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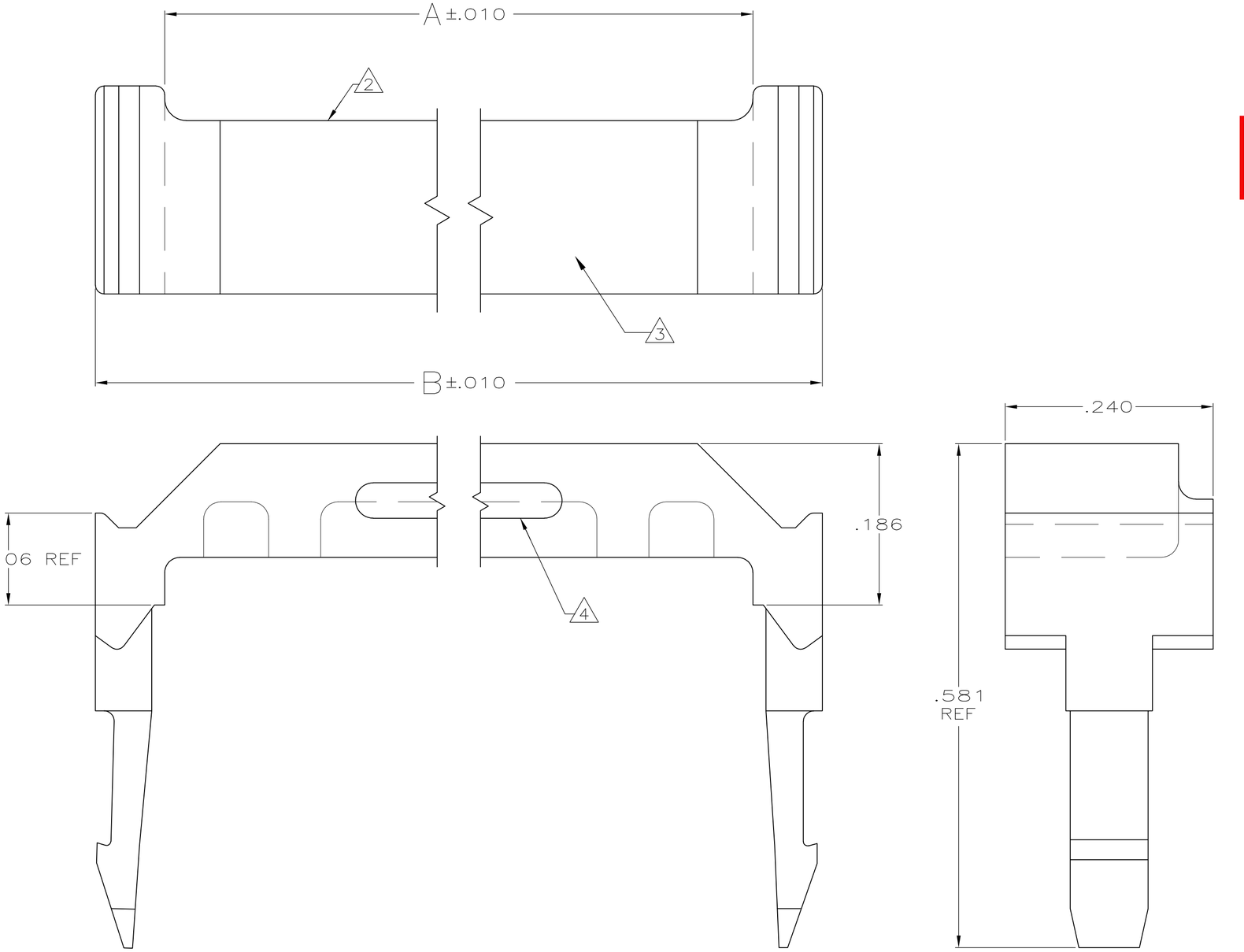
LOC	DIST
GP	00

REVISIONS

P	LTR	DESCRIPTION	DATE	DWN	APVD
	H3	REVISED PER ECO-11-005033	23MAR11	RK	HMR



勝特力電材超市-龍山店 886-3-5773766
勝特力電材超市-光復店 886-3-5729570
胜特力电子(上海) 86-21-34970699
胜特力电子(深圳) 86-755-83298787
http://www.100y.com.tw

B	A	NO OF POSN	PART NUMBER
1.990	1.834	36	1-499252-5
1.290	1.134	22	1-499252-4
3.390	3.234	64	1-499252-3
1.690	1.534	30	1-499252-2
2.390	2.234	44	1-499252-1
1.390	1.234	24	1-499252-0
.890	.734	14	499252-9
.990	.834	16	499252-8
3.190	3.034	60	499252-7
1.890	1.734	34	499252-6
.690	.534	10	499252-5
2.690	2.534	50	499252-4
1.490	1.334	26	499252-3
1.190	1.034	20	499252-2
2.190	2.034	40	499252-1

499252

1. MATERIAL: FLAME RETARDANT THERMOPLASTIC, COLOR: BLACK.
2. AMP TRADEMARK, MOLD CAVITY LETTER, AND MANUFACTURING ORIGIN (OPTIONAL) TO BE MOLDED ON THIS SURFACE.
3. ALTERNATE LOCATION FOR AMP TRADEMARK AND CAVITY ID.
4. CORING SLOTS IN BOTH SIDES AS INDICATED, OR IN UNDERSIDE OF PART.

THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS: INCHES

TOLERANCES UNLESS OTHERWISE SPECIFIED:
0 PLC ± -
1 PLC ± -
2 PLC ± -
3 PLC ± .005
4 PLC ± -
ANGLES ± -

MATERIAL 1
FINISH

DWN J GALLUCCI BG 2-23-90
CHK H.MOLL 3-5-90
APVD -
PRODUCT SPEC -
APPLICATION SPEC -
WEIGHT -

TE Connectivity

NAME STRAIN RELIEF, RECEPTACLE CONNECTOR, FLAT CABLE, AMP-LATCH
-

SIZE	CAGE CODE	DRAWING NO	RESTRICTED TO
A2	00779	C-499252	-

CUSTOMER DRAWING | SCALE 15:1 | SHEET 1 OF 1 | REV H3

AMP-LATCH* Novo Receptacles for Ribbon Cable with Conductors Having 1.27 mm [.050 in.] Centerlines

NOTE

All numerical values are in metric units [with U.S. customary units in brackets]. Dimensions are in millimeters [and inches]. Unless otherwise specified, dimensions have a tolerance of ±0.13 [±.005] and angles have a tolerance of ±2°. Figures and illustrations are for identification only and are not drawn to scale.

1. INTRODUCTION

This specification covers the requirements for application of the AMP-LATCH Novo line of receptacle connectors. The receptacles are available in sizes of 10, 14, 16, 20, 24, 26, 30, 34, 40, 50, 60, and 64 positions.

The contacts housed in these receptacles are of the insulation displacement connection (IDC) type. They accept mating headers or other pin connectors having 0.64 [.025]-square pins or 0.64 [.025]-diameter round pins 6.1 [.240] nominal length. Intermateability limitations and available polarization features are detailed in Paragraph 3.2.

When corresponding with TE Connectivity representatives, use the terminology provided in this specification to facilitate your inquiry for information. Basic terms and features of the connectors and contacts are provided in Figure 1. Accessories and their identifying features are described in Paragraph 3.4 and shown in Figure 5.

