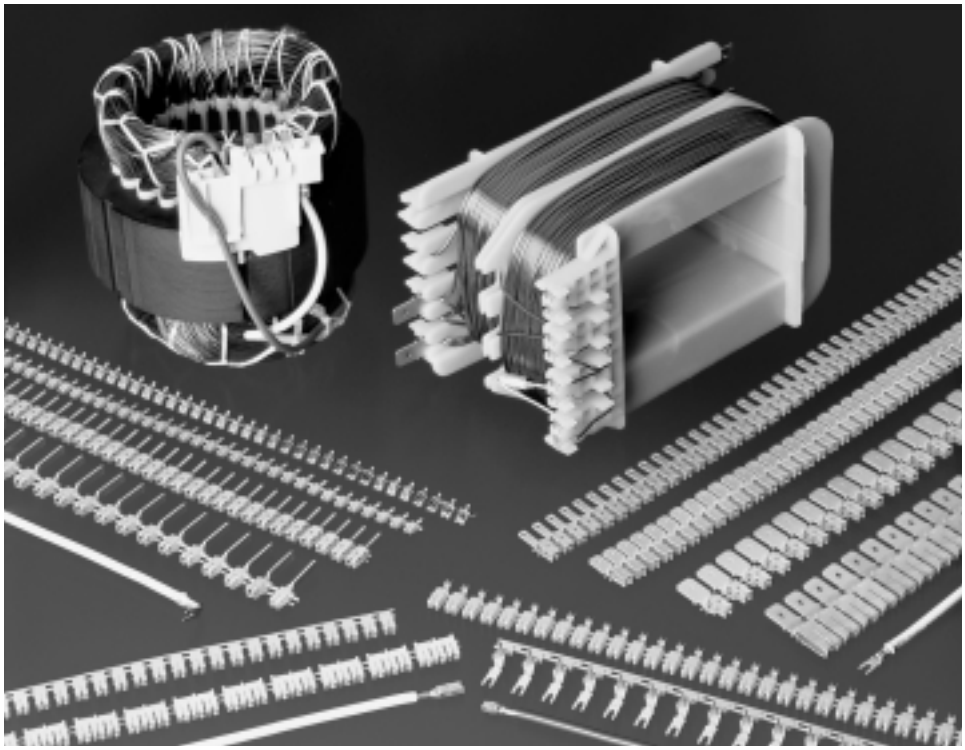
## Standard MAG-MATE Terminals

### Product Facts

- **Terminates all magnet wire film insulations**
- **Eliminates need for pre-stripping conductors**
- **Eliminates need to post insulate termination**
- **Excess magnet wire is automatically trimmed during the termination process**
- **Simultaneously terminates two magnet wires of the same size in one terminal (for splicing or bi-filing)**
- **Various lead wire attachment options available**
- **Available in strip form for semi-automatic or fully automatic insertions**
- **Available in loose piece form for hand tool insertions**
- **Varnish resist tab terminals are available for special applications**
- **High speed, fully automated integrated systems provide uniform terminations reliability at the lowest possible applied cost**
- **Clean metal-to-metal interface produces stable, gas-tight electrical terminations free of oxides and other contaminants**
- **Recognized under the Component Recognition Program of Underwriters Laboratories Inc., File No. E13288**

### Applications

- **Motor windings and connections**
- **Coil connections**
- **Transformer windings and connections**
- **Bobbin connections**
- **Lighting ballasts**
- **Power supplies**

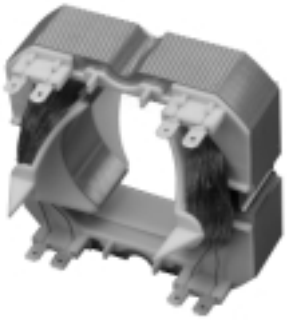


Tyco Electronics offers a full selection of AMP Standard MAG-MATE Insulation Displacement Crimp (IDC) terminals for magnet wire terminations.

MAG-MATE terminals are available in poke-in, poke-in tab, splice, crimp wire barrel, solder post, quick connect tab, pin and receptacle styles.

Standard MAG-MATE terminates magnet wire ranging from 34-12 AWG [0.16 -2.05 mm].

Each IDC slot terminates up to four consecutive magnet wire ranges.



Two magnet wires with the same diameter can be terminated in one terminal down to 23 AWG [0.57 mm].

According to Tyco Electronics specifications MAG-MATE cavities are either integrated into coil bodies or especially designed cavity housings. The magnet wires are precisely positioned in the “U”shaped designed termination slots.

The MAG-MATE Inserter cuts the terminals from the strip and places the terminals over the magnet wire into the plastic cavities.

During this operation the small stripping devices penetrate the film insulation from the magnet wire.

Residual spring energy in the terminal causes the side walls of each IDC slot to function as opposing cantilever beams.

This constant pressure results in an intimate metal-to-metal interface, providing a reliable, long-term connection.

The wiping action between the wire and terminals removes oxides or other contaminants present on both the conductor and the terminal slot side walls, producing a clean, stable, gas-tight electrical termination.

The AMP MAG-MATE Inserter may be used as a semi-automatic bench machine or integrated in production lines for fully-automatic applications.





Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.

Dimensions are shown for reference purposes only. Specifications subject to change.

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Mexico: 01-800-733-8926

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## Standard MAG-MATE Terminals (Continued)

### Typical Plastic Cavities

Manufacture only according to Tyco Electronics Specification.

### Technical Documents

**Application Specifications** describe requirements for using the product in its intended application and or crimping information. They are intended for the Packaging and Design Engineer and the Machine Setup Person.

114-2050—Poke-In Tab MAG-MATE Terminals

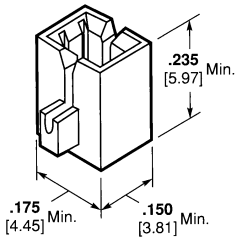
114-2069—Standard MAG-MATE .187 [4.75] Box Height Terminals

114-2046—Standard MAG-MATE .300 [7.62] Box Height Terminals

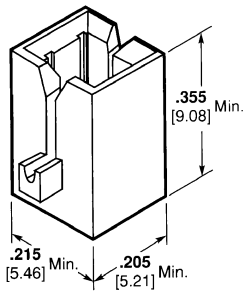
114-2066—Standard MAG-MATE .500 [12.7] Box Height Terminals

114-2067—Standard MAG-MATE .300 [7.62] Box Height Latch-In Terminals Narrow Body

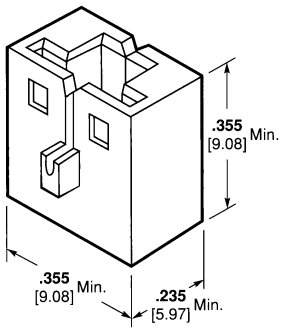
114-2094—Standard MAG-MATE .300 [7.62] Box Height Latch-In Terminals Wide Body



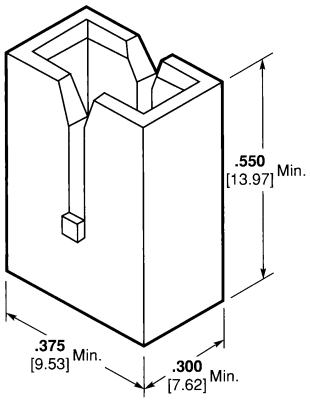

**Cavity Size 1, .187 [4.75] Box Height MAG-MATE (Reference Application Spec. 114-2069)**



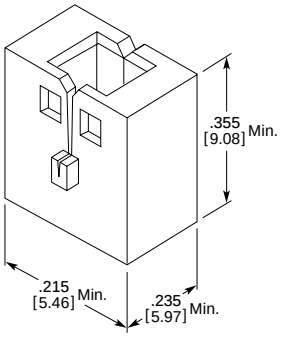

**Cavity Size 2, .300 [7.62] Box Height MAG-MATE (Reference Application Spec. 114-2046)**



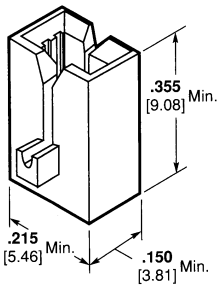

**Cavity Size 3, .300 [7.62] Box Height Latch-In MAG-MATE, Wide Body (Reference Application Spec. 114-2094)**




**Cavity Size 4, .500 [12.70] Box Height MAG-MATE (Reference Application Spec. 114-2066)**




**Cavity Size 5, .300 [7.62] Box Height Latch-In MAG-MATE, Narrow Body (Reference Application Spec. 114-2067)**




**Cavity Size 6, .300 [7.62] Box Height MAG-MATE (Reference Application Spec. 114-2046)**

**Note:** MAG-MATE typical plastic cavities are not for design; Tyco Electronics will supply required dimensions of cavity for each customer application.

Plastic cavities, designed to Tyco Electronics specifications, may be molded as part of the coil bobbin or attached to a lamination stack in the area of the magnet wire coil.

Each cavity is a rectangular box with two narrow slots on opposing walls and a plastic post or anvil extending upward from the bottom surface.

During or after the winding process, the magnet wire is placed across the plastic cavities and into the slots, either manually or by coil winding equipment.

Unraveling is prevented by a slight friction fit, suitable bend or by wrapping the magnet wire around a tie-off post.

During insertion, two insulation displacing terminal slots strip the film insulation from the magnet wire producing a stable electrical termination.

The plastic anvil supports the magnet wire, helping to prevent it from being dragged down when the terminal is inserted.

Terminal retention is secured in the plastic cavities by either locking barbs or locking latches in addition to locking barbs for quick disconnect FASTON tab terminals.

Excess magnet wire is trimmed flush with the outside of the plastic cavity by a shear blade traveling with the terminal insertion ram.

The sheared wire end can be tucked inside the plastic cavity, if necessary, by cutting the wire off before the terminal is fully seated allowing the terminal to drag the severed end of the wire into the pocket inside the cavity.

**Tyco Electronics will provide design and mold engineering resources to manufacture any specifically designed MAG-MATE cavity housing.**



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Technical Support
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## Standard MAG-MATE Terminals (Continued)



### Standard MAG-MATE Interconnection System

#### How the System Operates

① **Wire Cutter**
This part cuts off the excess magnet wire and the wire support at the front of the cavity.

② **Insertion Finger**
The insertion finger is part of the MAG-MATE Inserter. It pushes the terminal that was sheared from the carrier strip through the inserter "tube" into the positioned cavity.

③ **Contact**
Various wire attachments in three different sizes, .187, .300, .500 cavity height (see tables).

④ **IDC Slot**
In different sizes for magnet wire diameters from 34-12 AWG [0.16-2.05 mm]. Strain relief slots available for high vibration applications.

⑤ **Stripping Shoulders**
During the insertion process, these shoulders strip the film insulation from the magnet wire in four areas.

⑥ **Locking Barbs**
Terminal retention is secured in the cavity by four locking barbs.

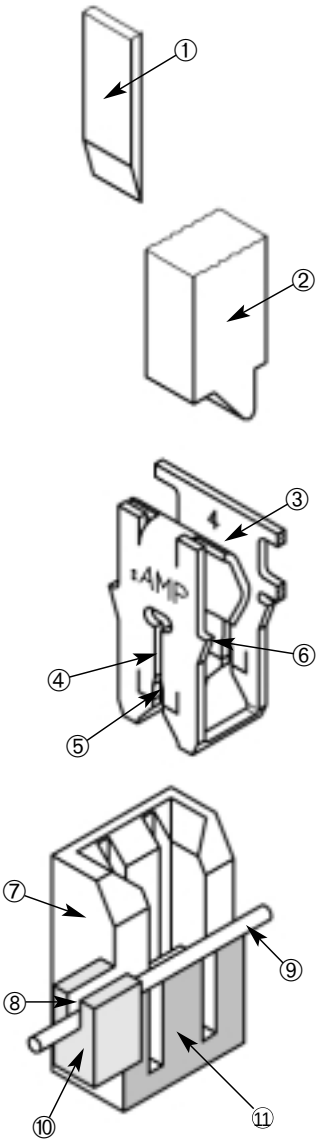
⑦ **Plastic Cavity**
Production must be in accordance with Tyco Electronics Application Specifications. **Consulting Tyco Electronics is required for design in.**

⑧ **Cavity Slot for Wire**
The width has to be in accordance with the wire size (see Application Specification).

⑨ **Magnet Wire**
The magnet wire is positioned in the "U" slot.

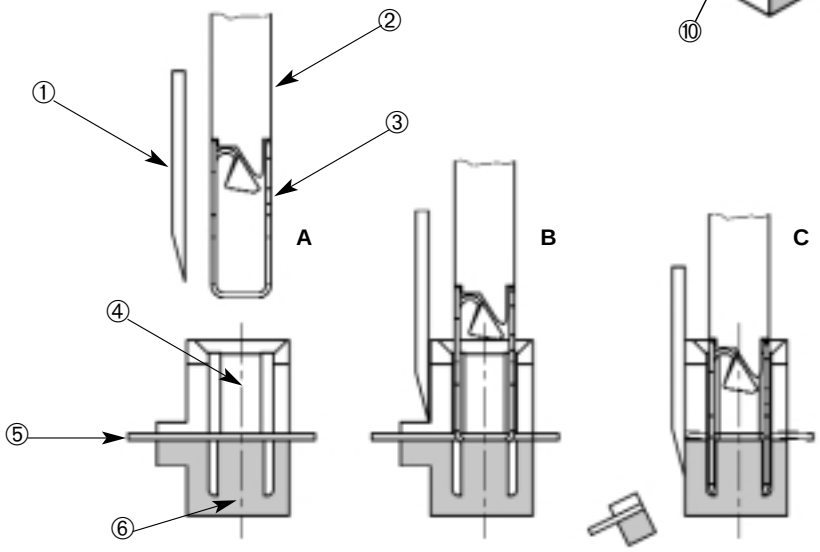
⑩ **Wire Support Block**
The block supports the magnet wire during the cutting process. The magnet wire is cut flush to the cavity front side.

⑪ **Anvil**
The anvil supports the wire during the insertion process.




#### Termination Sequence

**A** = Prepare
**B** = Insert
**C** = Finish




① Post Trim Blade
② Insertion Finger
③ Poke-In Contact
④ MAG-MATE Cavity
⑤ Magnet Wire
⑥ Support Anvil



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## Standard MAG-MATE Terminals (Continued)

### Test Results

**Standard and Slim Line MAG-MATE** products have been submitted to the following tests without significant millivolt increase:

**Current Cycling** —
480 cycles with each cycle consisting of 15 minutes "ON" followed by 15 minutes "OFF"

**Thermal Shock** —
25 cycles with each cycle consisting of 30 minutes at 125°C followed by 30 minutes at -65°C

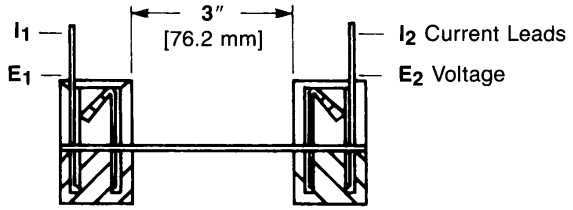
**Humidity** —
**Temperature Cycling**
10 cycles between 25°C and 65°C at 95% RH

**Heat Age** —
33 days at 118°C

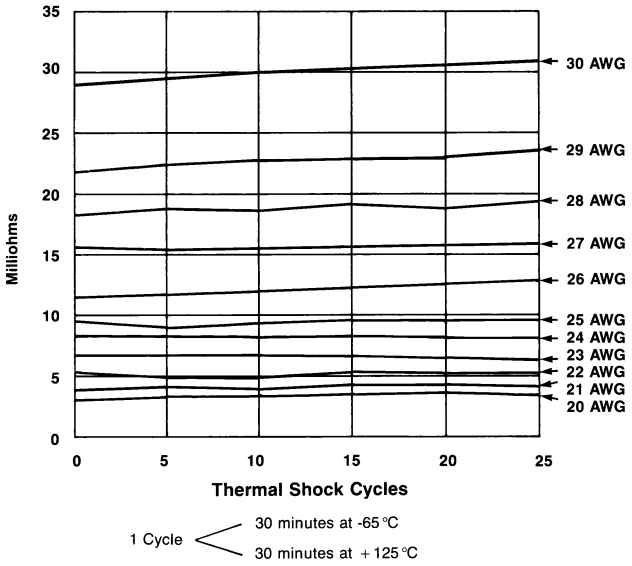
**Mini MAG-MATE** products have been submitted to the following tests in addition to those listed without significant millivolt increase:

**Vibration** —
10-55-01- Hz traversed in 1 minute at .06 inches total excursion; 2 hours in each of 3 mutually perpendicular directions.

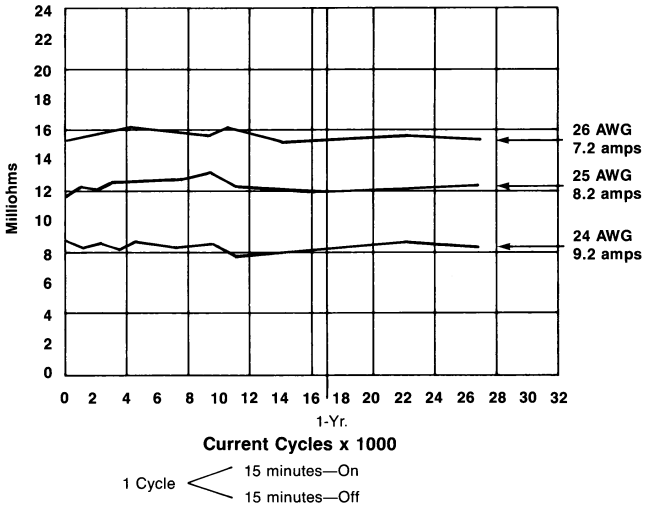
**Industrial Gas with Chlorine** —
1000 exposure to 200 ppb each of sulphur dioxide, nitrogen dioxide, hydrogen sulphide and 50 ppb chlorine.



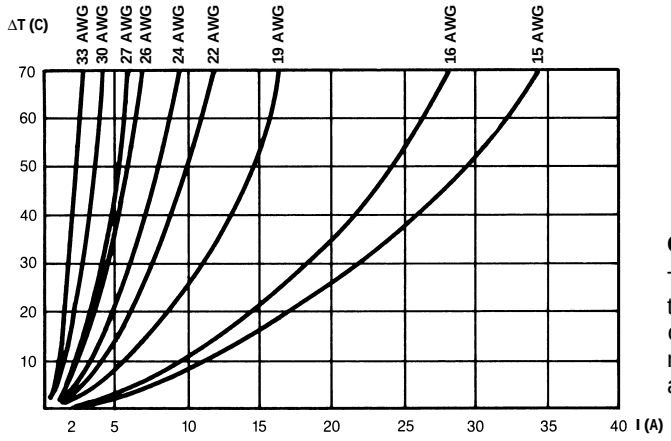

**Resistance vs Thermal Shock (Copper Wire)**




**Resistance vs Current Cycles (Copper Wire)**




Test Current produces 100°C Magnet Wire Operating Temperature




### Current Rating Curves

The diagram shows the temperature rise of the contact, depending on the magnet wire size being applied.

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

108-2012 Standard .187and .300 MAG-MATE Terminals

108-2053 Standard .500 Box MAG-MATE Terminals

108-1484 Slim Line MAG-MATE Terminals

108-2016 Mini MAG-MATE Terminals

**Note:** For all applications, Tyco Electronics recommends that samples of the magnet wire to be used be submitted for engineering evaluation.



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## Standard MAG-MATE Terminals (Continued)

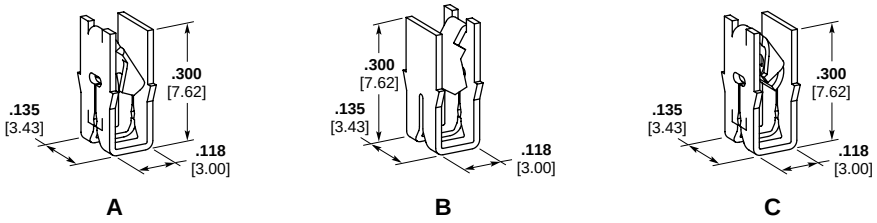
### 300 Box Poke-In Terminals

**Material**

Tin plated brass

**Typical Cavity Size 2**

(See page 2)




| Type | Copper Magnet Wire Range[1] | | Lead Wire Range[3] | | Stock Thickness | Part Number* | | |
|---|---|---|---|---|---|---|---|---|
| | AWG | mm | AWG | mm² | | Strip | L. P. | Dual L. P. |
| A 300 Box Standard IDC Locking Poke-In | 34-33 | 0.16-0.18 | 20-18 | 0.5-0.9 | **.010** 0.25 | 63662-1 | — | — |
| | 33-31 | 0.18-0.23 | 20-18 | 0.5-0.9 | **.010** 0.25 | **62431-1** | 62527-1 | — |
| | 31-28 | 0.23-0.32 | 20-18 | 0.5-0.9 | **.012** 0.30 | 1217234-1 | — | — |
| | 30-27 | 0.25-0.36 | 20-18 | 0.5-0.9 | **.012** 0.30 | **62429-1**<br>63636-1[8] | 62526-1<br>— | 63855-1<br>— |
| | 27-23 | 0.36-0.57 | 20-18 | 0.5-0.9 | **.016** 0.41 | 62935-1 | 63044-1 | 62842-1 |
| | | | — | — | | 63754-1[5] | — | — |
| | 25-22[2] | 0.45-0.64 | 20-18 | 0.5-0.9 | **.016** 0.41 | 63658-1<br>1217084-1[5] | 1217757-1 | — |
| | 22-20[2] | 0.64-0.81 | 20-18 | 0.5-0.9 | **.016** 0.41 | **62420-1**<br>62420-4[6]<br>1217824-1[1] | 62524-1<br>—<br>— | 62841-1<br>—<br>— |
| | | | — | — | | 63725-1[5] | — | — |
| | 20[2] | 0.81 | 20-18 | 0.5-0.9 | **.016** 0.41 | 63591-1 | — | — |
| | 19-17[2] | 0.91-1.15 | 20-18 | 0.5-0.9 | **.016** 0.41 | **62833-1** | 62912-1 | 1217736-1† |
| B[4] 300 Box Standard IDC w/ Strain Relief Slot Locking Poke-In | 30 | 0.25 | 20-18 | 0.5-0.9 | **.012** 0.30 | 63786-1† | — | — |
| | 29-28[2] | 0.29-0.32 | 20-18 | 0.5-0.9 | **.012** 0.30 | 1217011-1 | — | — |
| | 28-26[2] | 0.32-0.40 | 20-18 | 0.5-0.9 | **.012** 0.30 | 1217368-1 | — | — |
| | 27-23[2] | 0.36-0.57 | 20-18 | 0.5-0.9 | **.016** 0.41 | 63789-1 | — | — |
| C 300 Box Standard IDC Non-Locking Poke-In | 31-28 | 0.23-0.32 | — | — | **.012** 0.30 | 1217026-1 | — | — |
| | 30-27 | 0.25-0.36 | — | — | **.012** 0.30 | 63590-1[7]<br>63590-2<br>63590-3[6] | —<br>—<br>— | —<br>—<br>— |
| | 27-23 | 0.36-0.57 | — | — | **.016** 0.41 | 63551-1[7]<br>63551-2†<br>63551-3[6] | —<br>—<br>— | —<br>—<br>— |
| | 27-26 | 0.36-0.40 | — | — | **.016** 0.41 | 1217192-1 | — | — |
| | 25.5-24 | 0.43-0.51 | — | — | **.016** 0.41 | 1217191-1 | — | — |
| | 23.5-22[2] | 0.54-0.64 | — | — | **.016** 0.41 | 1217190-1 | — | — |
| | 21.5-20[2] | 0.68-0.81 | — | — | **.016** 0.41 | 1217189-1 | — | — |

[1] Two magnet wires may be terminated in the same terminal slot if diameters are equal.
[2] Single magnet wire only; 22 AWG [0.64 mm] or larger unless otherwise noted.
[3] Solid or overcoated stranded lead wire only. Product will also accept Poke-In Tab Terminal shown on page 7.
[4] Strain relief slot for high vibration applications.
[5] Enhanced anti-overstress behind Poke-In feature for severe applications. Part does not accept lead wires.
[6] Finish is tin plated phosphor bronze.
[7] Finish is tin over nickel plated brass.
[8] Deep Poke-In design for enhanced lead wire retention. Special cavity design required. Contact Tyco Electronics Engineering for details.
* Recognized under the Component Program of Underwriters Laboratories, Inc.
† These part numbers are available upon special request; contact Tyco Electronics Engineering for details.

**Preferred part numbers are printed in bold.**

*Chart continued on next page*

## Standard MAG-MATE Terminals (Continued)

### 300 Box Poke-In Terminals

(Continued)

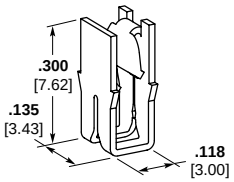
#### Material

Tin plated brass

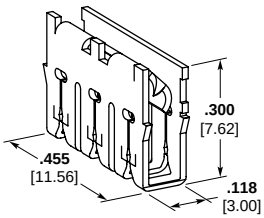
#### Typical Cavity Size 2

(See page 2)

**Note:** Special cavity required for Tri-slot splice terminal. Contact Tyco Electronics Engineering for details.




D




E

| Type | Copper Magnet Wire Range[1] AWG | mm | Stock Thickness | Strip Part Number |
|---|---|---|---|---|
| D[4] 300 Box Standard IDC w/ Strain Relief Slot Non-Locking Poke-In | 27-26 | 0.36-0.40 | **.016** 0.41 | 1217429-1<br>1217691-1[3] |
| | 25.5-24 | 0.43-0.51 | **.016** 0.41 | 1217428-1<br>1217690-1[3] |
| | 23.5-22[2] | 0.54-0.64 | **.016** 0.41 | 1217427-1<br>1217689-1[3] |
| | 21.5-20[2] | 0.68-0.81 | **.016** 0.41 | 1217426-1<br>1217688-1[3] |
| E 300 Box Standard IDC Tri-Slot Non-Locking Poke-In | 30-27[2] | 0.25-0.36 | **.016** 0.41 | 1217221-1† |
| | 27-23[2] | 0.36 -0.57 | **.016** 0.41 | 63632-1 |
| | 23-20[2] | 0.57-0.81 | **.016** 0.41 | 1217533-1† |
| | 27-23[2]<br>19-17[2]<br>18[2] | 0.36-0.57<br>0.91-1.15<br>0.8-0.9 | **.016** 0.41 | 63975-1 |

[1] Two magnet wires may be terminated in the same terminal slot if diameters are equal.
[2] Single magnet wire only; 22 AWG [0.64 mm] or larger.
[3] Enhanced anti-overstress behind Poke-In feature for severe applications. Part does not accept lead wires.
[4] Strain relief slot for high vibration applications.
† These part numbers are available upon special request; contact Tyco Electronics Engineering for details.
* Recognized under the Component Program of Underwriters Laboratories, Inc.

