

#### **AMPLIMITE .050 Series Cable Assemblies, Series III**

To meet Standard
Applications the following
106 ohm, black jacketed
cable assemblies are available. For AMPLIMITE .050
Series cable assemblies that
meet other impedance
requirements or other
lengths consult TE.



IPI-2 and HIPPI

Annlination	Accombly	Part Numbers				
Application	Assembly	2 Feet	2 Meters	3 Meters		
SCSI-2	50 pos050 Series Plug to 50 pos050 Series Plug	750254-1	5750254-2	750254-3		
SCSI-2*	68 pos050 Series Plug to 68 pos050 Series Plug	_	5750732-2	5750732-4		
RS-232 (Alternate)	26 pos050 Series Plug to 26 pos050 Series Plug	_	750255-2	750255-3		

A !! !!	Assaulth	Part Numbers				
Application	Assembly	5 Meters	15 Meters	25 Meters		
IPI-2 and HIPPI	100 pos050 Series Plug to 100 pos050 Series Plug	749755-2	_	_		

<sup>\*</sup>This version has spring latches. Consult TE for availability of jackscrew version.

Note: .050 centerline ribbon cable assemblies are available in single or double ended versions. These assemblies are made using AMPLIMITE .050 Series panel mount connectors, AMPLIMITE .050 Series all-plastic connectors and AMP-LATCH Novo receptacles. Consult TE.

SCSI—Small Computer Systems Interface HIPPI—High Performance Parallel Interface IPI—Intelligent Peripheral Interface



#### AMPLIMITE .050 Series Right-Angle Receptacle Headers, Series III



#### Materials:

**Housing** — Thermoplastic, 94V-0 rated, black. SMT compatible

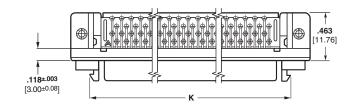
**Shell** — Steel, plated bright nickel over copper

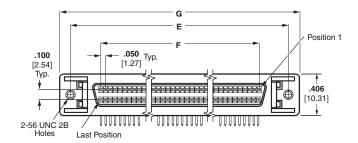
**Bracket** — Zinc, plated nickel over copper

**Contacts** — Phosphor bronze, duplex plated [.000030] 0.00076 min. gold on mating end; tin on solder end; all underplated nickel

#### **Technical Documents:**

**Product Specifications** — 108-1228 **Application Specifications** — 114-40029





Note: Refer to TE Customer drawings and Application Spec for PCB & panel layouts.







Shown With Boardlocks

Shown With Boardlocks

Shown With Boardlocks

							Part Numbers	5				
				w/ Rails and	Latchblocks	w/o Rails, w	ı/ Latchblocks	w/o	Rails, w/o Lat	chblocks		
	Dime:	nsions G	K		With .100 [2.54] Solder Tails					With .100 [2.54] Solder Tails		With .120 [3.05] Solder Tails
				Without Boardlocks	With Boardlocks	Without Boardlocks	With Boardlocks	Without Boardlocks	With Boardlocks	With Boardlocks		
<b>1.580</b> 40.13	<b>.950</b> 24.13	<b>1.815</b> 46.10	<b>1.415</b> 35.94	_	1761028-2	_	5787082-3	_	5787170-4*	_		
<b>1.830</b> 46.48	<b>1.200</b> 30.48	<b>2.065</b> 52.45	<b>1.665</b> 42.29	5787190-5	1761028-3	5787394-5	5787082-5	_	5787170-5*	5787362-5*		
<b>1.830</b> 46.48	<b>1.200</b> 30.48	<b>2.065</b> 52.45	<b>1.665</b> 42.29	_	5787266-5*	_	5787395-5*	_	_	_		
<b>2.280</b> 57.91	<b>1.650</b> 41.91	<b>2.515</b> 63.88	<b>2.115</b> 53.72	5787190-7	1761028-4	5787394-7	5787082-7	5787169-7*	5787170-7*	5787362-7*		
<b>3.080</b> 78.23	<b>2.450</b> 62.23	<b>3.315</b> 84.20	<b>2.915</b> 74.04	_	1761028-5	_	5787082-9	5787169-9*	5787170-9*	5787362-9*		
	40.13 1.830 46.48 1.830 46.48 2.280 57.91 3.080	1.580 .950 40.13 24.13 1.830 1.200 46.48 30.48 1.830 1.200 46.48 30.48 2.280 1.650 57.91 41.91 3.080 2.450	1.580     .950     1.815       40.13     24.13     46.10       1.830     1.200     2.065       46.48     30.48     52.45       1.830     1.200     2.065       46.48     30.48     52.45       2.280     1.650     2.515       57.91     41.91     63.88       3.080     2.450     3.315	E         F         G         K           1.580         .950         1.815         1.415           40.13         24.13         46.10         35.94           1.830         1.200         2.065         1.665           46.48         30.48         52.45         42.29           1.830         1.200         2.065         1.665           46.48         30.48         52.45         42.29           2.280         1.650         2.515         2.115           57.91         41.91         63.88         53.72           3.080         2.450         3.315         2.915	Dimensions   With .10	E         F         G         K         Solder Tails Solder Tails Without Boardlocks         Without Boardlocks         With Boardlocks           1.580         .950         1.815         1.415         —         1761028-2           1.830         1.200         2.065         1.665         5787190-5         1761028-3           1.830         1.200         2.065         1.665         5787190-5         1761028-3           46.48         30.48         52.45         42.29         —         5787266-5*           46.48         30.48         52.45         42.29         —         5787266-5*           46.48         30.48         52.45         42.29         —         5787266-5*           46.48         30.48         52.45         42.29         —         5787266-5*           46.49         30.48         52.45         42.29         —         5787190-7         1761028-4           57.91         41.91         63.88         53.72         5787190-7         1761028-5           3.080         2.450         3.315         2.915         —         1761028-5	Dimensions   With .100 [2.54]   With .15	Note	Note	Note		

<sup>\*</sup>Has 4-40 threaded mating holes (2 places), for use with female screwlock Part No. 750644-1.

Note: All part numbers are RoHS compliant.



### AMPLIMITE .050 Series Vertical Receptacle Headers With Through-Hole Tails, Series III



#### **Materials:**

**Housing**—Thermoplastic, 94V-0 rated, black. SMT compatible

**Shell**—Steel, plated bright nickel over copper

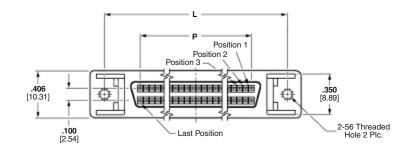
**Bracket**—Zinc, plated nickel over copper

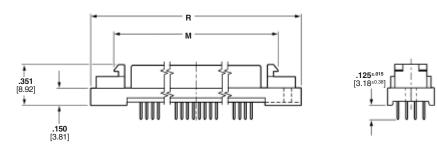
Contacts—Phosphor bronze, duplex plated .000030 [0.00076] min. gold on mating end; tin on solder end; all underplated nickel

#### **Technical Documents:**

Product Specifications—108-1228
Application Specifications—
114-40029

**Note:** Extra pin contact protection is provided by rails, which facilitate a straight-out, unmating motion. A side-to-side rocking motion should not be used to disengage the connector system.





Note: Refer to TE Customer drawings and Application Spec for PCB & panel layouts.



Part Number 749721-5

Part Number 749070-7

No. of		Dime	nsions		Part Numbers				
Pos.	L	M	Р	R	w/ Rails & Latchblocks	w/ Latchblocks	Plain		
20	<b>1.080</b> 27.43	<b>.915</b> 23.24	<b>.450</b> 11.43	<b>1.315</b> 33.40	5749069-1	_	_		
26	<b>1.230</b> 31.34	<b>1.065</b> 27.05	<b>.600</b> 15.24	<b>1.465</b> 37.21	5749069-2	_	_		
28	<b>1.280</b> 32.51	<b>1.115</b> 28.32	<b>.650</b> 16.51	<b>1.515</b> 38.48	_	5749721-3	_		
40	<b>1.580</b> 40.13	<b>1.415</b> 35.94	<b>.950</b> 24.13	<b>1.815</b> 46.10	5749069-4	_	_		
50	<b>1.830</b> 46.48	<b>1.665</b> 42.29	<b>1.200</b> 30.48	<b>2.065</b> 52.45	5749069-5	5749721-5	5749070-5		
68	<b>2.280</b> 57.91	<b>2.115</b> 53.72	<b>1.650</b> 41.91	<b>2.515</b> 63.88	5749069-7	5749721-7	5749070-7		
80	<b>2.580</b> 65.53	<b>2.415</b> 61.34	<b>1.950</b> 49.53	<b>2.815</b> 71.50	5749069-8	_	_		
100	<b>3.080</b> 78.23	<b>2.915</b> 74.04	<b>2.450</b> 62.23	<b>3.315</b> 84.20	5749069-9	_	5749070-9		

Note: All part numbers are RoHS compliant.