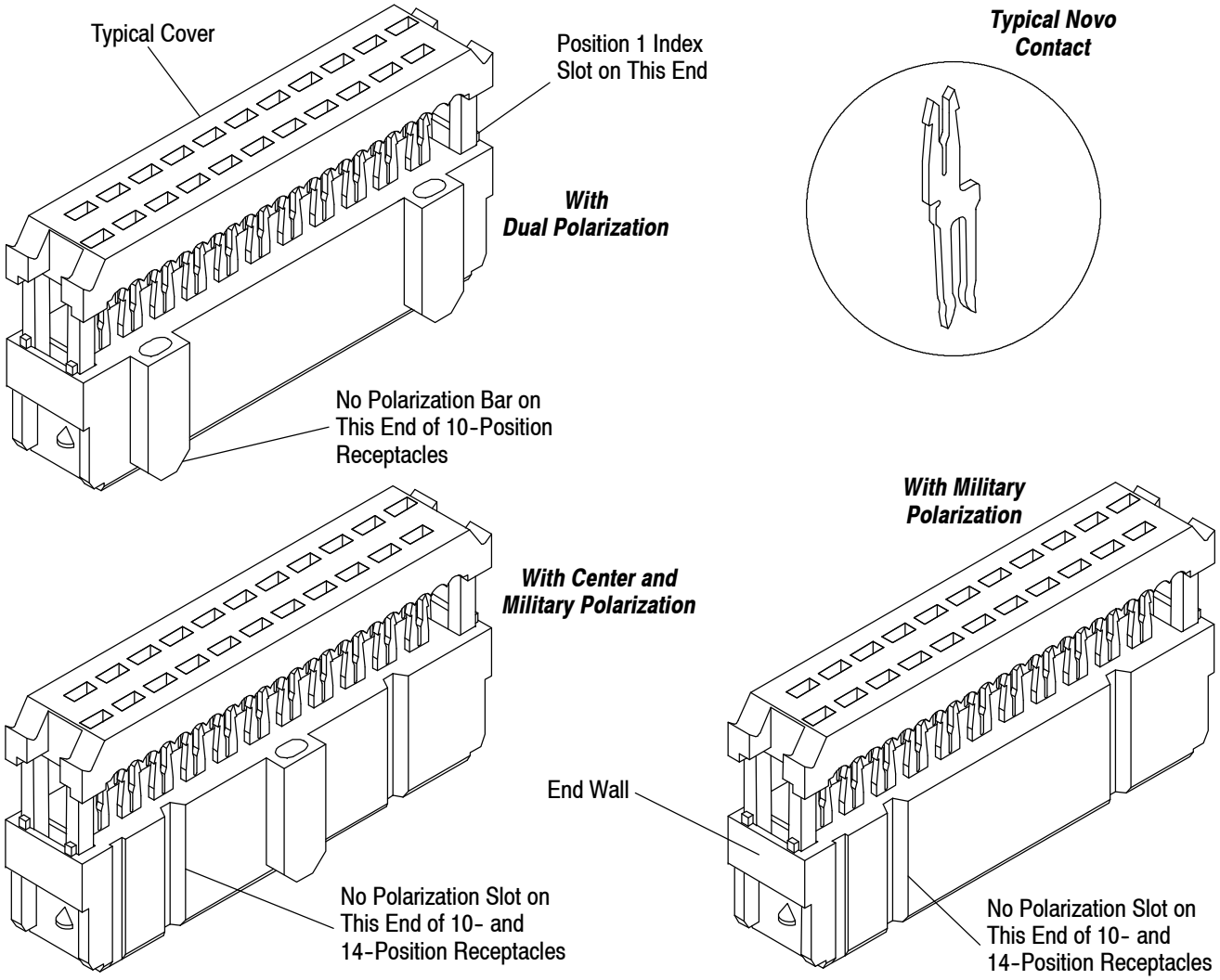


Figure 1

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2. REFERENCE MATERIAL

2.1. Revision Summary

This paragraph is reserved for a revision summary of changes and additions made to this specification. The following changes were made for this revision.

- Updated document to corporate requirements.

2.2. Customer Assistance

Reference Part Number 746285 and Product Code 5754 are representative numbers of the AMP-LATCH line of receptacle connectors. Use of these numbers will identify the product line and expedite your inquiries through a service network established to help you obtain product and tooling information. Such information can be obtained through a local TE Representative (Field Sales Engineer, Field Applications Engineer, etc.) or, after purchase, by calling the Product Information number on the bottom of page 1.

2.3. Drawings

Customer Drawings for each product part number are available from the service network. The information contained in Customer Drawings takes priority if there is a conflict with this specification or with any technical documentation supplied by TE.

2.4. Specifications

Product Specification108-40000 for AMP-LATCH Novo and Novo Stackable Receptacles covers test data and performance requirements.

2.5. Instructional Material

The following list includes available instruction sheets (408-series) that provide assembly procedures for product, operation, maintenance and repair of tooling, as well as setup and operation procedures of applicators; and customer manuals (409-series) that provide setup, operation, and maintenance of machines.

Document Number	Document Title
408-6732	Pneumatic Auto-Cycle Unit
408-7763	Pneumatic Applicator Frame Assembly
408-7777	Manual Arbor Frame Assembly
408-9828	AMP-LATCH Universal Tooling Kit
408-9831	AMP-LATCH Receptacle Connector-Specific Kits
409-5725	R-CAM 2A Cable Terminating Machine 760700-6
409-5794	R-CAM 3A Cable Terminating Machine 761900-[ ]

3. REQUIREMENTS

3.1. Storage

A. Ultraviolet Light

Prolonged exposure to ultraviolet light may deteriorate the chemical composition used in the housing material.

B. Shelf Life

Each connector is packaged and shipped in an individual antistatic tube container. To prevent damage to the housings and contacts, the connectors should remain in the container until ready for installation. Also, to prevent possible storage contamination, the connectors should be used on a first in, first out basis.

C. Chemical Exposure

Do not store product near any of the following chemicals as they may cause stress corrosion.

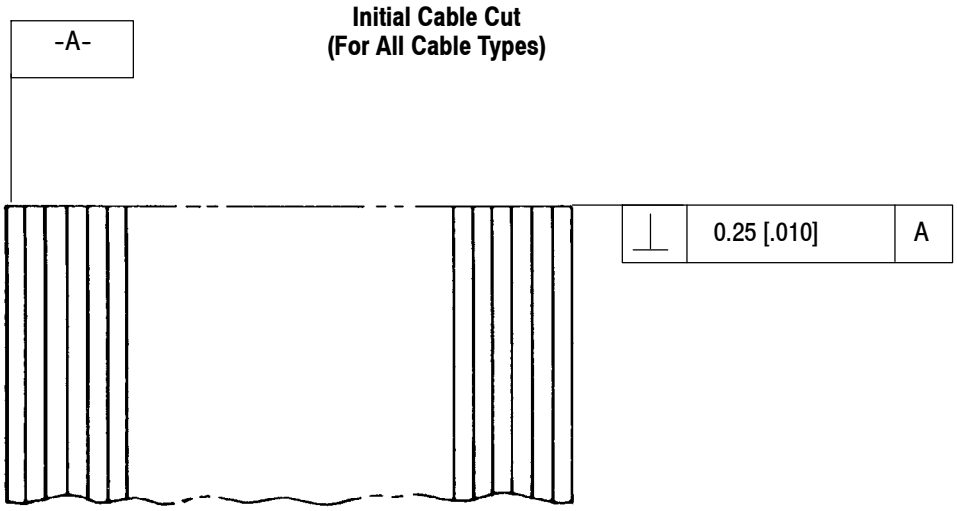
Alkalies	Ammonia	Citrates	Phosphates Citrates	Sulfur Compounds
Amines	Carbonates	Nitrites	Sulfides Nitrites	Tartrates

NOTE

Where the above environmental conditions exist, phosphor-bronze contacts are recommended instead of brass if available.

3.2. Cable Selection and Preparation

The IDC contacts in AMP-LATCH receptacles are designed to accept PVC-insulated cable wires with 26 or 28 AWG conductors. Insulation materials other than standard PVC must be submitted to TE Engineering for evaluation before use. The types of cables that can be used are shown in Figure 2. Also shown is the initial cut to be made, regardless of the cable type, using a guillotine-type cutting tool. Contact your TE representative for current tool recommendations for cutting and notching of cables.