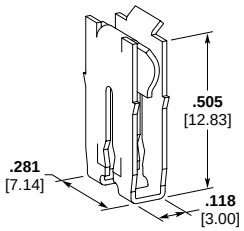
### 500 Box Poke-In Terminals

#### Material

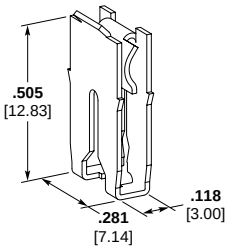
Tin plated brass

#### Typical Cavity Size 4

(See page 2)




A




B

| Type | Copper Magnet Wire Range[1] AWG | mm | Stock Thickness | Strip Part Number |
|---|---|---|---|---|
| A 500 Box Standard IDC Non-Locking Poke-In | 23-19.5 | 0.57-0.86 | **.016** 0.41 | 1217069-1 |
| | 19-17 | 0.91-1.15 | **.016** 0.41 | 1217068-1 |
| | 16-15 | 1.29-1.45 | **.016** 0.41 | 1217067-1 |
| B[3] 500 Box Standard IDC w/ Strain Relief Slot Non-Locking Poke-In | 23-21.5 | 0.57-0.68 | **.016** 0.41 | 1217358-1 |
| | 21-19.5 | 0.72-0.86 | **.016** 0.41 | 1217357-1 |
| | 19-17 | 0.91-1.15 | **.016** 0.41 | 1217356-1 |
| | 16-15 | 1.29-1.45 | **.016** 0.41 | 1217355-1 |
| | 14-13[2] | 1.61-1.83 | **.016** 0.41 | 1217579-1† |

[1] Two magnet wires may be terminated in the same terminal slot if diameters are equal.
[2] Single magnet wire only.
[3] Strain relief slot for high vibration applications.
† These part numbers are available upon special request; contact Tyco Electronics Engineering for details.



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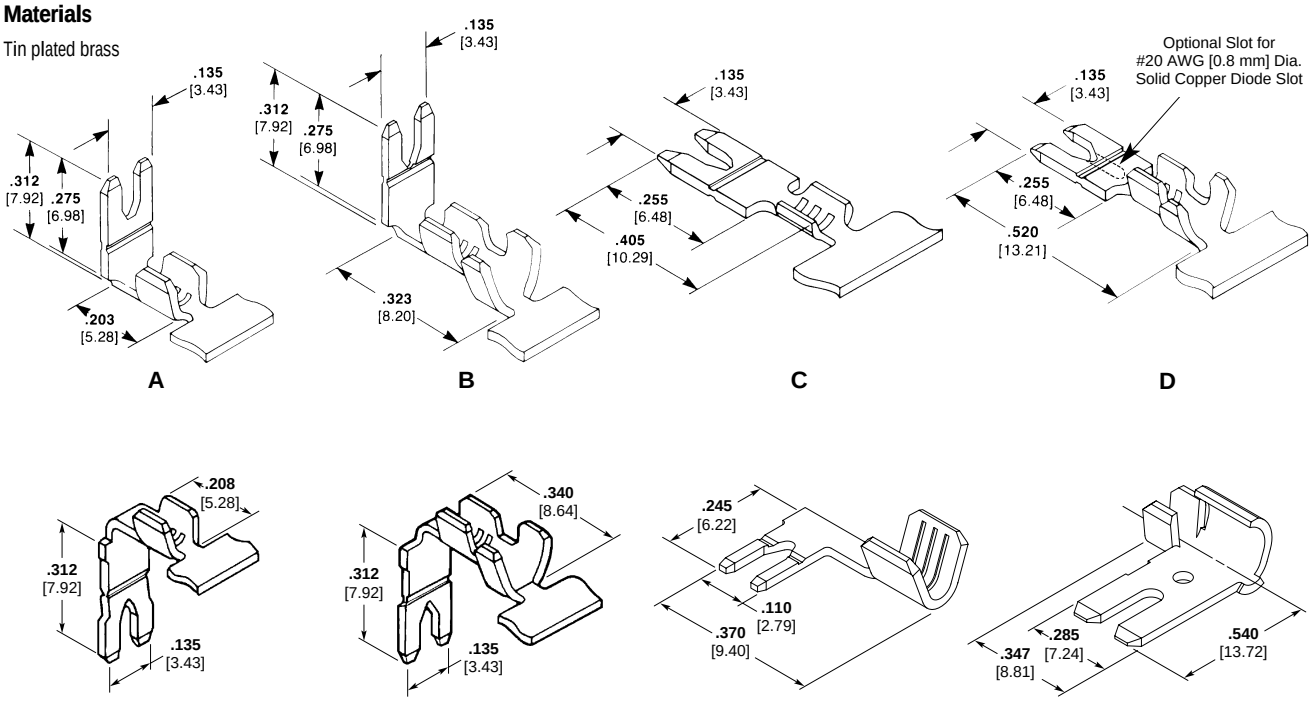
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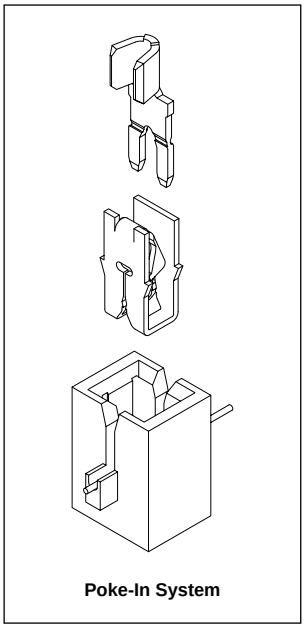
## Standard MAG-MATE Terminals (Continued)

### Poke-In Tab Terminals

#### Materials

Tin plated brass



**Poke-In System**

| Type | Lead Wire Size[1] AWG | Lead Wire Size[1] mm² | Ins. O.D. | Stock Thickness | Strip Part Number |
|---|---|---|---|---|---|
| A 90° Up | 22-18 | 0.3-0.9 | — | **.018** 0.46 | 62895-1* |
| | | | | **.020** 0.51 | 63410-1 |
| B 90° Up w/Ins. Sup. | 22-18 | 0.3-0.9 | **.060-.100** 1.52-2.54 | **.018** 0.46 | 62896-1* 1217132-1[2] |
| | 18-14 | 0.8-2.0 | **.090-.140** 2.29-3.56 | **.020** 0.51 | 63218-1 |
| C Straight | 22-18 | 0.3-0.9 | — | **.020** 0.51 | 62897-1* |
| | 18-14 | 0.8-2.0 | — | **.020** 0.51 | 63775-1 |
| D Straight w/Ins. Sup. | 22-18 | 0.3-0.9 | **.060-.100** 1.52-2.54 | **.018** 0.46 | 62898-1* 63574-1[3] 63631-1[4,†] 1217470-1[5] |
| | 18-14 | 0.8-2.0 | **.090-.140** 2.29-3.56 | **.020** 0.51 | 63397-1† |
| E 90° Down | 22-18 | 0.3-0.9 | — | **.018** 0.46 | 63364-1 |
| F 90° Down w/Ins. Sup. | 18-14 | 0.8-2.0 | **.090-.140** 2.29-3.56 | **.020** 0.51 | 63458-1 1217214-1[6] |
| G Flag - 300 Box only | 20-16 | 0.5-1.4 | — | **.020** 0.51 | 1217406-1[7] 1217875-1† |
| H Flag - 500 Box only | 18-14 | 0.8-2.0 | **.080-.120** 2.03-3.05 | **.032** 0.81 | 1217324-1 |

[1] Stranded, fused stranded or solid lead wire.
[2] Shallow tab serrations.
[3] Tab serration on top of tab only.
[4] No serrations on tab.
[5] Includes diode slot for 20 AWG [0.8 mm] diameter solid copper diode wire.
[6] Special serration location for deeper poke-in.
[7] Deeper poke-in. Special cavity detail required.
† These part numbers are available upon special request; contact Tyco Electronics Engineering for details.
* Recognized under the Component Program of Underwriters Laboratories, Inc.
**Note:** All tab terminals accept stranded, fused stranded or solid lead wire.

## Standard MAG-MATE Terminals (Continued)

### 300 Box Splice Terminals

#### Material

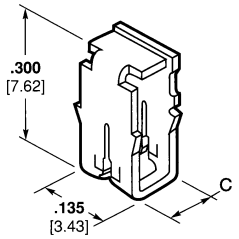
Tin plated brass

**.300 [7.62] Series Box**

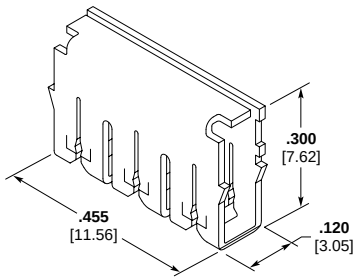
Typical Cavity Size 2, when "C" dimension is .120 [3.05] (See page 2)

Typical Cavity Size 6, when "C" dimension is .070 [1.78] (See page 2)

**Note:** Special cavity required for Tri-slot splice terminal. Contact Tyco Electronics Engineering for details.




A




B

| Type | Copper Magnet Wire Range[1] AWG | Copper Magnet Wire Range[1] mm | Dim. C | Stock Thickness | Part Number Strip | Part Number L. P. |
|---|---|---|---|---|---|---|
| A 300 Box Standard IDC Splice | 33-31 | 0.18-0.23 | **.070** 1.78 | **.012** 0.30 | — | 63531-1 |
| | 31-28 | 0.23-0.32 | **.070** 1.78 | **.012** 0.30 | — | 63532-1 |
| | 27-24 | 0.36-0.50 | **.070** 1.78 | **.012** 0.30 | — | 63533-1† |
| | 20-18[3] | 0.81-1.02 | **.120** 3.05 | **.020** 0.51 | 62903-1 | — |
| B 300 Box Standard IDC Tri-Slot Splice | 28-24 | 0.32-0.51 | — | **.016** 0.41 | 1217858-1† | — |
| | 23-20[2] | 0.57-0.81 | — | **.016** 0.41 | 1217853-1† | — |
| | 27-23 | 0.36-0.57 | — | **.016** 0.41 | 1217613-1† | — |
| | 18[4] | 0.8-0.9 | | | | |
| | 19-17[2] | 0.91-1.15 | | | | |
| | 25-22[3] | 0.45-0.64 | — | **.016** 0.41 | 1217209-1 | — |
| | 18[4] | 0.8-0.9 | | | | |
| | 23.5-20[2] | 0.54-0.81 | | | | |

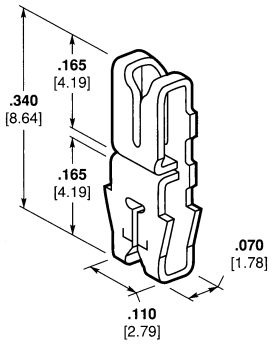
[1] Two magnet wires may be terminated in the same terminal slot if diameters are equal.
[2] Single magnet wire only; 22 AWG [0.64 mm] or larger.
[3] Bare wire only.
[4] Single solid or fused stranded lead wire only.
† These part numbers are available upon special request; contact Tyco Electronics Engineering for details.

### Dual Connection Terminals

#### Material

Tin plated brass

**Note:** Special cavity required. Contact Tyco Electronics Engineering for details.




A

| Type | Copper Magnet Wire Range[1] AWG | Copper Magnet Wire Range[1] mm | Solid Lead Wire Range AWG | Solid Lead Wire Range mm | Stock Thickness | Strip Part Number |
|---|---|---|---|---|---|---|
| A 165 Box Standard IDC Splice | 32-31 | 0.20-0.23 | 26-24 | 0.40-0.51 | **.012** 0.30 | 63005-1† |
| | 30-28 | 0.25-0.32 | 26-24 | 0.40-0.51 | **.012** 0.30 | 63087-1† |
| | 30-27 | 0.25-0.36 | 26-24 | 0.40-0.51 | **.012** 0.30 | 62766-1† |

[1] Two magnet wires may be terminated in the same terminal lower slot if diameters are equal.
† These part numbers are available upon special request; contact Tyco Electronics Engineering for details.



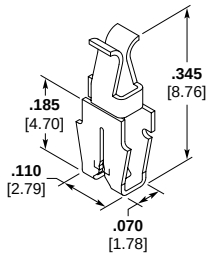
Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.
Dimensions are shown for reference purposes only. Specifications subject to change.
Technical Support
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## Standard MAG-MATE Terminals (Continued)

### Dual Connection Terminals
(Continued)

#### Material
Tin plated phos. bronze

**Note:** Special cavity required. Contact Tyco Electronics Engineering for details.




**B**

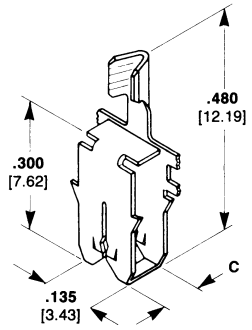
| Type | Copper Magnet Wire Range[1] AWG | Copper Magnet Wire Range[1] mm | Mating Tab | Stock Thickness | Strip Part Number |
|---|---|---|---|---|---|
| B 185 Box Standard IDC Tab Receptacle | 32-31 | 0.20-0.23 | **.070 x .020** 1.78 x 0.51 | **.010** 0.25 | 1217538-1 |
| | 30-28 | 0.25-0.32 | **.070 x .020** 1.78 x 0.51 | **.010** 0.25 | 1217457-1 |
| | 29-28 | 0.29-0.32 | **.070 x .020** 1.78 x 0.51 | **.010** 0.25 | 1217458-1 |

[1] Two magnet wires may be terminated in the same slot if diameters are equal.

### 300 Box F-Crimp Terminals

#### Material
Tin plated brass

**.300 [7.62] Series Box**
Typical Cavity Size 2, when "C" dimension is .120 [3.05]
(See page 2)
Typical Cavity Size 6, when "C" dimension is .070 [1.78]
(See page 2)




**A**

| Type | Copper Magnet Wire Range[1] AWG | Copper Magnet Wire Range[1] mm | Dim. C | Lead Wire Range[3] AWG | Lead Wire Range[3] mm² | Stock Thickness | Part Number Strip | Part Number L. P. |
|---|---|---|---|---|---|---|---|---|
| A 300 Box Standard IDC F-Crimp | 33-31 | 0.18-0.23 | **.070** 1.78 | 22-18 | 0.3-1.0 | **.012** 0.30 | 63235-1 | — |
| | | | **.120** 3.05 | 24-20 | 0.2-0.6 | **.012** 0.30 | 63420-1† | — |
| | 31-28 | 0.23-0.32 | **.070** 1.78 | 22-18 | 0.3-1.0 | **.012** 0.30 | 63236-1 | — |
| | 30-27 | 0.25-0.36 | **.120** 3.05 | 24-20 | 0.2-0.6 | **.012** 0.30 | 62992-1 | — |
| | 28-24 | 0.32-0.51 | **.120** 3.05 | 24-20 | 0.2-0.6 | **.012** 0.30 | 63641-1 | — |
| | 27-24 | 0.36-0.51 | **.070** 1.78 | 22-18 | 0.3-1.0 | **.012** 0.30 | 63237-1 | — |
| | 27-23 | 0.36-0.57 | **.120** 3.05 | 24-20 | 0.2-0.6 | **.016** 0.41 | 62459-1 | 62666-1† |
| | 25-22 | 0.45-0.64 | **.070** 1.78 | 22-18 | 0.3-1.0 | **.012** 0.30 | 63690-1† | — |
| | 22-20[2] | 0.64-0.81 | **.120** 3.05 | 24-20 | 0.2-0.6 | **.016** 0.41 | 62458-1 | 62665-1† |

[1] Two magnet wires may be terminated in the same terminal slot if diameters are equal.
[2] Single magnet wire only; 22 AWG [0.64 mm] or larger.
[3] Stranded, fused stranded or solid lead wire.
† These part numbers are available upon special request; contact Tyco Electronics Engineering for details.

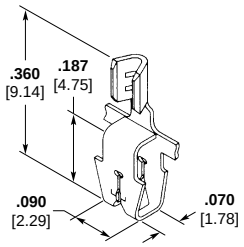
## Standard MAG-MATE Terminals (Continued)

### 187 Box F-Crimp Terminals

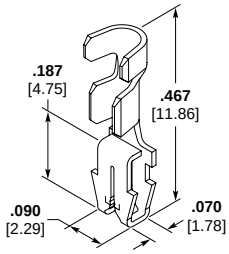
#### Material

Tin plated brass

**.187 [4.75] Series Box**
Typical Cavity Size 1
(See page 2)



A



B

| Type | Copper Magnet Wire Range[1] | | Lead Wire Range[3] | | Ins. O.D. | Stock Thickness | Strip Part Number |
|---|---|---|---|---|---|---|---|
| | AWG | mm | AWG | mm² | | | |
| A 187 Box Standard IDC F-Crimp | 33-31 | 0.18-0.23 | 26-22 | 0.12-0.3 | — | **.010** 0.25 | 63039-1 63039-2[3,5] |
| | 30-28 | 0.25-0.32 | 26-22 | 0.12-0.3 | — | **.012** 0.30 | 63036-1 62608-1[4] 62608-3[4] |
| | 27-25 | 0.36-0.46 | 26-22 | 0.12-0.3 | — | **.012** 0.30 | 62609-1[4] 62609-3[4] |
| | 26-24 | 0.40-0.51 | 22-18 | 0.3-1.0 | — | **.012** 0.30 | 1217146-1 |
| | 24-22[2] | 0.51-0.64 | 26-22 | 0.12-0.3 | — | **.012** 0.30 | 62610-1[4] |
| B 187 Box F-Crimp w/ Ins Sup. | 27-25 | 0.36-0.46 | 22-18 | 0.3-1.0 | **.071-.088** 1.80 -2.23 | **.012** 0.30 | 63856-1 63856-2 |

[1] Two magnet wires may be terminated in the same terminal slot if diameters are equal.
[2] Single magnet wire only.
[3] Stranded, fused stranded or solid lead wire.
[4] Strip rereeled to feed through mini-applicator to crimp lead wire first, magnet wire termination is secondary operation.

### 300 Box Posted PCB Terminals

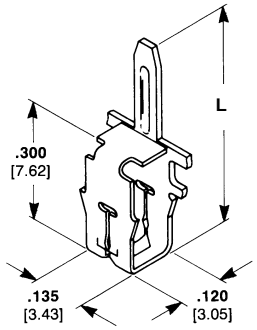
#### Solder Terminal

#### Material

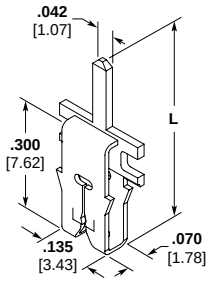
Tin over copper plated brass

#### Typical Cavity Size

(See page 2)
Type A—Cavity Size 2
Type B—Cavity Size 6



A



B

| Type | Copper Magnet Wire Range[1] | | Dim. L | Stock Thickness | | Strip Part Number |
|---|---|---|---|---|---|---|
| | AWG | mm | | Tab Section | Mag Wire | |
| A 300 Box Standard IDC PCB Post | 33-31 | 0.18-0.23 | **.540** 13.72 | **.010** 0.25 | **.010** 0.25 | 63253-1 |
| | 31-28 | 0.23-0.32 | **.540** 13.72 | **.010** 0.25 | **.010** 0.25 | 62928-1* |
| | 29-26 | 0.29-0.40 | **.540** 13.72 | **.012** 0.30 | **.012** 0.30 | 62958-1* |
| | 27-23 | 0.36-0.57 | **.460** 11.68 | **.016** 0.41 | **.016** 0.41 | 63659-1 |
| | 22-20[2] | 0.64-0.81 | **.460** 11.68 | **.016** 0.41 | **.016** 0.41 | 63660-1 |
| | 19-17[2] | 0.91-1.15 | **.460** 11.68 | **.016** 0.41 | **.016** 0.41 | 63661-1 |
| B PCB Post Shallow Box | 33-31 | 0.18-0.23 | **.475** 12.07 | **.020** 0.51 | **.012** 0.30 | 1217302-1 |

[1] Two magnet wires may be terminated in the same terminal slot if diameters are equal.
[2] Single magnet wire only.
* Recognized under the Component Program of Underwriters Laboratories, Inc.
**Note:** PC Board hole size .050 [1.27].



Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.
Dimensions are shown for reference purposes only. Specifications subject to change.
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Mexico: 01-800-733-8926
www.tycoelectronics.com

## Standard MAG-MATE Terminals (Continued)

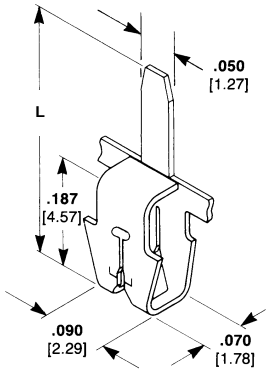
### 187 Box Posted PCB Terminals

#### Material

Tin plated brass, except where noted

#### Typical Cavity Size 1

(See page 2)




A

| Type | Copper Magnet Wire Range[1] AWG | Copper Magnet Wire Range[1] mm | Dim. L | Stock Thickness | Part Number Strip | Part Number L.P. |
|---|---|---|---|---|---|---|
| A 187 Box Standard IDC PCB Post | 33-31 | 0.18-0.23 | **.267** 6.78 | **.010** 0.25 | 63565-1 | — |
| | | | **.330** 8.38 | **.010** 0.25 | 62938-1<br>62938-2[3] | 62934-1<br>— |
| | 30-28 | 0.25-0.32 | **.267** 6.78 | **.012** 0.30 | 63160-1 | — |
| | | | **.287** 7.29 | **.012** 0.30 | 63818-1 | — |
| | | | **.330** 8.38 | **.012** 0.30 | 62430-1<br>62430-2[3] | 62874-1<br>— |
| | 27-25 | 0.36-0.46 | **.330** 8.38 | **.012** 0.30 | 62438-1<br>62438-2 | — |
| | 24-22[2] | 0.51-0.64 | **.287** 7.29 | **.012** 0.30 | 63819-1 | — |
| | | | **.330** 8.38 | **.012** 0.30 | 62439-1<br>62439-2[4]<br>62439-3[3] | 63645-1†<br>—<br>— |

[1] Two magnet wires may be terminated in the same terminal slot if diameters are equal.
[2] Single magnet wire only.
[3] Reverse reeled version of -1.
[4] Finish is tin over nickel plated brass.
† These part numbers are available upon special request; contact Tyco Electronics Engineering for details.

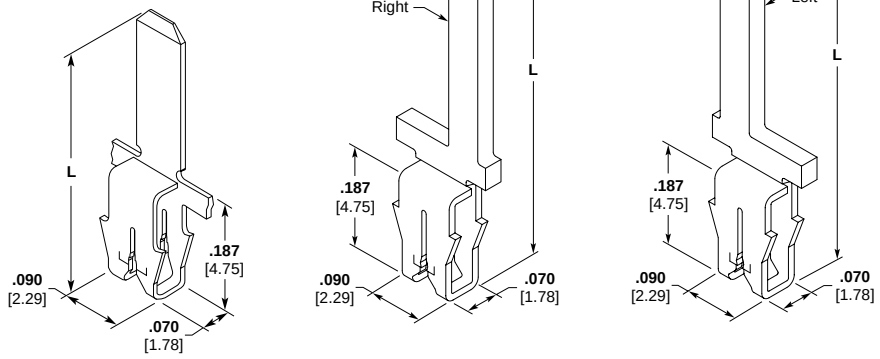
### 187 Box Tab Terminals

#### Material

Tin plated brass, except when noted

#### Typical Cavity Size 1

(See page 2)




A B C

| Type | Copper Magnet Wire Range[1] AWG | Copper Magnet Wire Range[1] mm | Dim. L | Tab Size | Stock Thickness Tab Section | Stock Thickness Mag Wire | Strip Part Number |
|---|---|---|---|---|---|---|---|
| A 187 Box Standard IDC Straight Tab | 30-28 | 0.25-0.32 | **.432** 10.97 | **.110 x .020** 2.79 x 0.51 | **.020** 0.51 | **.012** 0.30 | 63702-1 |
| | 29-27 | 0.29-0.36 | **.432** 10.97 | **.110 x .020** 2.79 x 0.51 | **.020** 0.51 | **.012** 0.30 | 1217196-1[3] |
| | 30 | 0.25 | **.550** 14.00 | **.071 x .025** 1.80 x 0.63 | **.025** 0.63 | **.012** 0.30 | 1217405-1 |
| | 25-22[2] | 0.46-0.64 | **.700** 17.78 | **.059 x .032** 1.50 x 0.81 | **.032** 0.81 | **.012** 0.30 | 1217013-1 |
| B 187 Box Standard IDC Offset Tab-R.H. | 27-25 | 0.36-0.45 | **.565** 14.36 | **.059 x .032** 1.50 x 0.81 | **.032** 0.81 | **.012** 0.30 | 1217641-1 |
| | | | **.700** 17.78 | **.059 x .032** 1.50 x 0.81 | **.032** 0.81 | **.012** 0.30 | 1217459-1 |
| C 187 Box Standard IDC Offset Tab-L.H. | 27-25 | 0.36-0.45 | **.565** 14.36 | **.059 x .032** 1.50 x 0.81 | **.032** 0.81 | **.012** 0.30 | 1217642-1 |
| | | | **.700** 17.78 | **.059 x .032** 1.50 x 0.81 | **.032** 0.81 | **.012** 0.30 | 1217460-1 |

[1] Two magnet wires may be terminated in the same terminal if diameters are equal.
[2] Single magnet wire only.
[3] Finish is tin over nickel plated brass.