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Canada: +1 (905) 475-6222 Mexico/C. Am.: +52 (0) 55-1106-0800 Latin/S. Am.: +54 (0) 11-4733-2200 Germany: +49 (0) 6251-133-1999 UK: +44 (0) 800-267666 France: +33 (0) 1-3420-8686 Netherlands: +31 (0) 73-6246-999 China: +86 (0) 400-820-6015



### AMPLIMITE .050 Series Vertical Receptacle Headers With Through-Hole Tails, Series III (Continued)

#### .120 [3.05] Solder Tail Length



#### **Materials:**

**Housing**—Thermoplastic, 94V-0 rated, black. SMT compatible

**Shell**—Steel, plated bright nickel over copper

**Bracket**—Zinc, plated nickel over copper

**Contacts**—Phosphor bronze, duplex plated .000030 [0.00076] min. gold on mating end; tin on solder end; all underplated nickel

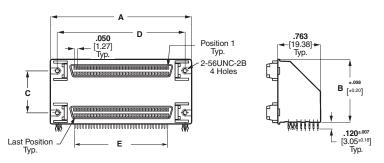
#### **Related Product Data:**

Required Hardware—page 26

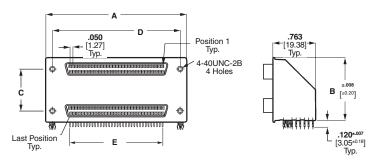
#### **Technical Documents:**

**Product Specifications**—108-1228-1 **Application Specifications**— 114-40029

**Note:** Extra pin contact protection is provided by rails, which facilitate a straight-out unmating motion. A side-to-side rocking motion should not be used to disengage the connector system.



Rails and Latch Blocks



Flat Top Configuration

Note: Refer to TE Customer drawings and Application Spec for PCB & panel layouts.

No. of		Dimensions						
Pos.	Α	В	С	D	E	Part No.		
50/50	<b>2.085</b> 52.96	<b>.874</b> 22.20	<b>.500</b> 12.70	<b>1.830</b> 46.48	<b>1.200</b> 30.48	5787656-1		
68/68	<b>2.535</b> 64.39	<b>1.124</b> 28.55	<b>.750</b> 19.05	<b>2.280</b> 57.91	<b>1.650</b> 41.91	5787678-1		
68/68	<b>2.535</b> 64.39	<b>1.124</b> 28.55	<b>.750</b> 19.05	<b>2.280</b> 57.91	<b>1.650</b> 41.91	5787679-1*		

<sup>\*</sup>Flat-top configuration.

Note: All part numbers are RoHS compliant.



### AMPLIMITE .050 Series Vertical Receptacle Headers, Series III, with ACTION PIN Contacts (.050 x .100 [1.27 x 2.54] Centerlines)

#### **Product Facts**

- Recognized under the Component Program of the Underwriters Laboratories, Inc., File No. E28476
- Certified by Canadian Standards Association, File No. 1088108 (LR 7189A-207)



 Produced under a Quality Management System certified to ISO 9001

A copy of the certificate is available upon request





Shielded AMPLIMITE .050 Series headers with ACTION PIN contacts offer a high-density D type interface, and a solderless board-mount interconnection. These vertical mount headers are available in 20, 26, 50, 68 and 100 contact sizes. Choice of configurations includes; headers with rails and latch blocks, with latch blocks only, and without rails and latch blocks.

ACTION PIN contact tails are available in two lengths; .173 [4.39] for pc boards with a nominal thickness of .062 [1.56] to .093 [2.36], and .280 [7.11] for pc boards with a nominal thickness of .125 [3.18] to .200 [5.08].

AMPLIMITE .050 Series headers with ACTION PIN contacts are compatible with SCSI-2, SCSI-3, EIA RS-232, IPI-2 and HIPPI standards.

#### Principle of the AMPLIMITE .050 Series Compliant ACTION PIN Contact

When an AMPLIMITE .050 Series compliant ACTION PIN contact is inserted into a plated-through-hole, two spring members are compressed, exerting force against the hole for a gas-tight connection. The diameter of the hole is smaller than the diagonal size of the pin.

The beam characteristics of the pin are designed so that a plastic, as well as an elastic, deformation takes place during insertion. The two spring members compress to different degrees to accommodate hole tolerances. The compliant pin also reduces strain on the board. With a rigid pin, the elastic strain energy is stored entirely in the board, leading to damage of the platedthrough holes. With the

AMPLIMITE .050 Series compliant ACTION PIN contact, the residual force of the elastic deformation maintains stored energy to produce a gas-tight contact zone between the pin and the plated-through-hole. This ensures long term electrical and mechanical reliability of the interconnection.

### Technical Documents: Product Specification—

108-1228-2

**Application Specification**—114-40029

#### Instruction Sheets-

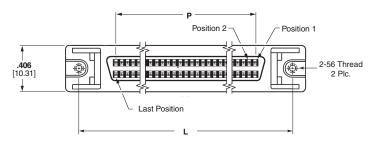
pc board support

408 6923—AMP Manual Arbor Frame Assembly 408 9027—AMP Adapter Kit for Greenerd Frame Assemblies 3A and 3B 408 9757—Seating Instructions and Tooling 408 6927—Recommendations for



#### **AMPLIMITE .050 Series Vertical Receptacle Headers**, with ACTION PIN Tails, Series III





#### **Materials:**

Housings—Thermoplastic, 94V-0 rated, black, SMT compatible

Shell—Carbon steel, plated bright tin over copper

Bracket—Zinc, plated nickel over copper

Contacts—Phosphor bronze, duplex plated .000030 [0.00076] min. gold on mating end; tin on solder end; all underplated nickel

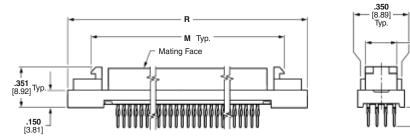
#### **Technical Documents:**

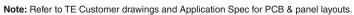
**Product Specifications**-

108-1228-2

Application Specifications— 114-40029

Note: Extra pin contact protection is provided by rails, which facilitate a straight-out unmating motion. A side-to-side rocking motion should not be used to disengage the connector











±.015

Part Number 786554-1

Part Number 786554-7

Part Number 786155-7

No. of		ı	Dimension	S		Part Numbers				
Pos.	L	M	Р	R	S	w/ Rails & Latchblocks	w/ Latchblocks	Plain		
20	<b>1.080</b> 27.43	<b>.915</b> 23.24	<b>.450</b> 11.43	<b>1.315</b> 33.40	<b>.173</b> 4.39	5786554-1	_	_		
26	<b>1.230</b> 31.34	<b>1.065</b> 27.05	<b>.600</b> 15.24	<b>1.465</b> 37.21	<b>.173</b> 4.39	5786554-2	_	_		
50 1.83	1.830	1.665	1.200	2.065	<b>.173</b> 4.39	5786554-5	5786155-5	5786555-5		
50	46.48	42.29	30.48	52.45	52.45	<b>.280</b> 7.11	5786556-5	_	_	
68	2.280	2.115	1.650	2.515	<b>.173</b> 4.39	5786554-7	5786155-7	5786555-7		
00	57.91	53.72	41.91	63.88	<b>.280</b> 7.11	_	786155-7	5786557-7		
100	<b>3.080</b> 78.23	<b>2.915</b> 74.04	<b>2.450</b> 62.23	<b>3.315</b> 84.20	<b>.173</b> 4.39	5786554-9	_	5786555-9		
120	<b>3.580</b> 90.93	<b>3.415</b> 86.74	<b>2.950</b> 74.93	<b>3.815</b> 96.90	<b>.173</b> 4.39	1-5786554-0	_	_		

Note: All part numbers are RoHS compliant.

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#### **AMPLIMITE .050 Series Cable Plug Connectors, Series III**

#### **Shielded Plugs**



Shielded Plug



**Wire Lacing Termination Covers** 

#### **Materials:**

#### Housing and Covers-

Thermoplastic, 94V-0 rated, black or

**Contacts**—Phosphor bronze, duplex plated .000030 [0.00076] min. gold on mating end, tin on termination end, all underplated .nickel

Shell—Steel, plated tin-nickel alloy over nickel over min. copper

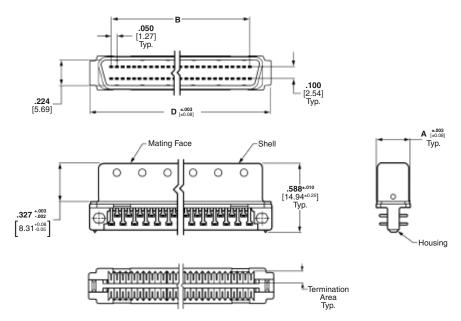
#### Recommended wire size-28 AWG [0.08-0.09mm<sup>2</sup>] or 30 AWG [0.05mm<sup>2</sup>], solid or

7 strand, with a .029-.036 [0.74-0.89] insulation diameter.