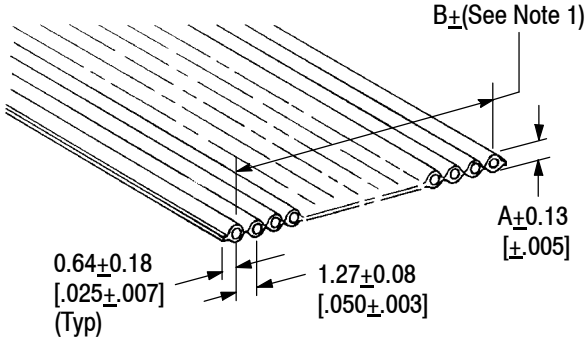


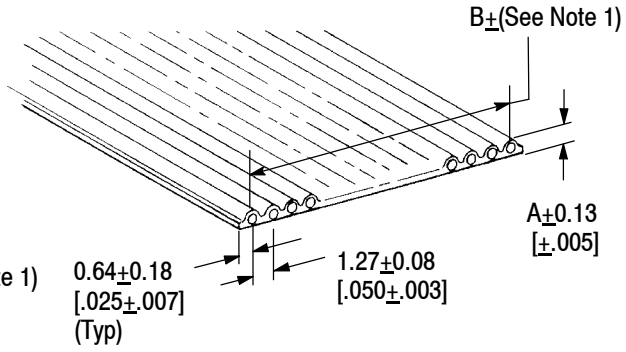
CABLE TYPE	CONDUCTOR		DIMENSION	
	SIZE (AWG)	TYPE	"A"	"B"
Standard Planar or Ribbon	26	Stranded or Solid	0.94 [.037]	(Total Number of Conductors Minus 1) x 1.27 [.050]
	28			
Woven (Discrete Wire)	28	Stranded or Solid	0.79 [.031]	
All Shielded Types	28	Stranded or Solid	0.81 [.032]	
Jacketed Flat	28	Stranded or Solid	0.86 [.034]	
Twisted-Pair FLat	28	Stranded	1.09 [.043]	

Figure 2 (cont'd)

Cable Types

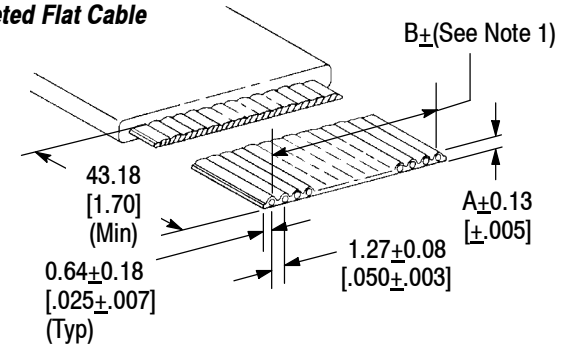
Standard Planar Cable



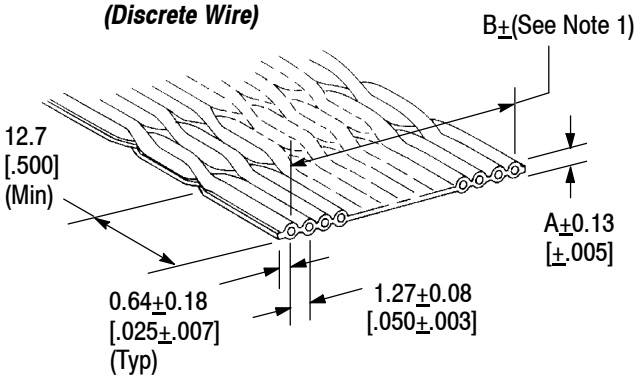


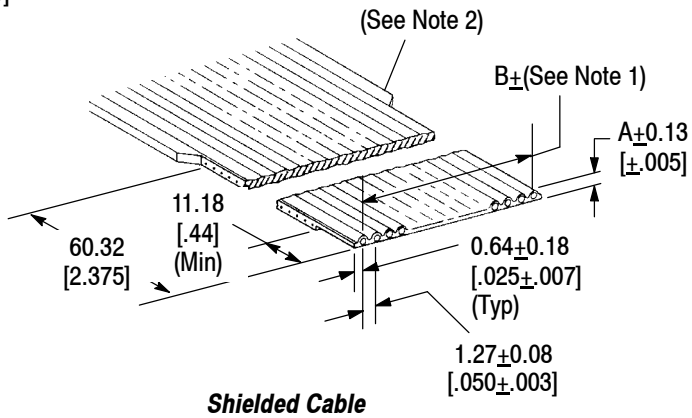
Ribbon Cable

Jacketed Flat Cable

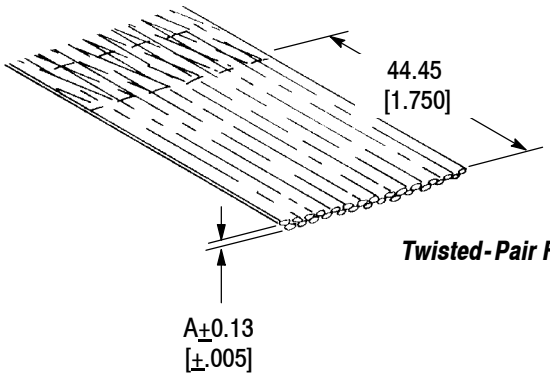


Woven Cable (Discrete Wire)





Shielded Cable



Twisted-Pair Flat Cable

Notes: 1.Cumulative tolerance for cables with 1–34 conductors is ±0.25 [±.010]; for cables with 40–64 conductors is ±0.38 [±.015].
2.Ground plane and shielded cable must be notched as shown.

