

## Novo Receptacles, Center and Military Polarized\* .100 x .100 [2.54 x 2.54] Centers

### Housing Assembly with Cover (Preassembled) and Strain Relief (Optional)



Contacts mate with .025 [0.64] sq. or round pins with .245 [6.22] max. and .175 [4.45] min. lengths.

### Material and Finish:

**Housing, Cover & Strain Relief**—94V-0 rated thermoplastic, black

**Contacts**—Phosphor bronze, duplex plated (See chart below)

### Related Product Data:

**Electrical Characteristics**—page 5

**Mateable Connectors:**

**Mateable Pin Headers:**

**Universal**—pages 52 thru 64

**High Temperature**—pages 62 & 63

**Low Profile**—pages 41 thru 51

**Pinless**—pages 58 & 59

**Ribbon Cable**—page 40

### Accessories:

**Pull Tabs**—page 21

**Keying Plug**—page 23

**Application Tooling**—pages 81 & 82

**Strain Relief Dimensional Information**—page 18

### Technical Documents:

#### Product Specifications—

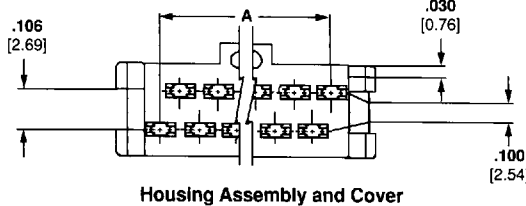
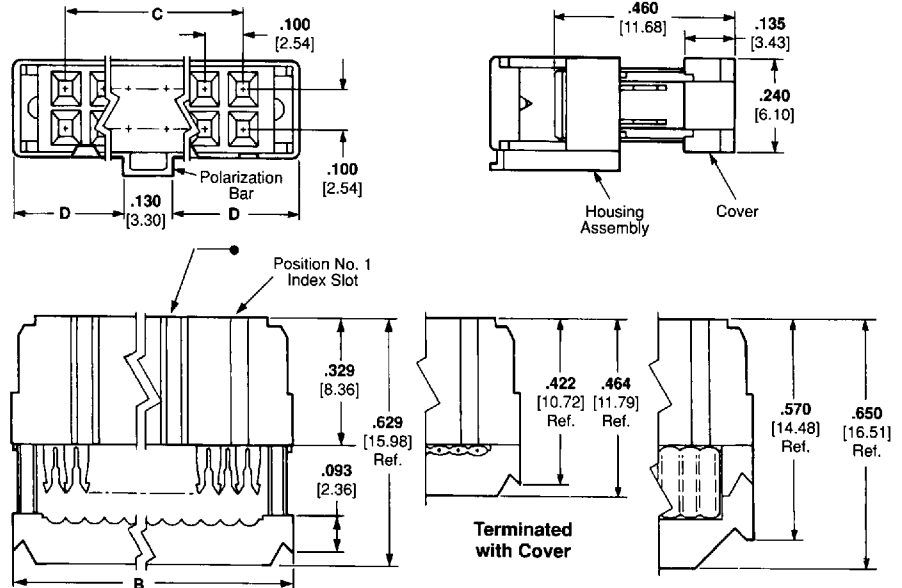
108-40000 Novo and Novo Stackable Receptacles 108-40004 Ribbon Cable, PVC Insulated, AMP

**Application Specifications:**  
114-40005 Ribbon Cable Connectors

#### Instruction Sheets:

Instructional material covering operation, setup, maintenance, repair, etc. is included with each machine, tool or die set. If this material is required prior to receiving your tooling, call the **AMP Tooling Assistance Hotline 1-800-722-1111** for the applicable documents.

\*These receptacles can be used in applications requiring center polarization.



• There is no polarization slot on this end of 10- and 14-position receptacles.

No. of Pos.	Dimensions				Contact Plating	Strain Relief Part No.	Receptacle (Preassembled)
	A	B	C	D			
10	.450	.680	.400	.275	Duplex <sup>1</sup>	499252-5	746285-1
	11.43	17.27	10.16	6.99	Duplex <sup>2</sup>	499252-5	746288-1
14	.650	.880	.600	.375	Duplex <sup>1</sup>	499252-9	746285-2
	16.51	22.35	15.24	9.53	Duplex <sup>2</sup>	499252-9	746288-2
16	.750	.980	.700	.425	Duplex <sup>1</sup>	499252-8	746285-3
	19.05	24.89	17.78	10.80	Duplex <sup>2</sup>	499252-8	746288-3
20	.950	1.180	.900	.525	Duplex <sup>1</sup>	499252-2	746285-4
	24.13	29.97	22.86	13.34	Duplex <sup>2</sup>	499252-2	746288-4
24	1.150	1.380	1.100	.625	Duplex <sup>1</sup>	1-499252-0	746285-5
	29.21	35.05	27.94	15.88	Duplex <sup>2</sup>	1-499252-0	746288-5
26	1.250	1.480	1.200	.675	Duplex <sup>1</sup>	499252-3	746285-6
	31.75	37.59	30.48	17.15	Duplex <sup>2</sup>	499252-3	746288-6
30	1.450	1.680	1.400	.775	Duplex <sup>1</sup>	1-499252-2	746285-7
	36.83	42.67	35.56	19.69	Duplex <sup>2</sup>	1-499252-2	746288-7
34*	1.650	1.880	1.600	.875	Duplex <sup>1</sup>	499252-6	746285-8
	41.91	47.75	40.64	22.23	Duplex <sup>2</sup>	499252-6	746288-8
40*	1.950	2.180	1.900	1.025	Duplex <sup>1</sup>	499252-1	746285-9
	49.53	55.37	48.26	26.04	Duplex <sup>2</sup>	499252-1	746288-9
50*	2.450	2.680	2.400	1.275	Duplex <sup>1</sup>	499252-4	1-746285-0
	62.23	68.07	60.96	32.39	Duplex <sup>2</sup>	499252-4	1-746288-0
60	2.950	3.180	2.900	1.525	Duplex <sup>1</sup>	499252-7	1-746285-1
	74.93	80.77	73.66	38.74	Duplex <sup>2</sup>	499252-7	1-746288-1
64	3.150	3.380	3.100	1.625	Duplex <sup>1</sup>	1-499252-3	1-746285-2
	80.01	85.85	78.74	41.28	Duplex <sup>2</sup>	1-499252-3	1-746288-2

