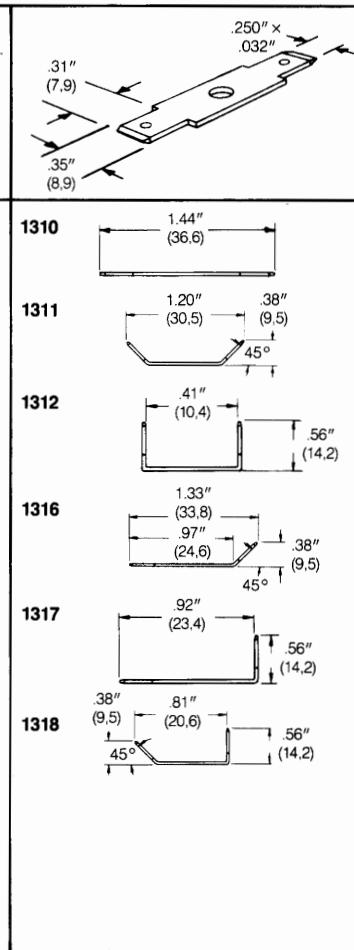
TWO-SIDED TABS



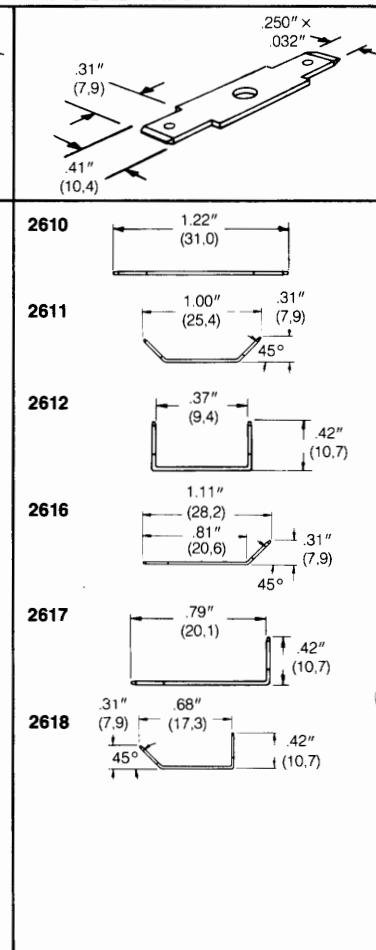
TWO-SIDED TABS



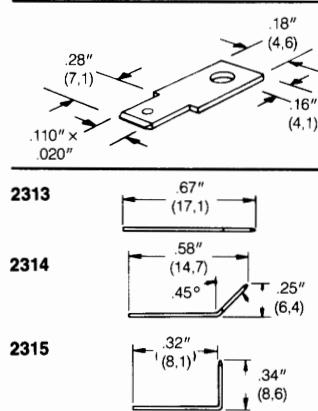
TWO-SIDED TABS



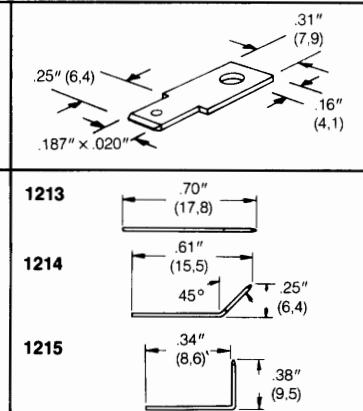
TWO-SIDED TABS



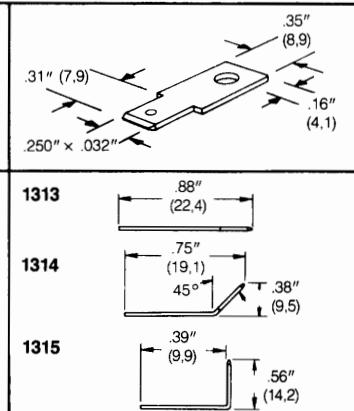
ONE-SIDED TABS



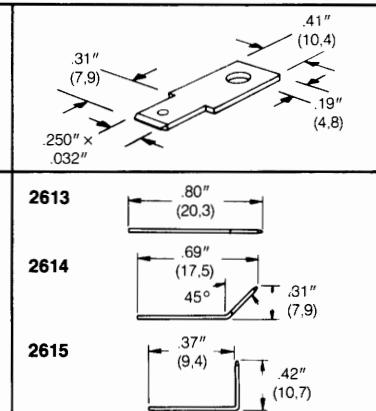
ONE-SIDED TABS



ONE-SIDED TABS



ONE-SIDED TABS



Information in this catalog is subject to change without notice. The information is believed to be accurate, however, Vernitron disclaims any liability for errors beyond the purchase price of the products shown.