**Technical Documents:** Product Specifications—108-1228 Application Specifications—

Instruction Sheet—408-9427

114-40029



Shielded Plug with Unassembled Wire Lacing Termination Covers

#### **Connector With Unassembled Wire Lacing Termination Covers**

				Part Numbers			
No. of		Dimensions		.032036	.029031		
Pos.	Α	В	D	[0.81-0.91] Outer Wire Dia. Black	[0.74-0.79] Outer Wire Dia. Gray		
26	<b>.293</b> 7.44	<b>.600</b> 15.24	<b>.979</b> 24.87	5750913-2	1-5750913-2		
50	<b>.293</b> 7.44	<b>1.200</b> 30.48	<b>1.579</b> 40.11	5750913-5	1-5750913-5		
68	<b>.293</b> 7.44	<b>1.650</b> 41.91	<b>2.029</b> 51.54	5750913-7	1-5750913-7		
100	<b>.373</b> 9.47	<b>2.450</b> 62.23	<b>2.829</b> 71.86	_	1-5750913-9		

Notes: 1. Plug connector requires backshell kit for complete assembly. Refer to pages 16-19 for backshell kit part

2. For termination, cover closing and wire lacing tooling, see page 14.



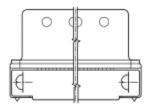
#### AMPLIMITE .050 Series Cable Plug Connectors, Series III (Continued)

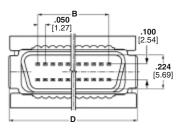
#### **Shielded Plugs**

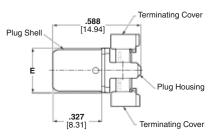
(Continued)



Shielded Plug with Unassembled Standard Termination Covers









Shielded Plug with Assembled Standard Termination Covers

#### Materials:

#### Housing and Covers-

Thermoplastic, 94V-0 rated, black

**Contacts**—Phosphor bronze, duplex plated .000030 [0.00076] min. gold on mating end, tin on termination end, all underplated nickel

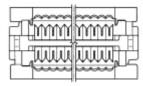
**Shell**—Steel, plated tin-nickel alloy over nickel over copper

Recommended wire size<sup>3</sup> — 28 AWG [0.08-0.09mm²] or 30 AWG [0.05mm²], solid or 7 strand, with a .029-.036 [0.74-0.89] insulation diameter.

### Technical Documents: Product Specifications—108-1228 Application Specifications—

114-40029

Instruction Sheet—408-9427



Shielded Plug with Assembled or Unassembled Standard Termination Covers

Note: Refer to TE Customer drawings and Application Spec for PCB & panel layouts.

#### **Connectors With Standard Termination Covers**

No. of		Dimensions		Part Nun	nbers
Pos.	В	D	Е	w/Rails & Latchblocks	w/Latchblocks
20	<b>.450</b> 11.43	<b>.829</b> 21.06	<b>.293</b> 7.44	5749111-1	5749621-1
26	<b>.600</b> 15.24	<b>.979</b> 24.87	<b>.293</b> 7.44	1-5749111-0	5749621-2
28	<b>.650</b> 16.50	<b>1.029</b> 26.14	<b>.293</b> 7.44	_	5749621-3
40	<b>.950</b> 24.13	<b>1.329</b> 33.76	<b>.293</b> 7.44	5749111-3	5749621-4
50	<b>1.200</b> 30.48	<b>1.579</b> 40.11	<b>.293</b> 7.44	5749111-4	5749621-5
68	<b>1.650</b> 41.91	<b>2.029</b> 51.54	<b>.293</b> 7.44	5749111-6	5749621-7
80	<b>1.950</b> 49.53	<b>2.329</b> 59.16	<b>.373</b> 9.47	5749111-7	5749621-8
100	<b>2.450</b> 62.23	<b>2.829</b> 71.86	<b>.373</b> 9.47	5749111-8	5749621-9
120	<b>2.950</b> 74.93	<b>3.329</b> 84.56	<b>.373</b> 9.47	5749111-9	1-5749621-0

**Notes:** 1. Plug connector requires backshell kit for complete assembly and must use round jacketed cable (discrete or laminated). Refer to pages 16-19 for backshell kit part numbers.

2. For termination tooling, see pages 28 & 29

3. The CHAMPOMATOR 2.5 Automatic Termination Machine will accept diameters as low as .023 [0.58].



#### AMPLIMITE .050 Series Cable Plug Connectors, Series III (Continued)

#### AMPLIMITE .050 Series Connector Application Tooling for Use with Wire Lacing Termination Covers

#### Manual Arbor Frame Assembly—Part No. 58024-1

Equipped with Cover Lacing Assembly—**Part No. 91293-1** (Includes Seating Bars for 50 and 100 Positions). See Table 3 for Seating Bar Part Numbers.

Extra Lacing Stations available for use with Lacing Assembly—Part No. 91293-1 Order Lower Tooling Assembly—Part No. 543481-1

**Note:** AMP Manual Miniature Applicator Frame Assembly, Cover Closing Kit, and Staple Insertion Kit each must be ordered separately by part number.



Arbor Frame, Part No. 58024-1 Equipped with Cover Lacing Assembly, Part No. 91293-1



Lower Tooling Assembly Part No. 543481-1



Part No. 91295-1 Equipped with Cover Closing Kit Part No. 543508-1

#### Table Number 3

No. of Pos.	Seating Bar Part No.
26	543494-2
40	543494-3
50	543494-1
68	543502-2
100	543502-1

**Note:** All Tooling must be ordered separately by part number.



**Seatings Bars** 



#### AMPLIMITE .050 Series Cable Receptacle Connectors, Series III

#### **Shielded Receptacles**



**Shielded Receptacle** with Assembled **Termination Covers** 

#### Materials:

#### Housing and Covers-

Thermoplastic, 94V-0 rated, black

**Contacts**—Phosphor bronze, duplex plated .000030 [0.00076] min. gold on mating end, tin on termination end, all underplated nickel

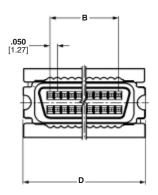
Shell—Steel, plated bright tin over copper

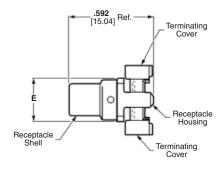
#### Recommended wire size-

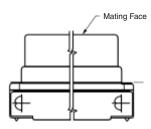
28 AWG [0.08-0.09mm<sup>2</sup>] or 30 AWG [0.05mm<sup>2</sup>], solid or 7 strand, with a .029-.036 [0.74-0.89] insulation diameter.

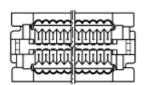
#### **Technical Documents:**

Product Specifications—108-1228 Application Specifications-114-40029









		Dimensions		Part N	Numbers
No. of Pos.				Connectors With Stan	dard Termination Covers
FUS.	В	D	E	Assembled Covers	Unassembled Covers
40	<b>.950</b> 24.13	<b>1.329</b> 33.76	<b>.293</b> 7.44	_	_
50	<b>1.200</b> 30.48	<b>1.579</b> 40.11	<b>.293</b> 7.44	5749210-5	5749699-5
68	<b>1.650</b> 41.91	<b>2.029</b> 51.54	<b>.293</b> 7.44	5749210-7	5749699-7
100	<b>2.450</b> 62.23	<b>2.829</b> 71.86	<b>.373</b> 9.47	_	5749699-8

Notes: 1. Receptacle connector requires backshell kit for complete assembly. Refer to pages 16-19 for backshell kit part numbers.

- 2. For termination, cover closing and wire lacing tooling, see page 14.
  3. For Termination Tooling other than Wire Lacing see pages 28 & 29.



### AMPLIMITE .050 Series Shielded Backshell Kits, With Jackscrews, Series III



Straight Exit Male Jackscrews Style A



Straight Exit Male Jackscrews Style B



Straight Exit Female Jackscrews Style A

#### **Materials:**

**Jackscrews**—Stainless steel or steel, black electroless nickel plated

**Jackscrew Caps**—Polyolefin or PVC, black

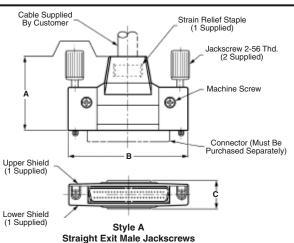
2-56 Screws—Stainless steel

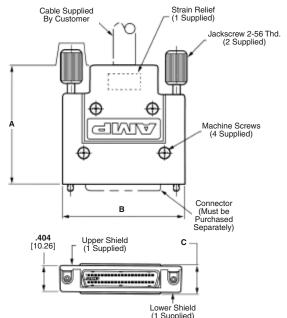
**Backshell**—Zinc, plated nickel over copper

**Strain Relief Staple**—Steel, plated tin over nickel

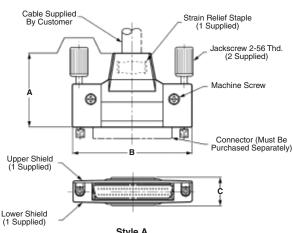
Technical Documents: Product Specifications—108-1228 Application Specifications— 114-40029

Instruction Sheet—408-9427





Style B
Straight Exit Male Jackscrews



Style A Straight Exit Female Jackscrews



#### AMPLIMITE .050 Series Shielded Backshell Kits, With Jackscrews, Series III (Continued)

No. of	0. 1.		Dimensions			Max.	Male with	Female with
Pos.	Style	Α	В	С	Pkg.	O.D.	#2-56 Threads	#2-56 Threads
					Bulk	<b>.450</b> 11.43	5787543-1	5787543-7
40	В	<b>1.822</b> 46.25	<b>1.830</b> 46.48	<b>.456</b> 11.58	Bulk	<b>.400</b> 10.16	5787543-2	5787543-8
					Bulk	<b>.350</b> 8.89	5787543-3	5787543-9
50	A 1.270	1.270 2.085	.480	Individual	<b>.400</b> 10.16	5749080-1	_	
50	A	32.26	52.96	52.96 12.19	Bulk	<b>.400</b> 10.16	5749080-2	_
60	D	<b>1.887</b> 47.93	<b>2.645</b> 67.18	<b>.660</b> 16.76	Bulk	<b>.550</b> 13.97	5750752-3	_
68 B	Б	<b>1.822</b> 46.28	<b>2.525</b> 64.14	<b>.564</b> 14.33	Individual	<b>.550</b> 13.97	5786152-3	_
100 A	۸	<b>2.082</b> 52.88	<b>3.325</b> 84.46	<b>.615</b> 15.62	Individual	<b>.500</b> 12.70	5749854-1	_
	A	A 1.695 3.325 43.05 84.46	<b>.595</b> 15.11	Individual	<b>.500</b> 12.70	5749081-1	_	

Notes: 1. Each backshell kit includes upper and lower backshells, two male or female jackscrews, one strain relief staple and two or four #2-56 screws. All are packaged unassembled.

