

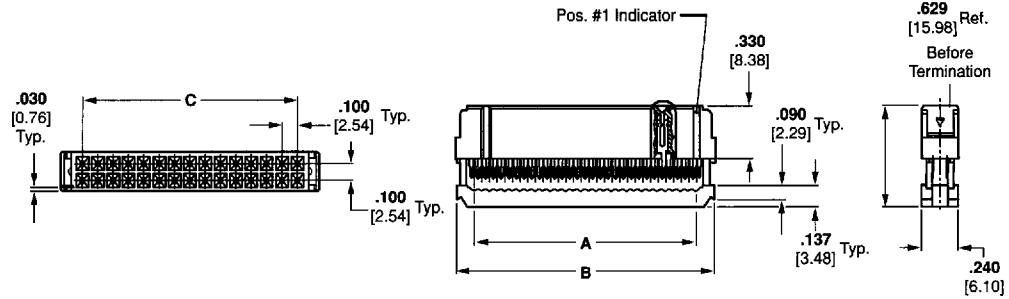


Today, more than ever, inter-connection economies are playing a major role in electronic packaging. While economy must be achieved, it can not result in sacrificing quality. Economy and quality must be the goals of today's interconnection system supplier.

As the leader in interconnection system technology AMP has successfully combined economy and quality in these **new** products. By reducing the gold content on the contacts and providing economical quantity packaging, AMP provides the **most requested AMP-LATCH connector configurations** at a highly competitive price, yet maintaining the quality consistent with AMP products used around the world.

If your electronic packaging budget is restricted, yet you require AMP quality, then these latest AMP-LATCH connectors may be your answer.

Connectors With .000005 [0.000127] Gold Plated Contacts



AMP-LATCH Novo Receptacles, Military Polarized, .100 x .100 [2.54 x 2.54] Centers

No. of Pos.	Dimensions				Receptacle Part No.
	A	B	C	D	
10	.450 11.43	.680 17.27	.400 10.16	—	111557-1
14	.650 16.51	.880 22.35	.600 15.24	—	111557-2
16	.750 19.05	.980 24.89	.700 17.78	—	111557-3
20	.950 24.13	1.180 29.97	.900 22.86	—	111557-4
24	1.150 29.21	1.380 35.05	1.100 27.94	—	111557-5
26	1.250 31.75	1.480 37.59	1.200 30.48	—	111557-6
30	1.450 36.83	1.680 42.67	1.400 35.56	—	111557-7
34	1.650 41.91	1.880 47.75	1.600 40.64	—	111557-8
40	1.950 49.53	2.180 55.37	1.900 48.26	—	111557-9
50	2.450 62.23	2.680 68.07	2.400 60.96	—	1-111557-0
60	2.950 74.93	3.180 80.77	2.900 73.66	—	1-111557-1
64	3.150 80.01	3.380 85.85	3.100 78.74	—	1-111557-2

AMP-LATCH Novo Receptacles, Military and Center Polarized, .100 x .100 [2.54 x 2.54] Centers

No. of Pos.	Dimensions				Receptacle Part No.
	A	B	C	D*	
10	.450 11.43	.680 17.27	.400 10.16	.275 6.98	111556-1
14	.650 16.51	.880 22.35	.600 15.24	.375 9.52	111556-2
16	.750 19.05	.980 24.89	.700 17.78	.425 10.80	111556-3
20	.950 24.13	1.180 29.97	.900 22.86	.525 13.34	111556-4
24	1.150 29.21	1.380 35.05	1.100 27.94	.625 15.88	111556-5
26	1.250 31.75	1.480 37.59	1.200 30.48	.675 17.11	111556-6
30	1.450 36.83	1.680 42.67	1.400 35.56	.775 19.68	111556-7
34	1.650 41.91	1.880 47.75	1.600 40.64	.875 22.22	111556-8
40	1.950 49.53	2.180 55.37	1.900 48.26	1.025 26.01	111556-9
50	2.450 62.23	2.680 68.07	2.400 60.96	1.275 32.38	1-111556-0
60	2.950 74.93	3.180 80.77	2.900 73.66	1.525 38.74	1-111556-1
64	3.150 80.01	3.380 85.85	3.100 78.74	1.625 41.28	1-111556-2

*For "D" dimension, see drawings on page 15.