Figure 2 (end)

3.3. Product Selection

The specific acceptable pin length range for AMP-LATCH Novo Receptacles is 4.44-6.22 [.175-.245].

Figure 3 shows relationships between available receptacles and the connectors that will mate with them.

MATING CONNECTOR TYPES	POLARIZATION OPTIONS		
	MILITARY	CENTER AND MILITARY	DUAL
Pin Connector with or without Mounting Ears	X	X	X
Pin Connector with or without Mounting Ears and with Detent Windows	X	X	X
Bulkhead Pin Connector	X	---	X
Universal Ejection Style Pin Header	X	X	X
Military Ejection Style Header	X	X	---
Low-Profile Pin Header	X	X	X
High Temperature Universal Ejection Style Pin Header	X	X	X
Universal Ejection Style Pinless Header	X	X	X
Stacked Headers	X	X	X
AMPMODU* Headers⊞	X	---	X

⊞ Only headers that have a 3.81 [.150] end dimension will mate.

Figure 3

A. Polarization and Strain Relief

Polarization has been designed into the housings of Novo receptacles.

B. Military, Center, and Dual Polarization

Receptacles with military polarization can be used in all header and plug connectors. Those with a combination of military and center polarization, and those with dual polarization can only be used with header or plug connectors that have the respective type of center or dual polarization.

C. Receptacle Cover Options

Covers are designed for either feed-through or end-of-line applications.

3.4. Terminated Receptacle Requirements

Prepared cable shall be terminated according to the procedures given in the applicable tooling instructions. See Paragraph 2.3, for details on tooling options and instructional materials. Figure 4 shows criteria for acceptable terminations.

NOTE

Reasonable care should be taken by tooling operators to provide undamaged terminations. An improper termination in any of the IDC contacts will be reason to discard the entire receptacle. Contacts are designed for one-time termination, and cannot be replaced, repaired, or re-used.