2. For Staple Insertion Tooling see page 29.



### AMPLIMITE .050 Series Shielded Backshell Kits, With Spring Latches, Series III



Style A Straight Exit with Latches



Style A Angled Exit with Latches



Style B Straight Exit with Latches

#### Materials:

**Backshell**—Zinc, plated nickel over copper

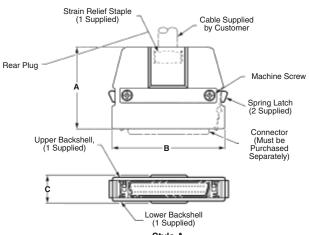
Spring Latch—Stainless steel
2-56 Screws—Stainless steel
Strain Relief Staple—Steel, plated tin over nickel

#### **Technical Documents:**

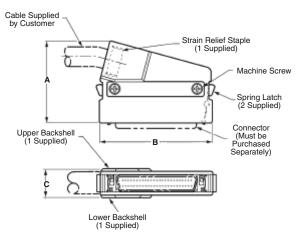
**Product Specifications**—108-1228 **Application Specifications**— 114-40029

Instruction Sheet—408-9427

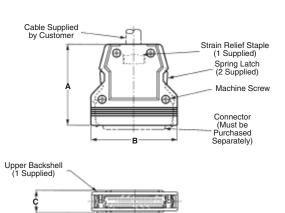
**Note:** Extra pin contact protection is provided by rails on the receptacle, which facilitate a straight-out unmating motion. A side-to-side rocking motion should not be used to disengage the connector system.



Style A Straight Exit with Latches



Style A Angled Exit with Latches



Lower Backshell
(1 Supplied)

Style B

Straight Exit with Latches



### $\begin{tabular}{ll} AMPLIMITE .050 Series Shielded Backshell Kits, With Spring Latches, Series III ({\tt Continued}) \\ \end{tabular}$

No. of	Style		Dimensions		Pkg.	Max.	Straight Exit with	Angled Exit with	
Pos.	Style	Α	В	С	rky.	O.D.	Latches	Latches	
20	Α	<b>1.290</b> 32.77	<b>1.215</b> 30.86	<b>.400</b> 10.16	Individual	<b>.270</b> 6.86	5749190-1	5749199-1	
00	Α	<b>1.290</b> 32.77	<b>1.365</b> 34.67	<b>.400</b> 10.16	Individual	<b>.270</b> 6.86	_	5749609-1	
26	В	<b>1.290</b> 32.77	<b>1.335</b> 33.91	<b>.400</b> 10.16	Individual	<b>.270</b> 6.86	749608-2	_	
40	А	1.290	1.715	.400	Individual	<b>.320</b> 8.13	_	5749201-1	
40	A	32.77	43.56	10.16	muividuai	<b>.320</b> 8.13	5749192-1	_	
					Individual	<b>.400</b> 10.16	_	5749202-2	
	Α	1.395	1.965	.480	Bulk	<b>.400</b> 10.16	5749202-3	_	
50	A	35.43	49.91	12.19	Individual	<b>.355</b> 9.02	5749193-1	_	
					maividuai	<b>.400</b> 10.16		_	
	В	1.800	1.965	<b>.492</b> 12.50	Bulk	<b>.480</b> 12.19	5749889-3	_	
	В		49.91		Individual	<b>.480</b> 12.18	5749889-4	_	
00	_	A 1.405 35.69		2.415	.520	la altrial cal	<b>.400</b> 10.16	_	5749204-1
68	А			13.21	Individual	<b>.440</b> 11.18	5749195-2	5749204-2	
00		1.600	2.715	.565		<b>.420</b> 10.67	_	5749205-1	
80	Α	40.64	68.96	14.35	Individual	<b>.500</b> 12.70	749196-2	_	
100	Α	<b>1.725</b> 43.82	<b>3.215</b> 81.66	<b>.615</b> 15.62	Individual	<b>.500</b> 12.70	5749197-1	5749206-1	
120	Α	<b>1.725</b> 43.82	<b>3.715</b> 94.36	<b>.665</b> 16.89	Individual	<b>.550</b> 13.97	5749198-1	5749207-1	



#### **AMPLIMITE .050 Series Shielded Enclosure Kits**, With Male Jackscrews, Series III

#### 68-Position

#### **Material and Finish:**

Backshells—Zinc Boot—PVC. black

Jackscrews—Stainless steel and PVC,

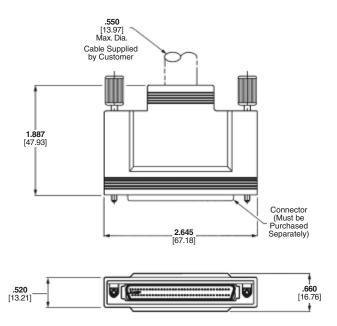
Staple—Carbon steel, plated tin over nickel

Screws—Stainless steel, #2-56 threads

#### **Technical Documents:**

Product Specifications—108-1228 Application Specifications— 114-40029





No. of	Part Number	Part Number
Pos.	Male 2-56 Jackscrews	Male 4-40 Jackscrews
68	5750752-1	5750752-2

- **Notes:** 1. Each enclosure kit contains two backshells, one boot, two jackscrews, one staple and two screws. All are packaged unassembled.
  - For staple insertion tooling see page 29.
     Meets SCSI-3 standards.



### AMPLIMITE .050 Series Panel Mount Receptacle Assemblies Without Rails, With Latch Blocks, Series III



#### **Materials:**

#### **Housing and Termination Covers**— Thermoplastic, 94V-0 rated, black

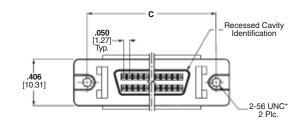
**Shell**—Steel, plated bright nickel over copper

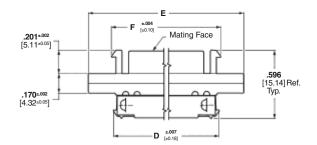
**Bracket**—Zinc, plated nickel over copper

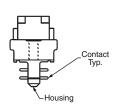
**Contacts**—Phosphor bronze, duplex plated .000030 [0.00076] min. gold on mating end, bright tin in termination area, all nickel underplated

# Recommended wire size—28 AWG [0.08-0.09mm²] or 30 AWG [0.05mm²], solid or 7 strand, with a .029-.036 [0.74-0.89] insulation diameter or .050 [1.27] centerline, 28 AWG [0.08-0.09mm²] stranded, PVC, flat ribbon cable.

# Technical Documents: Product Specifications—108-1228 Application Specifications— 114-40029







Note: Refer to TE Customer drawings and Application Spec for PCB & panel layouts.

					Part N	Part Numbers			
No. of	Dimensions					Connectors With Unassembled Wire Lacing Termination Covers			
Pos.	C	D	E	F	Connectors With Assembled Standard Termination Covers	.032036 [0.81-0.91] Outer Wire Dia.	.029031 [0.74-0.79] Outer Wire Dia.		
50	<b>1.830</b> 46.48	<b>1.629</b> 41.38	<b>2.065</b> 52.45	<b>1.665</b> 42.29	1-749656-1	5-786862-5	6-786862-5		
50	<b>1.830</b> 46.48	<b>1.629</b> 41.38	<b>2.065</b> 52.45	<b>1.665</b> 42.29	5-750640-1*	5-786865-5*	_		
68	<b>2.280</b> 57.91	<b>2.079</b> 52.81	<b>2.515</b> 63.88	<b>2.115</b> 53.72	1-749656-2	_	_		
120	<b>3.580</b> 90.93	<b>3.379</b> 85.83	<b>3.815</b> 96.90	<b>3.415</b> 86.74	6-749656-0	_	_		

\*Part Numbers 5-750640-1 and 5-786865-5 have 4-40 threaded holes. All others have 2-56 threaded holes. Note: For termination, cover closing and wire lacing tooling, see page 14.

For termination tooling other than wire lacing see pages 28 & 29.