Electrical Characteristics and Introduction

Electrical Characteristics

Contact Current Rating—1 ampere (continuous)

Operating Temperature—
-55°C to +105°C

Dielectric Withstanding Voltage—
Receptacles (all)—1000 Volts, RMS
Card Edge Connectors—1000 Volts, RMS
DIP Plugs—300 Volts, RMS
Paddle Board Connectors—500 Volts, RMS
Pin Connectors—500 Volts, RMS
Ejection Style Pin Headers (all)—
1000 Volts, RMS
Ribbon Cable—2000 Volts, RMS

No. of Positions	Cable Centerlines	PCB Area	Mating Height
20	.050	0.47 in. ²	0.565
	1.27	303 mm ²	14.35
	.039	0.134 in. ²	0.390
50	1.00	86.64 mm ²	9.91
	.025	0.213 in. ²	0.584
	0.64	137 mm ²	14.83
	.050	1.01 in. ²	0.565
	1.27	645 mm ²	14.25
	.039	0.335 in. ²	0.390
50	1.00	216 mm ²	9.91
	.025	0.426 in. ²	0.584
	0.64	275 mm ²	14.83

Chart gives an example of a 20-position and a 50-position configuration showing the optimum pc board space and mating connector system height. These factors are of prime importance when you considered the premium placed on system space.

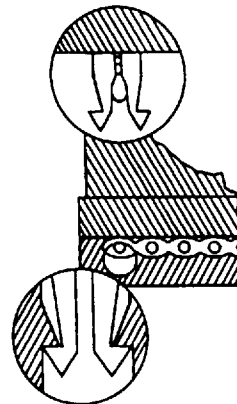
AMP-LATCH Connectors and Mass Termination

AMP-LATCH connectors use insulation displacement contacts (IDC), where each contact has a slotted-beam geometry to mass terminate the conductors. As a wire is pressed down into the slot, the beam tips pierce and displace the insulation. As the conductor is pressed farther into the slot, the contact provides sufficient conductor deformation to achieve a gastight interface.

The design of the contact supplies residual spring pressure to maintain a long term gastight connection. Since the connector **is** gastight, it will not corrode or otherwise degrade from normal environmental exposures.

Just as AMP-LATCH connectors help users derive the full benefits of ribbon cable, one-step application tooling allows them to realize the full productivity of mass termination. AMP offers a full range of die sets and tools, from hand tools to automatic cable assembly machines, to meet every production requirement.

Latching feature of AMP-LATCH Connectors



AMP-LATCH connectors have an additional feature not found in competitive connectors: Contact Latching. As the cable is terminated, a cover snaps down over the contacts.

Each contact individually latches to the cover. Where cable shearing occurs because of inappropriate handling AMP offers the following to protect the cable:

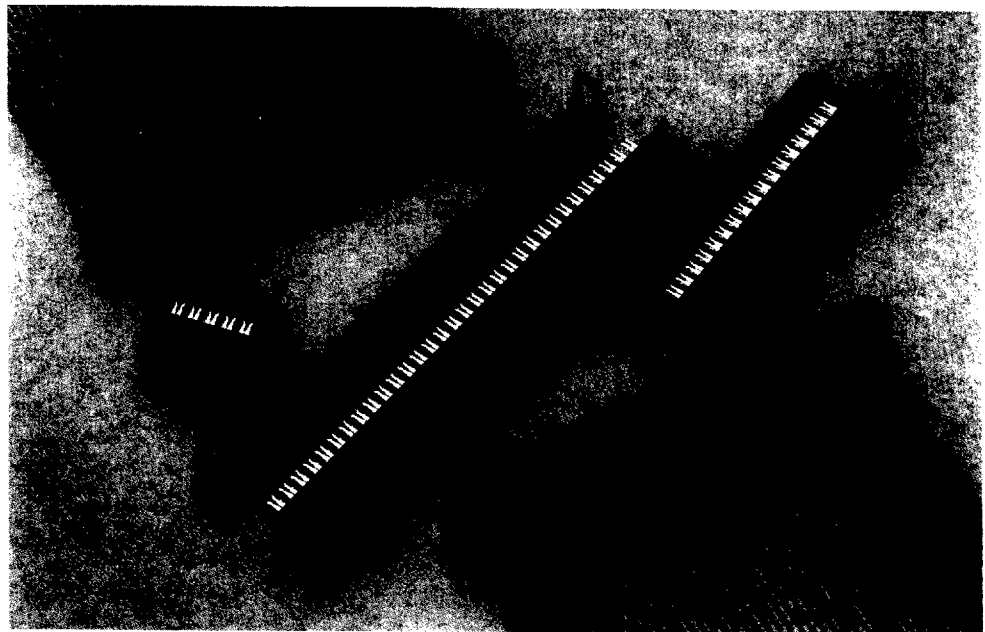
- Pull Tabs
- Strain Reliefs
- Ejection Latches (Mounted on the Headers and Pin Connectors)

*In AMP-LATCH connectors, the normal force (the amount of residual spring pressure the contact exerts against the conductor to maintain a gastight connection) is not supported by the plastic in the cover and is obtained solely by the contact design. The latching is **not** related to IDC normal force.*

AMP-LATCH Novo Connectors

Product Facts

- .100 X .100 [2.54 X 2.54] mating grid for .050 [1.27] pitch ribbon cable
- Tuning fork contact offers a military approved design, at an economical cost
- Polarization options included military, plus center and military
- Choice of duplex gold plating on contact mating area
- Insulation displacement contacts for fast, economical mass terminations
- Contact design provides uniform latching of contacts and housing with connector cover
- Recessed cover with cable alignment feature
- Housing, cover and strain relief made of UL94V-0 rated thermoplastic material
- Selected 10 thru 64 position configurations available
- Accepts wire size range 28-26 AWG [0.08-0.15 mm²], solid or stranded
- Snap-on strain relief and choice of pull tabs available
- One-step termination with AMP-LATCH Novo tooling
- Recognized under the Component Program of the Underwriters Laboratories, Inc. File No. E28476
- Certified by the Canadian Standards Association, File No. LR 7189



AMP-LATCH Novo receptacles offer a dual contact interface with all normal force created by metal-to-metal contact. This provides a higher degree of contact reliability.

Novo receptacles feature two rows of contacts on .100 X .100 [2.54 X 2.54] centerlines in select sizes from 10 to 64-positions. Contacts mate with .025² [0.64²] or round posts with .245 [6.22] max. and .175 [4.45] min. lengths. The Novo tuning fork contact offers a military-approved design, and at a lower cost.

Contacts are made of phosphor bronze and are available in a choice of duplex [0.00038] or .000030 [0.00076] gold in the mating area, and .000100 [0.00254] tin-lead in the termination area, with the entire contact underplated with .000050 [0.00127] nickel. Economy versions with gold-flash

plating in the mating area are also available in select sizes, see page 16 for complete selection of this economy version. Contact mating area extends .100 [2.54] from the mating face of the housing.

Housings are made of 94V-0 thermoplastic material and feature military polarization. The dual recessed cover contains an integral cable alignment feature that provides additional ribbon cable alignment during termination.

Optional accessories include a snap-on strain relief and a choice of pull tabs.

AMP-LATCH Novo receptacles can be terminated to .050 [1.27] pitch ribbon cable by a wide variety of AMP-LATCH, one-step application tooling.

Assemblies are packaged in tubes for ease of handling, protection and termination.