## Standard MAG-MATE Terminals (Continued)

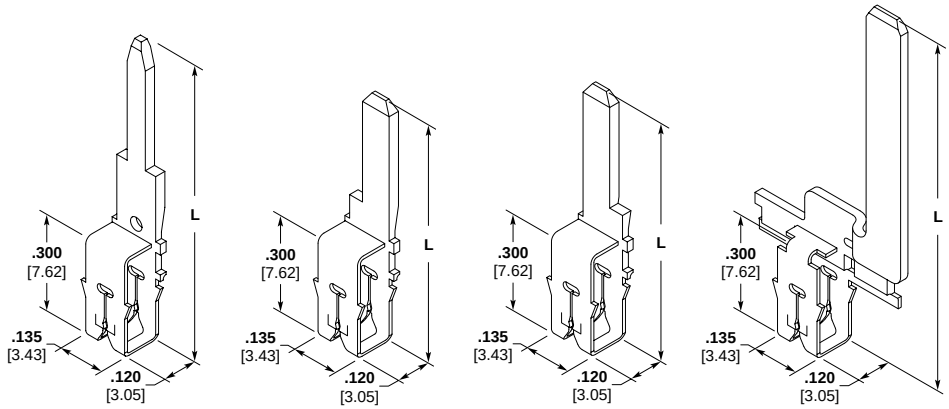
### 300 Box Tab Terminals

**Material**

Tin plated brass

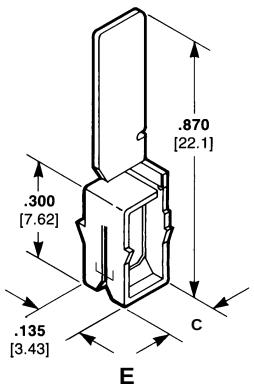
**Typical Cavity Size 2**

(See page 2)




| Type | Copper Magnet Wire Range[1] AWG | mm | Dim. L | Tab Size | Stock Thickness Tab Section | Mag Wire | Part Number Strip | L.P. |
|---|---|---|---|---|---|---|---|---|
| A 300 Box Standard IDC Straight Tab | 20 | 0.79 | **.750** 19.05 | **.063 x .025** 1.60 x 0.63 | **.025** 0.63 | **.016** 0.41 | 63965-1[2] | — |
| | | | **.895** 22.73 | **.063 x .025** 1.60 x 0.63 | **.025** 0.63 | **.016** 0.41 | 1217595-1[2] | — |
| | 31 | 0.23 | **.870** 22.10 | **.062 x .032** 1.57 x 0.81 | **.032** 0.81 | **.010** 0.25 | 63810-1 | — |
| B 300 Box Standard IDC Offset Tab-R.H. | 33-31 | 0.18-0.23 | **.660** 16.76 | **.071 x .025** 1.80 x 0.63 | **.025** 0.63 | **.010** 0.25 | 63909-1 | — |
| | | | **.669** 17.75 | **.091 x .025** 2.31 x 0.63 | **.025** 0.63 | **.010** 0.25 | 63927-1 | — |
| | 30 | 0.25 | **.669** 17.75 | **.091 x .025** 2.31 x 0.63 | **.025** 0.63 | **.010** 0.25 | 1217052-1 | — |
| C 300 Box Standard IDC Offset Tab-L.H. | 33-31 | 0.18-0.23 | **.660** 16.76 | **.071 x .025** 1.80 x 0.63 | **.025** 0.63 | **.010** 0.25 | 63910-1 | — |
| | | | | | | | 63910-2[3] | — |
| | | | **.669** 17.75 | **.091 x .025** 2.31 x 0.63 | **.025** 0.63 | **.010** 0.25 | 63926-1 | — |
| | 30 | 0.25 | **.669** 17.75 | **.091 x .025** 2.31 x 0.63 | **.025** 0.63 | **.010** 0.25 | 1217051-1 | — |
| D 300 Box Standard IDC Universal Offset Tab | 31-28 | 0.23-0.32 | **1.230** 31.25 | **.071 x .025** 1.80 x 0.63 | **.025** 0.63 | **.012** 0.30 | 63773-1 | — |
| | 32 | 0.20 | **1.098** 27.90 | **.118 x .025** 3.00 x 0.63 | **.025** 0.63 | **.010** 0.25 | 63247-1 | 1217032-1 |
| | | | | | | | 63247-2[3] | — |

[1] Two magnet wires may be terminated in the same terminal slot if diameters are equal.
[2] Tinsel wire only.
[3] Reverse reeled version of -1.




Typical Cavity Size 2, when "C" dimension is .120 [3.05]
(See page 2)

Typical Cavity Size 6, when "C" dimension is .070 [1.78]
(See page 2)

| Type | Copper Magnet Wire Range[1] AWG | mm | Dim. C | Tab Size | Stock Thickness Tab Section | Mag Wire | Strip Part Number |
|---|---|---|---|---|---|---|---|
| E 300 Box Standard IDC Twisted Tab | 33-31 | 0.18-0.23 | **.070** 1.78 | **.125 x .020** 3.17 x 0.51 | **.020** 0.51 | **.012** 0.30 | 63806-1 |
| | 31-28 | 0.23-0.32 | **.070** 1.78 | **.125 x .020** 3.17 x 0.51 | **.020** 0.51 | **.012** 0.30 | 63807-1 |
| | 27-24 | 0.36-0.50 | **.070** 1.78 | **.125 x .020** 3.17 x 0.51 | **.020** 0.51 | **.012** 0.30 | 63808-1 |
| | 21[2] | 0.72 | **.120** 3.05 | **.118 x .030** 3.00 x 0.76 | **.030** 0.76 | **.016** 0.41 | 63463-1 |
| | 19.5[2] | 0.86 | **.120** 3.05 | **.118 x .030** 3.00 x 0.76 | **.030** 0.76 | **.016** 0.41 | 63216-1 |

[1] Two magnet wires may be terminated in the same terminal slot if diameters are equal.
[2] Single magnet wire only.



Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.
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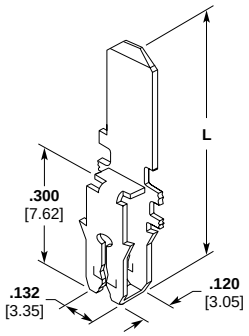
## Standard MAG-MATE Terminals (Continued)



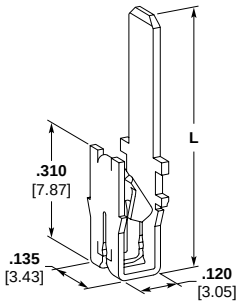
### 300 Box Tab Terminals
(Continued)

**Material**
Tin plated brass

**Typical Cavity Size 2**
(See page 2)




F




G

| Type | Copper Magnet Wire Range AWG | Copper Magnet Wire Range mm | Dim. L | Tab Size | Stock Thickness Tab Section | Stock Thickness Mag Wire | Strip Part Number |
|---|---|---|---|---|---|---|---|
| F 300 Box Standard IDC Timer Tab | 33-31 | 0.18-0.23 | **.585** 14.86 | **.118 x .020** 3.00 x 0.51 | **.020** 0.51 | **.010** 0.25 | 1217746-1† |
| | 30 -28 | 0.25-0.32 | **.585** 14.86 | **.118 x .020** 3.00 x 0.51 | **.020** 0.51 | **.010** 0.25 | 1217745-1† |
| | 27-23 | 0.36-0.57 | **.585** 14.86 | **.118 x .020** 3.00 x 0.51 | **.020** 0.51 | **.016** 0.41 | 63973-1 |
| | | | **.585** 14.86 | **.125 x .020** 3.00 x 0.51 | **.020** 0.51 | **.016** 0.41 | 63489-1 |
| | 25-22[2] | 0.45-0.64 | **.585** 14.86 | **.118 x .020** 3.00 x 0.51 | **.020** 0.51 | **.016** 0.41 | 1217596-1† |
| | 23.5-21.5[2] | 0.54-0.68 | **.585** 14.86 | **.118 x .020** 3.00 x 0.51 | **.020** 0.51 | **.016** 0.41 | 1217593-1† |
| | 23-20[2] | 0.57-0.81 | **.775** 19.68 | **.125 x .020** 3.00 x 0.51 | **.020** 0.51 | **.016** 0.41 | 63899-1 |
| | 19-17[2] | 0.91-1.15 | **.585** 14.86 | **.118 x .020** 3.00 x 0.51 | **.020** 0.51 | **.016** 0.41 | 63972-1 |
| | 18 Lead[2] | 1.02 | **.585** 14.86 | **.118 x .020** 3.00 x 0.51 | **.020** 0.51 | **.016** 0.41 | 63974-1<br>63974-2[3] |
| G[4] 300 Box Standard IDC Poke-In Combination Tab | 25-22[2] | 0.45-0.64 | **.665** 16.89 | **.118 x .020** 3.00 x 0.51 | **.020** 0.51 | **.016** 0.41 | 1217210-1<br>1217210-2[3] |
| | 23.5-20[2] | 0.54 0.81 | **.665** 16.89 | **.118 x .020** 3.00 x 0.51 | **.020** 0.51 | **.016** 0.41 | 1217211-1 |

[1] Two magnet wires may be terminated in the same terminal slot if diameters are equal.
[2] Single magnet wire only; 22 AWG [0.64 mm] or larger.
[3] Reverse reeled version of -1.
[4] Poke-In feature accepts 20-18 AWG [0.5-0.8 mm$^2$] Solid or overcoated stranded lead wire or 90° Poke-In tab.
† These part numbers are available upon special request; contact Tyco Electronics Engineering for details.



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## Standard MAG-MATE Terminals (Continued)

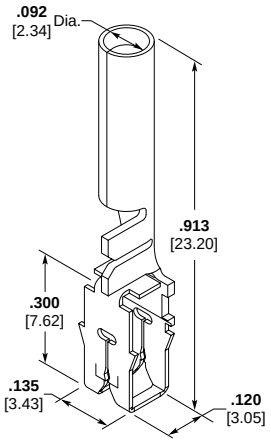
### Pin Receptacle Terminals with Right or Left Hand Diode Lead Slot

**Material**

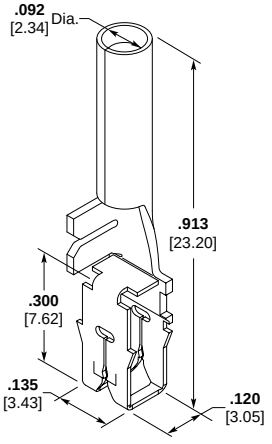
Tin plated brass

**Typical Cavity Size 2**

(See page 2)




A




B

| Type | Copper Magnet Wire Range[1] | | Diode Lead | | Mating Pin Dia. | Stock Thickness | | Strip Part Number |
|---|---|---|---|---|---|---|---|---|
| | AWG | mm | AWG | mm | | I/O | Mag Wire | |
| A<br>300 Box<br>Diode Offset- R.H. | 32-31 | 0.20-0.23 | 22 | 0.64 | **.094**<br>2.39 | **.014**<br>0.36 | **.010**<br>0.25 | 63208-1†<br>63326-1 |
| B<br>300 Box<br>Diode Offset- L.H. | 31-27 | 0.23-0.36 | 22 | 0.64 | **.094**<br>2.39 | **.014**<br>0.36 | **.010**<br>0.25 | 63209-1†<br>63308-1 |

[1] Two magnet wires may be terminated in the same terminal slot if diameters are equal.
† These part numbers are available upon special request; contact Tyco Electronics Engineering for details.

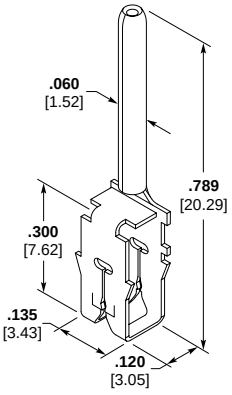
### Pin I/O Terminals

**Material**

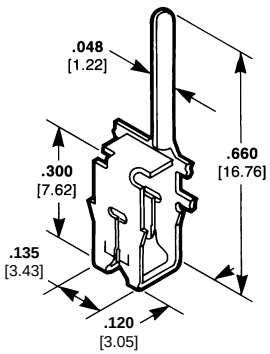
Tin plated brass

**.300 [7.62] Series Box**
Styles A, B and C
Typical Cavity Size 2
(See page 2)

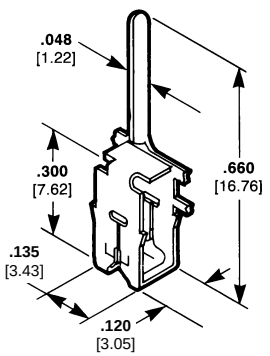
**.500 [12.7] Series Box**
Style D
Typical Cavity Size 4
(See page 2)



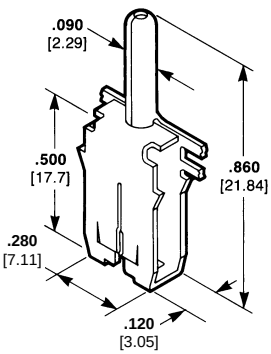

A




B




C




D

| Type | Copper Magnet Wire Range[1] | | Pin Dia. | Stock Thickness | | Part Number | |
|---|---|---|---|---|---|---|---|
| | AWG | mm | | I/O | Mag Wire | Strip | L.P. |
| A<br>300 Box<br>Straight Pin | 27-23 | 0.36-0.57 | **.060**<br>1.52 | **.010**<br>0.25 | **.010**<br>0.25 | 63722-1 | — |
| B<br>300 Box<br>Offset Pin-R.H. | 33-31 | 0.18-0.23 | **.048**<br>1.22 | **.010**<br>0.25 | **.010**<br>0.25 | 63443-1 | — |
| C<br>300 Box<br>Offset Pin-L.H. | 33-31 | 0.18-0.23 | **.048**<br>1.22 | **.010**<br>0.25 | **.010**<br>0.25 | 63444-1 | — |
| | 31-28 | 0.23-0.32 | **.048**<br>1.22 | **.010**<br>0.25 | **.010**<br>0.25 | 63569-1 | 63879-1 |
| | 27-23 | 0.36-0.57 | **.048**<br>1.22 | **.010**<br>0.25 | **.016**<br>0.25 | 63570-1 | 63880-1 |
| | 25-22[2] | 0.45-0.64 | **.048**<br>1.22 | **.010**<br>0.25 | **.016**<br>0.41 | 63788-1 | — |
| D<br>500 Box<br>Straight Pin | 27-23 | 0.86-1.15 | **.090**<br>2.29 | **.016**<br>0.41 | **.016**<br>0.41 | 63278-1[3] | — |
| | 22-20 | 0.64-0.81 | **.090**<br>2.29 | **.016**<br>0.41 | **.016**<br>0.41 | 63277-1[3] | — |

[1] Two magnet wires may be terminated in the same terminal slot if diameters are equal.
[2] Single magnet wire only; 22 AWG [0.64 mm] or larger.
[3] Varnish resist coating.



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## Standard MAG-MATE Terminals (Continued)

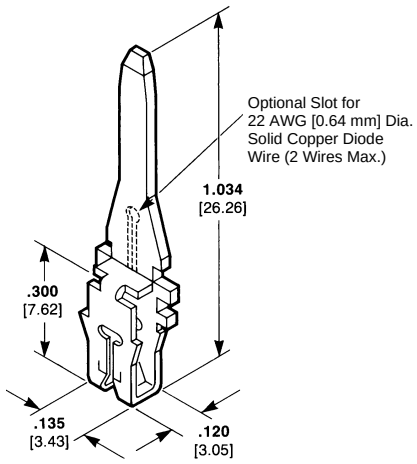
### 110 Series
### FASTON Tab Terminals

**Material**

Tin plated brass

**Typical Cavity Size 2**

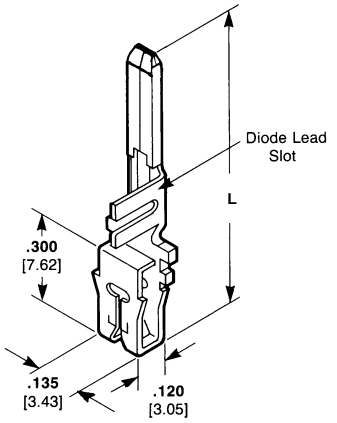
(See page 2)



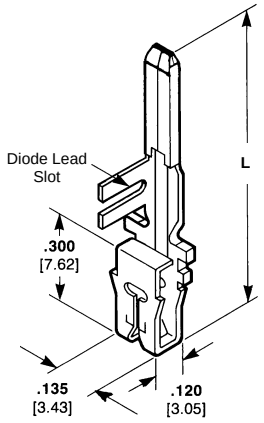

A

| Type | Copper Magnet Wire Range[1] | | Diode Lead | | Tab Size | Stock Thickness | | Strip Part Number |
|---|---|---|---|---|---|---|---|---|
| | AWG | mm | AWG | mm | | Tab | Mag Wire | |
| A 300 Box Standard IDC .110 [2.79] Tab w/ Optional Diode Slot | 33-31 | 0.18-0.23 | — | — | **.110 x .025** 2.79 x 0.64 | **.025** 0.64 | **.010** 0.25 | 63110-1 |
| | | | 22 | 0.64 | **.110 x .025** 2.79 x 0.64 | **.025** 0.64 | **.010** 0.25 | 63376-1 |

[1] Two magnet wires may be terminated in the same terminal slot if diameters are equal.




A




B

| Type | Copper Magnet Wire Range[1] | | Diode Lead | | Tab Size | Dim. L | Stock Thickness | | Part Number | |
|---|---|---|---|---|---|---|---|---|---|---|
| | AWG | mm | AWG | mm | | | Tab | Mag Wire | Strip | L.P. |
| A 300 Box Standard IDC .110 [2.79] FASTON w/ Diode Slot Offset-R.H. | 31-27 | 0.23-0.36 | 22 | 0.64 | **.110 x .032** 2.79 x 0.81 | **.965** 24.51 | **.032** 0.81 | **.010** 0.25 | 63319-1† | — |
| | | | 20 | 0.81 | **.110 x .032** 2.79 x 0.81 | **.965** 24.51 | **.032** 0.81 | **.010** 0.25 | 63331-1† | 63434-1 |
| | 30-27 | 0.25-0.36 | 20 | 0.81 | **.110 x .032** 2.79 x 0.81 | **.965** 24.51 | **.032** 0.81 | **.014** 0.36 | — | 63529-1 |
| | | | 20 | 0.81 | **.110 x .032** 2.79 x 0.81 | **.895** 22.73 | **.032** 0.81 | **.014** 0.36 | 63177-1† | — |
| B 300 Box Standard IDC .110 [2.79] FASTON w/ Diode Slot Offset-L.H. | 31-27 | 0.23-0.36 | 22 | 0.64 | **.110 x .032** 2.79 x 0.81 | **.965** 24.51 | **.032** 0.81 | **.010** 0.25 | 63276-1† | — |
| | | | 20 | 0.81 | **.110 x .032** 2.79 x 0.81 | **.965** 24.51 | **.032** 0.81 | **.010** 0.25 | 63330-1† | 63433-1 |
| | 30-27 | 0.25-0.36 | 20 | 0.81 | **.110 x .032** 2.79 x 0.81 | **.965** 24.51 | **.032** 0.81 | **.014** 0.36 | — | 63530-1 |
| | | | 20 | 0.81 | **.110 x .032** 2.79 x 0.81 | **.895** 22.73 | **.032** 0.81 | **.014** 0.36 | 63178-1† | — |

[1] Two magnet wires may be terminated in the same terminal slot if diameters are equal.
† These part numbers are available upon special request; contact Tyco Electronics Engineering for details.

**Note:** .110 [ 2.79] Tab Terminals mate with compatible FASTON receptacles.
Request AMP Catalog 82004.

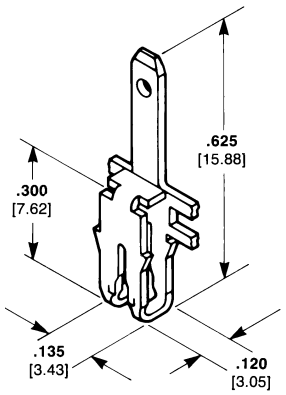
## Standard MAG-MATE Terminals (Continued)

### 110 Series FASTON Tab Terminals
(Continued)

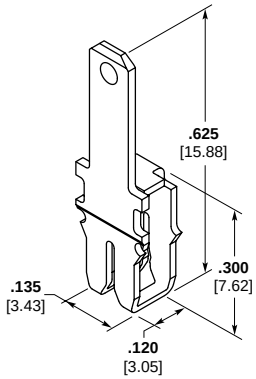
### Material
Tin plated brass

### Typical Cavity Size 2
(See page 2)

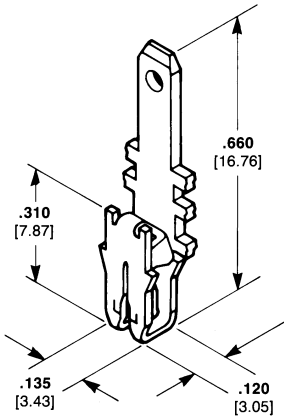
**Note:** .110 [2.79] Tab Terminals mate with compatible FASTON receptacles. Request AMP Catalog 82004.




A




B




C

| Type | Copper Magnet Wire Range[1] AWG | mm | Tab Size | Stock Thickness Tab | Mag Wire | Part Number Strip | L.P. |
|---|---|---|---|---|---|---|---|
| A[5] 300 Box Standard IDC .110 [2.79] FASTON Tab | 30-27 | 0.25-0.36 | **.110 x .020** 2.79 x 0.51 | **.020** 0.51 | **.012** 0.30 | 63777-1 | — |
| | 27-23 | 0.36-0.57 | **.110 x .020** 2.79 x 0.51 | **.020** 0.51 | **.016** 0.41 | 63746-1 | — |
| | 23-20[2] | 0.45-0.64 | **.110 x .020** 2.79 x 0.51 | **.020** 0.51 | **.016** 0.41 | 63486-1 | — |
| | 19-17 | 0.91-1.15 | **.110 x .020** 2.79 x 0.51 | **.020** 0.51 | **.020** 0.51 | 63145-1† | — |
| B[5,6] 300 Box Single IDC w/ Strain Relief Slot | 27-23 | 0.36-0.57 | **.110 x .020** 2.79 x 0.51 | **.020** 0.51 | **.016** 0.41 | 63827-1 | — |
| | 23.5-20[2] | 0.54-0.81 | **.110 x .020** 2.79 x 0.51 | **.020** 0.51 | **.016** 0.41 | 1217783-1† | — |
| C[4,5] Poke-In Combination Tab | 28-24 | 0.32-0.51 | **.110 x .020** 2.79 x 0.51 | **.020** 0.51 | **.012** 0.30 | 63062-1[3] | 1217430-1[3] |
| | 25-22[2] | 0.45-0.64 | **.110 x .020** 2.79 x 0.51 | **.020** 0.51 | **.012** 0.30 | 63063-1[3]<br>63063-2 | —<br>— |

1 Two magnet wires may be terminated in the same terminal slot if diameters are equal.
2 Single magnet wire only; 22 AWG [0.64 mm] or larger.
3 Varnish resist coating.
4 Poke-In feature accepts 20-18 AWG [0.5-0.8 mm$^2$] Solid or overcoated stranded lead wire or 90° Poke-In tab.
5 After insertion into plastic cavity, tab portion must be bent over 45°-90° or potted in to prevent pullout when mating receptacle is disconnected.
6 Strain relief slot for high vibration applications.
† These part numbers are available upon special request; contact Tyco Electronics Engineering for details.



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## Standard MAG-MATE Terminals (Continued)

### 187 Series FASTON Tab Terminals

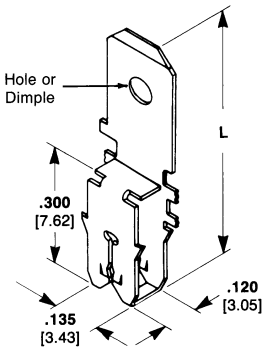
**Material**

Tin plated brass

**Typical Cavity Sizes**

(See page 2)

Type A—Cavity Size 2




**A**

| Type | Copper Magnet Wire Range[1] AWG | mm | Dim. L | Tab Feature | Tab Size | Stock Thickness Tab Section | Mag. Wire Section | Part Number Strip | L. P. |
|---|---|---|---|---|---|---|---|---|---|
| A[4] 300 Box Standard IDC .187 [4.75] FASTON Tab | 33-31 | 0.18-0.23 | **.630** 16.00 | Dimple | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.010** 0.25 | 62513-1* | 62663-1 |
| | | | **.660** 16.76 | Hole | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.012** 0.30 | 63584-1 | — |
| | 30-27 | 0.25-0.36 | **.630** 16.00 | Dimple | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.012** 0.30 | 62512-1* 63510-1[5,†] | — — |
| | | | | Dimple | **.187 x .032** 4.75 x 0.81 | **.032** 0.81 | **.012** 0.30 | 62678-1†* | 1217178-1 |
| | 27-23 | 0.36-0.57 | **.630** 16.00 | Dimple | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.016** 0.41 | 62514-1* 62514-2[5]* | 63852-1 — |
| | | | | Hole | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.016** 0.41 | 63664-1[5] 63664-2 | — — |
| | | | | — | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.016** 0.41 | 63461-1 1217243-1[6] | — — |
| | | | **.660** 16.76 | Hole | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.016** 0.41 | 63585-1 | — |
| | 23 | 0.57 | **.630** 16.00 | — | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.016** 0.41 | 63776-1 | — |
| | 22-20[2] | 0.64-0.81 | **.630** 16.00 | Dimple | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.016** 0.41 | 62511-1* 62511-2[5] | 62661-1 — |
| | | | | Hole | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.016** 0.41 | 63663-1[5] 63663-2 | — — |
| | | | | Dimple | **.187 x .032** 4.75 x 0.81 | **.032** 0.81 | **.016** 0.41 | 1217065-1 | — |
| | | | | Hole | **.187 x .032** 4.75 x 0.81 | **.032** 0.81 | **.016** 0.41 | 1217128-1 | — |
| | 21-19[3] Aluminum | 0.72-0.91 | **.630** 16.00 | Dimple | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.016** 0.41 | 63293-1† | — |
| | | | | Hole | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.016** 0.41 | 63669-1 | — |
| | 20-18[2] | 0.81-1.02 | **.630** 16.00 | Dimple | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.020** 0.51 | 62904-1[7] | — |
| | | | | Hole | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.020** 0.51 | 63670-1 | — |
| | 19-17[2] | 0.91-1.15 | **.630** 16.00 | Dimple | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.020** 0.51 | 63273-1 63511-1[5] | 63829-1 — |
| | | | | Hole | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.020** 0.51 | 63665-1[5] | — |
| | 18.5-16.5[3] Aluminum | 0.97-1.22 | **.630** 16.00 | Dimple | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.016** 0.41 | 63494-1† | — |
| | | | | Hole | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.016** 0.41 | 63668-1 | — |

[1] Two magnet wires may be terminated in the same terminal slot if diameters are equal.
[2] Single magnet wire only.
[3] Single aluminum magnet wire only.
[4] After insertion into plastic cavity, tab portion must be bent over 45°-90° or potted in to prevent pullout when mating receptacle is disconnected.
[5] Varnish resist coating.
[6] Special wide body cut off for added stability.
[7] Single bare copper wire only.
* Recognized under the Component Program of Underwriters Laboratories, Inc.
† These part numbers are available upon special request; contact Tyco Electronics Engineering for details.

**Note:** .187 [4.75] Tab Terminals mate with compatible FASTON receptacles. Request AMP Catalog 82004.

*Chart continued on next page*

## Standard MAG-MATE Terminals (Continued)

### 187 Series FASTON Tab Terminals
(Continued)

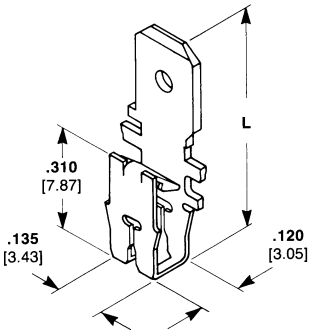
#### Material
Tin plated brass

#### Typical Cavity Sizes
(See page 2)
Type B—Cavity Size 5
Type C—Cavity Size 5
Type D—Cavity Size 3

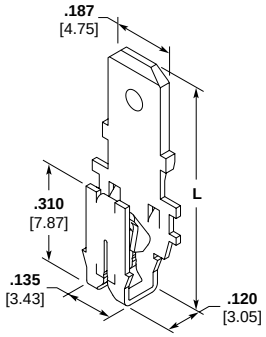
### 187 Series Combination Poke-In FASTON Terminals

#### Material
Tin plated brass

#### Typical Cavity Sizes
(See page 2)
Type E—Cavity Size 2
Type F—Cavity Size 3

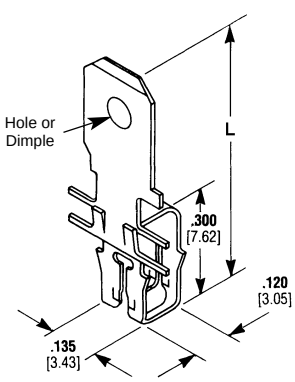


E

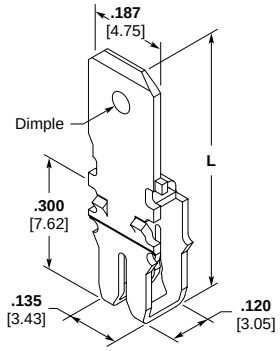


F

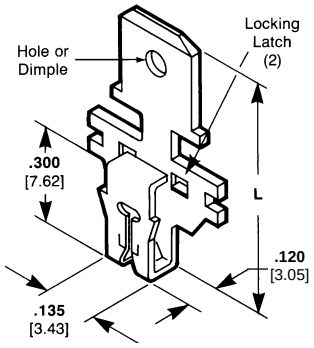
**Note:** .187 [4.75] Tab Terminals mate with compatible FASTON receptacles. Request AMP Catalog 82004.