### AMPLIMITE .050 Series Panel Mount Flat Top Receptacle Assemblies Without Rails and Latch Blocks, Series III



#### **Materials:**

**Housing and Termination Covers**— Thermoplastic, 94V-0 rated, black

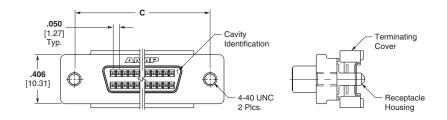
**Shell**—Steel, plated bright nickel over copper

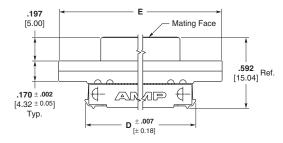
**Bracket**—Zinc, plated nickel over copper

**Contacts**—Phosphor bronze, duplex plated .000030 [0.00076] min. gold on mating end; tin on solder end; all nickel underplated

Recommended wire size—28 AWG [0.08-0.09mm²] or 30 AWG [0.05mm²], solid or 7 strand, with a .029-.036 [0.74-0.89] insulation diameter or .050 [1.27] centerline, 28 AWG [0.08-0.09mm²] stranded, PVC, flat ribbon cable

Technical Documents:
Product Specifications—108-1228
Application Specifications—
114-40029





Note: Refer to TE Customer drawings and Application Spec for PCB & panel layouts.

Pos.		Dimensions		Part Numbers
No. of	С	D	E	Connectors With Assembled Standard Termination Covers
50	<b>1.830</b> 46.48	<b>1.629</b> 41.38	<b>2.065</b> 52.45	5-749877-5
68	<b>2.280</b> 57.91	<b>2.079</b> 52.81	<b>2.515</b> 63.88	5-749877-7
100	<b>3.080</b> 78.23	<b>2.879</b> 73.13	<b>3.315</b> 84.20	5-749877-9

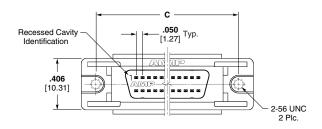
Note: For termination, cover closing and wire lacing tooling, see page 14. For termination tooling other than wire lacing see pages 28 & 29.



### AMPLIMITE .050 Series Panel Mount Plug Assemblies With Rails, Latch Blocks, Series III



#### Plug



#### Materials:

#### Housing and Termination Covers—

Thermoplastic, 94V-0 rated, black

**Bracket**—Zinc, plated nickel over copper

**Contacts**—Phosphor bronze, duplex plated .000030 [0.00076] min. gold on mating end, bright tin in termination area, all nickel underplated

#### Recommended wire size-

28 AWG [0.08-0.09mm²] or 30 AWG [0.05mm²], solid or 7 strand, with a .029-.036 [0.74-0.89] insulation diameter or .050 [1.27] centerline, 28 AWG [0.08-0.09mm²] stranded, PVC, flat ribbon cable.

#### **Technical Documents:**

Product Specifications—108-1228 Application Specifications— 114-40029

**Note:** Extra pin contact protection is provided by rails, which facilitate a straight-out, unmating motion. A side-to-side rocking motion should not be used to disengage the connector system.

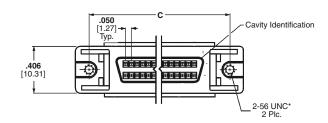
	<b>←</b>	
.217 ± .002 [5.51 ± 0.05]	F ± .004 [± 0.10]	Mating Face
		.598 Ref.
.154 ± .002 [3.91 ± 0.05]	D ± .007	

No. of		Dimen	sions		Part
Positions	С	D	E	F	Numbers
50	<b>1.830</b> 46.48	<b>1.629</b> 41.38	<b>2.065</b> 52.45	<b>1.665</b> 42.29	5-749878-5
68	<b>2.280</b> 57.91	<b>2.079</b> 52.81	<b>2.515</b> 63.88	<b>2.115</b> 53.72	5-749878-7
100	<b>3.080</b> 78.23	<b>2.879</b> 73.13	<b>3.315</b> 84.20	<b>2.915</b> 74.04	5-749878-9



### AMPLIMITE .050 Series Panel Mount Plug Assemblies With Rails, Latch Blocks, Series III (Continued)





#### Materials:

#### Housing and Termination Covers—

Thermoplastic, 94V-0 rated, black **Shell**—Steel, plated bright nickel over copper

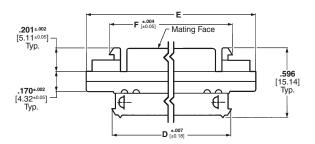
**Bracket**—Zinc, plated nickel over copper

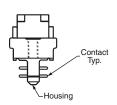
**Contacts**—Phosphor bronze, duplex plated .000030 [0.00076] min. gold on mating end, bright tin in termination area, all nickel underplated

Recommended wire size—28 AWG [0.08-0.09mm²] or 30 AWG [0.05mm²], solid or 7 strand, with a .029-.036 [0.74-0.89] insulation diameter or .050 [1.27] centerline, 28 AWG [0.08-0.09mm²] stranded, PVC, flat ribbon cable.

# Technical Documents: Product Specifications—108-1228 Application Specifications— 114-40029

**Note:** Extra pin contact protection is provided by rails, which facilitate a straight-out, unmating motion. A side-to-side rocking motion should not be used to disengage the connector system.





Note: Refer to TE Customer drawings and Application Spec for PCB & panel layouts.

No. of		Dimer	nsions		Part Numbers
Pos.	С	D	E	F	Connectors With Assembled Standard Termination Covers
20	<b>1.080</b> 27.43	<b>.879</b> 22.33	<b>1.315</b> 33.40	<b>.915</b> 23.24	5-749611-2
26	<b>1.230</b> 31.24	<b>1.029</b> 26.14	<b>1.465</b> 37.21	<b>1.065</b> 27.05	5-749611-1
50	<b>1.830</b> 46.48	<b>1.629</b> 41.38	<b>2.065</b> 52.45	<b>1.665</b> 42.29	5-749611-5
50	<b>1.830</b> 46.48	<b>1.629</b> 41.38	<b>2.065</b> 52.45	<b>1.665</b> 42.29	5-750450-1*
100	<b>3.080</b> 78.23	<b>2.879</b> 73.13	<b>3.315</b> 84.20	<b>2.915</b> 74.04	5-749611-9

\*Part Number 750450-1 has 4-40 threaded holes. All others have 2-56 threaded holes.

**Note:** For termination, cover closing and wire lacing tooling, see page 14. For termination tooling other than wire lacing see pages 28 & 29.



### AMPLIMITE .050 Series Plug Assemblies Unshielded for .025 [0.64] Centerline Ribbon Cable, Series III

#### **Plug Assembly**



#### **Materials:**

**Housing and Termination Covers**— Thermoplastic, 94V-0 rated, black

**Contacts**—Phosphor bronze, duplex plated .000030 [0.00076] min. gold on mating end, bright tin on termination end, all over nickel underplating

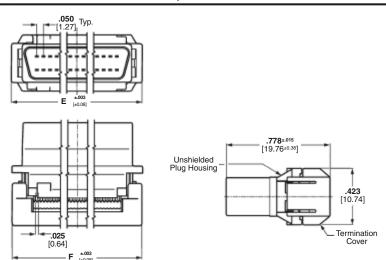
Recommended wire size— .025 [0.64] centerline, 30 AWG [0.05mm<sup>2</sup>] solid or 7 strand, PVC,

flat ribbon cable.

Note: Cable must be approved by TE Engineering.

Technical Documents for 5786090-7 only:

**Product Specifications**—108-1359 **Application Specifications**— 114-40049



No. of	Dimer	Part	
Pos.	Е	F	No.
50	<b>1.578</b> 40.07	<b>1.578</b> 40.07	5390377-51
68	<b>2.029</b> 51.54	<b>2.023</b> 51.30	5786090-7

Note: Termination Tooling: Manual Arbor Press Part No. 91085-2 or Pneumatic Press Part No. 91112-3, Universal Base Tool Part No. 768338-4, and Connector Specific Kit Part No. 679235-2. Refer to page 29.

<sup>1</sup> Accepts 32 AWG Flat Ribbon Cable. Selection of compatible ribbon cable is the responsibility of the user.

Note: Refer to TE Customer drawings and Application Spec for PCB & panel layouts.

#### Backshell Kit for 5786090-7 .025 [0.64] Unshielded Plug



#### Materials:

**Backshell**—Thermoplastic, 94V-0 rated, black

Spring Latches—Stainless steel

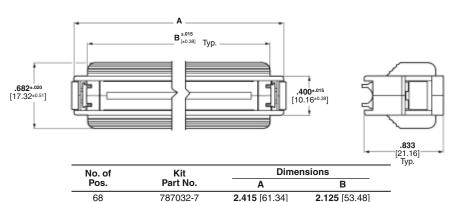
#### Strain Relief for 5786090-7 .025 [0.64] & Unshielded Plug

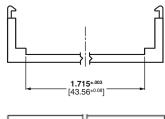
68-Position
Part No. 787043-7

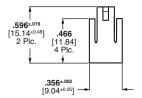
**Materials:** 

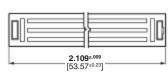
Thermoplastic, 94V-0 rated, black

Note: Pull tab Part No. 88450-8 can be used with this strain relief. Must be ordered separately.











