

AMPLIMITE .050 Series Connector (.050 x .100 [1.27 x 2.54] Centerline) Series III

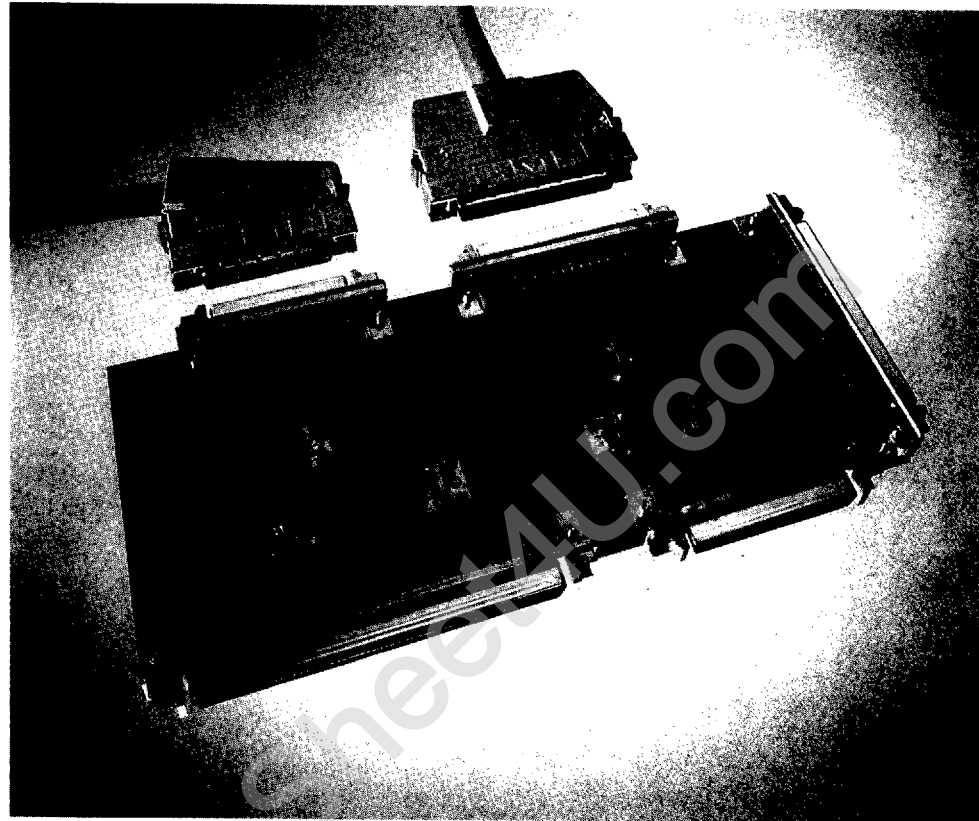
Product Facts

- Compatible with SCSI-2, SCSI-3, EIA RS-232, ISO-11569*, HIPPI, IPI-2 and IEE 802.3 MII standards
- High-density D type interface
- 20 through 120 contact positions
- Tab plug contacts and tuning-fork receptacle contacts, with reliable two-point (redundant) contact; contact normal force is not dependent on plastic housing support
- Insulation displacement wire termination of discrete wire, round-to-flat laminated wires and flat ribbon cable
- Vertical and right-angle headers
- Vertical headers with ACTION PIN contacts
- Board-to-board, cable-to-board and cable-to-cable connection
- Rugged die cast back-shell with excellent EMI/RFI protection
- Shields mate before contacts, with ground mating first and breaking last
- Squeeze-to-release latches or jackscrew hardware
- Keying available
- Board connectors compatible with standard thru-hole flow solder and surface-mount reflow solder processes (Series III)
- Unshielded, All-Plastic Cable Plugs available
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR 7189A-207
- Produced under a Quality Management System certified to ISO 9001



A copy of the certificate is available upon request

*26-position cable assembly with spring latches



Introduction

Shielded AMPLIMITE .050 Series connectors offer a high-density D type interface. Featuring .050 x .100 [1.27 x 2.54] contact centerline spacing, these compact and reliable connectors are available in 20 through 120 positions. Their construction offers exceptional EMI/RFI shielding effectiveness.