B



C



D

| Type | Copper Magnet Wire Range[1] AWG | mm | Dim. L | Tab Feature | Tab Size | Stock Thickness: Tab Section | Stock Thickness: Mag. Wire Section | Strip Part Number |
|---|---|---|---|---|---|---|---|---|
| B 300 Box Standard IDC Narrow Body Latch Type | 33-31 | 0.18-0.23 | **.630** 16.00 | Hole | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.010** 0.25 | 63108-1† |
| | 31-28 | 0.23-0.32 | **.630** 16.00 | Hole | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.010** 0.25 | 62743-1† |
| | 30-27 | 0.25-0.36 | **.630** 16.00 | Hole | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.012** 0.30 | 63109-1† |
| | 27-23 | 0.36-0.57 | **.630** 16.00 | Hole | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.016** 0.41 | 63107-1 |
| | | | | — | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.016** 0.41 | 1217493-1 |
| | 23-20[2] | 0.57-0.81 | **.630** 16.00 | Hole | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.016** 0.41 | 63340-1 |
| | | | | — | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.016** 0.41 | 1217493-1 |
| | 22-20[2] | 0.64-0.81 | **.630** 16.00 | Hole | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.016** 0.41 | 63429-1<br>63429-2[6] |
| | 19-17[2] | 0.91-1.15 | **.630** 16.00 | Dimple | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.016** 0.41 | 62888-1<br>62888-2[6] |
| | | | | Hole | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.016** 0.41 | 63782-1 |
| | 18 lead[2] | 0.80-0.92 mm[2] | **.630** 16.00 | — | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.016** 0.41 | 1217592-1† |
| C[3] Narrow Body Latch Type w/ Strain Relief Slot | 23.5-20[2] | 0.54-0.81 | **.630** 16.00 | Dimple | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.016** 0.41 | 1217004-1 |
| D 300 Box Standard IDC Wide Body Latch Type | 33-31 | 0.18-0.23 | **.630** 16.00 | Dimple Hole | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.010** 0.25 | 63255-1<br>63544-1† |
| | | | **.730** 18.54 | Hole | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.010** 0.25 | 63505-1 |
| | 31-28 | 0.23-0.32 | **.630** 16.00 | Hole | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.012** 0.30 | 63760-1 |
| | 30-27 | 0.25-0.36 | **.630** 16.00 | Dimple Hole | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.012** 0.30 | 63254-1†<br>63478-1† |
| | | | **.730** 18.54 | Hole | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.012** 0.30 | 63447-1 |
| | 27-23 | 0.36-0.57 | **.630** 16.00 | Dimple | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.016** 0.41 | 63256-2 |
| E[4,5] Poke-In Combination Tab | 33-31 | 0.81-0.23 | **.630** 16.00 | Hole | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.010** 0.25 | 63018-1 |
| F[4] Poke-In Combination Tab Wide Body Latch Type | 28-24 | 0.32-0.51 | **.630** 16.00 | Hole | **.187 x .032** 4.75 x 0.81 | **.032** 0.51 | **.016** 0.41 | 1217857-1† |

[1] Two magnet wires may be terminated in the same terminal slot if diameters are equal.
[2] Single magnet wire only; 22 AWG [0.64 mm] or larger.
[3] Strain relief slot for high vibration applications.
[4] Poke-In feature accepts 20-18 AWG [0.5-0.8 mm²] solid, fused stranded lead wire or 90° poke-in tab terminal.
[5] After insertion into plastic cavity, tab portion must be bent over 45°-90° or potted in to prevent pullout when mating receptacle is disconnected.
[6] Splice free reeling.
† These part numbers are available upon special request; contact Tyco Electronics Engineering for details.

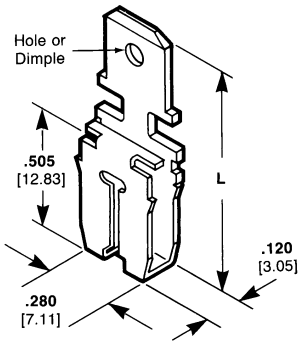
*Chart continued on next page*

## Standard MAG-MATE Terminals (Continued)

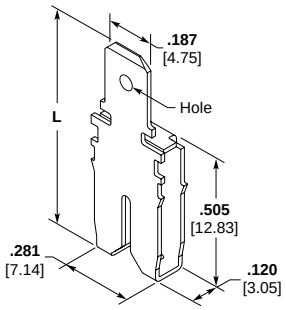
### 187 Series FASTON Tab Terminals
(Continued)

### Material
Tin plated brass

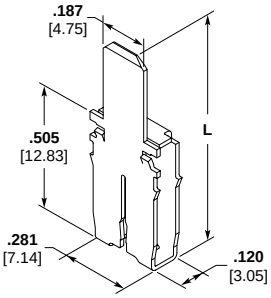
### Typical Cavity Sizes
(See page 2)
Type G—Cavity Size 4
Type H—Cavity Size 4
Type J—Cavity Size 4



G



H



J

| Type | Copper Magnet Wire Range[1] AWG | mm | Dim. L | Tab Feature | Tab Size | Stock Thickness Tab Section | Mag. Wire Section | Part Number Strip | L. P. |
|---|---|---|---|---|---|---|---|---|---|
| G[3] 500 Box Standard IDC | 22-20 | 0.64-0.81 | **.830** 21.08 | Dimple | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.020** 0.51 | — | 63708-1[4] |
| | 19-17 | 0.91-1.15 | **.830** 21.08 | Hole | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.020** 0.51 | 63643-1 | — |
| | 17.5-16 | 1.09-1.29 | **.830** 21.08 | Hole | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.020** 0.51 | 63667-1[4] | 63599-1[4] |
| | | | | Hole | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.020** 0.51 | 63427-1† | — |
| | | | | Hole | **.187 x .032** 4.75 x 0.81 | **.032** 0.81 | **.020** 0.51 | 1217075-1 | — |
| | 16-15 | 1.29-1.45 | **.830** 21.08 | Hole | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.020** 0.51 | 63666-1[4] | — |
| | | | | Hole | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.020** 0.51 | 63762-1 | — |
| | | | | Dimple | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.020** 0.51 | 63353-1 | — |
| | 14.5-13[2] | 1.54-1.83 | **.830** 21.08 | Dimple | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.016** 0.41 | 63428-1 | — |
| H[3,5] 500 Box Single IDC w/ Strain Relief Slot | 27-23 | 0.36-0.57 | **.830** 21.08 | Hole | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.020** 0.51 | 1217042-1 | — |
| | 22-20 | 0.64-0.81 | **.830** 21.08 | Hole | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.020** 0.51 | 63983-1 | — |
| | | | | Hole | **.187 x .032** 4.75 x 0.81 | **.032** 0.81 | **.020** 0.51 | 1217339-1 | — |
| | 19-17 | 0.91-1.15 | **.830** 21.08 | Hole | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.020** 0.51 | 63995-1 | — |
| | | | | Hole | **.187 x .032** 4.75 x 0.81 | **.032** 0.81 | **.020** 0.51 | 1217090-1 | — |
| | 16-15 | 1.29-1.45 | **.830** 21.08 | Hole | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.020** 0.51 | 63996-1 | — |
| J 500 Box Standard IDC Latch Type | 22-20 | 0.64-0.81 | **.830** 21.08 | — | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.020** 0.51 | 1217491-1 | — |
| | 19-17 | 0.91-1.15 | **.830** 21.08 | — | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.020** 0.51 | 1217492-1 | — |

[1] Two magnet wires may be terminated in the same terminal slot if diameters are equal.
[2] Single magnet wire only.
[3] After insertion into plastic cavity, tab portion must be bent over 45°-90° or potted in to prevent pullout when mating receptacle is disconnected.
[4] Varnish resist coating.
[5] Strain relief slot for high vibration applications.
† These part numbers are available upon special request; contact Tyco Electronics Engineering for details.



Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.
Dimensions are shown for reference purposes only. Specifications subject to change.
Technical Support
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Canada: 1-905-475-6222
Mexico: 01-800-733-8926
www.tycoelectronics.com

## Standard MAG-MATE Terminals (Continued)

### 250 Series FASTON Tab Terminals

#### Material

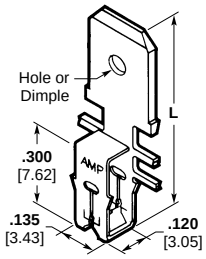
Tin plated brass

#### Typical Cavity Sizes

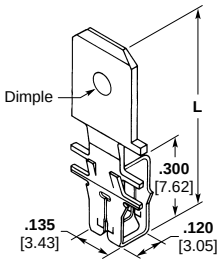
(See page 2)

Type A—Use Cavity Size 2
Type B—Use Cavity Size 5
Type C—Use Cavity Size 3

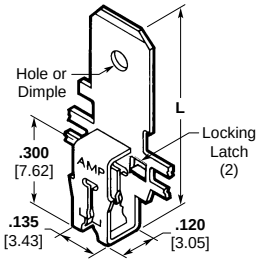
**Note:** .250 [6.35] tab terminals mate with compatible FASTON receptacles. Request AMP Catalog 82004.



A



B



C

| Type | Copper Magnet Wire Range[1] AWG | mm | Dim. L | Tab Feature | Tab Size | Stock Thickness Tab Section | Stock Thickness Mag. Wire Section | Part Number Strip | Part Number L. P. |
|---|---|---|---|---|---|---|---|---|---|
| A[3] 300 Box Standard IDC .250 [6.35] FASTON Tab | 33-31 | 0.18-0.23 | **.750** 19.05 | Dimple | **.250 x .032** 6.35 x 0.81 | **.032** 0.81 | **.010** 0.25 | 62600-1* 62600-2[7] | 62655-1 — |
| | 30-27 | 0.25-0.36 | **.750** 19.05 | Dimple Hole Dimple & Hole | **.250 x .032** 6.35 x 0.81 | **.032** 0.81 | **.012** 0.30 | 62651-1* 63055-1† 63328-1 | 62656-1† — — |
| | 28-24 | 0.32-0.51 | **.750** 19.05 | Hole | **.250 x .032** 6.35 x 0.81 | **.032** 0.81 | **.016** 0.41 | 63607-1 | — |
| | 27-23 | 0.36-0.57 | **.750** 19.05 | Dimple Dimple Dimple Dimple Hole | **.250 x .032** 6.35 x 0.81 | **.032** 0.81 | **.016** 0.41 | 62652-17* 62652-2[6,7] 62939-1[3,4,†] 63920-1[7,9] 63159-1[7,†] | 62657-1 — — — — |
| | 22-20[2] | 0.64-0.81 | **.750** 19.05 | Dimple | **.250 x .032** 6.35 x 0.81 | **.032** 0.81 | **.016** 0.41 | 62653-1* 62653-2[7] 62653-3[6] | 62658-1 1217031-1[7] — |
| | 20-18[2] Bare Wire | 0.81-1.02 | **.750** 19.05 | Dimple | **.250 x .032** 6.35 x 0.81 | **.032** 0.81 | **.020** 0.51 | 63200-1 | — |
| B Narrow Body Latch Type | 33-31 | 0.18-0.23[1] | **.750** 19.05 | Dimple | **.250 x .032** 6.35 x 0.81 | **.032** 0.81 | **.010** 0.25 | 63026-1† | — |
| | 30-27 | 0.25-0.36[1] | **.750** 19.05 | Dimple | **.250 x .032** 6.35 x 0.81 | **.032** 0.81 | **.012** 0.30 | 63027-1† | — |
| | 27-23 | 0.36-0.57 | **.750** 19.05 | Dimple | **.250 x .032** 6.35 x 0.81 | **.032** 0.81 | **.016** 0.41 | 1217860-1† | — |
| | 23-20[2] | 0.57-0.81 | **.750** 19.05 | Dimple | **.250 x .032** 6.35 x 0.81 | **.032** 0.81 | **.016** 0.41 | 1217870-1† | — |
| C Wide Body Latch Type | 33-31 | 0.18-0.23 | **.750** 19.05 | Dimple Hole Hole Hole | **.250 x .032** 6.35 x 0.81 | **.032** 0.81 | **.010** 0.25 | 63133-1 63309-1 63309-2[7] 63618-1[8] | — — — — |
| | 31-28 | 0.23-0.32 | **.750** 19.05 | Dimple | **.250 x .032** 6.35 x 0.81 | **.032** 0.81 | **.012** 0.30 | 63403-2† | — |
| | 30-28 | 0.25-0.32 | **.750** 19.05 | Hole | **.250 x .032** 6.35 x 0.81 | **.032** 0.81 | **.012** 0.30 | 1217152-1 | — |
| | 30-27 | 0.25-0.36 | **.750** 19.05 | Dimple Dimple Dimple Hole Hole | **.250 x .032** 6.35 x 0.81 | **.032** 0.81 | **.012** 0.30 | 63132-1 63132-2[10] 63132-3[4] 63499-1 63499-2[7] | 63203-1† — — 63898-1 — |
| | 27-23 | 0.36-0.57 | **.750** 19.05 | Hole Hole Dimple Dimple | **.250 x .032** 6.35 x 0.81 | **.032** 0.81 | **.016** 0.41 | 63571-1 63571-2[7] 63128-1 63128-3[7] | — — 63207-1† — |
| | 22-20[2] | 0.64-0.81 | **.750** 19.05 | Dimple | **.250 x .032** 6.35 x 0.81 | **.032** 0.81 | **.016** 0.41 | 63601-1 63601-2[7] | — — |
| | 19-17[2] | 0.91-1.15 | **.750** 19.05 | Hole | **.250 x .032** 6.35 x 0.81 | **.032** 0.81 | **.016** 0.41 | 63614-1 | — |
| D[5] Poke-In Combination Tab Wide Body Latch Type | 28-24 | 0.32-0.51 | **.750** 19.05 | Hole | **.250 x .032** 6.35 x 0.81 | **.032** 0.81 | **.016** 0.41 | 1217856-2† | — |

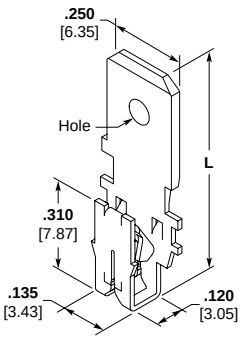
### 250 Series Combination Poke-In FASTON Tab Terminal

#### Material

Tin plated brass

#### Typical Cavity Sizes 3 (Type D)

(See page 2)



D

[1] Two magnet wires may be terminated in the same terminal slot if diameters are equal.
[2] Single magnet wire only; 22 AWG [0.64 mm] or larger.
[3] After insertion into plastic holder, tab portion must be bent over 45°-90° or potted in to prevent pullout when mating receptacle is disconnected.
[4] Varnish resist coating.
[5] Poke-In feature accepts 20-18 AWG [0.5-0.8 mm$^2$] solid, fused stranded lead wire or 90° Poke-In tab terminal.
[6] Reverse reeled version of -1.
[7] Half hard temper brass.
[8] Special key hole wire slot block.
[9] Special wide neck design.
[10] Material is unplated brass.
† These part numbers are available upon special request; contact Tyco Electronics Engineering for details.
* Recognized under the Component Program of

*Chart continued on next page*



Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.
Dimensions are shown for reference purposes only. Specifications subject to change.
Technical Support
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Canada: 1-905-475-6222
Mexico: 01-800-733-8926
www.tycoelectronics.com

## Standard MAG-MATE Terminals (Continued)



### 250 Series
### FASTON Tab Terminals
(Continued)

**Material**

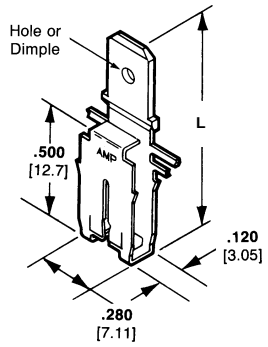
Tin plated brass

**Typical Cavity Sizes**

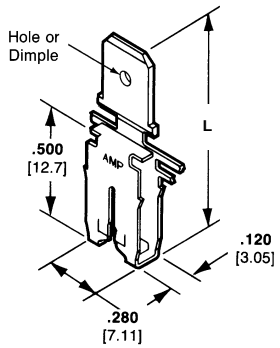
(See page 2)

Type E—Use Cavity Size 4

Type F—Use Cavity Size 4




E




F

| Type | Copper Magnet Wire Range[1] AWG | mm | Dim. L | Tab Feature | Tab Size | Stock Thickness Tab Section | Mag. Wire Section | Part Number Strip | L. P. |
|---|---|---|---|---|---|---|---|---|---|
| E[3] 500 Box Standard IDC Wide Neck | 22-20 | 0.64-0.81 | **.952** 24.18 | Hole | **.250 x .032** 6.35 x 0.81 | **.032** 0.81 | **.020** 0.51 | 63495-1[4] | 63882-1 |
| | 19-17 | 0.91-1.15 | **.952** 24.18 | Hole | **.250 x .032** 6.35 x 0.81 | **.032** 0.81 | **.020** 0.51 | 63464-2† 63464-3[4] | — 63598-1 |
| | 16-15 | 1.29-1.45 | **.952** 24.18 | Hole | **.250 x .032** 6.35 x 0.81 | **.032** 0.81 | **.020** 0.51 | 63459-2 63459-3[4] | 63881-1 — |
| | 14-13[2] | 1.61-1.83 | **.952** 24.18 | Dimple | **.250 x .032** 6.35 x 0.81 | **.032** 0.81 | **.020** 0.51 | 63460-1[4,†] — | 63883-1 1217588-1† |
| | | | | Hole | **.250 x .032** 6.35 x 0.81 | **.032** 0.81 | **.020** 0.51 | 63816-1 63816-2[4] | — — |
| F[3] 500 Box Standard IDC Narrow Neck | 22-20 | 0.64-0.81 | **.952** 24.18 | Dimple | **.250 x .032** 6.35 x 0.81 | **.032** 0.81 | **.020** 0.51 | 63155-1[4] | 63336-1† |
| | 19-17 | 0.91-1.15 | **.952** 24.18 | Dimple | **.250 x .032** 6.35 x 0.81 | **.032** 0.81 | **.020** 0.51 | 62923-1[4] 62923-2[4,5] 62923-3[4.6] | — — — |
| | 16-15 | 1.29-1.45 | **.952** 24.18 | Dimple | **.250 x .032** 6.35 x 0.81 | **.032** 0.81 | **.020** 0.51 | 63064-1[4] | 63263-1† |
| | 14-13[2] | 1.61-1.83 | **.952** 24.18 | Dimple | **.250 x .032** 6.35 x 0.81 | **.032** 0.81 | **.020** 0.51 | 63465-1 63371-1[4] | — — |
| | 12[2] | 2.05 | **.952** 24.18 | Dimple | **.250 x .032** 6.35 x 0.81 | **.032** 0.81 | **.020** 0.51 | 63425-1[4] | — |

[1] Two magnet wires may be terminated in the same terminal slot if diameters are equal.
[2] Single magnet wire only.
[3] After insertion into plastic holder, tab portion must be bent over 45°-90° or potted in to prevent pullout when mating receptacle is disconnected.
[4] Varnish resist coating.
[5] Box-up reversed reel version of -1.
[6] Box-up reeled version of -1.
† These part numbers are available upon special request; contact Tyco Electronics Engineering for details.



Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.

Dimensions are shown for reference purposes only. Specifications subject to change.

Technical Support
USA: 1-800-522-6752
Canada: 1-905-475-6222
Mexico: 01-800-733-8926

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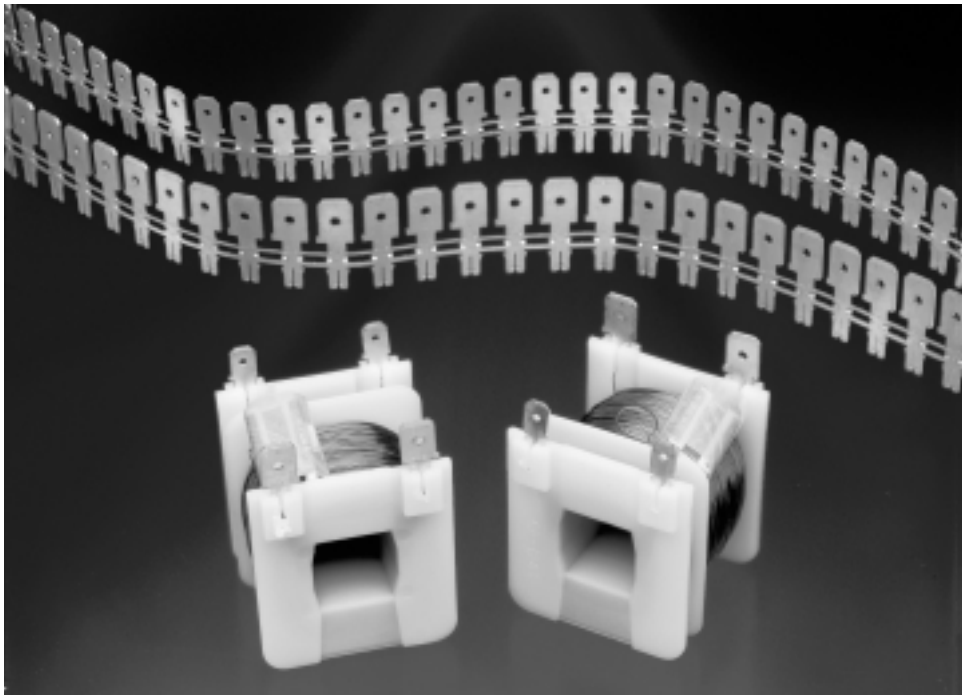
## Slim Line MAG-MATE Terminals

### Product Facts

- **Terminates all magnet wire film insulations**
- **Eliminates need for pre-stripping conductors**
- **Eliminates need to post insulate termination**
- **Excess magnet wire is automatically trimmed during the termination process**
- **Series 187 and 250 Tab terminals available**
- **Terminates 33-17 AWG [0.18-1.15 mm] magnet wire**
- **Simultaneously terminates two magnet wires of the same size in one terminal from 33-23 AWG [0.18-0.57 mm]**
- **Available in strip form for semi-automatic or fully automatic insertions**
- **Available in loose piece form for hand tool insertions**
- **Varnish resist tab terminals are available for special applications**
- **High speed, fully automated integrated systems provide uniform terminations reliability at the lowest possible applied cost**
- **Clean metal-to-metal interface produces stable, gas-tight electrical terminations free of oxides and other contaminants**
- **Recognized under the Component Recognition Program of Underwriters Laboratories Inc., File No. E13288**

### Applications

- **Motor windings and connections**
- **Coil Connections**
- **Transformer windings and connections**
- **Bobbin connections**
- **Lighting Ballasts**
- **Power Supplies**



Tyco Electronics offers a full selection of Series 187 and 250 Slim Line MAG-MATE Tab insulation displacement (IDC) terminals for magnet wire terminations.

Slim Line MAG-MATE Series 187 and 250 tab terminals with a single IDC slot terminate 33-17 AWG [0.18 to 1.15 mm].

Each IDC slot terminates up to four consecutive magnet wire ranges.

Two magnet wires with the same diameter can be terminated in one terminal down to 23 AWG [0.57 mm].

According to Tyco Electronics specifications MAG-MATE cavities are either integrated into coil bodies or especially designed cavity housings.The magnet wires are precisely positioned in the “U” shaped designed termination slots.

The MAG-MATE Inserter cuts the terminals from the strip and places the terminals over the magnet wire into the plastic cavities.

During this operation the small stripping devices penetrate the film insulation from the magnet wire.

Residual spring energy in the terminal causes the side walls of each IDC slot to function as opposing cantilever beams.

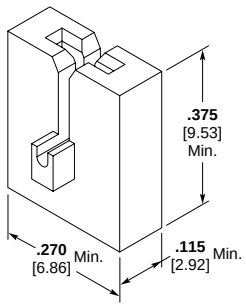
This constant pressure results in an intimate metal-to-metal interface, providing a reliable, long-term connection.

The wiping action between the wire and terminals removes oxides or other contaminants present on both the conductor and the terminal slot side walls, producing a clean, stable, gas-tight electrical termination.

The AMP MAG-MATE Inserter may be used as a semi-automatic bench machine or integrated in production lines for fully-automatic applications.

### Typical Plastic Cavity

Not for design, Tyco Electronics will supply required dimensions of cavity for each customer application.




**Reference Application Spec. 114-2147**

### Technical Documents

**Application Specifications** describe requirements for using the product in its intended application and or crimping information. They are intended for the Packaging and Design Engineer and the Machine Setup Person.

114-2140—Slim Line MAG-MATE Terminals



Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.

Dimensions are shown for reference purposes only. Specifications subject to change.