#### **AMPLIMITE .050 Series Hardware and Dust Covers, Series III**

#### **Screwlock Kits**

#### Materials:

Stainless steel (female) Steel, zinc plated black (male)

#### **Related Product Data:**

Used with the following connectors:

**Right-Angle Receptacle Header**—page 7

Vertical Receptacle Header—pages 8-11

Panel Mount Plug and Receptacle Headers—pages 21 & 22

#### **Technical Documents:**

**Product Specifications**—108-1228 **Application Specifications**— 114-40029



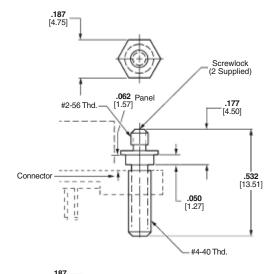
Part No. 749086-1 (Includes two screwlocks)

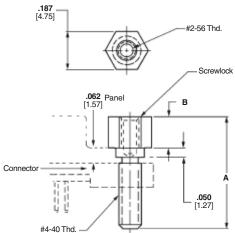


Female (Includes two screwlocks)

Dim. A	Dim. B	Individual Kits Part No.	Bulk Part No.
<b>.562</b> 14.27	<b>.157</b> 3.99	749087-1	_
<b>.380</b> 9.65	<b>.157</b> 3.99	749087-21	749087-3
<b>.562</b> 14.27	<b>.165</b> 4.19	749087-4	749087-8

<sup>&</sup>lt;sup>1</sup> Recommended for right-angle board mount connectors.





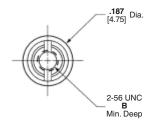


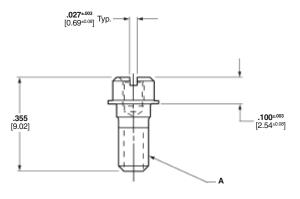
Female (Includes two screwlocks)

Thread Size		Kits	Bulk
Α	В	Part No.	Part No.
4-40	<b>.110</b> 2.79	750644-1	_
2-56	<b>.090</b> 2.29	786585-2	786585-3

Recommended for pc board mount of panel mount connectors with latches or latches and rails. Permits cable connectors to be spring latch-type or jackscrew-type

Note: All part numbers are RoHS compliant.





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### AMPLIMITE .050 Series Performance Specifications and Technical Documents

Performance Specifications for Right-Angle, Vertical and .050 Centerline Cable Products Mating Cycles (Durability): 500 max.

Current Rating (30°C T-Rise): 1A max., 50% energized

Termination Resistance (Mated): 25 milliohms max.

Insulation Resistance: 1000 megohms min.

Dielectric Withstanding Voltage: 500 VAC

Header Processing Temperature: +220°C max. for 3 minutes

**Temperature Range:** -55°C to 105°C

Performance Specifications for .025 [1.27] Centerline Ribbon Cable Product. Same as above except:

Current Rating (30°C T-Rise): 1A max. center four contacts energized (two from top row, two

from bottom row)

Termination Resistance (Mated): 50 milliohms max.

#### **Product Specifications:**

108-1228	AMPLIMITE .050 Series Printed Circuit Board Mounted and Cable Applied
108-1359	AMPLIMITE .050 Series .025 [0.64] Centerline Connectors
108-1228	AMPLIMITE .050 Series Stacked Connectors
108-1228-2	AMPLIMITE .050 Series ACTION PIN Connectors
108-1228-3	AMPLIMITE .050 Series SBus Connectors

#### **Application Specifications:**

114-40029 AMPLIMITE .050 Series Printed Circuit Board Mounted and Cable Applied	d
---	---

Connectors

114-40049 AMPLIMITE .050 Series .025 [0.64] Centerline Connectors

#### **Instruction Sheets:**

408-6923	AMP Manual Arbor Frame Assembly
408-6927	TE Design Recommendations for Printed Circuit Board
	Support Fixture
408-9200	AMP Single Wire Insertion Tool
408-9822	Wire Termination Tooling Kit for CHAMPOMATOR 2.5 Machine
408-9820	AMP Cover Closing and Staple Inserter Kits
408-9663	AMP Mass Insertion Tool
408-9750	AMP Cover Lacing Fixture
408-9757	AMP Tooling Assembly for ACTION PIN Receptacles
408-9817	AMP Manual Miniature Applicator Frame Assembly
408-9427	Round-to-Flat Cable Termination
408-9875	AMP Universal Base Tool for .025 [0.64] © Connectors
408-9892	AMP Tool Kit for .025 [0.64] @ Connectors

#### **Customer Manuals:**

409-5839	CHAMPOMATOR 2.5 Machine

409-5791 Control Unit for CHAMPOMATOR 2.5 Machine



#### **AMPLIMITE .050 Series Application Tooling, Series III**

#### Discrete Wire Application Tooling

To meet medium to high volume production of dis-crete wire terminations, TE offers the following tooling:

The CHAMPOMATOR Model 2.5 Bench Terminating Machine—Part No. 354786-1, used in conjunction with Control Module—Part No. 852423-□, and Tie Bar—Part No. 762637-□ (Table No. 1).



Control Module
Part No. 852423-1 120 VAC
852423-2 100 VAC
852423-3 230 VAC

CHAMPOMATOR 2.5 Machine Tool Kit Part No. 354786-1

Note: The CHAMPOMATOR 2.5 Machine includes plug and receptacle nests, as well as wire setup gauge.

#### **Table Number 1**

Connector Size	Tie Bar Part No.
20 Pos.	762637-1
26 Pos.	1-762637-1
28 Pos.	1-762637-2
40 Pos.	762637-3
50 Pos.	762637-4
60 Pos.	762637-5
68 Pos.	762637-6
80 Pos.	762637-7
100 Pos.	762637-9
120 Pos.	1-762637-0

#### Discrete Wire Application Tooling

For low to medium volume production use the AMP Arbor Frame Assembly—
Part No. 58024-1 equipped with Applicator—Part No. 91291-1 for .032-.035 [0.81-0.89] Conductor Insulation O.D. and Applicator—Part No. 91291-2 for .029-.032 [0.74-0.81] Conductor Insulation O.D.

**Note:** AMP Arbor Frame Assembly and Applicator Kit must be ordered separately.



Arbor Frame
Part No. 58024-1
Equipped with
Applicator Part No.
91291-□

Note: All part numbers are RoHS compliant.

Canada: +1 (905) 475-6222 Mexico/C. Am.: +52 (0) 55-1106-0800 Latin/S. Am.: +54 (0) 11-4733-2200 Germany: +49 (0) 6251-133-1999 UK: +44 (0) 800-267666 France: +33 (0) 1-3420-8686 Netherlands: +31 (0) 73-6246-999 China: +86 (0) 400-820-6015



#### **AMPLIMITE .050 Series Application Tooling, Series III** (Continued)

#### Cover Closing/ Termination Tooling

Manual Miniature Applicator Frame Assembly— Part No. 91295-1

This Frame requires Cover Closing Kit—Part No. 543508-1

#### **Cable Staple Tooling**

To provide cable strain relief use Manual Miniature Applicator Frame Assembly—Part No. 91295-1. This Frame requires Staple Insertion Kit—Part No. 543515-1 to install staples into lower backshells of connector kits and assemblies.



Miniature Applicator Frame Assembly Part No. 91295-1 Equipped with Cover Closing Kit Part No. 543508-1

AMPLIMITE .050 Series Connector Application Tooling for Use with Wire Lacing Terminating Covers

Manual Arbor Frame Assembly—Part No. 58024-1

Equipped with Cover Lacing Assembly—Part No. 91293-1 (Includes Seating Bars for 50 and 100 Positions). See Table 3 for Seating Bar Part Numbers.

Extra Lacing Stations available for use with Lacing Assembly—Part No. 91293-1 Order Lower Tooling Assembly—Part No. 543481-1



Lower Tooling Assembly Part No. 543481-1



Arbor Frame, Part No. 58024-1 Equipped with Cover Lacing Assembly, Part No. 91293-1

Note: AMP Manual Miniature Applicator Frame Assembly, Cover Closing Kit, and Staple Insertion Kit each must be ordered separately by part number.

Note: All part numbers are RoHS compliant.



Seatings Bars

#### **Table Number 3**

No. of Pos.	Seating Bar Part No.
26	543494-2
50	543494-1
68	543502-2
100	543502-1

Notes: All Tooling must be ordered separately by part number. Two seating bars required per tool assembly.

### Termination Tooling for .025 [0.64] Centerline Ribbon Cable

Used with Manual Arbor Tool **Part No. 91085-2**, or Pneumatic Arbor Tool **Part No. 91112-3** and Universal Base Tool **Part No. 768338-4**.