Shielded AMPLIMITE .050 Series Connectors, Series III, are approved to SCSI-2, SCSI-3, EIA RS-232, ISO-11569*, IPI-2, HIPPI, and IEE 802.3 MII standards.

Connectors are available in cable-mount and panel mount versions and vertical and right-angle mount pcb headers plus vertical mount with ACTION PIN contacts. The headers feature high temperature housings for reflow soldering processes.

Cable and panel connectors use insulation displacement contacts for fast termination of discrete, round-to-flat laminated, and ribbon cable.

Series I, II and III intermateability:

Only the 50, 68, and 96 position sizes are intermateable between Series I, II, and III.

A list of approved jacketed cables is listed on page 216. All other cables must be approved by AMP Incorporated.

Backshells are available with either a straight or angled cable exit. Hardware includes a choice of integral squeeze-to-release latches or jackscrews.

Unshielded, All-Plastic Cable Plugs are available in 50 through 100 positions and offer an economical answer to your connector needs on applications where EMI/RFI protection is not a factor.

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 right-angle and stacked configurations is .100 x .050 [2.54 x 1.27] staggered centerlines
- Header footprint for vertical configuration is .100 x .075 [2.54 x 1.90] staggered centerlines
- Right-angle and stacked headers feature integral boardlocks for positive board retention and grounding
- Vertical headers feature 8 below the board, retentive contact legs for mechanical retention before and after soldering
- Vertical headers feature polarized grounding posts to assure correct header-to-board orientation
- 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
- Choice of three keying positions, plus non-keyed inserts for assurance against mismatch mating

- Listed and complies with UL 1863, Communication Circuit Accessories File No. E81956



- Certified by Canadian Standards Association, File No. LR 7189A



- 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 and vertical PCB receptacle headers, 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 contact footprints on .100 x .050 [2.54 x 1.27] staggered centerlines and vertical header footprints are on .100 x .075 [2.54 x 1.90] 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.

Vertical headers feature 8 below the board, retentive contact legs for mechanical retention before and after soldering. Polarized grounding posts assure correct header-to-board orientation. The complete package occupies an area only 1.230 W x .325 D x .433 H [31.24 W x 8.26 D x 11.00 H].

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 [10.06] on the standard .050 Series stacked headers. This results in an overall 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 boardlocks 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. AMP offers a choice of termination equipment to meet your production requirements.

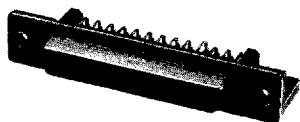
The backshell hardware kit includes a two-piece, aesthetically designed, thermoplastic cover over an inner and outer shield and two, high strength #2-56 male jackscrews with insulated heads (easy finger grip caps) to secure mated connectors.

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. There are three possible keying arrangements, plus un-keyed inserts to assure maximum options for multiple connector applications.

AMPLIMITE .050 Series Right-Angle Receptacle Headers Without Rails and Latch Blocks, Series III

.100 [2.54] and .120 [3.05] Solder Tail Lengths

For use with jackscrew
mating hardware



Without Boardlocks



With Boardlocks

Materials:

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

Shell—Steel, plated .000200 [0.00508]
min. bright tin over .000050 [0.00127]
min. copper

Bracket—Zinc, plated nickel over
copper

Contacts—Phosphor bronze, duplex
plated .000030 [0.00076] min. gold on
mating end; .000120 [0.00304] min. tin-
lead on solder end; all underplated
.000050 [0.00127] min. nickel

Related Product Data:

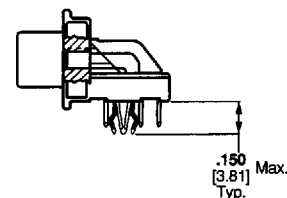
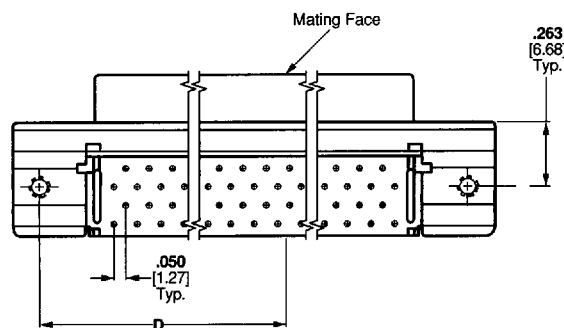
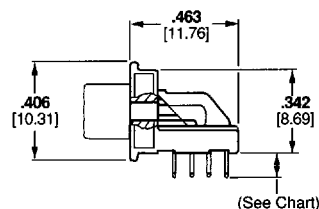
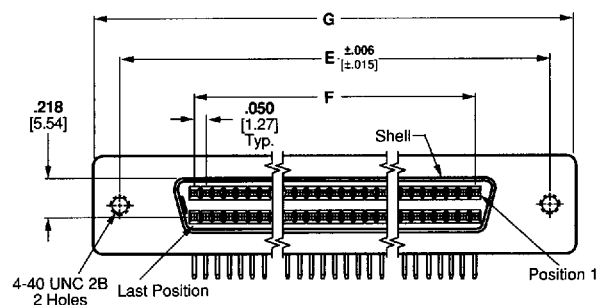
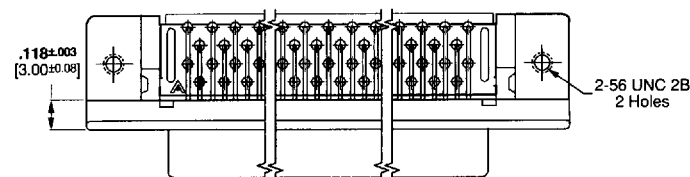
Panel Cutouts—page 269

Required Hardware—page 270

Technical Documents:

Product Specifications—108-1228

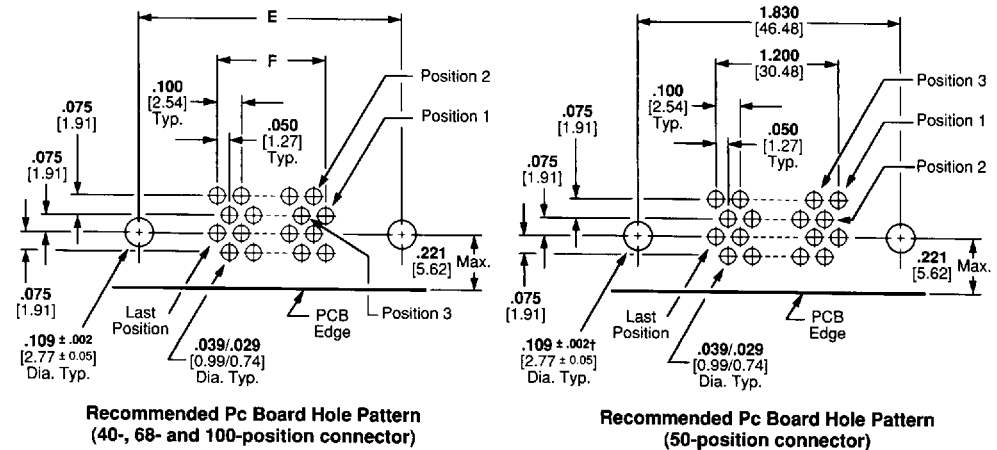
Application Specifications—
114-40029



With Boardlocks

AMPLIMITE .050 Series Right-Angle Receptacle Headers Without Rails and Latch Blocks, Series III (Continued)

.100 [2.54] and .120 [3.05] Solder Tail Lengths (Continued)



- Notes:**
1. Connector side of pc board layout shown.
 2. Pc board layouts and connector dimensions illustrated above serve as a guide only; they are not to be used for actual design or construction of customer equipment. Consult AMP customer drawings for detailed pc board layout and connector dimension requirements.

No. of Pos.	Dimensions				Part Numbers		
					With .100 [2.54] Solder Tails		With .120 [3.05] Solder Tails
	D	E	F	G	Without Boardlocks	With Boardlocks	With Boardlocks
40	.790 20.07	1.580 40.13	.950 24.13	1.815 46.10	—	787170-4	—
50	.915 23.24	1.830 46.48	1.200 30.48	2.065 52.45	787169-5	787170-5	787362-5
68	1.140 28.96	2.280 57.91	1.650 41.91	2.515 63.88	787169-7	787170-7	787362-7
100	1.540 39.12	3.080 78.23	2.450 62.23	3.315 84.20	787169-9	787170-9	787362-9

Note: Female screwlocks must be used to mate with cable assemblies with male jackscrew hardware.