Technical Support
USA: 1-800-522-6752
Canada: 1-905-475-6222
Mexico: 01-800-733-8926

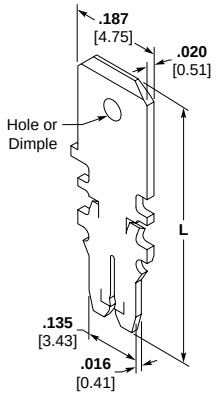
www.tycoelectronics.com

## Slim Line MAG-MATE Terminals (Continued)

### 187 Series FASTON Tab Terminals

#### Material

Tin Plated Brass




A

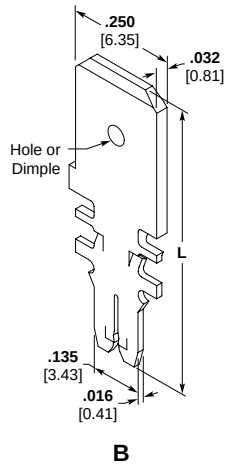
| Type | Copper Magnet Wire Range[1] AWG | mm | Dim. L | Tab Feature | Tab Size | Stock Thickness Tab Section | Stock Thickness Mag. Wire Section | Part Number Strip | Part Number L. P. |
|---|---|---|---|---|---|---|---|---|---|
| A .187 [4.75] FASTON Tab | 33-31 | 0.18-0.23 | **.630** 16.00 | Hole | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.012** 0.30 | 63710-2 | — |
| | | | | Dimple | | | | 63738-2 | — |
| | | | | Hole | **.187 x .032** 4.75 x 0.81 | **.032** 0.81 | **.012** 0.30 | 1217666-1 | — |
| | 30-28 | 0.25-0.32 | **.630** 16.00 | Hole | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.012** 0.30 | 63711-2 | — |
| | | | | Dimple | | | | 63737-2 | — |
| | 27-24 | 0.36-0.51 | **.630** 16.00 | Hole | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.016** 0.41 | 63712-2 | — |
| | | | | Dimple | | | | 63736-2 | — |
| | | | **.760** 19.31 | Plain | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.016** 0.41 | 1217497-1 | — |
| | | | | | | | | 1217497-2[3] | — |
| | 23-20[2] | 0.57-0.81 | **.630** 16.00 | Hole | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.016** 0.41 | 63713-2 | 1217714-1 |
| | | | | Dimple | | | | 63735-2 | — |
| | | | | Hole | **.187 x .032** 4.75 x 0.81 | **.032** 0.81 | **.016** 0.41 | 1217516-1 | — |
| | 19-17[2] | 0.91-1.15 | **.630** 16.00 | Hole | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.016** 0.41 | 63714-2 | — |
| | | | | Dimple | | | | 63734-2 | — |

[1] Two magnet wires may be terminated in the same terminal slot if diameters are equal.
[2] Single magnet wire only; 22 AWG [0.64] or larger.
[3] Reverse reeled version of -1.

### 250 Series FASTON Tab Terminals

#### Material

Tin Plated Brass




B

| Type | Copper Magnet Wire Range[1] AWG | mm | Dim. L | Tab Feature | Tab Size | Stock Thickness Tab Section | Stock Thickness Mag. Wire Section | Strip Part Number |
|---|---|---|---|---|---|---|---|---|
| B .250 [6.35] FASTON Tab | 33-31 | 0.18-0.23 | **.752** 19.10 | Hole | **.250 x .032** 6.35 x 0.81 | **.032** 0.81 | **.012** 0.30 | 63716-2 |
| | | | | Dimple | | | | 63744-2 |
| | 30-28 | 0.25-0.32 | **.752** 19.10 | Hole | **.250 x .032** 6.35 x 0.81 | **.032** 0.81 | **.012** 0.30 | 63717-2 |
| | | | | Dimple | | | | 63743-2 |
| | 27-24 | 0.36-0.51 | **.752** 19.10 | Hole | **.250 x .032** 6.35 x 0.81 | **.032** 0.81 | **.016** 0.41 | 63718-2 |
| | | | | Dimple | | | | 63742-2 |
| | 23-20[2] | 0.57-0.81 | **.752** 19.10 | Hole | **.250 x .032** 6.35 x 0.81 | **.032** 0.81 | **.016** 0.41 | 63719-2 |
| | | | | Dimple | | | | 63741-2 |
| | 19-17[2] | 0.91-1.15 | **.752** 19.10 | Hole | **.250 x .032** 6.35 x 0.81 | **.032** 0.81 | **.016** 0.41 | 63720-2 |
| | | | | Dimple | | | | 63740-2 |

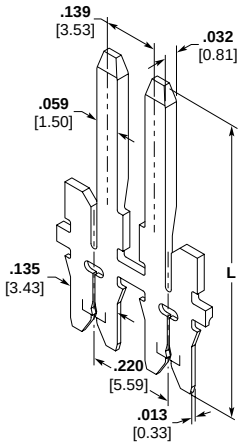
[1] Two magnet wires may be terminated in the same terminal slot if diameters are equal.
[2] Single magnet wire only; 22 AWG [0.64] or larger.

## Slim Line MAG-MATE Terminals (Continued)

### Tab Terminals

**Material**

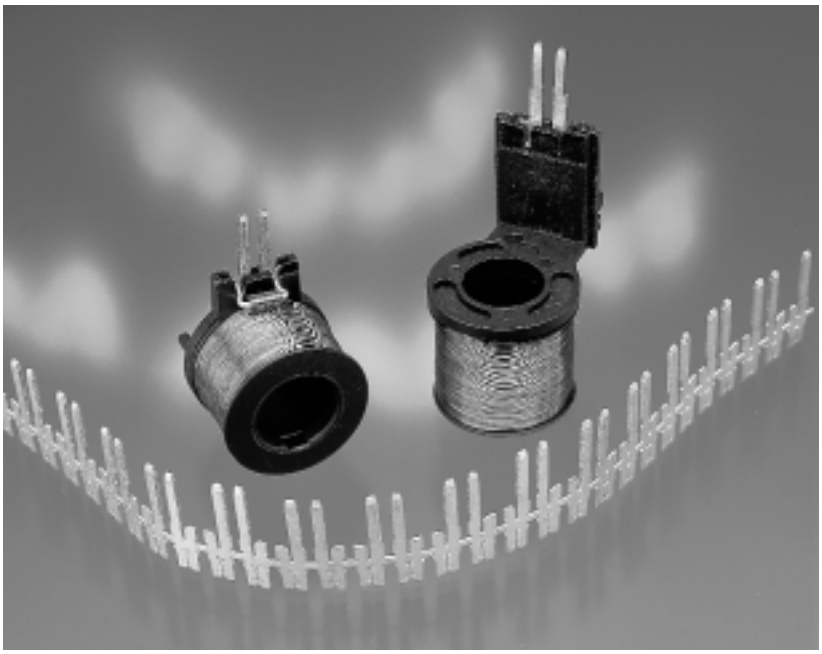
Tin Plated Brass




**C**

| Type | Copper Magnet Wire Range[1] | | Dim. L | Diode Size | Tab Size | Stock Thickness | | Strip Part Number |
|---|---|---|---|---|---|---|---|---|
| | AWG | mm | | | | Tab Section | Mag. Wire Section | |
| C Combination Diode Slot/Tab | 33-31 | 0.18-0.23 | **.725** 18.42 | #20 0.8 | **.059 x .032** 1.50 x 0.81 | **0.032** 0.81 | **0.012** 0.30 | 63888-1 |
| | 33-31 | 0.18-0.23 | **.725** 18.42 | #22.5 0.6 | **.059 x .032** 1.50 x 0.81 | **0.032** 0.81 | **0.012** 0.30 | 63903-1 |
| | 33-31 | 0.18-0.23 | **.760** 19.29 | #22.5 0.6 | **.059 x .032** 1.50 x 0.81 | **0.032** 0.81 | **0.012** 0.30 | 1217709-1 |

[1] Two magnet wires may be terminated in the same terminal slot if diameters are equal.





Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.

Dimensions are shown for reference purposes only. Specifications subject to change.

Technical Support
USA: 1-800-522-6752
Canada: 1-905-475-6222
Mexico: 01-800-733-8926

www.tycoelectronics.com

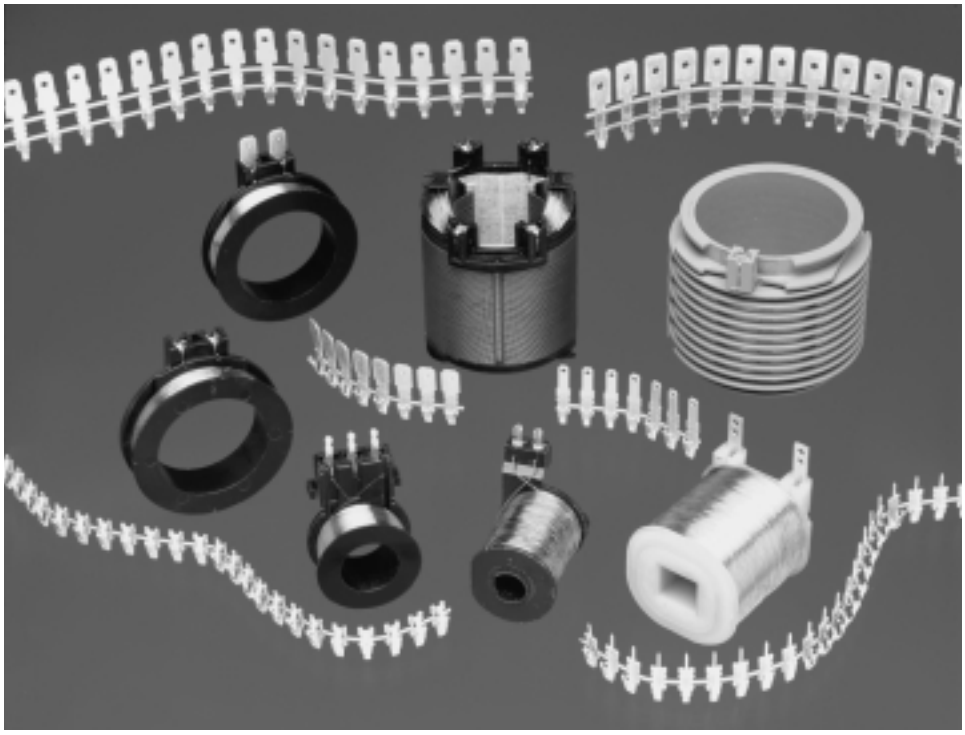
## Mini MAG-MATE Terminals

### Product Facts

- **Terminates all fine gauge magnet wire film insulations**
- **Eliminates need to pre-stripping conductors**
- **Eliminates need to post insulate termination**
- **Terminates 52-30 AWG [0.254-0.0198 mm] diameter copper magnet wire**
- **Poke-In leaf style accepts 22 -18 AWG [0.3-0.9 mm] overcoated stranded or solid lead wire**
- **Available in strip form for semi-automatic or fully automatic insertions**
- **Available in both open and closed cavity systems**
- **High speed, fully automated integrated systems provide uniform terminations reliability at the lowest possible applied cost**
- **Recognized under the Component Recognition Program of Underwriters Laboratories Inc, File No. E13288**

### Applications

- **Ignition coils**
- **Small motors**
- **Synchronist timers**
- **Electric meter coils**
- **Solenoids**
- **Relays**



Tyco Electronics offer AMP Mini MAG-MATE poke-in, crimp wire barrel, post and quick disconnect tab insulation displacement (IDC) terminals for fine gauge magnet wire terminations.

Mini MAG-MATE terminals are designed to terminate 52-30 AWG [0.254-0.198 mm] diameter copper magnet wire; poke-in leaf terminals accept 22-18 AWG [0.3-0.9 $mm^2$] overcoated stranded or solid lead wire.

The terminal design uses the AMPLIVAR serrated burr technology to penetrate the film insulation of copper magnet wire.

Mini MAG-MATE cavity pockets, designed to Tyco Electronics specifications, include a wire receiving slot and wire tie-off post that is either integrated into coil bodies or specially designed cavity housings.

The magnet wire is wrapped around the tie-off post and placed across the cavity slot. After the coil is wound, the finish end of the magnet wire is dressed through the second cavity slot and tied to its tie-off post.

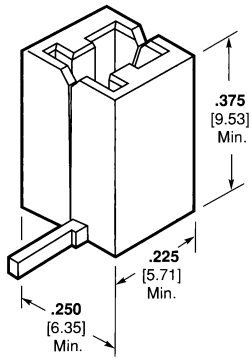
The Mini MAG-MATE Inserter shears the terminal from the carrier strip and insert the terminal into the cavity by a dual ram insertion mechanism.

As the unexpanded terminal approaches the bottom of the cavity the upper ram stops. The lower ram continues to push to a prescribed depth to expand the terminal and complete the termination process.

The fully seated terminal fits squarely into the cavity, while the serrated leg of the terminal cams against the pre-positioned magnet wire to penetrate the film insulation and provide a stable electrical termination.

### Typical Plastic Cavity

Not for design, Tyco Electronics will supply required dimensions of cavity for each customer application.




**Reference Application Spec. 114-2047**

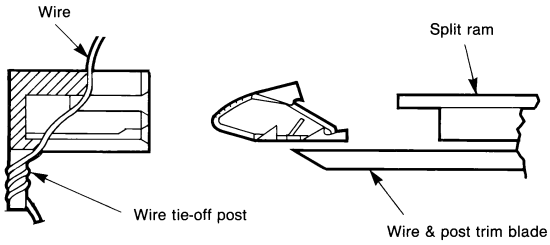
### Technical Documents

**Application Specifications** describe requirements for using the product in its intended application and or crimping information. They are intended for the Packaging and Design Engineer and the Machine Setup Person.

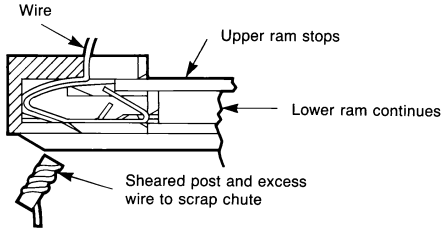
114-2047—Mini MAG-MATE Terminals

## Mini MAG-MATE Terminals (Continued)

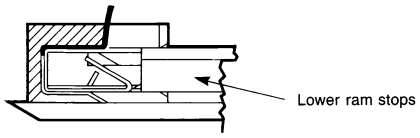
### Termination Sequence




**Terminal Removed from Carrier**




**Terminal Inserted**

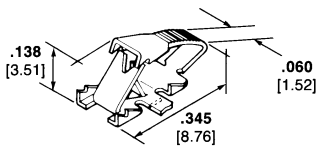



**Termination Complete**

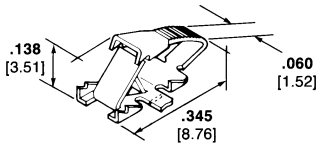
### Poke-In Tab Terminal

#### Material

.010 [0.25] tin plated brass




**A**




**B**

| Type | Copper Magnet Wire Range | | Lead Wire Range[1] | | Mating Tab | Stock Thickness | | Strip Part Number |
|---|---|---|---|---|---|---|---|---|
| | AWG | mm | AWG | mm² | | Poke-In Beam | Mag Wire | |
| A Lead Wire Poke-In | 52-42 | 0.02-0.06 | 22-18 | 0.3-0.9 | — | **0.010** 0.25 | **0.010** 0.25 | 62781-1 |
| | 44-36 | 0.05-0.13 | 22-18 | 0.3-0.9 | — | **0.010** 0.25 | **0.010** 0.25 | 62780-1 |
| | 38-30 | 0.10-0.25 | 22-18 | 0.3-0.9 | — | **0.010** 0.25 | **0.010** 0.25 | 62606-1 |
| B Tab Poke-In | 52-42 | 0.02-0.06 | — | — | **.050 x .020** 1.27 x 0.51 | **0.010** 0.25 | **0.010** 0.25 | 63613-1[3] |
| | 44-36 | 0.05-0.13 | — | — | **.060 x .020** 1.52 x 0.51 | **0.010** 0.25 | **0.010** 0.25 | 63795-1[2] 63845-1[2,3] |
| | 38-30 | 0.10-0.25 | — | — | **.060 x .020** 1.52 x 0.51 | **0.010** 0.25 | **0.010** 0.25 | 63844-1[2,3] |

[1] Solid or overcoated stranded lead wire only.
[2] Radius on beam leaf tip.
[3] Finish is select gold plated on lead tip.



Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.

Dimensions are shown for reference purposes only. Specifications subject to change.

Technical Support
USA: 1-800-522-6752
Canada: 1-905-475-6222
Mexico: 01-800-733-8926

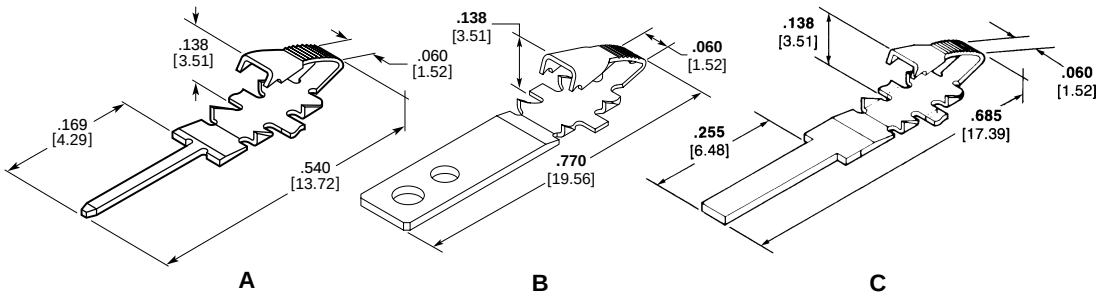
www.tycoelectronics.com

## Mini MAG-MATE Terminals (Continued)

### Posted Terminal

#### Material

Tin over premilled brass



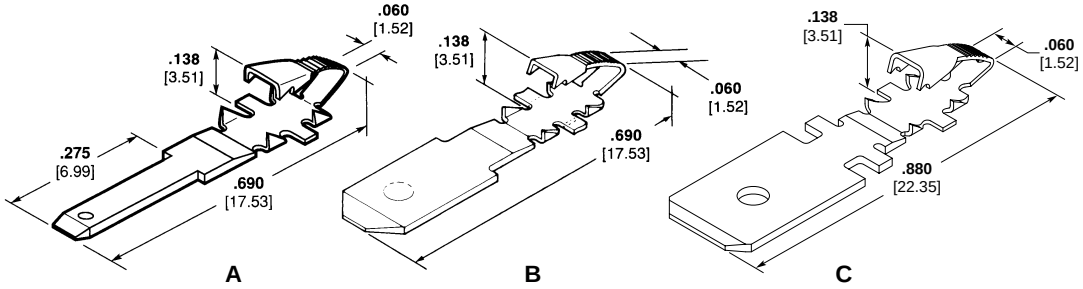

| Type | Copper Magnet Wire Range | | Post Size | Stock Thickness | | Strip Part Number |
|---|---|---|---|---|---|---|
| | AWG | mm | | Post | Mag Wire | |
| A PCB Post | 44-36 | 0.05-0.13 | **.024 x .020** 0.62 x 0.51 | **.020** 0.51 | **.010** 0.25 | 1217804-1† |
| | 38-30 | 0.10-0.25 | **.024 x .020** 0.62 x 0.51 | **0.020** 0.51 | **0.010** 0.25 | 63675-4 |
| B Solder Post | 44-36 | 0.05-0.13 | **.150 x .020** 3.81 x 0.51 | **0.020** 0.51 | **0.010** 0.25 | 63955-1 |
| | 38-30 | 0.10-0.25 | **.150 x .020** 3.81 x 0.51 | **0.020** 0.51 | **0.010** 0.25 | 63956-1 |
| C Wire Wrap Post | 38-30 | 0.10-0.25 | **.070 x .020** 1.78 x 0.51 | **0.020** 0.51 | **0.010** 0.25 | 63041-1 |

† These part numbers are available upon special request; contact Tyco Electronics Engineering for details.

### FASTON Tab Terminals

#### Material

Tin over premilled brass

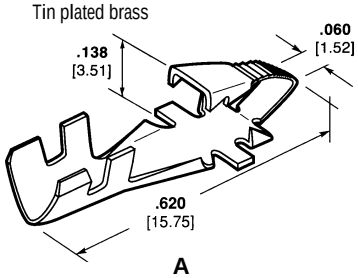



| Type | Copper Magnet Wire Range | | Tab Size | Stock Thickness | | Strip Part Number |
|---|---|---|---|---|---|---|
| | AWG | mm | | Post | Mag Wire | |
| A .110 [2.79] FASTON Tab | 38-30 | 0.10-0.25 | **.110 x .020** 2.79 x 0.51 | **.020** 0.51 | **.010** 0.25 | 63161-1 |
| B .187 [4.75] FASTON Tab | 44-36 | 0.05-0.13 | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.010** 0.25 | 63778-1 |
| | 38-30 | 0.10-0.25 | **.187 x .020** 4.75 x 0.51 | **.020** 0.51 | **.010** 0.25 | 62816-1 1217529-1 |
| C .250 [6.35] FASTON Tab | 44-36 | 0.05-0.13 | **.250 x .032** 6.35 x 0.81 | **.032** 0.81 | **.010** 0.25 | 1217000-1 |
| | 38-30 | 0.10-0.25 | **.250 x .032** 6.35 x 0.81 | **.032** 0.81 | **.010** 0.25 | 63999-1 |

### Crimp Wire Barrel Terminal

#### Material

Tin plated brass




| Type | Copper Magnet Wire Range | | Lead Wire Range | | Stock Thickness | | Strip Part Number |
|---|---|---|---|---|---|---|---|
| | AWG | mm | AWG | mm² | Crimp Barrel | Mag Wire | |
| A Crimp Wire Barrel | 52-42 | 0.02-0.06 | 26-22 | 0.12-0.30 | **0.010** 0.25 | **0.010** 0.25 | 63828-1 |
| | 44-36 | 0.05-0.13 | 26-22 | 0.12-0.30 | **0.010** 0.25 | **0.010** 0.25 | 1217830-1[1,†] |
| | 38-30 | 0.10-0.25 | 22-18 | 0.3-0.9 | **0.010** 0.25 | **0.010** 0.25 | 63199-1[1] 1217231-1† |

[1] Wire and insulation barrel reversed so lead wire exits over magnet wire termination area.
† These part numbers are available upon special request; contact Tyco Electronics Engineering for details.

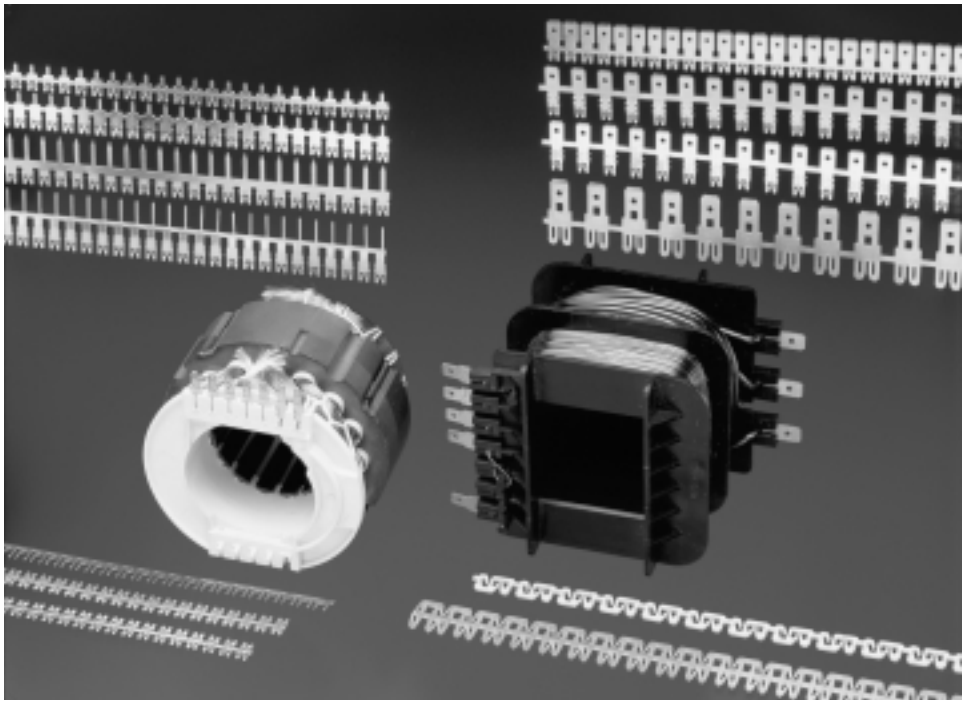
## SIAMEZE Terminals

### Product Facts

- **Terminates all copper magnet wire film insulations**
- **Eliminates need for pre-stripping conductors**
- **Moving Beam contact design connects a wide range of magnet wire sizes with a single terminal**
- **Standard range terminals connect 34-18 AWG [0.16-1.0 mm] magnet wire**
- **Fine range terminals connect 36-27 AWG [0.13-0.38 mm] magnet wire**
- **Medium range terminals connect 23-12 AWG [0.56-2.03 mm] magnet wire**
- **Excess magnet wire is automatically trimmed during the termination process**
- **Available in strip form for semi-automatic or fully automatic insertions**
- **Loose piece terminals available for hand tool insertions**
- **High-speed automatic coil winding machine terminations provide uniform reliability at the lowest possible applied cost**
- **Clean metal-to-metal interface produces stable, gas-tight electrical terminations free of oxides and other contaminants**
- **Recognized under the Component Program of Underwriters Laboratories Inc., File No. E13288**

### Applications

- **Motor windings and connections**
- **Coil connections**
- **Transformer windings and connections**
- **Ballasts**
- **Power supplies**
- **Solenoids**
- **Actuators**



Tyco Electronics offers a full selection of AMP SIAMEZE insulation displacement (IDC) terminals for interconnecting copper magnet wires, lead wires, and other components.

The AMP SIAMEZE insulation displacement (IDC) technology eliminates the need to strip the film insulation from copper magnet wires and lead wires.

Terminals are available in wire-to-wire, Lead Lok, quick disconnect tabs, posts, pin and receptacle terminals.

Standard Range SIAMEZE terminals terminate 34-18 AWG [0.16-1.0 mm] copper magnet wires.



Fine Range SIAMEZE terminals terminate 36-27 AWG [0.13-0.38 mm] copper magnet wires.

Medium Range and Heavy Range SIAMEZE terminals terminate 23-12 AWG [0.56-2.03 mm] copper magnet wires.

Available with either Moving Beam contacts whereby a single terminal connects to a very wide range of magnet wire sizes, or a Compliant Beam for contacting two magnet wires of the same diameter in one terminal for splicing or bi-filar applications.

According to Tyco Electronics specifications SIAMEZE cavities are either integrated into coil bodies or specially designed cavity housings.

The magnet wires are positioned in the “U” shaped slots.

The SIAMEZE Inserter cuts the terminals from the strip and places the terminals over the magnet wire into the plastic cavities.

During this operation the small stripping devices penetrate the film insulation from the magnet wire.

Residual spring energy in the terminal causes the side walls of the IDC slot to function as opposing cantilever beams.

This constant pressure results in an intimate metal-to-metal interface, providing a reliable, long-term connection.

The wiping action between the wire and terminals remove all oxides or other contaminants present on both the conductor and the terminal slot side walls, producing a clean, stable, gas-tight electrical termination.

The AMP SIAMEZE Inserter may be used as a semi-automatic bench machine or integrated in production lines for fully-automatic applications.



Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.

Dimensions are shown for reference purposes only. Specifications subject to change.

Technical Support
USA: 1-800-522-6752
Canada: 1-905-475-6222
Mexico: 01-800-733-8926

www.tycoelectronics.com

## SIAMEZE Terminals (Continued)



### Typical Plastic Cavity — Pockets

**Note:** SIAMEZE typical plastic cavities are not for design; Tyco Electronics will supply required dimensions of cavity for each customer application.

Plastic cavities, designed to Tyco Electronics specifications, may be molded as part of the coil bobbin or attached to a lamination stack in the area of the magnet wire coil.

Each cavity is a rectangular box with two narrow slots on opposing walls and a plastic cutoff or tie-off post.

During or after the winding process, the magnet wire is placed across the plastic cavities and into the slots, either manually or by coil winding equipment.