Termination Requirements

Typical Cross-Section

Side View of Application

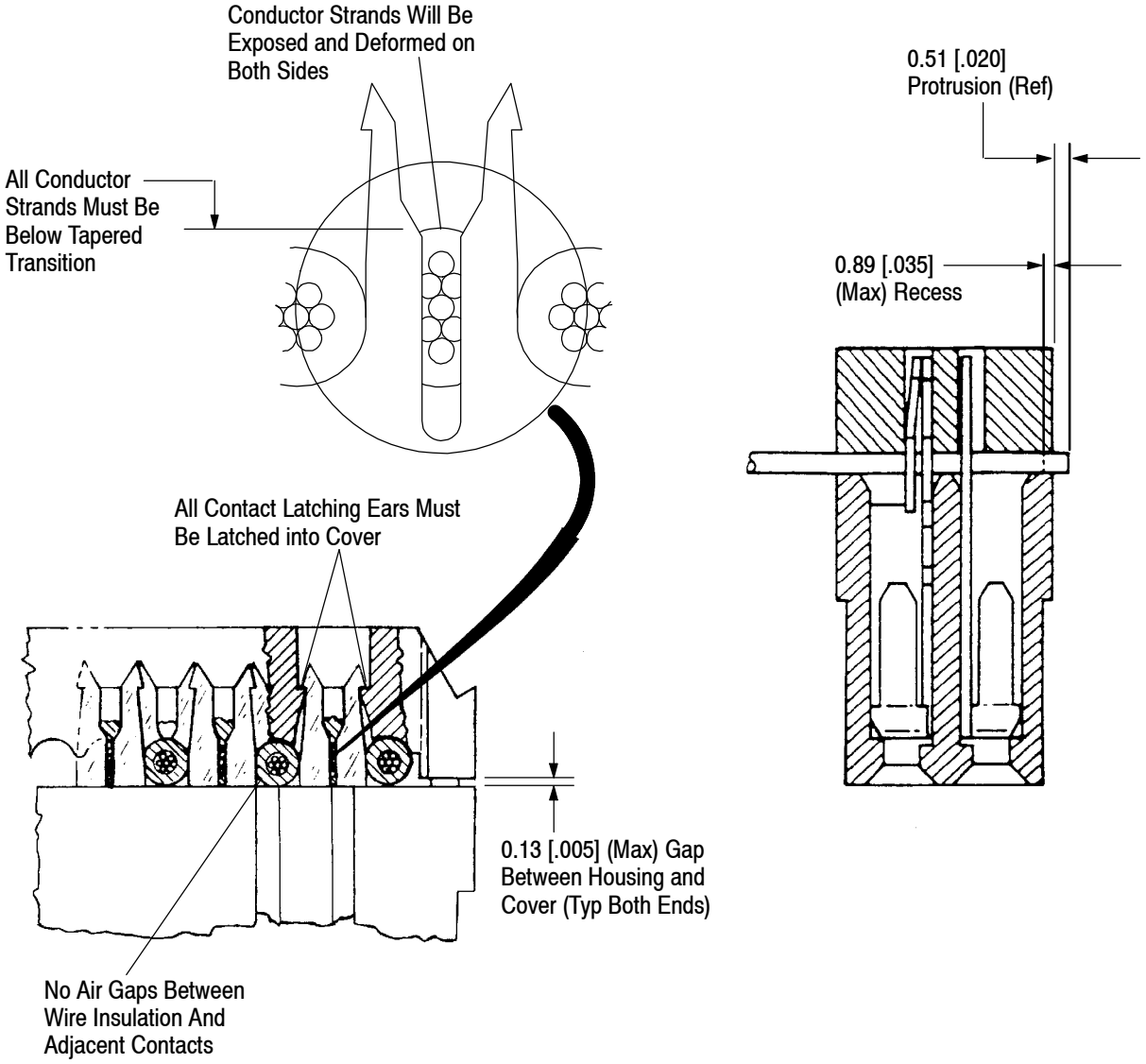


Figure 4

3.5. Accessories (Figure 5)

A. Strain Relief

Strain relief may be added to any application.

B. Keying Plugs

Keying plugs are designed to be hand inserted directly into the contact cavities. Corresponding pins must be removed from the mating connector.

C. Pull Loops

Flexible pull loops may be permanently assembled. The loop is installed between the strain relief and the cover in strain-relieved applications. An unattached, insertion type of pull tab is also available for receptacles not employing strain relief.

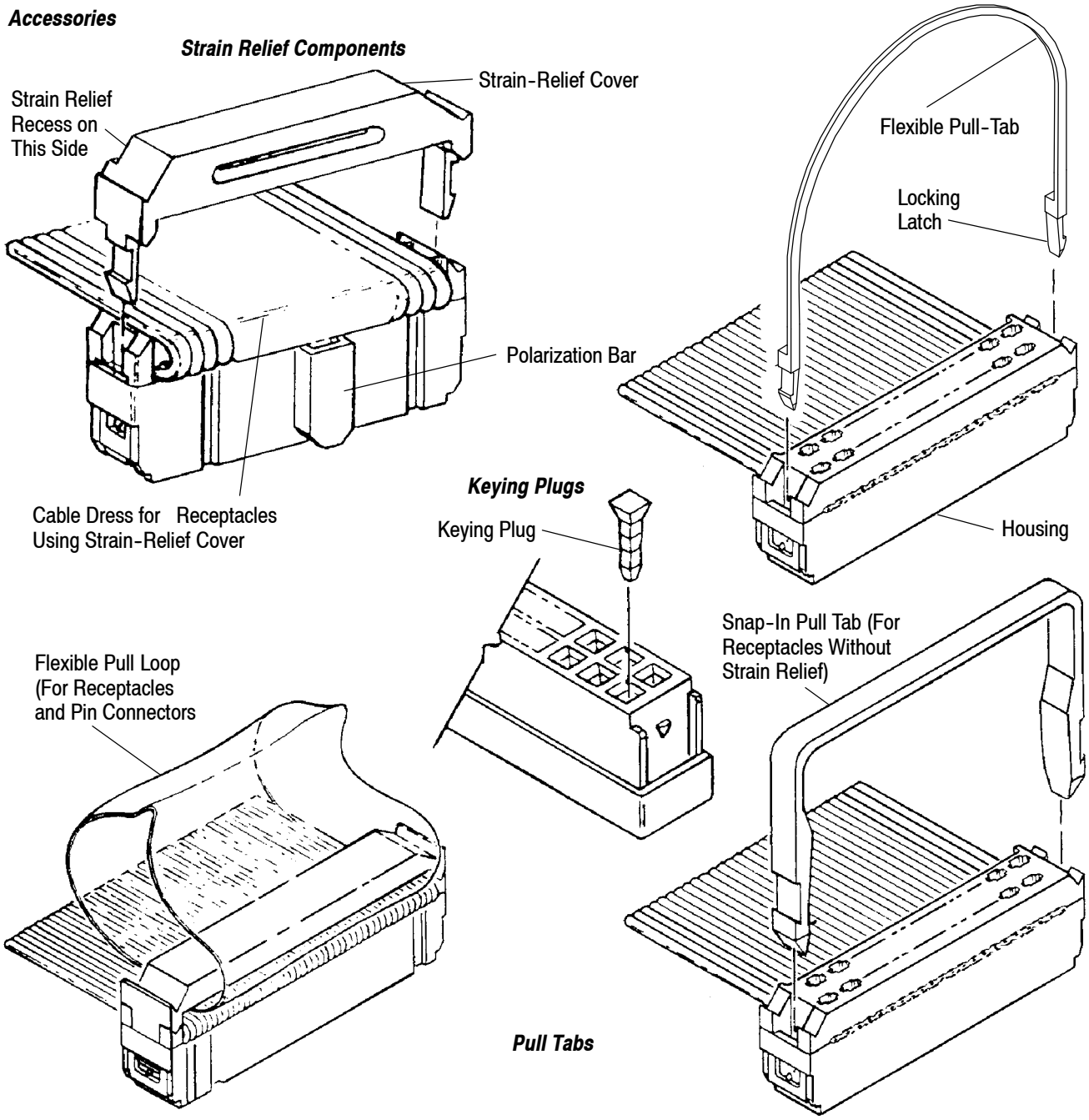


Figure 5

3.6. Testing

Completed cable assemblies should be tested for continuity using a CIRRIS Tester●, or similar equipment.