VERNITRON CORPORATION
BEAU PRODUCTS DIVISION

Box 10, Laconia, New Hampshire 03246
Tel: (603) 524-5101 TWX: 710-364-1843

Beau® Barrier Terminal Strips

Double Row

50 amps
11/16" centers (17.5)

28000

Specifications

Series No.	28000
Construction	Open back
Terminal centers	11/16" (17.5)
Current rating, amps (UL)	50*
Voltage rating, rms	1700
1. UL Recognized...	
Class B: Comm'l equip	600*
Class C: Gen'l ind'l	600*
2. CSA Certified	600 @ 50 amps*
3. Withstand volts, rms	10500
Insulator material	General purpose phenolic. UL temp index 150°C. Color, black.
Width x height	1 13/16" x 3/4" (46.0 x 19.1)
Wire size recommended, max AWG	No. 6 lugged
Terminal screws (standard; also see options below).	No. 10-32 x 3/8" binding head screws. Brass, nickel plated
Top-side terminals (The 1-digit No. becomes 3rd digit of Cat. No.; 2-digit No. is dash No.)▲	0 Screws only 1 One-sided solder 2 Two-sided solder -70 Stud terminal
Bottom terminal (3rd digit of Cat. No.)▲	3 Solder, short
No. of circuits (4th & 5th digits of Cat. No.)▲	1 to 12
Options (add dash numbers (to Cat. No.)▲	-10A thru -11D Imprinting, one side -12A thru -13B Imprinting, both sides -51 Internal lock washer screws -53 Phillips head screws -58 Barrier supplied without screws -59 Screws supplied, unassembled -60 One row screws assembled, one row screws bulk -61 One row screws assembled, one row screws not supplied
Top-side hardware (option; indicate circuit positions)	2831 Jumper, hole

Dimensions in parentheses are millimeters.

*Vernitron estimates of UL and CSA ratings; UL recognition and CSA certification have been applied for.

▲HOW TO ORDER: See page 7 of Cat. #500.

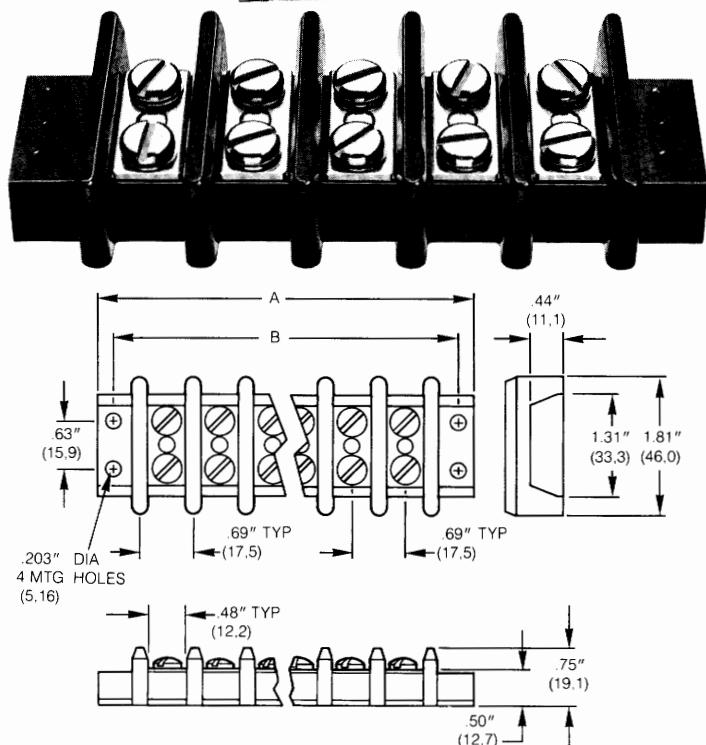
DEVERELL ASSOCIATES

WELLINGTON

REC. - 3 SEP 1985

ANSI.....

Dimensions



No. of circuits	A in. mm	B in. mm
1	1.81	46.0
2	2.50	63.5
3	3.19	81.0
4	3.88	98.4
5	4.56	116
6	5.25	133
7	5.94	151
8	6.63	168
9	7.31	186
10	8.00	203
11	8.69	221
12	9.38	238

Tolerance on length $\pm .015"$

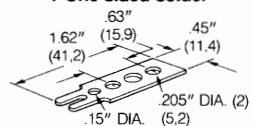
Top-side terminals

Material: 062" (1.6) brass (Style 0, nickel plated; Styles 1 and 2, solder plated)