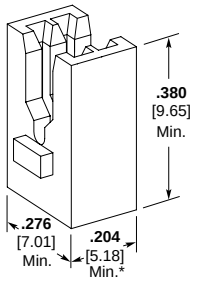
Unraveling is prevented by a slight friction fit, suitable bend or by wrapping the magnet wire around the tie-off post.

During insertion, the insulation displacing terminal slot strip the film insulation from the magnet wire producing a stable electrical termination.

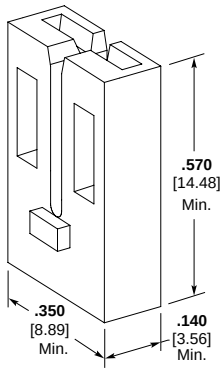
Terminal retention is retained in the plastic cavities by single or multiple locking barbs or locking latches for large quick disconnect FASTON tab terminals.

Excess magnet wire is trimmed flush with the outside of the plastic cavity by a shear blade traveling with the terminal insertion ram.

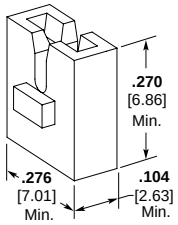
**Tyco Electronics can provide design and mold engineering resources to manufacture most specifically designed SIAMEZE cavity housings.**



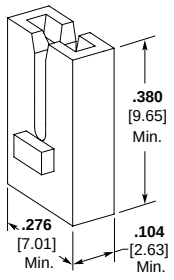

**Cavity Part Number 1601421**



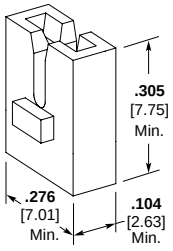

**Cavity Part Number 1601423**



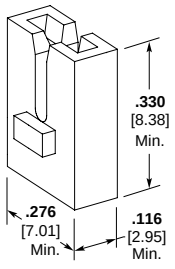

**Cavity Part Number 1601424**




**Cavity Part Number 1601425**




**Cavity Part Number 1601427**




**Cavity Part Number 1601431**

* Minimum dimension with Lead Lok slot.



Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.

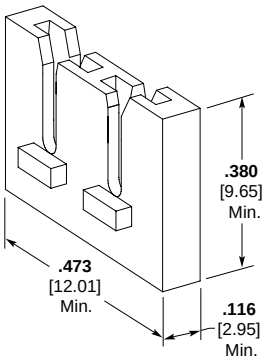
Dimensions are shown for reference purposes only. Specifications subject to change.

Technical Support
USA: 1-800-522-6752
Canada: 1-905-475-6222
Mexico: 01-800-733-8926

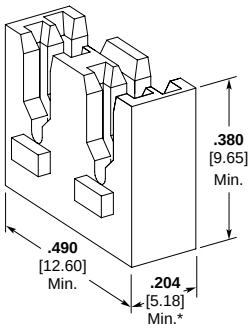
www.tycoelectronics.com

## SIAMEZE Terminals (Continued)

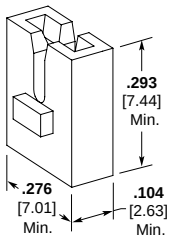
### Typical Plastic Cavity — Pockets (Continued)



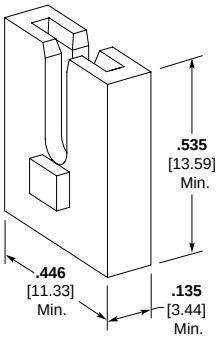

**Cavity Part Number 1601432**



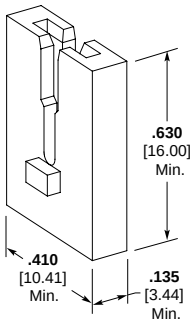

**Cavity Part Number 1601433**



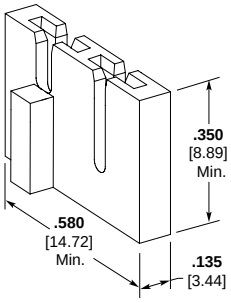

**Cavity Part Number 1601434**



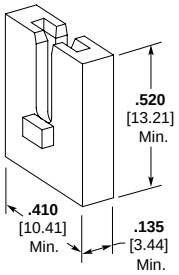

**Cavity Part Number 1601435**



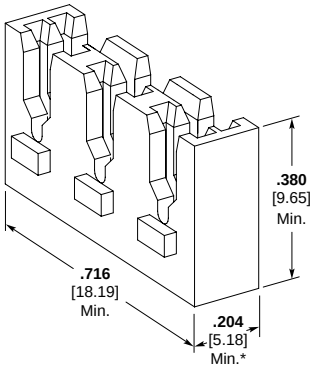

**Cavity Part Number 1601436**



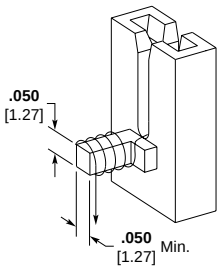

**Cavity Part Number 1601437**



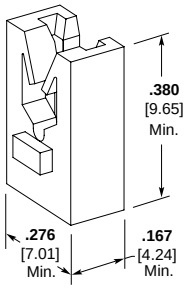

**Cavity Part Number 1601438**



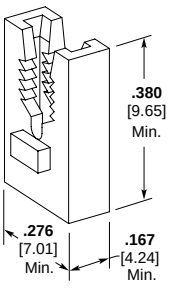

**Cavity Part Number 1601440**



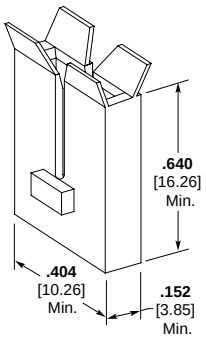

**Wrap Post Part Number 1601447**




**Cavity Part Number 1601462**




**Cavity Part Number 1601463**




**Cavity Part Number 1601470**

* Minimum dimension with Lead Lok slot.



Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.

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Technical Support
USA: 1-800-522-6752
Canada: 1-905-475-6222
Mexico: 01-800-733-8926

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## SIAMEZE Terminals (Continued)

### SIAMEZE Interconnection System

**How the System Operates**

① **Trim Blade**
The trim blade cuts the excess magnet wire and the wire cutoff block at the front of the cavity.

② **Terminal Insertion Finger**
The terminal insertion finger is part of the SIAMEZE Inserter. It pushes the terminal that was sheared from the carrier strip through the "tube" into the cavity.

③ **Contact**
Various wire attachments in standard, fine, medium and heavy duty terminals are available (See tables).

④ **IDC Slot**
The IDC slot in the terminal will terminate a wide range of magnet wire sizes.

⑤ **Stripping Burrs**
During the insertion process, these burrs strip the film insulation from the magnet wire.

⑥ **Locking Barbs**
Terminal retention is provided in the cavity by single or multiple locking barbs.

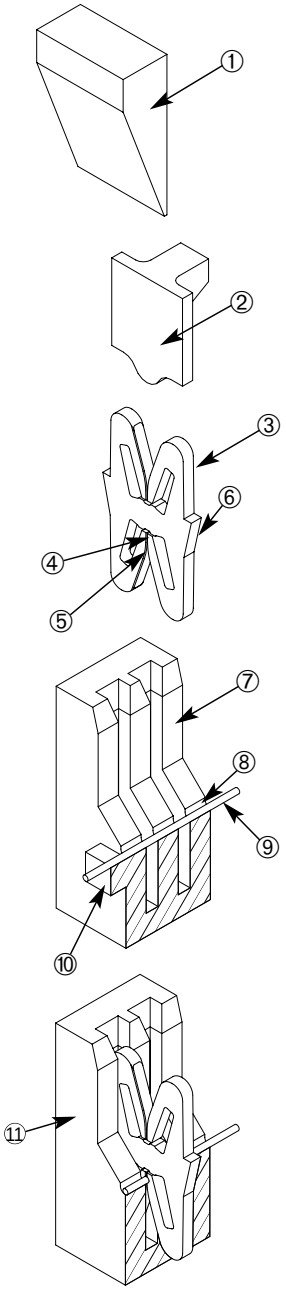
⑦ **Plastic Cavity**
Production has to be in accordance with Tyco Electronics specifications (for cavity drawing numbers see tables). **Consulting Tyco Electronics is required for design in.**

⑧ **Cavity Slot for Wire**
The width has to be in accordance with the wire size (see cavity drawings).

⑨ **Magnet Wire**
The magnet wire is positioned in "U" slot manually or automatically by coil winding equipment.

⑩ **Wire Cutoff Block**
The wire cutoff block supports the magnet wire during the trimming process. The magnet wire is cut plain to the cavity front side.

⑪ **Terminal Insertion Complete**
The magnet wire termination is complete when the terminal is fully seated in the cavity.




### Test Results

Standard Range SIAMEZE products have been submitted to the following tests without significant millivolt increase:

**Current Cycling** —
50 cycles with each cycle consisting of 15 minutes "ON" followed by 15 minutes "OFF"

**Thermal Shock** —
10 cycles with each cycle consisting of 30 minutes at 150°C followed by 30 minutes at 21°C

**Humidity** —
**Temperature Cycling**
10 cycles between 25°C and 65°C at 80 to 100% RH





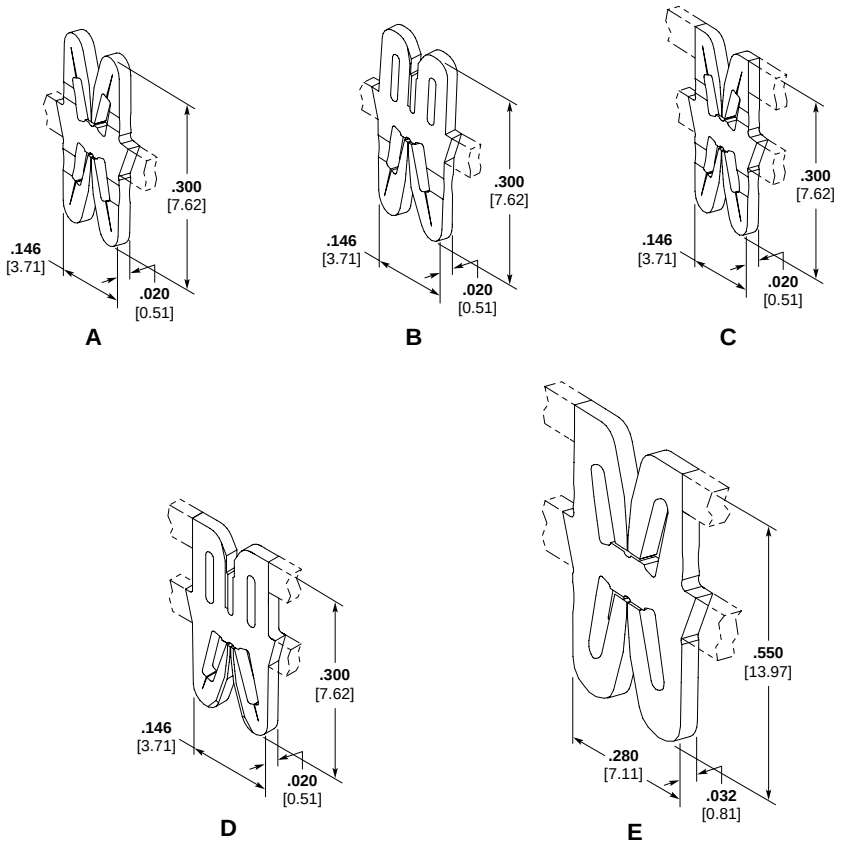
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## SIAMEZE Terminals (Continued)

### Wire-to-Wire Terminals

#### Material

Brass




| Type | Recommended Pocket[7] | Copper Magnet Wire Range | | Lead Wire Range | | Part Number | |
|---|---|---|---|---|---|---|---|
| | | AWG | mm² | AWG | mm² | Reeled | Loose |
| A Moving Beam | 1601421<br>1601462<br>1601463 | 27–26 | 0.36–0.13 | 18-22[6] | 0.8-0.3 | 1601117-1<br>2-1601117-1[1] | 4-1601117-1[2] |
| | | 18-34 | 1.02-0.16 | 18-22[6] | 0.8-0.3 | 1601000-1<br>1601000-2[5] | 4-1601000-1[2]<br>4-1601000-2[2,5] |
| B Wire Specific | 1601421 | 18–34 | 1.02–0.16 | 20 | 0.5 | 1601056-1<br>2-1601056-1[1] | 4-1601056-1[2] |
| | | 18-34 | 1.02-0.16 | 18 | 0.8 | 1601074-1<br>2-1601074-1[1] | 4-1601074-1[2] |
| C High Carry | 1601433<br>1601440 | 18-34 | 1.02-0.16 | 18-22[6] | 0.8-0.3 | 1601046-1<br>2-1601046-1[1] | 4-1601046-1[2]<br>6-1601046-1[3]<br>8-1601046-1[4] |
| D High Carry Specific | 1601433 | 27-36 | 0.36-0.13 | 20 | 0.5 | 1601125-1<br>2-1601125-1[1] | 4-1601125-1[2]<br>6-1601125-1[3] |
| E Medium Range | 1601436 | 12-23 | 2.06-0.56 | 16-20 | 1.3-0.5 | 1601136-1<br>2-1601136-1[1] | 4-1601136-1[2]<br>6-1601136-1[3] |

[1] Reversed Reeled—Consult Tyco Electronics drawing for orientation.
[2] Loose Single.
[3] Loose Bussed Pair.
[4] Loose Bussed Triple.
[5] Finish is Post Plated Tin over Copper (Consult Tyco Electronics drawing for specifics).
[6] Lead wire may be stranded, solid or bonded with 105°C PVC insulation. Contact Tyco Electronics Engineering when using other types of insulation.
[7] Magnet wire 30 AWG [0.25 mm] and smaller also requires a wrap post per drawing 1601447.



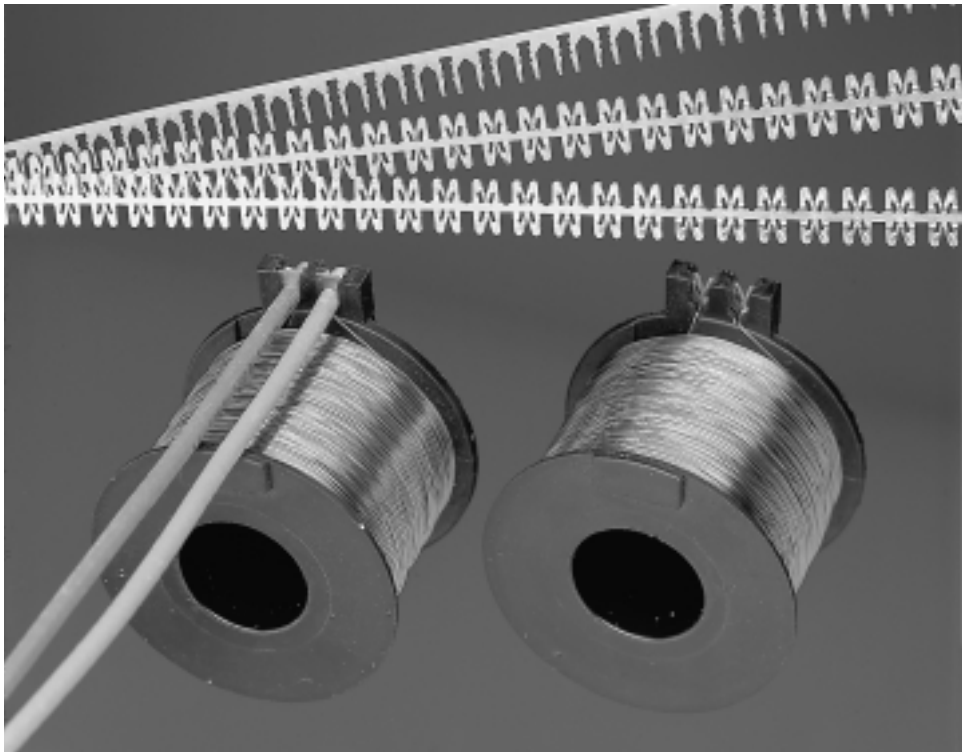
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Dimensions are shown for reference purposes only. Specifications subject to change.
Technical Support
USA: 1-800-522-6752
Canada: 1-905-475-6222
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www.tycoelectronics.com

## SIAMEZE Terminals (Continued)



### Lead Lok Terminals Product Facts

- **Provides perpendicular and parallel lead wire strain relief retention forces in excess of 20 lbs.**
- **AMP Inserter automatically positions and secures lead wire during insertion**
- **Manual, semi-automated, fully automated systems allow for lead wire termination**
- **Accepts #18 -#22 [0.3 mm²-0.8 mm²] AWG solid or stranded lead wire with .115 [2.92] max. insulation diameter**
- **No lead wire stripping required**



Tyco Electronics features the AMP Lead Lok strain relief terminal system that provides optimum lead wire retention when used in conjunction with SIAMEZE insulation displacement terminals.

After the one-step insertion of AMP SIAMEZE wire-to-wire terminals into Tyco Electronics specified plastic cavities, the application is ready for the secondary lead wire attachment.

The lead wire is manually positioned over the magnet wire terminated SIAMEZE wire-to-wire terminal.

The AMP Lead Lok Inserter cuts the Lead Lok terminals from the strip and places the terminal over the lead wire in the plastic cavities.

During this operation, the lead wire is automatically seated, the insulation pierced and the exposed solid or stranded conductor is terminated in the IDC slot of the SIAMEZE wire-to-wire terminal.

Residual spring energy in the terminal causes the side walls of the IDC slot to function as opposing cantilever beams.

This constant pressure results in an intimate metal-to-metal interface, providing a reliable, long-term connection.

Perpendicular and parallel lead wire strain relief retention forces in excess of 20 lbs are achieved.

The AMP Lead Lok Inserter may be a secondary station in the AMP SIAMEZE Wire-to-Wire semi-automatic bench machine or a separate semi-automatic bench machine inserter depending on the application and required production rates.



Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.

Dimensions are shown for reference purposes only. Specifications subject to change.

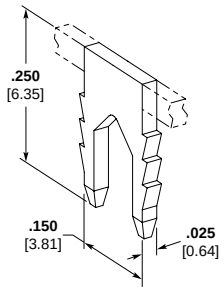
Technical Support
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Mexico: 01-800-733-8926

www.tycoelectronics.com

## SIAMEZE Terminals (Continued)

### Lead Lok Interconnection System

### How the System Operates




| Type | Recommended Pocket | Lead Wire Range | | Part Number | |
|---|---|---|---|---|---|
| | | AWG | mm² | Reeled | Loose |
| A Lead Lok | 1601421<br>1601433<br>1601440 | 18-22[2] | 0.8-0.3 | 1601140-1<br>2-1601140-1[1] | 4-1601140-1 |

[1] Reverse Reeled—Consult Tyco Electronics drawing for orientation.
[2] Lead wire may be stranded, solid or bonded with 105°C PVC insulation. Contact Tyco Electronics Engineering when using other types of insulation.

① **Lead Lok Insertion Finger**
The Lead Lok insertion finger pushes the Lead Lok that was sheared from the carrier strip and positions the Lead Lok and lead wire into the IDC slot.

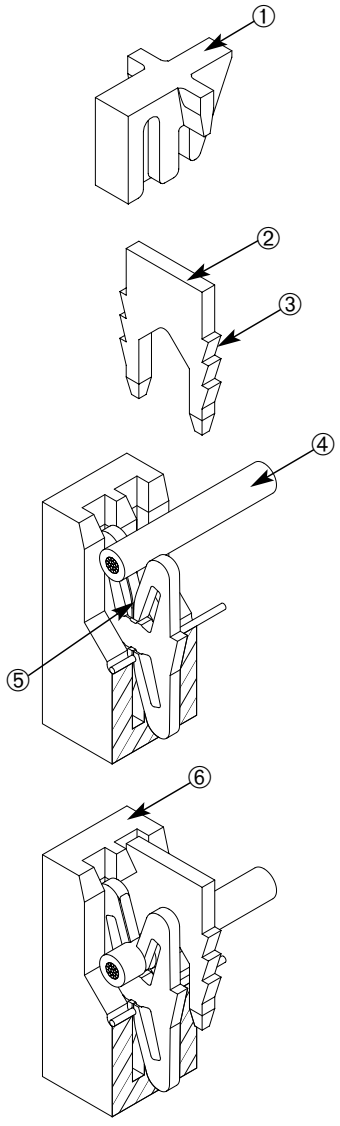
② **Lead Lok Terminal**
The Lead Lok terminal provides maximum lead wire retention in the cavity.

③ **Locking Barbs**
The Lead Lok multiple locking barbs provide retention in the cavity.

④ **Lead Wire**
Stranded, solid and bonded lead wire with 105°C PVC insulation can be used. Contact Tyco Electronics Engineering for other lead wires and insulation under consideration.

⑤ **IDC Slot**
The IDC slot will pierce the lead wire during insertion.

⑥ **Lead Wire Insertion Complete**
The lead wire termination is complete when the Lead Lok is fully seated in the cavity.





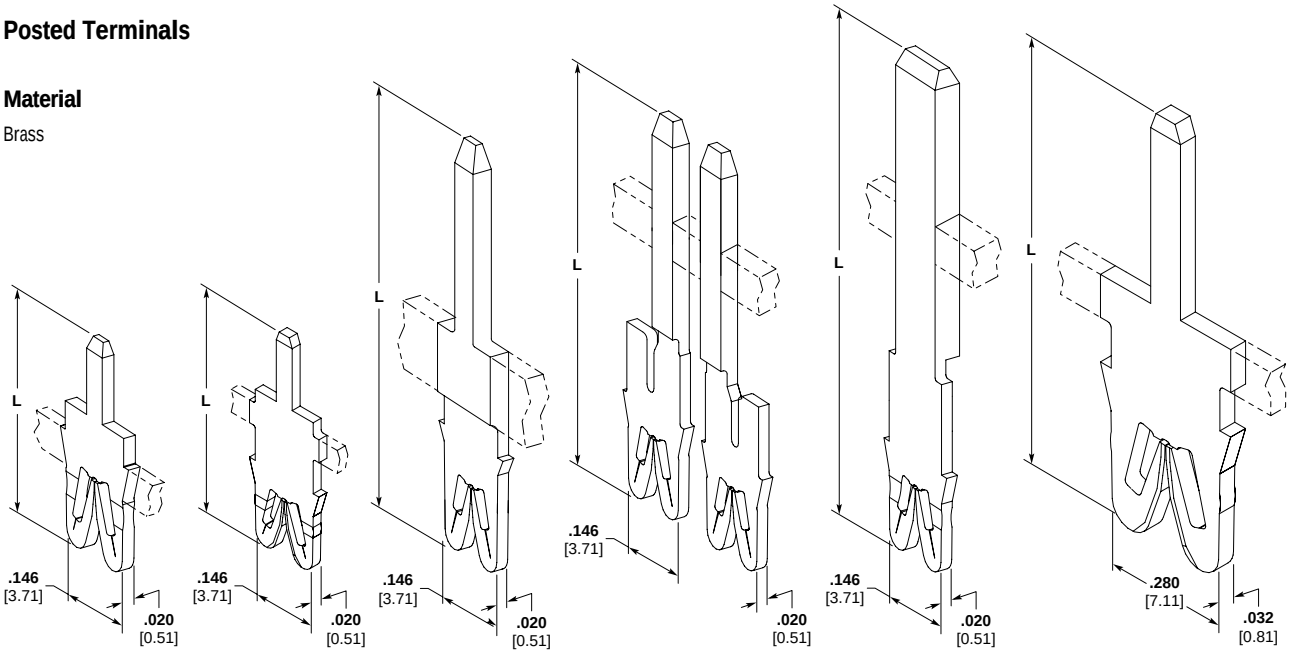

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www.tycoelectronics.com

## SIAMEZE Terminals (Continued)

### Posted Terminals

**Material**

Brass




| Type | Recommended Pocket[7] | Copper Magnet Wire Range AWG | Copper Magnet Wire Range mm² | L Dim. | Tab Size | Part Number Reeled | Part Number Loose |
|---|---|---|---|---|---|---|---|
| A PC Tab | 1601424 | 27-36 | 0.36-0.13 | **.345** 8.76 | **.040 x .020** 1.02 x 0.51 | 1601120-2[3] 2-1601120-2[1,3] | 4-1601120-2[3] |
| | | 18-34 | 1.02-0.16 | **.345** 8.76 | **.040 x .020** 1.02 x 0.51 | 1601009-2[2] 2-1601009-2[1,2] | 4-1601009-2[2] |
| | | 16-17[6] | 1.27-1.15 | **.345** 8.76 | **.040 x .020** 1.02 x 0.51 | 1601147-2[3] 2-1601147-2[1,3] | 4-1601147-2[3] |
| | | 29[6] | 0.29 | **.345** 8.76 | **.040 x .020** 1.02 x 0.51 | 1601155-2[2] 2-1601155-2[1,2] | 4-1601155-2[2] |
| B Extended PC Tab | 1601425 | 27-36 | 0.36-0.13 | **.485** 12.32 | **.040 x .020** 1.02 x 0.51 | 1601128-2[3] 2-1601128-2[1,3] | 4-1601128-2[3] |
| | | 18-34 | 1.02-0.16 | **.485** 12.32 | **.040 x .020** 1.02 x 0.51 | 1601041-2[2] 2-1601041-2[1,2] | 4-1601041-2[2] |
| | | | | **.456** 11.57 | **.040 x .020** 1.02 x 0.51 | 1601095-2[4] 2-1601095-2[1,4] | 4-1601095-2[4] |
| C Long Narrow Width Blade | 1601431 | 18-34 | 1.02-0.16 | **.754** 19.16 | **.047 x .032** 1.20 x. 0.81 | 1601110-2[4] 2-1601110-2[1,4] | 4-1601110-2[4] |
| | | | | **.669** 17.00 | **.059 x .032** 1.50 x 0.81 | 1601099-1 2-1601099-1[1] | 4-1601099-1 |
| | | | | **.756** 19.21 | **.059 x .032** 1.50 x 0.81 | 1601063-2[5] 2-1601063-2[1,5] | 4-1601063-2[5] |
| | | | | **.904** 22.96 | **.059 x .032** 1.50 x 0.81 | 1601037-2[5] 2-1601037-2[1,5] | 4-1601037-2[5] |
| | | | | **1.005** 25.53 | **.059 x .032** 1.50 x 0.81 | 1601066-2[4] 2-1601066-2[1,4] | 4-1601066-2[4] |
| | | | | **.974** 24.74 | **.071 x .025** 1.80 x 0.64 | 1601104-2[5] 2-1601104-2[1,5] | 4-1601104-2[5] |
| D Tab Pair with Diode Slot | 1601425 | 27-36 | 0.36-0.13 | **.710** 18.03 | **.059 x .032** 1.50 x 0.81 | 1601121-2[4] 2-1601121-2[1,4] | — |
| | | 18-34 | 1.02-0.16 | **.710** 18.03 | **.059 x .032** 1.50 x 0.81 | 1601065-2[4] 2-1601065-2[1,4] | — |
| E Long Medium Width Blade | 1601425 | 18-34 | 1.02-0.16 | **.837** 21.26 | **.118 x .025** 3.00 x 0.51 | 1601008-2[4] 2-1601008-2[4] | 4-1601008-2[4] |
| | | | | **.837** 21.26 | **.118 x .032** 3.00 x 0.81 | 1601051-2[4] 2-1601051-2[1,4] | 4-1601051-2[4] |
| F Long Medium Blade Medium Range | 1601438 | 12-23 | 0.56-2.06 | **.872** 22.15 | **.130 x .032** 3.30 x 0.81 | 1601138-1 2-1601138-1[1] | 4-1601138-1 |

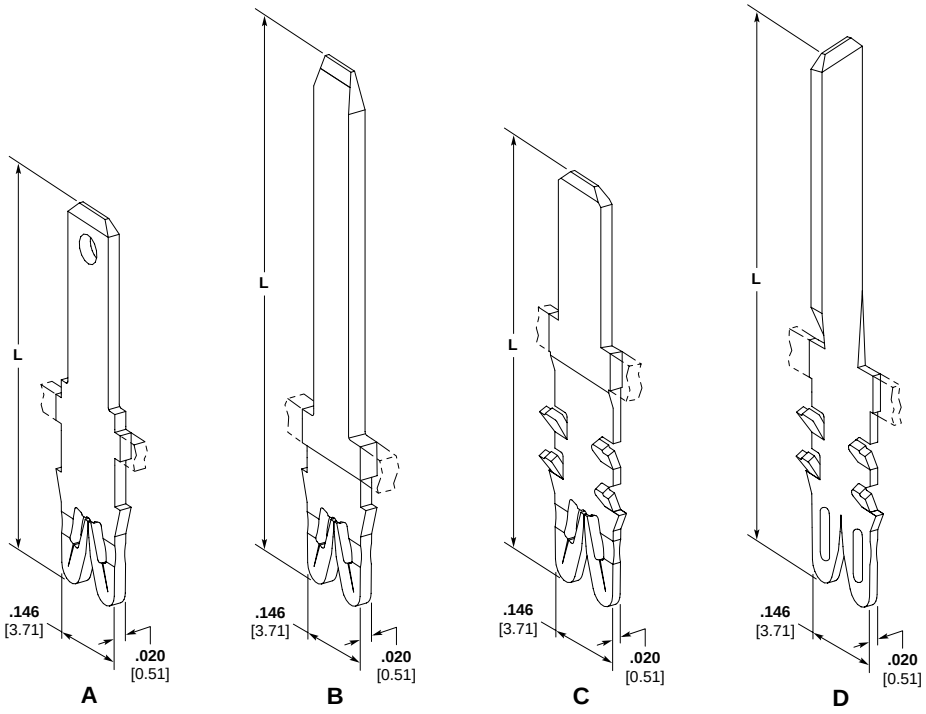
[1] Reverse Reeled—Consult Tyco Electronics drawing for orientation.
[2] Finish is Post Plated Tin over Copper (Consult Tyco Electronics drawing for specifics).
[3] Finish is Post Plated Tin over Nickel (Consult Tyco Electronics drawing for specifics).
[4] Finish is Pre-Plated Tin over Copper (Consult Tyco Electronics drawing for specifics).
[5] Finish is Pre-Plated Tin (Consult Tyco Electronics drawing for specifics).
[6] Two magnet wires may be terminated in the same slot if diameters are equal.
[7] Magnet wire 30 AWG [0.25 mm] and smaller also requires a wrap post per drawing 1601447.