The automatic cable assembly machines described in Paragraph 5.3, contain their own test equipment, and should be operated according to the documentation supplied with them.

4. QUALIFICATIONS

AMP-LATCH Novo Receptacles for Ribbon Cable are Recognized under the Component Recognition Program by Underwriters Laboratories Inc. (UL) under Electrical File Number E-28476. They are also Certified by the Canadian Standards Association (CSA) under File Number LR-7189.

● Manufactured by CIRRIS Systems Corp.

5. TOOLING

This section provides a selection of tools for various application requirements. They include hand tools for manual application of product, and semi-automatic and automatic machines for power assist application product. Modified designs and additional tooling concepts may be available to meet other application requirements. For additional information, contact one of the service groups at the bottom of page 1. A listing of tooling recommendations covering the full product range is provided in Figure 6.

AMP-LATCH Receptacle Connectors for ribbon cable having 1.27 [.050] centerlines can be attached to the cable with hand application tooling and arbor frame assemblies for small volume prototype and repair applications, or cable-making machines for complete cable assemblies in higher volume production requirements.

- **Hand Application Tooling:** A typical guillotine-type cutting tool used to cut ribbon cable for AMP-LATCH receptacles is shown in Figure 6. The components needed for hand tool application will consist of a hand tool, tooling assembly, and a connector-specific kit. After the hand tool and tooling assembly are set up, they will accept the connector-specific kit with no further adjustments. The connector-specific kit is designed for both the hand tool and the arbor frame assembly.
- **Arbor Frame Assemblies:** There are manually operated and pneumatically operated (auto-cycle and foot pedal actuated) arbor frame assemblies designed for bench mounted operation. They accept standardized upper/lower tooling assemblies that have been designed for the AMP-LATCH Connector-Specific Kit. Instruction sheets covering tool setup and operation are packaged with the tooling. See Figure 6.
- **Cable Making Machines:** There are two high production automatic machines designed to make cable assemblies using standard planar ribbon cable described in Figure 2. One is the R-CAM 2A for terminating up to four connectors to a cable assembly (one connector on the leading end and three on the trailing end of the cable assembly), and the other is the R-CAM 3A for terminating up to two connectors (one on the leading end and one on the trailing end). Both machines can accommodate variations of the AMP-LATCH Ribbon Cable Connectors. A customer manual for setup and operation will be supplied for each machine. Both machines test the cable assemblies for continuity and short circuits as they are being processed. See Figure 8 for typical R-CAM 2A machine design.