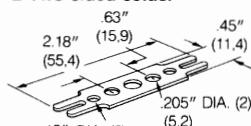
0 Screws only



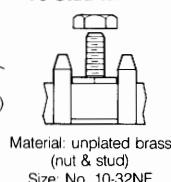
1 One-sided solder



2 Two-sided solder



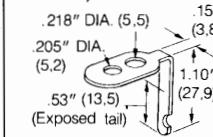
-70 Stud terminal



Bottom terminal

Material: 062" (1.6) brass, solder plated

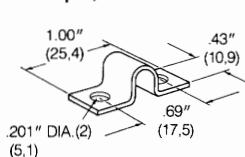
3 Solder, short



Jumper

Material: 032" (0.8) brass, nickel plated Option; when ordering, indicate circuit positions

2831 Jumper, hole



3108-3301-0000



VERNITRON CORPORATION
BEAU PRODUCTS DIVISION

Box 10, Laconia, New Hampshire 03246
Tel: (603) 524-5101 TWX: 710-364-1843



Beau® Barrier Terminal Strips

Single Row

20 amps
7/16" centers (11,1)
thermoplastic
74000 low profile

DEVERELL ASSOCIATES
WELLINGTON

REC. - 3 SEP 1985

ANSI.....

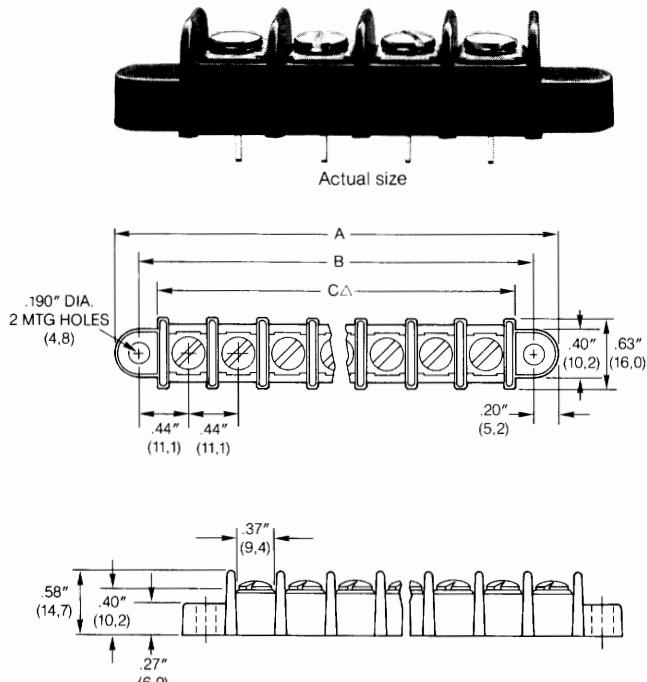
Specifications

Series No.	74000
Construction	Low barrier; closed back or feed thru
Terminal centers	7/16" (11,1)
Current rating, amps (UL)	20
Voltage rating, rms	
1. UL Recognized, Class...	
A. Commercial equipment	250
C. General industrial	300
2. CSA certified	300 @ 10 amps; 150 @ 20 amps
3. Withstand volts, rms	8500
Insulator material	Thermoplastic, glass-filled. UL temp index 105°C. UL flame retardant rating 94 V-O. Color, black.
Width x height	.63" x .58" (16.0 x 14.7)
Wire size recommended, max AWG	14
Terminal screws (standard; also see options below)	No. 6-32 x 1/4" binding head screws. Steel, nickel plated
Top-side terminals (3rd digit of Cat. No.)	1 Closed back, screws only
Bottom terminals (3rd digit of Cat. No.)	2 Insulated solder turret 3 Insulated PC 5 PC 6 Solder turret 7 Wire wrap 8 Right angle PC 9 Insulated quick-connect
No. of circuits (4th & 5th digits of Cat. No.)	1 to 30
Options (add dash number to Cat. No.)	-10A thru -11D Imprinting, one side -12A thru -13B Imprinting, both sides -49 Nickel-plated brass binding head screws -50 Rising surface clamp screws -51 Internal lock washer screws -52 External lock washer screws -53 Phillips head screws -56 Stainless steel screws -58 Barrier supplied without screws -59 Screws supplied, unassembled -A Oversize screws -C Without mounting ends -M Metric screws -P With standoff pads, .070" x .078" x .040"H (1.8 x 2.0 x 1.0) -V Polyester insulator material, UL temp index 130°C
Top-side hardware (options; indicate circuit positions)	7310 thru 7318 Quick-connect terminals, .250" tab 1831 Jumper, hole 1832 Jumper, slotted 7833 Jumper, edge on

Dimensions in parentheses are millimeters.

Avoid breakage with tough thermoplastic strips
Costly component replacement and re-wiring are no longer a problem with our flexible thermoplastic strips.