## SIAMEZE Terminals (Continued)

### 110 Series
### FASTON Tab Terminals

**Material**

Brass




| Type | Recommended Pocket[7] | Copper Magnet Wire Range AWG | Copper Magnet Wire Range mm | L Dim. | Tab Feature | Tab Size | Part Number Reeled | Part Number Loose |
|---|---|---|---|---|---|---|---|---|
| A Single Barb | 1601425 | 27-36 | 0.36-0.13 | **.640** 16.26 | Hole | **.110 x .020** 2.79 x 0.51 | 1601116-1<br>2-1601116-1[1] | 4-1601116-1 |
| | | 18-34 | 1.02-0.16 | **.640** 16.26 | Hole | **.110 x .020** 2.79 x 0.51 | 1601005-1<br>2-1601005-1[1] | 4-1601005-1 |
| | | | | | | | 1601005-2[3]<br>2-1601005-2[1,3] | 4-1601005-2[3] |
| | | | | | — | **.110 x .020** 2.79 x 0.51 | 1601085-1[3]<br>2-1601085-1[1,3] | 4-1601085-1[3] |
| | | 18-34 | 1.02-0.16 | **.846** 21.49 | Hole | **.110 x .020** 2.79 x 0.51 | 1601045-1<br>2-1601045-1[1] | 4-1601045-1 |
| | | | | | — | **.110 x .020** 2.79 x 0.51 | 1601059-1<br>2-1601059-1[1] | 4-1601059-1 |
| | | | | | | | 1601059-2[4]<br>2-1601059-2[1,4] | 4-1601059-2[4] |
| | | 18-34 | 1.02-0.16 | **.925** 23.50 | Hole | **.110 x .020** 2.79 x 0.51 | 1601073-1<br>2-1601073-1[1] | 4-1601073-1 |
| B Single Barb Low Transition | 1601431 | 18-34 | 1.02-0.16 | **.945** 24.00 | — | **.110 x .032** 2.79 x 0.81 | 1601097-2[3]<br>2-1601097-2[1,3] | 4-1601097-2[3] |
| C Multi-Barb | 1601425 | 27-36 | 0.36-0.13 | **1.240** 31.50 | — | **.110 x .032** 2.79 x 0.81 | 1601133-2[2,5]<br>2-1601133-2[1,2,5] | 4-1601133-2[2] |
| | | 18-34 | 1.02-0.16 | **.655** 16.63 | Hole | **.110 x .020** 2.79 x 0.51 | 1601039-1<br>2-1601039-1[1] | 4-1601039-1 |
| | | | | | | | 1601039-2[3]<br>2-1601039-2[1,3] | 4-1601039-2[3] |
| | | 18-34 | 1.02-0.16 | **.630** 15.99 | — | **.110 x .032** 2.79 x 0.81 | 1601064-1<br>2-1601064-1[1] | 4-1601064-1 |
| | | 18-34 | 1.02-0.16 | **1.240** 31.50 | — | **.110 x .032** 2.79 x 0.81 | 1601112-2[2,5]<br>2-1601112-2[1,2,5] | 4-1601112-2[2] |
| D Multi-Barb w/ 90° Twist | 1601425 | 21-24[6] | .51-.72 | **.915** 23.24 | — | **.110 x .020** 2.79 x 0.51 | 1601151-2[3]<br>2-1601151-2[1,3] | 4-1601151-2[3] |

[1] Reversed Reeled—Consult Tyco Electronics drawing for orientation.
[2] Finish is Pre-Plated Tin over Copper (Consult Tyco Electronics drawing for specifics).
[3] Finish is Pre-Plated Tin (Consult Tyco Electronics drawing for specifics).
[4] Finish is Pre-Plated Silver over Nickel (Consult Tyco Electronics drawing for specifics).
[5] Dual Carrier Strip.
[6] Two magnet wires may be terminated in the same slot if diameters are equal.
[7] Magnet wire 30 AWG [0.25 mm] and smaller also requires a wrap post per drawing 1601447.



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Dimensions are shown for reference purposes only. Specifications subject to change.

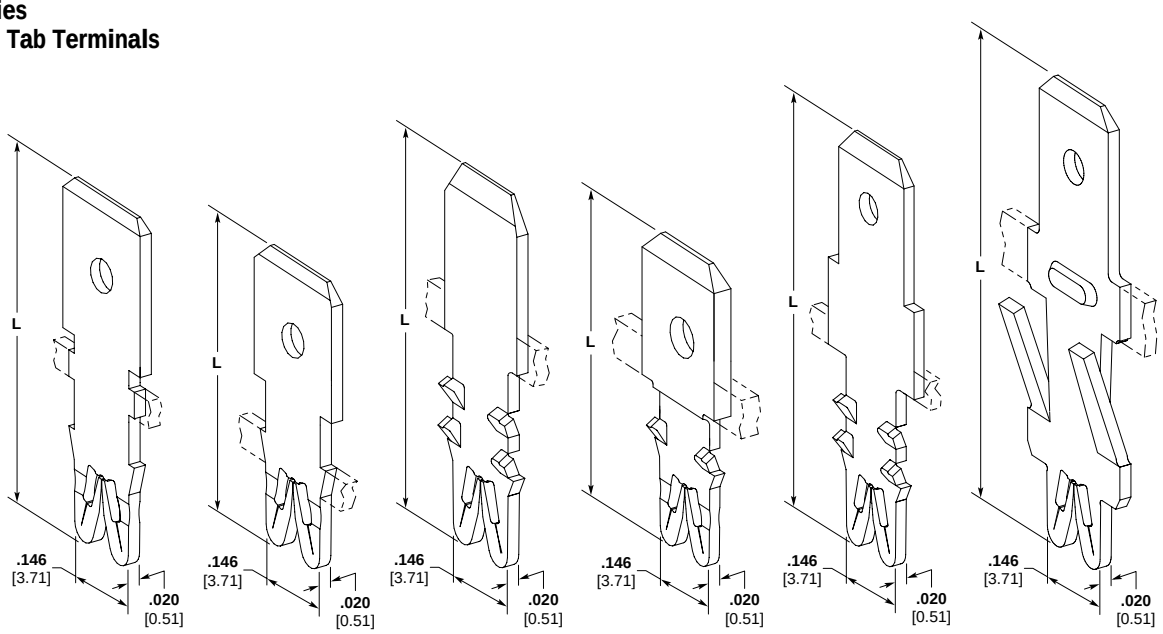
Technical Support
USA: 1-800-522-6752
Canada: 1-905-475-6222
Mexico: 01-800-733-8926

## SIAMEZE Terminals (Continued)

### 187 Series
### FASTON Tab Terminals

**Material**

Brass




| Type | Recommended Pocket[6] | Copper Magnet Wire Range AWG | Copper Magnet Wire Range mm | L Dim. | Tab Feature | Tab Size | Part Number Reeled | Part Number Loose |
|---|---|---|---|---|---|---|---|---|
| A Single Barb | 1601425 | 18-34 | 1.02-0.16 | **.605** 15.37 | Hole | **.187 x .020** 4.75 x 0.51 | 1601006-2[3] 2-1601006-2[1,3] | 4-1601006-2[3] |
| B Single Barb Short Pocket | 1601427 | 18-34 | 1.02-0.16 | **.505** 12.83 | Hole | **.187 x .020** 4.75 x 0.51 | 1601011-1 2-1601011-1[1] | 4-1601011-1 |
| | | | | **.590** 14.99 | — | **.187 x .020** 4.75 x 0.51 | 1601018-2[2,5] 2-1601018-2[1,2,5] | 4-1601018-2[2] |
| | | | | **.985** 25.02 | — | **.187 x .020** 4.75 x 0.51 | 1601033-2[2,5] 2-1601033-2[1,2,5] | 4-1601033-2[2] |
| C Multi-Barb | 1601425 | 18-34 | 1.02-0.16 | **.618** 15.70 | — | **.187 x .020** 4.75 x 0.51 | 1601021-2[2] 2-1601021-2[1,2] | 4-1601021-2[2] |
| | | | | **.655** 16.64 | Hole | **.187 x .020** 4.75 x 0.51 | 1601013-1 2-1601013-1[1] | 4-1601013-1 |
| | | | | **.791** 20.09 | — | **.187 x .020** 4.75 x 0.51 | 1601072-2[2] 2-1601072-2[1,2] | 4-1601072-2[2] |
| | | | | **.832** 21.14 | — | **.187 x .020** 4.75 x 0.51 | 1601068-2[2] 2-1601068-2[1,2] | 4-1601068-2[2] |
| | | | | **.655** 16.64 | Hole | **.187 x .032** 4.75 x 0.81 | 1601035-1 2-1601035-1[1] | 4-1601035-1 |
| | | | | | | | 1601035-2[3] 2-1601035-2[1,3] | 4-1601035-2[3] |
| | | | | **.745** 18.92 | Hole | **.187 x .032** 4.75 x 0.81 | 1601040-1 2-1601040-1[1] | 4-1601040-1 |
| | | 20-23** | 0.58-0.81 | **.655** 16.64 | Hole | **.187 x .020** 4.75 x 0.51 | 1601142-1 2-1601142-1[1] | 4-1601142-1 |
| D Multi-Barb Short Profile | 1601434 | | | **.492** 12.50 | Hole | **.187 x .032** 4.75 x 0.81 | 1601058-2[2,4] 2-1601058-2[1,2,4] | 4-1601058-2[2,4] |
| E Multi-Barb .187/.250 Profile | 1601425 | 18-34 | 1.02-0.16 | **.655** 16.64 | Hole | **.187 x .020** 4.75 x 0.51 | 1601020-1 2-1601020-1[1] | 4-1601020-1 |
| | | | | | | | 1601020-2[3] 2-1601020-2[1,3] | 4-1601020-2[3] |
| | | | | **.805** 20.45 | Hole | **.187 x .020** 4.75 x 0.51 | 1601049-2[3] 2-1601049-2[1,3] | 4-1601049-2[3] |
| F Latch | 1601423 | 18-34 | 1.02-0.16 | **.775** 19.68 | Hole | **.187 x .020** 4.75 x 0.51 | 1601004-1 2-1601004-1[1] | 4-1601004-1 |

[1] Reverse Reeled—Consult Tyco Electronics drawing for orientation.
[2] Finish is Pre-Plated Tin over Copper (Consult Tyco Electronics drawing for specifics).
[3] Finish is Pre-Plated Tin (Consult Tyco Electronics drawing for specifics).
[4] Extra Short Tab-Does not meet UL & NEMA length requirements.
[5] Carrier strip not in retention barb area as shown.
[6] Magnet wire 30 AWG [0.25 mm] and smaller also requires a wrap post per drawing 1601447.





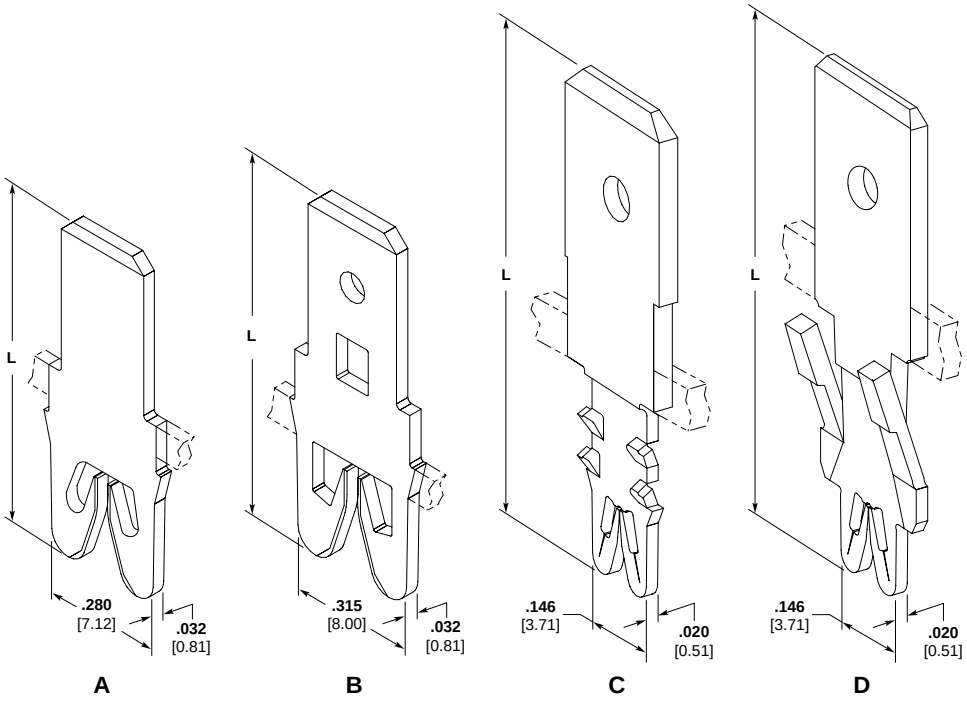
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Technical Support
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Canada: 1-905-475-6222
Mexico: 01-800-733-8926
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## SIAMEZE Terminals (Continued)

### 250 Series
### FASTON Tab Terminals

**Material**

Brass




| Type | Recommended Pocket[6] | Copper Magnet Wire Range AWG | Copper Magnet Wire Range mm | L Dim. | Tab Feature | Tab Size | Part Number Reeled | Part Number Loose |
|---|---|---|---|---|---|---|---|---|
| A Single Barb Medium Range | 1601438 | 12-23 | 2.03-0.56 | **.778** 19.76 | — | **.250 x .032** 6.35 x 0.81 | 1601139-2[3] 2-1601139-2[1,3] | 4-1601139-2[3] |
| B Single Barb Heavy Range | 1601435 | 12-20 | 2.03-0.8 | **.885** 22.48 | Hole | **.250 x .032** 6.35 x 0.81 | 1601115-1 2-1601115-1[1] | 4-1601115-1 |
| | | 16-17[5] | 1.27-1.15 | **.885** 22.48 | Hole | **.250 x .032** 6.35 x 0.81 | 1601159-1 2-1601159-1[1] | 4-1601159-1 |
| | | 14-15[5] | 1.60-1.40 | **.885** 22.48 | Hole | **250 x .032** 6.35 x 0.81 | 1601161-1 2-1601161-1[1] | 4-1601161-1 |
| C Multi-Barb | 1601425 | 27-36 | 0.36-0.13 | **.745** 18.92 | Hole | **.250 x .032** 6.35 x 0.81 | 1601118-2[3] 2-1601118-2[1,3] | 4-1601118-2[3] |
| | | 18-34 | 1.02-0.16 | **.745** 18.92 | Hole | **.250 x .032** 6.35 x 0.81 | 1601002-2[3] 2-1601002-2[1,3] | 4-1601002-2[3] |
| | | | | **.805** 20.45 | Hole | **.250 x .032** 6.35 x 0.81 | 1601028-2[3] 2-1601028-2[1,3] | 4-1601028-2[3] |
| | | | | | | | 1601028-1 2-1601028-1[1] | 4-1601028-1 |
| | | | | | Dimple | **.250 x .032** 6.35 x 0.81 | 1601061-2[3] 2-1601061-2[1,3] | 4-1601061-2[3] |
| | | | | **1.000** 25.4 | Hole | **.250 x .032** 6.35 x 0.81 | 1601044-1 2-1601044-1[1] | 4-1601044-1 |
| | | | | **1.281** 32.53 | Hole | **.250 x .032** 6.35 x 0.81 | 1601052-2[2,4] 2-1601052-2[1,2,4] | 4-1601052-2[2] |
| D Latch | 1601423 | 18-34 | 1.02-0.16 | **.850** 21.59 | Hole | **.250 x .032** 6.35 x 0.81 | 1601003-1 2-1601003-1[1] | 4-1601003-1[2] |

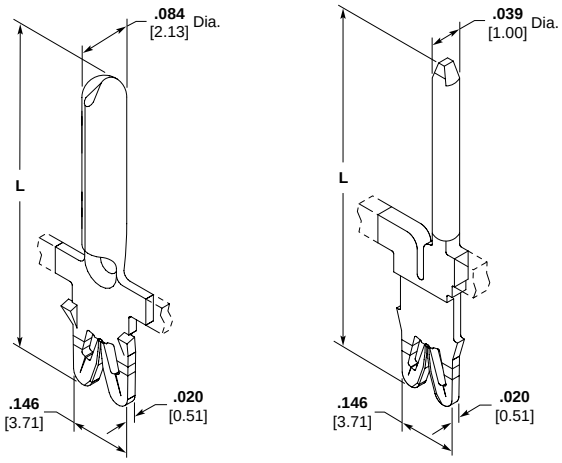
[1] Reverse Reeled—Consult Tyco Electronics drawing for orientation.
[2] Finish is Pre-Plated Tin over Copper (Consult Tyco Electronics drawing for specifics).
[3] Finish is Pre-Plated Tin (Consult Tyco Electronics drawing for specifics).
[4] Double Carrier Strip.
[5] Two magnet wires may be terminated in the same slot if diameters are equal.
[6] Magnet wire 30 AWG [0.25 mm] and smaller also requires a wrap post per drawing 1601447.



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## SIAMEZE Terminals (Continued)

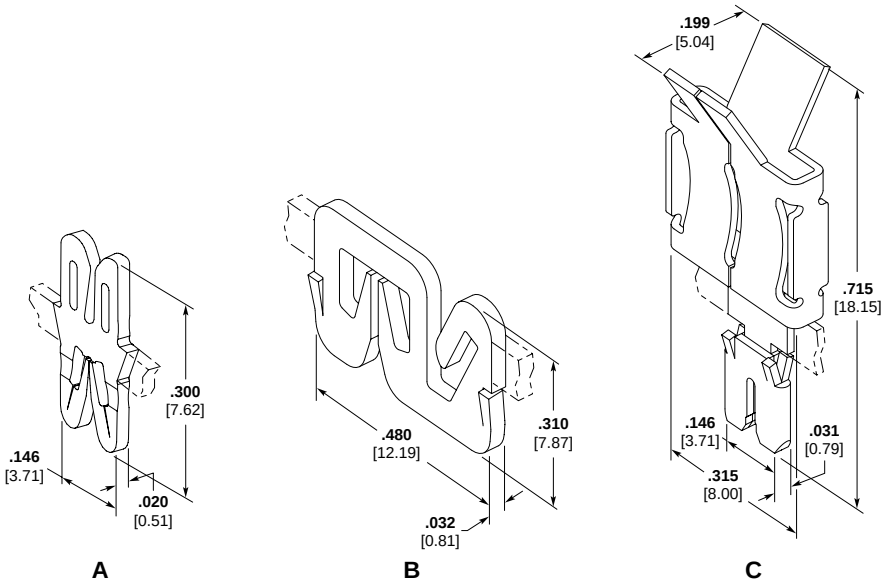
### Pin Terminals




| Type | Recommended Pocket[5] | Copper Magnet Wire Range AWG | Copper Magnet Wire Range mm² | L Dim. | Pin Dia. | Part Number Reeled | Part Number Loose |
|---|---|---|---|---|---|---|---|
| A Round Pin | 1601424 | 18-34 | 1.02-0.16 | **.718** 18.24 | **.084** 2.13 | 1601077-1 2-1601077-1[1] | 4-1601077-1 |
| B Pseudo Round Pin with Diode Slot | 1601432 | 27-36 | 0.36-0.13 | **.855** 21.71 | **.039** 1.00 | 1601130-2[2,3] 2-1601131-2[2,3,4] | — |

[1] Reverse Reeled—Consult Tyco Electronics drawing for orientation.
[2] Finish is Pre-Plated Tin over Copper (Consult Tyco Electronics drawing for specifics).
[3] Diameter is approximate as Pin is not perfectly round.
[4] Reverse Reeled Mirror Image—Consult Tyco Electronics drawing for orientation.
[5] Magnet wire 30 AWG [0.25 mm] and smaller also requires a wrap post per drawing 1601447.

### Receptacle Terminals




| Type | Recommended Pocket[3] | Copper Magnet Wire Range AWG | Copper Magnet Wire Range mm² | L Dim. | Mating Tab Size | Part Number Reeled | Part Number Loose |
|---|---|---|---|---|---|---|---|
| A Edge Contact In Line | 1601425 | 18-34 | 1.02-0.16 | **.300** 7.62 | **.020** 0.51 | 1601075-2[2] 2-1601075-2[1,2] | 4-1601075-2[2] |
| B Edge Contact Off Line | 1601421 | 15-23 | 1.47-0.56 | **.310** 7.87 | **.032** 0.81 | 1601137-2[2] 2-1601137-2[1,2] | 4-1601137-2[2] |
| C Blind Mate Full Surround | 1601470 | 21.5 | 0.71 | **.715** 18.15 | **.250 x .020** 6.35 x 0.51 | 1601149-2[2] 2-1601149-2[1,2] | 4-1601149-2[2] |

[1] Reverse Reeled—Consult Tyco Electronics drawing for orientation.
[2] Finish is Pre-Plated Tin over Copper (Consult Tyco Electronics drawing for specifics).
[3] Magnet wire 30 AWG [0.25 mm] and smaller also requires a wrap post per drawing 1601447.

## MAG-MATE and SIAMEZE Application Tooling

### MAG-MATE Product Terminator (MPT)

**Product Facts**

- **Single, dual and triple insertion**
- **Two-reel, two-product capability, with alternating feed capability**
- **Available as horizontal bench, vertical bench or independent module**
- **Module easily integrates into production lines using simple handshake signals**
- **Fine adjustment mechanism for insertion depth (.001 increments)**
- **Tube-type insertion tooling for standard MAG-MATE terminals**
- **Microprocessor controlled operation**
- **Holding fixture for bobbin can be designed and built by Tyco Electronics or the customer**




For quick, easy and reliable termination of magnet wire without pre-stripping the insulation or soldering, Tyco Electronics offers the MAG-MATE product family and the MPT-5 (MAG-MATE Product Terminator ) air-operated insertion machine with micro-processor control. The MPT-5 machine inserts a MAG-MATE terminal into a customer-designed cavity in the coil bobbin or similar magnet-wire housing, terminating the wire and providing an I/O terminal or other connection. The MAG-MATE system can create a termination that is very close to the coil.

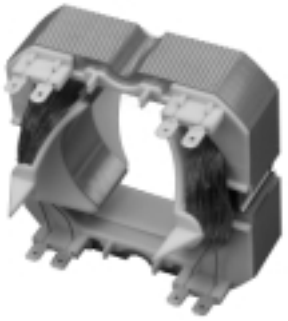
Dual reel capability of the MPT-5 allows insertion of two different MAG-MATE terminals, with the capability to alternate between inserting one and two terminals at a time. Two terminations per second are possible with dual insertion. Loaded with two different terminals, a single MPT-5 can cover a range of 8 AWGs.

A fifth generation machine, the MPT-5 is lighter and quieter than previous versions. The MPT-5 is available as a horizontal or vertical bench machine or as a discrete module for integration into automated lines. The discrete module also can be used to make a custom horizontal or vertical bench machine. A fixture to hold the coil assembly, which is required for bench operation, can be designed and built by Tyco Electronics or the customer.

The MPT-5 uses three or four air cylinders to feed terminals from one or both reels, cut terminals from the carrier strip, and insert terminals into the cavities. The display shows the operating conditions of the machine such as the batch count, total count, error messages, and ready state. The display also lets the operator step through the machine sequence or manually cycles the machine for set up or easy diagnosis of problems.

### Solderless MAG-MATE Terminations:

- No need to pre-strip the magnet wire
- No wire embrittlements due to solder
- No soldering fumes
- Compact, clean termination
- Ideal for automation
- Fast magnet wire connections: Up to two per second with dual insertion





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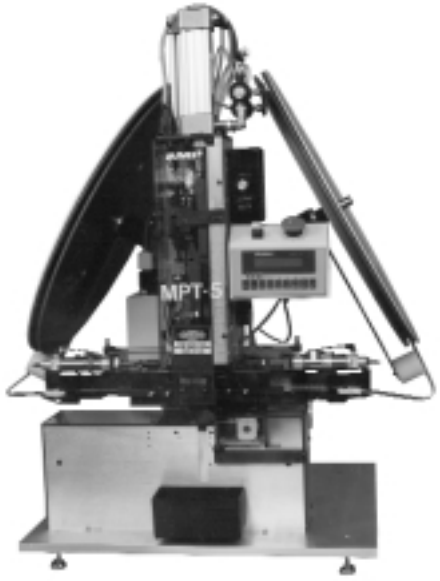
Dimensions are shown for reference purposes only. Specifications subject to change.