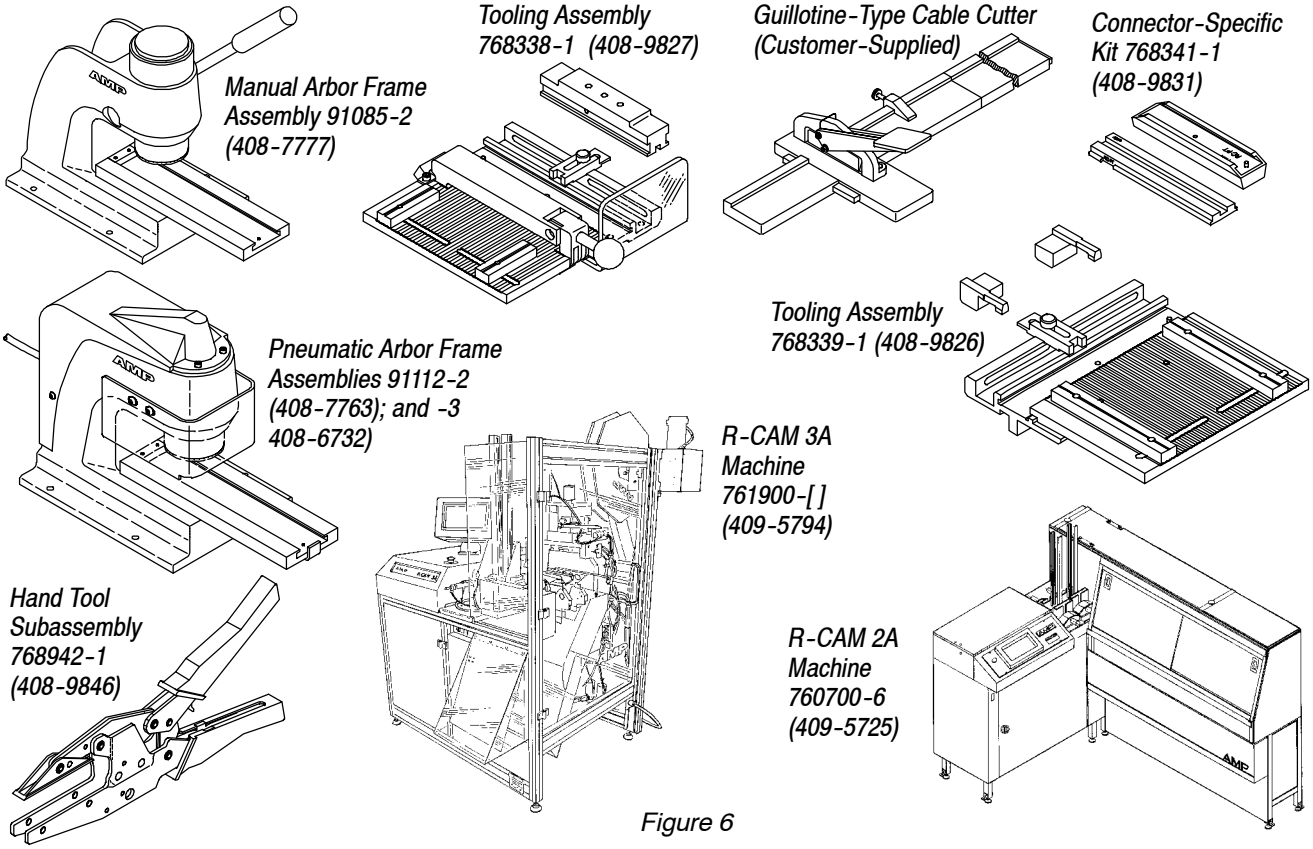
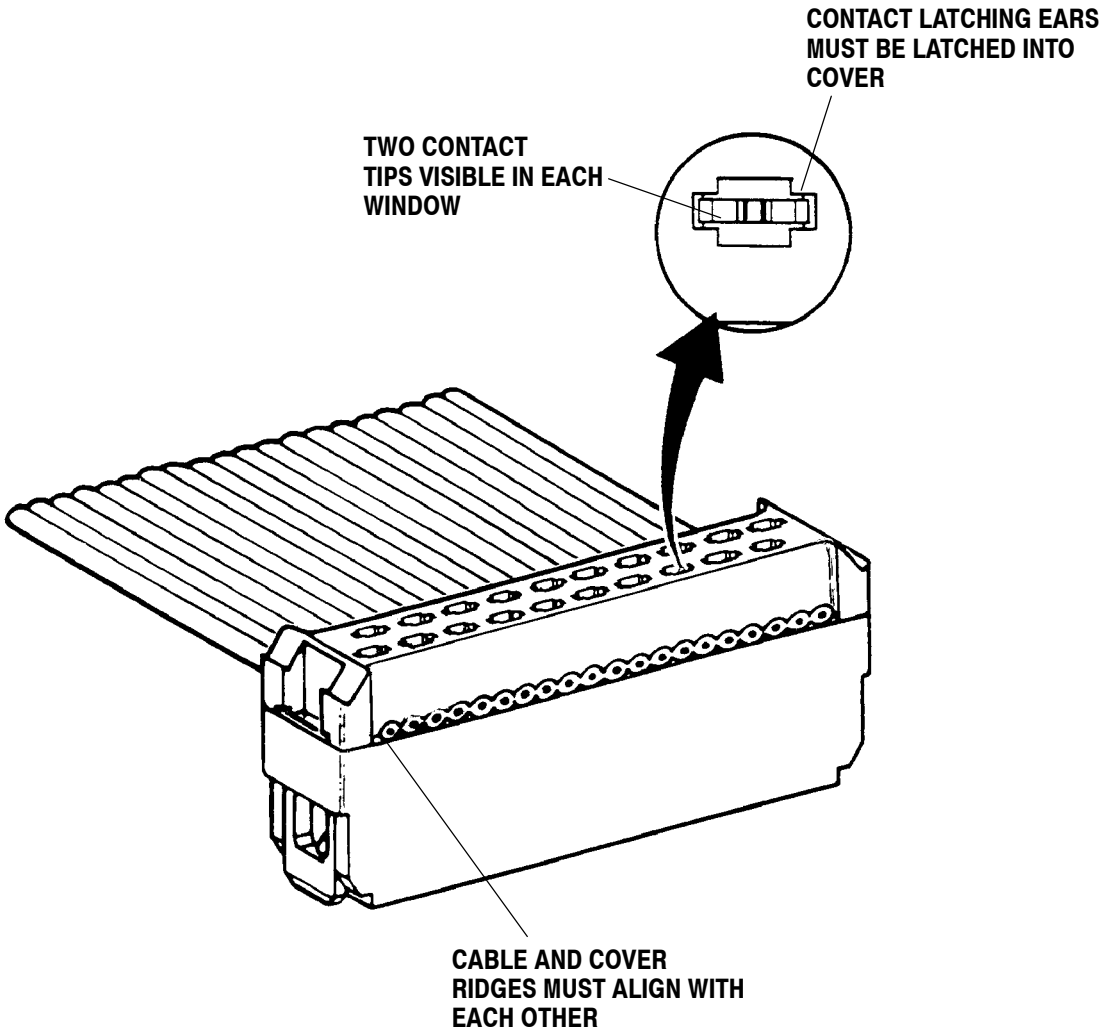


Figure 6

6. VISUAL AID

Figure 7 is to be used by production personnel to ensure a properly applied product. The views shown suggest requirements for all similar applications. Applications NOT visually correct should be inspected using the information in the main body of this document and in the instructional materials shipped with the product or tooling.



NOTE: **SMALL FISSURES IN THE END WALLS WHICH DO NOT RESULT IN MATERIAL SEPARATION ARE ACCEPTABLE AND DO NOT AFFECT CONNECTOR FUNCTIONALITY.**

FIGURE 7. VISUAL AID