No. of Pos.	Plug/Receptacle Upper Tooling Kit
50	679235-2
68	0702002



#### Shielded AMPLIMITE .050 Series Slimline Connectors

#### **Product Facts**

- Compact design, profile for the right-angle header 1.230 x .588 [31.24 x 14.94], vertical header 1.230 x .433 [31.24 x 11.00], right-angle stacked headers 1.230 x .803 [31.24 x 20.40]
- Housings and covers made of UL 94V-0 rated thermoplastic
- Headers are compatible with surface mount reflow solder processes
- Header footprint for rightangle and stacked configurations is .100 x .050
   [2.54 x 1.27] staggered centerlines
- Right-angle and stacked headers feature integral boardlocks for positive board retention and grounding
- Stacked headers reduce overall total header volume by 48% and PC board area by 38%
- Stacked headers offer optional contact shield for additional EMI/RFI protection
- Plugs preloaded with insulation displacement contacts (IDC) provide fast, reliable and economical terminations
- Aesthetically designed backshell kits feature easy-to-use finger grip jackscrews to secure mated connectors
- Listed and complies with UL 1863, Communication Circuit Accessories, File No. E81956
- Certified by Canadian Standards Association File No. 1088108 (LR 7189A-207)
- Produced under a Quality
   Management System certified to ISO 9001

A copy of the certificate is available upon request







Shielded AMPLIMITE .050 Series, Slimline Connectors answer today's industry requirement for higher density in a smaller overall package. The present line consists of 26 position, shielded right-angle, 26 position right-angle stacked PCB receptacle header, and mating 26 position plug connectors. All header, plug and backshell housings are made of UL 94V-0 rated thermoplastic. PCB headers are compatible with surface mount reflow solder processes. Right-angle and stacked PCB headers feature con-tact footprints on .100 x .050 [2.54 x 1.27] staggered centerlines.

The compact design of the **right-angle header** package measures only 1.230 W x .588 D x .300 H [31.24 W x 14.94 D x 7.62 H] for maximum board real estate conservation. Right-angle PCB headers feature integral

boardlocks for positive board retention and grounding.

Right-angle stacked headers provide 52 contacts in a package only .635 [16.13] high, allowing parallel (board-over-board) board spacing of .800 [20.32]. Centerlines between the top connector and the bottom connector measure .335 [8.51] when compared to .400 [10.16] on the standard .050 Series stacked headers. This results in an over-all reduction of total header volume, in comparison to the standard AMPLIMITE .050 Series header, of 48%, and a comparative reduction in PC board area of 38%.

Stacked header board retention and stabilization is provided by two board-locks and four grounding posts. In addition, an optional rear contact shield is available for additional EMI/RFI protection.

#### The mating plug connector

consists of a thermoplastic housing, preloaded with insulation displacement contacts (IDC) for fast, reliable terminations that offer greater applied cost savings. TE offers a choice of termination equipment to meet your production requirements.

#### The backshell hardware kit

includes a two-piece, aesthetically designed, thermoplastic cover over an inner and outer shield and two, high strength #2-56 male jackscrews with insulated heads (easy finger grip caps) to secure mated connectors.

The AMPLIMITE .050 Series, Slimline family of connectors offers **keyed coupling**. This feature eliminates the problem of mismatch mating of plug and receptacle, particularly in stacked applications.



#### Right-Angle Header, Receptacle



Part No. 750823-1

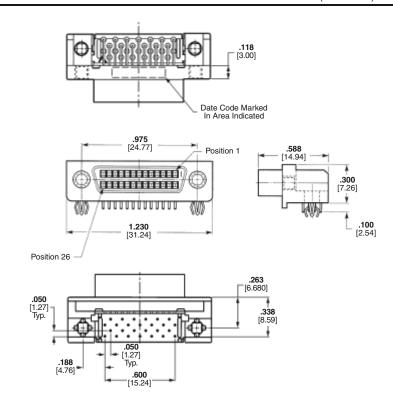
#### **Material and Finish**

**Housing**—UL 94V-0 rated thermoplastic, black

**Bracket**—Zinc, plated tin or tin over copper

**Metal-Shell**—Carbon steel, plated tin over copper

**Boardlocks**—Copper alloy, tin plated **Contacts**—Phosphor bronze, duplex plated .000030 [0.00076] min. gold on mating end, tin plated on solder end, all over nickel



#### Notes:

- 1. Rear panel mounting only.
- 2. Female screwlocks to be used with connectors mounted to panels having a thickness of .047 [1.19].
- See Application Specification 114-40036 for the most up-to-date detailed panel cutout and recommended PC Board hole pattern.
- Female screwlocks are not included with receptacles and must be ordered separately. See page 33 for screwlock kit information.



#### Shielded Right-Angle Stacked Header, Receptacle



With Shielding



Without Shielding

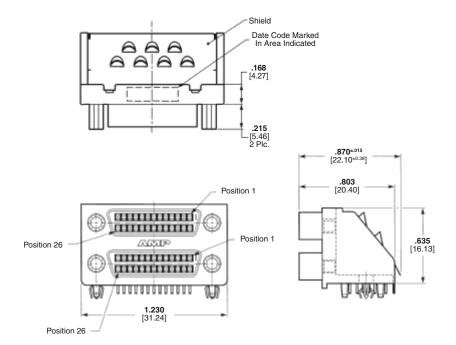
#### **Material and Finish:**

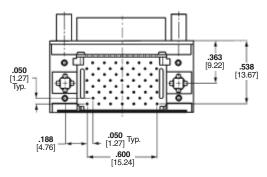
**Housing**—UL 94V-0 rated thermoplastic, black

**Bracket**—Zinc, plated tin over copper **Metal-Shell**—Carbon steel, plated tin over copper

**Boardlocks**—Copper alloy, tin plated **Contact Shield**—Phosphor bronze, plated tin

**Contacts**—Phosphor bronze, duplex plated .000030 [0.00076] min. on mating end, tin plated on solder end, all over nickel





Shielded Header with Rear Contact Shield

		Part N	lumbers	
No. of Positions	Std. Rc Rear Co	Std. Rcpt. without Rear Contact Shield		t. with tact Shield³
	Keyed <sup>1</sup>	Unkeyed <sup>2</sup>	Keyed <sup>1</sup>	Unkeyed <sup>2</sup>
26/26	_	5786200-1	5750821-1	5750820-1

<sup>&</sup>lt;sup>1</sup>Lower header unkeyed with 4-40 threaded holes, upper header keyed in keying position 1. See page 33 for keying code.

Note: See Application Specification 114-40036 for the most up-to-date detailed panel cutout and recommended PC Board hole pattern.

Note: All part numbers are RoHS compliant.

Catalog 82068

Revised 4-12

<sup>&</sup>lt;sup>2</sup>Both headers unkeyed with 4-40 threaded holes.

<sup>&</sup>lt;sup>3</sup>Receptacle includes a metal contact shield for added RFI protection to the rear of the receptacle assembly.



#### Cable Connector, Plug



Part No. 750833-1
Material and Finish:

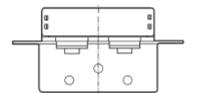
**Housing and Termination Covers**— UL 94V-0 rated thermoplastic, black

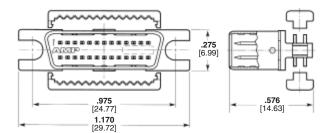
**Shell**—Steel, plated bright tin over conner

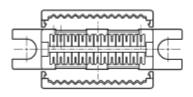
Contacts—Phosphor bronze, duplex plated .000030 [0.00076] min. gold on mating end, bright tin on termination end, all underplated nickel

**Bracket**—Zinc, plated nickel over copper

**Recommended Wire Size**—28 AWG [0.08 mm²] with max. O.D. .032 [0.813]. PVC or polyolefin insulation.







Note: Cable Connectors must be used with Backshell Kits. See page 34.

#### Keying Code, Receptacle





#### Keying Code, Plug





Position 1 (Up)

#### **Accessories**

#### **Female Screwlock Kit**

Material—Stainless Steel

**Note:** Female screwlocks to be used with connectors mounted to panels having a thickness of .047 [1.19]

#2-56 Thread
.170 [4.32] .170 [4.32] .390 [9.91]

Part No.	Packaging
750831-1	Individually Packed Kit (2 Screwlocks per kit)

<sup>\*</sup>Minimum order is 510 kits.

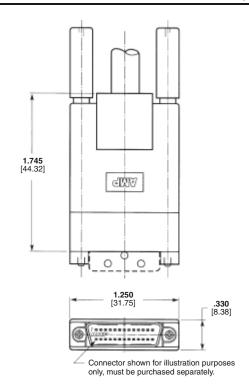


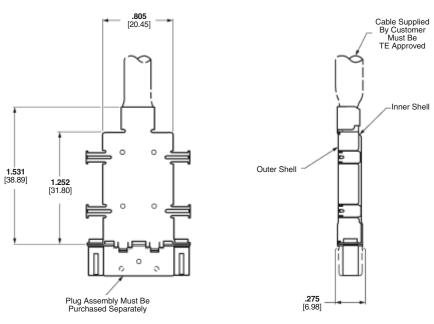
#### **Backshell Kits**



#### **Material and Finish:**

Backshells—Copper-nickel alloy
Jackscrews—Steel, plated tin over
copper, handles covered with ABS, gray
Keyed and Unkeyed Inserts—Zinc,
plated tin over copper
Outside Covers—ABS, gray





#### **Backshell Kits**

Unkeyed Kit Part No.	Cable Dia.	Packaging*
750850-1	.250280	Individually Packed Kit
750850-2	6.35-7.11	Bulk Packed Kit
750850-3	<b>.280310</b> 7.11-7.87	Individually Packed Kit

<sup>\*</sup>Bulk packaging—100 kits per box.