Dimensions



No. of circuits	A in. mm	B in. mm	C in. mm
1	1.28	32.4	.88
2	1.71	43.5	1.31
3	2.15	54.6	1.75
4	2.59	65.7	2.19
5	3.03	76.8	2.63
6	3.46	88.0	3.06
7	3.90	99.1	3.50
8	4.34	110	3.94
9	4.78	121	4.38
10	5.21	132	4.81
11	5.65	144	5.25
12	6.09	155	5.69
13	6.53	166	6.13
14	6.96	177	6.56
15	7.40	188	7.00
16	7.84	199	7.44
17	8.28	210	7.88
18	8.71	221	8.31
19	9.15	232	8.75
20	9.59	244	9.19
21	10.03	255	9.63
22	10.46	266	10.06
23	10.90	277	10.50
24	11.34	288	10.94
25	11.78	299	11.38
26	12.22	310	11.81
27	12.65	321	12.25
28	13.09	332	12.69
29	13.53	344	13.13
30	13.96	355	13.56

Tolerance on length $\pm .015"$

\triangle Overall length without mounting ends.

continued

Double the pull-out strength

Terminals are imbedded into the walls of the terminal block on both sides. This provides a pull-out strength over twice as great as competitive designs which retain the terminal only by twisting the terminal tail. Imbedding the terminals also eliminates solder joint fatigue from twisting the tail while torqueing the screws, and resists fatigue under vibration conditions.

Contact tails enclosed for maximum circuit isolation

Terminals are ultrasonically welded in, so there's no twisting of tails to secure them. Thus, the large hole usually needed for twisting action can be virtually the same size as the contact tail. With no cavities around dip solder contact tails, the terminal strip can be mounted directly on PC board without affecting isolation. No foreign matter is entrapped; solder wicking is reduced.

Top-sided terminal Material: .032" (0.8) brass, bright electro-tinned	Bottom terminals Material: .032" (0.8) brass, bright electro-tinned	2 Insulated solder turret	3 Insulated PC	5 PC	6 Solder turret
1 Closed back		<p>.32"D (8,1) .34"(8,6) .59"(15,0) .13" (3,3) .070" x .032" (1.8 x 0.8)</p>	<p>.32"D (8,1) .34"(8,6) .59"(15,0) .062" x .032" (1.6 x 0.8)</p>	<p>Pads (option) .22"(5,6) .062" x .032" (1.6 x 0.8)</p>	<p>.13" (3,2) .050" (1.3) .070" x .032" (1.8 x 0.8) .30" (7,6)</p>

7 Wire wrap	8 Right angle PC	9 Insulated quick-connect	Jumper Material: .015" (0.4) brass, nickel plated; 7833 is .032" (0.8) Option: when ordering, indicate circuit positions
<p>.59"(15,0) .062" x .032" (1.6 x 0.8)</p>	<p>.08" (2,0) .062" x .032" (1.6 x 0.8) * Right angles can be formed to customer requirements</p>	<p>.59"(15,0) .34"(8,6) .32"D (8,1) .250" x .032"</p>	<p>1831 Jumper, hole 1832 Jumper, slotted 7833 Jumper, edge on For jumping adjacent terminals</p> <p>Dimensions for jumpers: 1831: .75" (19), .31" (7,9), .44" (11,1), .156" DIA. (4,0) 1832: .75" (19), .31" (7,9), .44" (11,1), .156" DIA. (4,0) 7833: .16"(4,1), .63" (16,0), .44" (11,1), .75" (19,1), .44" (11,1), .16" (4,1), .63" (16,0), .78" (19,8)</p>

Quick-connect terminals

Material: Brass, bright electro-tinned
Options: when ordering, indicate circuit positions

One-sided	 .250" tab x .032" thick	7313	7314	7315
	<p>.31" (7,9) .37" (9,4) .16" (4,1) .250" x .032"</p>		<p>.75" (19,1) 63" (16,0) 45° .31" (7,9)</p>	<p>.33" (8,4) 44" (11,1)</p>
Two-sided	 .250" tab x .032" thick	7310	7311	7312
	<p>.31" (7,9) .37" (9,4) .250" x .032"</p>	<p>1.20" (30,5) .98" (25,0) 45° .31" (7,9)</p>	<p>.34" (8,6) .44" (11,1)</p>	
	7316	7317	7318	
	<p>1.06" (27,0) .78" (19,8) 45° .31" (7,9)</p>	<p>.77" (19,6) .44" (11,1)</p>	<p>.31" (7,9) .64" (16,3) 45° .44" (11,1)</p>	



VERNITRON CORPORATION
BEAU PRODUCTS DIVISION

Box 10, Laconia, New Hampshire 03246
Tel: (603) 524-5101 TWX: 710-364-1843

Also available in Canada, England, Europe and Japan.

Bulletin 510 (Rev. 1)