1.000015 [0.00038] gold on post/pin mating end, .000100-.000200 [0.00254-0.00508] bright tin-lead on termination end, with entire contact underplated .000050 [0.00127] nickel.

2.000030 [0.00076] gold on post/pin mating end, .000100-.000200 [0.00254-0.00508] bright tin-lead on termination end, with entire contact underplated .000050 [0.00127] nickel.

\*Economy versions featuring contacts with gold-flash over nickel plating are available, see page 16.

**Note:** These receptacles include a housing assembly and cover (preassembled). Strain reliefs may be purchased separately using the component part nos. listed above.

## 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. <sup>2</sup>	0.565
	1.27	303 mm <sup>2</sup>	14.35
	.039	0.134 in. <sup>2</sup>	0.390
50	1.00	86.64 mm <sup>2</sup>	9.91
	.025	0.213 in. <sup>2</sup>	0.584
	0.64	137 mm <sup>2</sup>	14.83
	.050	1.01 in. <sup>2</sup>	0.565
	1.27	645 mm <sup>2</sup>	14.25
	.039	0.335 in. <sup>2</sup>	0.390
50	1.00	216 mm <sup>2</sup>	9.91
	.025	0.426 in. <sup>2</sup>	0.584
	0.64	275 mm <sup>2</sup>	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.

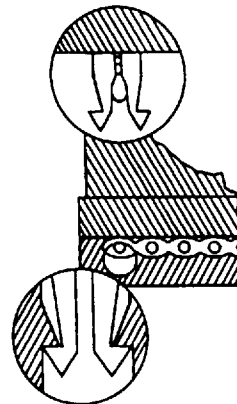
### AMP-LATCH Connectors and Mass Termination

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:

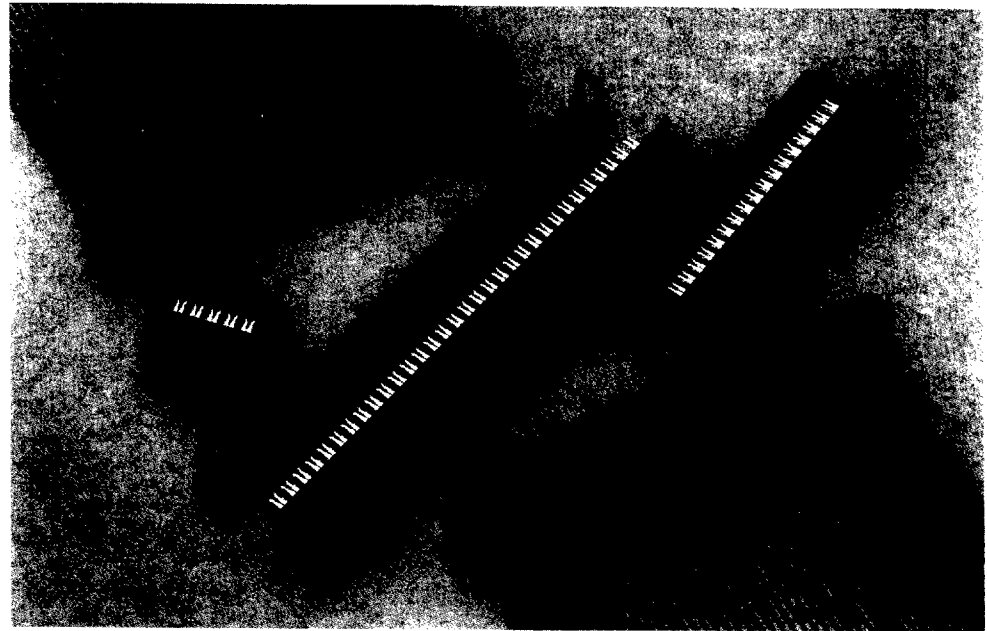
- Pull Tabs
- Strain Reliefs
- Ejection Latches  
(Mounted on the Headers and Pin Connectors)

*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 mm<sup>2</sup>], 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 .025<sup>2</sup> [0.64<sup>2</sup>] 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.