Note: All part numbers are RoHS compliant.

Canada: +1 (905) 475-6222 Mexico/C. Am.: +52 (0) 55-1106-0800 Latin/S. Am.: +54 (0) 11-4733-2200 Germany: +49 (0) 6251-133-1999 UK: +44 (0) 800-267666 France: +33 (0) 1-3420-8686 Netherlands: +31 (0) 73-6246-999 China: +86 (0) 400-820-6015



#### Shielded AMPLIMITE .050 Series Slimline Connectors, Application Tooling

#### Discrete Wire Application Tooling

To meet medium to high volume production of discrete wire terminations, TE offers the following tooling:

The CHAMPOMATOR Model 2.5 Bench Terminating Machine—
Part No. 354786-1, used in conjunction with Control Module—Part No. 852423-□, and Tie Bar—Part No. 1-762637-3.

**Note:** CHAMPOMATOR 2.5 Machine and Control Module must be ordered separately by part number.



Control Module
Part No. 852423-1 120 VAC
852423-2 100 VAC
852423-3 230 VAC

CHAMPOMATOR 2.5 Machine Part No. 354786-1

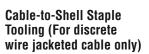
26 Position Tie Bar 1-762637-3

#### Wire Setup Gauge

Wire Insulation Dia.		lation Dia.	Part No.
	in.	mm	Part No.
	.026028	0.66-0.71	763382-3
	.029031	0.74-0.79	763382-4
	.032035	0.81-0.89	763382-5

#### Discrete Wire Application Tooling

For low to medium volume production use the TE Arbor Tool—Part No. 58024-1 equipped with Applicator—Part No. 91291-1 and Special Locator—Part No. 543506-1.



To meet medium to high volume production use TE Pneumatic Crimper—Part No. 312522-3 equipped with Die Holder Assembly—Part No. 58449-1 and Die—Part No. 90437-1 to crimp outer backshells of connector kits and assemblies.

For low volume use Manual Arbor Tool—Part No. 91085-2, equipped with Backshell Crimper Assembly Tool—Part No. 856684-1.

For tooling information call Tooling Assistance Center 1-800-722-1111.



Arbor Tool
Part No. 58024-1
Equipped with
Applicator Part No.
91291-1



Pneumatic Bench Tool No. 312522-3 (Requires Die Set Holder No. 58449-1)



Miniature Applicator Frame Assembly Part No. 91295-1 Equipped with Cover Closing Kit Part No. 543508-1



Staple Insertion Kit Part No. 543515-1 (For use with Miniature Applicator Frame Assembly Part No. 91295-1)

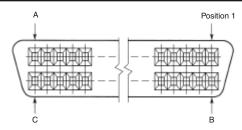
#### Backshell Tooling and Cover Tooling

To assemble backshell into plastic housing use Manual Miniature Applicator Frame Assembly—Part No. 91295-1 equipped with Part No. 543521-1. To assemble upper cover on lower cover use Part No. 91295-1 equipped with Part No. 543522-1.



### Shielded AMPLIMITE .050 Series Contact Arrangements, Performance Specifications, Technical Documents—Slimline Connectors

#### **Contact Arrangements**



Note: Mating face of receptacle is shown, plug is mirror image.

No. of	Position No.		
Pos.	Α	В	С
26	13	14	26

#### **Performance Specifications**

Mating Cycles (Durability): 500 max.

Current Rating (30°C T-Rise): 1A max., 50% loading Termination Resistance (Mated): 25 milliohms max. Insulation Resistance: 1000 megohms min. Dielectric Withstanding Voltage: 500 VAC

**Header Processing Temperature:** +220°C max. for 3 minutes

Temperature Range: -55°C to +105°C

#### **Technical Documents**

**Product Specifications** describe technical performance characteristics and verification tests. They are intended for the Design, Component and Quality Engineer.

108-1366 Shielded AMPLIMITE .050 Series,

Slimline Connectors

**Application Specifications** describe requirements for using the product in its intended application and/or termination information. They are intended for the Packaging and Design Engineer and the Setup person.

114-40036 Shielded AMPLIMITE .050 Series, Slimline Connectors

**Instruction Sheets** provide instructions for assembling or applying product. They are intended for Manufacturing Assembler or Operator.

408-9663	Mass Insertion Tooling-Part No. 91291-□
408-6923	AMP Manual Arbor Frame-Part No. 58024-1
408-9701	Wire Termination Tooling Kit for CHAMPOMATOR 2.5
	Machine-Part No. 1-762661-4
408-7777	AMP Manual Arbor Frame w/Slide-Part No. 91085-2
408-9746	Crimper Assembly-Part No. 856684-1
408-9200	Single Wire Insertion Tool-Part No. 58430-1
408-9721	Die Holder Assembly for Pneumatic Crimper-
	Part No. 58449-□
408-9788	Die Assembly-Part No. 90437-1
408-9898	Backshell and Cover Tooling Assemblies-
	Part No. 543521-1 and 543522-1

**Customer Manuals** provide information on TE termination equipment. They are intended for Manufacturing Assemblers or Operators.

409-5786 CHAMPOMATOR 2.5 Machine CHAMPOMATOR 2.5 Control Module—

Part No. 852423-□ 409-5822 Pneumatic Crimper-Part No. 312522-3 409-5843 Pneumatic Power Unit



### AMPLIMITE .050 Series Panel Mount Receptacle Assemblies for .025 [0.64] Centerline Ribbon Cable, Series III



### 

#### Materials:

#### Housing and Termination Covers—

Thermoplastic, 94V-0 rated, black **Shell**—Steel, plated bright tin over copper

**Bracket**—Zinc, plated nickel over copper

**Contacts**—Phosphor bronze, duplex plated .000030 [0.00076] min. gold on mating end; tin on solder end; all nickel underplated

#### Recommended wire size-

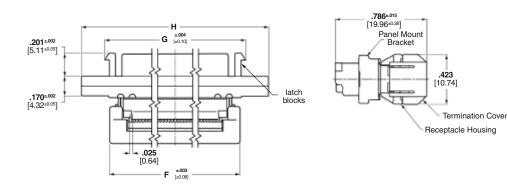
.025 [0.64] centerline, 30 AWG [0.05mm²] and 32 AWG [0.03mm²] solid or 7 strand, PVC, flat ribbon cable. Selection of compatible ribbon cable is the responsibility of the user.

#### Technical Documents:

See customer drawings for Product Performance criteria.

- Recognized under the Component Program of Underwriters Laboratories, Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189





No. of Pos.	Dimensions				Gold	Matin o Haudinana	Dovt No.
	Е	F	G	Н	Plating	Mating Hardware	Part No.
	<b>1.831</b> 46.50	<b>1.602</b> 40.70	N/A	<b>2.066</b> 52.47	15µ	w/ 4-40 threaded holes	1-5390378-5
	<b>1.831</b> 46.50	<b>1.602</b> 40.70	N/A	<b>2.066</b> 52.47	30μ	w/ 4-40 threaded holes	5390378-5
50	<b>1.831</b> 46.50	<b>1.602</b> 40.70	<b>1.664</b> 42.27	<b>2.066</b> 52.47	flash	w/ latch blocks and 4-40 threaded holes	2-5390399-5
00	<b>1.831</b> 46.50	<b>1.602</b> 40.70	<b>1.664</b> 42.27	<b>2.066</b> 52.47	15µ	w/ latch blocks and 4-40 threaded holes	1-5390399-5
	<b>1.831</b> 46.50	<b>1.602</b> 40.70	<b>1.664</b> 42.27	<b>2.066</b> 52.47	30μ	w/ latch blocks and 4-40 threaded holes	5390399-5
	<b>1.831</b> 46.50	<b>1.602</b> 40.70	<b>1.664</b> 42.27	<b>2.066</b> 52.47	30μ	w/ latch blocks and 2-56 threaded holes	5390379-5
	<b>2.281</b> 57.93	<b>2.018</b> 51.50	N/A	<b>2.516</b> 63.90	15µ	w/ 4-40 threaded holes	1-5390378-7
	<b>2.281</b> 57.93	<b>2.018</b> 51.50	N/A	<b>2.516</b> 63.90	30μ	w/ 4-40 threaded holes	5390378-7
68	<b>2.281</b> 57.93	<b>2.018</b> 51.50	<b>2.114</b> 53.70	<b>2.516</b> 63.90	flash	w/ latch blocks and 4-40 threaded holes	2-5390399-7
00	<b>2.281</b> 57.93	<b>2.018</b> 51.50	<b>2.114</b> 53.70	<b>2.516</b> 63.90	15µ	w/ latch blocks and 4-40 threaded holes	1-5390399-7
	<b>2.281</b> 57.93	<b>2.018</b> 51.50	<b>2.114</b> 53.70	<b>2.516</b> 63.90	30µ	w/ latch blocks and 4-40 threaded holes	5390399-7

Note: Termination Tooling: Manual Arbor Press Part No. 91085-2 or Pneumatic Press Part No. 91112-3, Universal Base Tool Part No. 768338-4, and Connector Specific Kit Part No. 1490479-1.

#### **X-ON Electronics**

Largest Supplier of Electrical and Electronic Components

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