Technical Support
USA: 1-800-522-6752
Canada: 1-905-475-6222
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## MAG-MATE and SIAMEZE Application Tooling (Continued)

### MPT-5S/L Machine for Mag Wire Coil Termination utilizing SIAMEZE and Lead Lok terminals




**Product Facts**

- **Single, dual and triple insertion**
- **Two-reel, two-product capability, with alternating feed capability**
- **Available as horizontal bench, vertical bench or independent module**
- **Module easily integrates into production lines using simple handshake signals**
- **Fine adjustment mechanism for insertion depth (.001 increments)**
- **Tube-type insertion tooling for standard SIAMEZE & Lead Lok terminals**
- **Microprocessor controlled operation**
- **Holding fixture for bobbin can be designed and built by Tyco Electronics or the customer**

For quick, easy and reliable termination of magnet wire without pre-stripping the insulation or soldering, Tyco Electronics offers the SIAMEZE terminals and Lead Lok product family and the MPT-5S/L (MAG-MATE Product Terminator) air-operated insertion machine with micro-processor control. The MPT-5S/L machine inserts a SIAMEZE terminal into a customer-designed cavity in the coil bobbin or similar magnet-wire housing, terminating the wire and providing an I/O terminal or other connection. The MPT-5S/L can insert both the SIAMEZE terminal for magnet wire termination and the Lead Lok terminal to assure your lead wire connection.

Dual reel capability of the MPT-5S/L allows insertion of two different SIAMEZE terminals, with the capability to alternate between inserting one and two terminals at a time. Two terminations per second are possible with dual insertion.

A fifth generation machine, the MPT-5s/L is lighter and quieter than previous versions. The MPT-5S/L is available as a horizontal or vertical bench machine or as a discrete module for integration into automated lines. The discrete module also can be used to make a custom horizontal or vertical bench machine. A fixture to hold the coil assembly, which is required for bench operation, can be designed and built by Tyco Electronics or the customer.
The MPT-5S/L uses three or four air cylinders to feed terminals from one or both reels, cut terminals from the carrier strip, and insert terminals into the cavities. The display shows the operating conditions of the machine such as the batch count, total count, error messages, and ready state. The display also lets the operator step through the machine sequence or manually cycles the machine for set up or easy diagnosis of problems.

Solderless SIAMEZE terminations:

- No need to pre-strip the magnet wire
- No wire embrittlements due to solder
- No soldering fumes
- Compact, clean termination
- Ideal for automation
- Fast magnet and lead wire connections: Up to two per second with dual insertion





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## MAG-MATE and SIAMEZE Application Tooling (Continued)

### Application Tooling for MAG-MATE Terminals

#### The Module




The MPT-5 insertion module is the cornerstone of Tyco Electronics magnet wire application tooling. A fifth generation machine, the MPT-5 module is used in conjunction with our bench machine, LPT-522, Rotary Index Table, and can also be order separately when using your equipment manufacture of choice. Electric, pneumatic and de-reeling controls are available allowing for easy integration in your production line. Experienced Tyco Electronics personnel will work with the customer and the equipment manufacturer to adapt the module to their automated assembly system.

**Specifications**

**Electrical**—120 VAC, 60 Hz, 5 A, 1 Ø, or 240 VAC, 50 Hz, 2 A, 1 Ø

**Air**—80 psi [5.52 bar], 3 scfm [0.00142 $m^3/s$]

**Weight**—Approx. 60 lb [27.2 kg]

**Width**—8 [204]

**Depth**—7 [178]

**Height**—30 [762]

#### Hand Tools

**Part Number 274250-2**
**Poke-In Terminals**

**Part Number 274260-1**
**.187 [4.75] Tab Terminals**

**Part Number 274282-1**
**.250 [6.35] Tab Terminals**



This insertion tool is capable of applying terminals furnished as loose piece parts. Use for prototype, production start-up and moderate volume production runs. Terminals can be inserted at rates up to 300 per hour.



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## MAG-MATE and SIAMEZE Application Tooling (Continued)

### Application Tooling for MAG-MATE Terminals

### Rotary Index Table

#### Product Facts

- **High-volume rates, up to 600 assemblies per hour**
- **Handles Standard and Mini MAG-MATE terminals through interchangeable insertion modules**
- **Load-while-run feature increases productivity**
- **Fast, simple machine setup and changeover**
- **Versions to handle in-line, radial, and linear/angularly opposed cavities**
- **Easy programming through hand-held keypad/display**
- **Up to 30 insertion sequences stored in EEPROM memory**
- **Options include**
  - **Continuity test station**
  - **Bend station**
  - **Dual MAG-MATE modules**
  - **X- or Y-axis travel**
  - **Auto-change single/dual insertion modules**

The Rotary Index Table is a semiautomatic machine that automatically positions fixtured coils, bobbins, and field assemblies for insertion of MAG-MATE terminals. The table is used with MPT-5 insertion modules, which mount vertically above the table and insert terminals fed from a reel. Modules which are not included as part of the base machine, are available for the entire MAG-MATE line, including Standard and Mini MAG-MATE, SIAMEZE and Lead Lok products.

In operation, the operator places the coil/bobbin/field assembly on the worktable and cycles the machine. The table rotates 90˚ or 180˚ to position the assembly under the insertion module for processing. As each terminal is inserted, the machine automatically indexes to the next insertion position. While this assembly is being processed, the operator can remove the assembly processed during the previous cycle and load a new coil/bobbin/field assembly. This load-while-run feature helps maximize productivity. Assembly rates of up to 600 coils per hour (at six terminations per coil) are possible with dual insertion.

A hand-held operator's terminal contains a keypad and easy-to-read LCD display to allow quick, easy programming of machine functions, including insertion sequences. Up to 30 programs (insertion sequences) can be stored in the EEPROM internal memory.

The machine is available with any combination of one or two MPT-5 insertion modules that are fixed or indexing, with or without a rotating fixture for axial insertion. One version allows indexing only in the Y axis for processing in-line cavities. The other includes a rotary fixture that allows the coil/bobbin/field assembly to be rotated to process cavities radially or linear/angularly opposed.

Besides its fast production rates, the rotary




table is also designed to enhance productivity through reliability and easy setup. The number of adjustments required for normal operation has been minimized, while the procedure for product changeovers takes only a few minutes. The result is a machine with little downtime.

Options include a continuity test station, a bend station that bends terminals up to 90˚ after insertion, dual modules that insert two identical or different terminals simultaneously, and X-axis travel.

Cost savings and productivity are enhanced with Tyco Electronics Field Engineering Service, which provides complete setup and installation assistance, operating and maintenance training, and continuing rapid response through the Toll-Free Technical Support Center at 1-800-522-6752.





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## MAG-MATE and SIAMEZE Application Tooling (Continued)

### LPT-522 Linear Product Terminator

#### Product Facts

- **Intermediate to high volume rates, up to 600 assemblies per hour**
- **Flexible platform accommodates secondary application modules**
- **Version to handle in-line, radial, and linear/angularly opposed cavities**
- **Programmable linear slide and rotary table**
- **Easy programming through keypad display**
- **Palletized fixture system for greater efficiency and production rates**
- **Microprocessor controlled**
- **Fine insertion depth adjustment (.001 increments)**
- **Two-reel, two-product capability with or without alternating feed**
- **Single, dual separate, and on-the-fly dual common insertion capability**

#### Specifications

**Air** — 10 scfm@80 psi minimum
**Electrical** — 110 VAC, 5 AMP
**Footprint** — 60"x 52"

The Linear Product Terminator-522 was designed for intermediate to high volume applications. It is also a very flexible platform since it can accommodate two secondary application modules. These can include, but are not limited to, special wrap-off post trim, continuity testing with defective coil identification, and tab bending.

The LPT-522 features our MPT-5 insertion module as well as a programmable linear slide and rotary table system. The flexible system can process coils that have cavity configurations in a linear pattern, axial pattern, or combination of both.

The LPT-522 machine is of a serial process design, which allows for a unique coil holding fixture. This fixture can be palletized to increase your efficiency and production rates. The palletized system allows the operator to load/unload a pallet of coils while a second pallet is processing on this machine, increasing the machine up time and decreasing non-productive labor.





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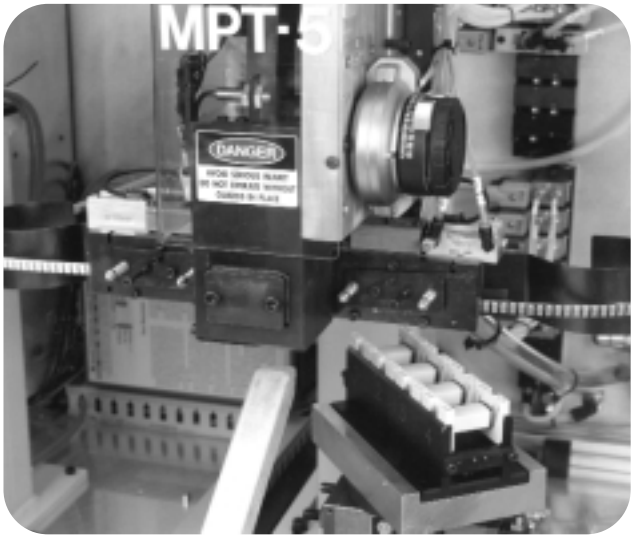
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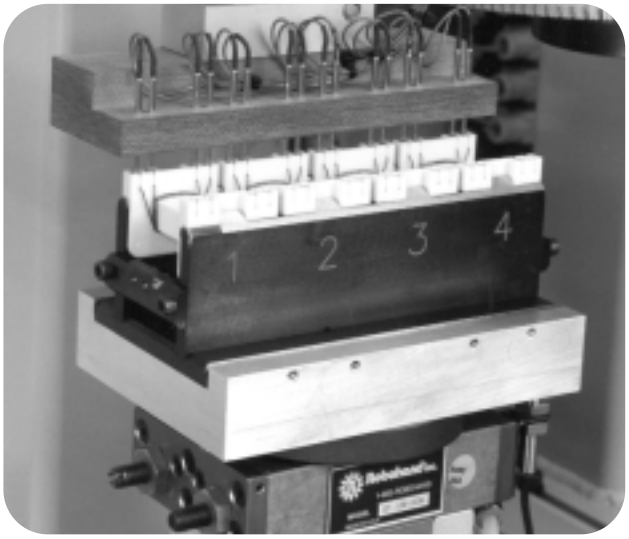
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## MAG-MATE and SIAMEZE Application Tooling (Continued)

### LPT-522 Linear Product Terminator (Continued)




Rotary Index Insertion Process




Optional Continuity Test Station



### Magnet Wire Termination Machines—Cost Comparison

| Machine Attribute | Horizontal Bench Machine (HBM) | Vertical Bench Machine (VBM) | LPT-522 Insertion Machine | RIT Insertion Machine |
|---|---|---|---|---|
| Applications | ● Single row bobbin<br>● Single terminal feed<br>● Bottom trim | ● Single/Dual/Axial bobbin<br>● Single or dual feed<br>● Bottom or top trim | ● Same as VBM plus:<br>-Multiple bobbin capacity<br>✍Auxiliary stations<br>● Serial Processing | ● Same as LPT, plus:<br>-Up to 3 different terminals<br>● Parallel processing |
| Machine Cost | ■ | ■■ | ■■■ | ■■■■ |
| Fixture Cost | ■■ | ■■■ | ■ | ■■■■ |
| Complexity | ■ | ■■ | ■■■■ | ■■■■ |
| Production Rate | ■ | ■ | ■■■ | ■■■■ |
| Cost / Insertion | ■■■ | ■■■■ | ■■ | ■ |

[■ = lowest level] [■■ = mid level] [■■■ = high level] [■■■■ = highest level]

*Note: All machine options work in conjunction with our MPT-5 module. The MPT-5 module can incorporate an on-the-fly feature, which allows for selection of dual common insertions. The MPT-5 module can also be incorporated in your automated line using your integrator of choice. Please call for details.*



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## AMPLIVAR Splices

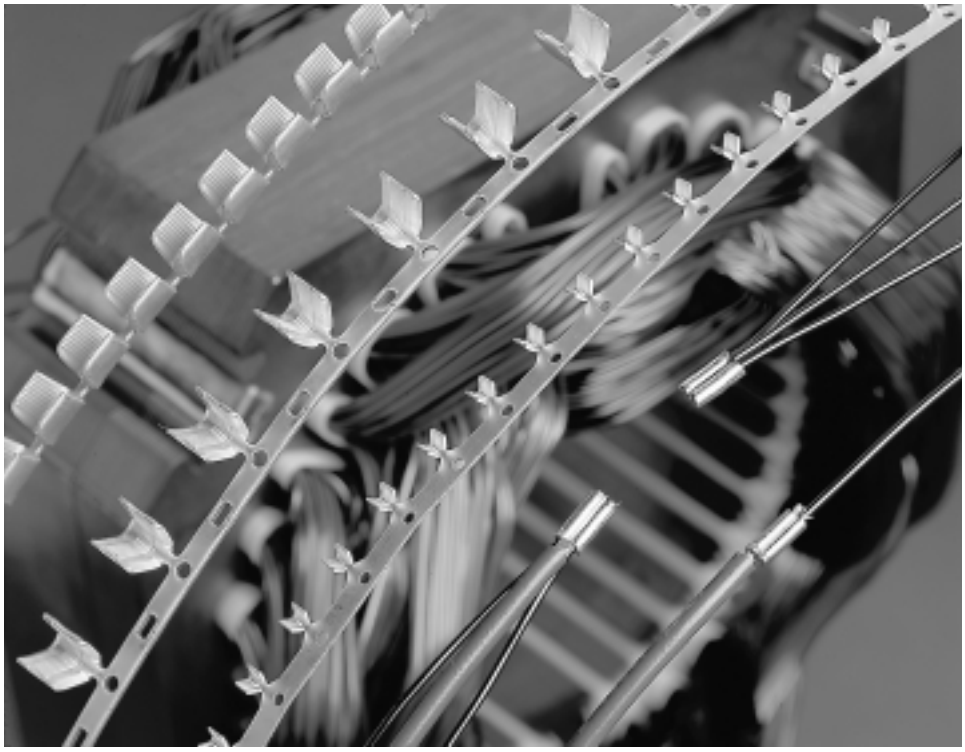
### Product Facts

- **Compression crimp eliminates cold solder points, weld burns and wire embrittlement usually connected with thermal-type terminations**
- **Excellent tensile strength—vibration resistant**
- **Provides a superior electrical connection that is free of many contaminants such as stripper residue and solder flux**
- **Precision formed, strip-fed splices terminated in AMP automatic machines for high production rates per hour**
- **High termination rates, low wire consumption and the elimination of rejects caused by solder flux or heat damage results in the lowest applied costs**
- **Precisely controlled crimp termination helps eliminate human error for maximum reliability**
- **Splice up to 3 magnet wires together with stranded lead in one barrel**

### Applications

- **Motor windings and connections**
- **Coil connections**
- **Transformer windings and connections**
- **Solid wire connections**
- **Lighting ballasts**
- **Power supplies**
- **Starters and alternators**





Tyco Electronics offers a full selection of AMP AMPLIVAR splices that are specifically designed to terminate magnet wire to itself or in combination with standard solid or stranded lead wire.

AMPLIVAR splices have machined, sharp edged serrations inside the crimp barrels. These serrations, made by a special production process, pierce the insulating layer of magnet wires in a manner that provides a large contact area.

In a one-step operation the magnet wire is automatically multiple ring-stripped of its insulation as it is forced into the serrations during the precisely controlled crimp.

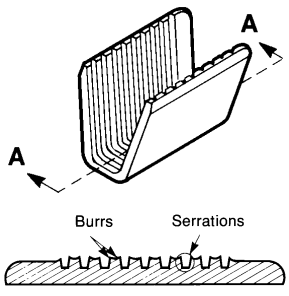
The resulting termination produces a high tensile strength, air-sealed connection that is as resistant to corrosion as the insulated conductor.

As many as three magnet wires can be terminated simultaneously in one splice. In addition, copper or aluminum magnet wire, or a combination of both, can be terminated.

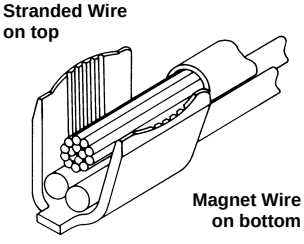
When required, copper or aluminum magnet wire can be combined with standard, pre-stripped solid or stranded lead wires.

Depending on your specific application, AMPLIVAR splices are available in 5, 7 and 9 serration versions for terminations in the 100 to 22,000 CMA range as well as miniature and subminiature designs for terminations in the 100 to 1850 CMA range.

The crimping of AMPLIVAR splices is done by semi-automatic crimping machines for high output per hour production rates.




**Section AA**






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## AMPLIVAR Splices (Continued)

### Technical Features

**Applicable Types of Wire** — Cu, Al (Solid) together or in combination with stranded lead wire

**Wire Size Range** — from 300 to 13,000 CMA (0.1 $mm^2$ to 6.6 $mm^2$)

**Terminal Base Material** — Brass, phosphor bronze

**Surface Finish** — plain and tin plated except where noted

**Temperature Range** — –65°C to +150°C

**Rated Current** — according connected wire size

**Rated Voltage** — according terminated winding

### Test Results

The AMPLIVAR products have been subjected to the following tests without significant millivolt losses.

**Temperature Cycling** — 25 cycles with each cycle consisting of 30 minutes at +125°C followed by 30 minutes at –65°C

**Heat Age** — 96 hours at +150°C

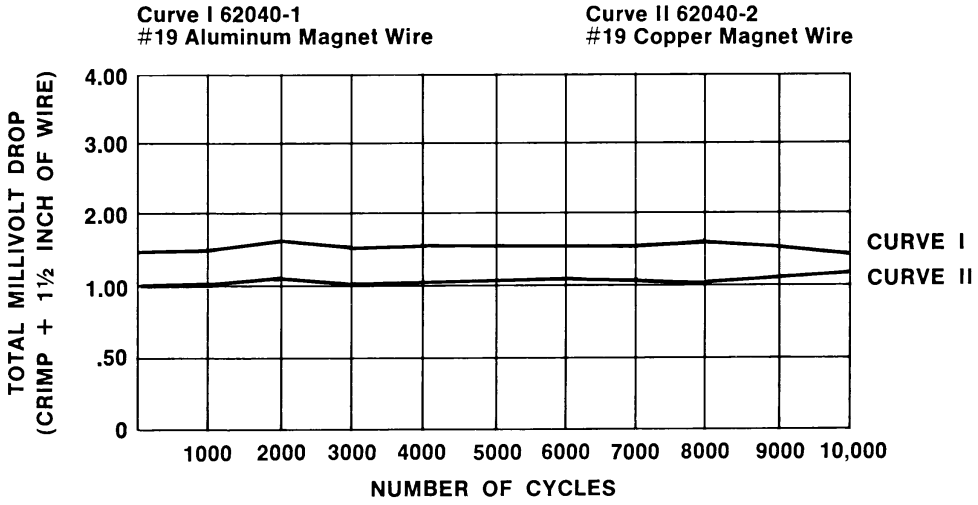
**Thermal Shock** — 25 cycles with each cycle consisting of 30 minutes at +150°C followed by 30 minutes at –65°C

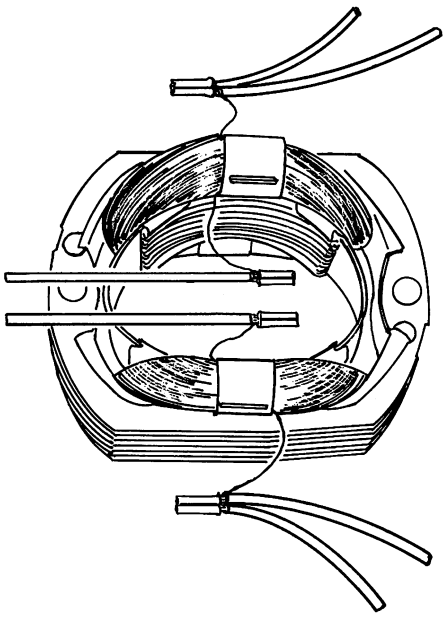
**Salt Spray** — 96 hours at +35°C with a 5% salt solution spray

**Humidity** — 96 hours at 90–95% relative humidity and +40°C

**Current Cycling** — 10,000 cycles with each consisting of 3 minutes on and 3 minutes off at a current (25 A) which establishes a wire temperature

**TYPICAL CURRENT CYCLING TEST RESULTS**







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## AMPLIVAR Splices (Continued)

### General Application Guidelines

To assist you in obtaining the optimum AMPLIVAR termination, the following guidelines are recommended:

1. All magnet wires must be placed in the bottom of the wire barrel before crimping. If lead wire is to be crimped in the same termination, it should be placed on top of the magnet wires.
2. Wire barrels are designed to accept a maximum of three insulated magnet wires plus stranded lead wires.
3. The ratio of magnet wire diameters crimped in any wire barrel should not exceed 2:1. This ratio is approximately a range from the largest to the smallest magnet wire of six sizes.
4. The sum of the circular mil area (CMA) of the magnet wires and any lead wires should not exceed the capacity of the splice.
5. The sum of the diameters of the individual magnet wires plus twice the terminal stock thickness must be equal to or less than the crimp width.
6. Magnet wire of 26 AWG [0.40 mm] or smaller should be used with 7-serration splices having “shallow serrations,” and magnet wire of 28 AWG [0.32 mm] or smaller should be used with 9-serration splices having “shallow serrations” (part numbers identified with asterisk [*] are in the tabular data on the following technical pages).
7. Magnet wire of 20 AWG [0.81 mm] or larger having an insulation thickness heavier than “single film coated,” should not be used with splices having “shallow serrations” (those part numbers marked with an asterisk [*] in the tabular data on the following technical pages).
8. When aluminum magnet wire is used, splices and terminals must be tin plated.
9. Consult Tyco Electronics for splice and terminal selection and recommendations for all non-standard applications.

### Technical Documents

**Application Specifications** describe requirements for using the product in its intended application and or crimping information. They are intended for the Packaging and Design Engineer and the Machine Setup Person.

| | | | |
|---|---|---|---|
| 114-2002 | AMPLIVAR 7-Serration Pigtail Splices | 114-2006 | AMPLIVAR Subminiature Pigtail Splices |
| 114-2003 | AMPLIVAR 9-Serration Pigtail Splices | 114-2009 | AMPLIVAR 5-Serration Thru Splices |
| 114-2005 | AMPLIVAR Subminiature Thru Splices | 114-2016 | AMPLIVAR Miniature Pigtail Splices |

### Suggested Splice Selection Procedure

Use the following guide to help you to determine the proper splice for your application:

1. Use 9-serration splices, tin plated when terminating aluminum magnet wire or combinations with aluminum magnet wire.
2. Use 9-serration splices for hermetic and severe environment applications.
3. Use splices identified with an asterisk [*] when terminating 7-serration 26 AWG [0.40 mm] or smaller wires and 9-serration 28 AWG [0.32 mm] or smaller wires.
4. Calculate the total CMA of the magnet wires plus any lead wires to be terminated. Always use the coated magnet wire for CMA (see pages 94–96).
5. Calculate the total magnet wire diameters (see pages 94 and 95).
6. Select a splice for trial calculations. It should have the proper CMA range. Plating finish should be considered at this time.
7. Calculate the sum of the magnet wire diameters plus two splice stock thicknesses. If this total is less than the crimp width of the splice selected, it may be used. If the total is greater than the crimp width, a splice with a greater crimp width must be selected. Consult Tyco Electronics for special wide tooling recommendations.

**Example:**

■ Selection of a Pigtail Splice to terminate the following wires:

One 28 AWG [0.32 mm] copper magnet wire.
One 22 AWG [0.64 mm] aluminum magnet wire.
One 18 AWG [0.8–0.9 mm$^2$] 19-strand copper lead wire.

■ Calculate the total CMA (Procedure 4):

| | |
|---|---|
| 28 AWG [0.32 mm] coated magnet wire | = 185 CMA |
| 22 AWG [0.64 mm] coated magnet wire | = 708 CMA |
| 18 AWG [0.8–0.9 mm$^2$] stranded lead wire | = 1608 CMA |
| **Total** | **= 2501 CMA** |

■ Calculate the sum of the magnet wire diameters (Procedure 5):

| | |
|---|---|
| 28 AWG [0.32 mm] coated magnet wire | = .0136 [0.35] |
| 22 AWG [0.64 mm] coated magnet wire | = .0266 [0.68] |
| **Total** | **= .0402 [1.03]** |

■ Select a terminal for trial calculations. Splice No. 62305-2, page 49 (Procedure 6):

| | |
|---|---|
| CMA range | = 600–3000 |
| Stock thickness | = .016 [0.41] |
| Crimp width | = .110 [2.79] |

9-serration, tin plated for aluminum magnet wire (Procedure 1).

Splice identified with asterisk [*] for 28 AWG [0.32 mm] (Procedure 3).

■ Calculate the sum of the magnet wire diameters plus two splice stock thicknesses (Procedure 7):

.0402 + (.016 x 2) = .0722
[1.02 + (0.41 x 2) = 1.84

.0722 [1.84] is less than the splice crimp width of .110 [2.79]; therefore, Part No. 62305-2 may be used.



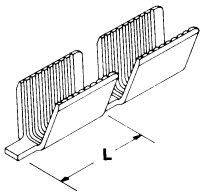
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## AMPLIVAR Splices (Continued)

### 9 Serrations — Pigtail Type

**Product Facts**
(Plus All 7 Serration Facts)

- **Splice length is increased on larger CMA splices for improved performance**
- **Serration depths are varied within the splice to give optimum electrical/ mechanical performance on all wire sizes**
- **Serration sidewall angles are varied to allow better wire stripping and serration fill**
- **Flat bottom of splice helps keep magnet wires on bottom as required during crimping**
- **Magnet wires 28 AWG [0.32 mm] and larger may be terminated without requiring shallow serrations**
- **Additional serrations enhance stability of crimp**



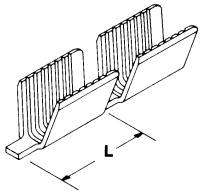

| AWG/ mm² | Wire Range Solid Dia. | Wire Range CMA | Stock Thickness | Crimp Width | Dim. L | Material | Part Number |
|---|---|---|---|---|---|---|---|
| 24-18.5<br>0.26-0.80 | **.020-.039**<br>0.55-1.00 | 400-1500 | **.016**<br>0.41 | **.080**<br>2.03 | **.225**<br>5.72 | Tin Plated Brass | 62303-2* |
| 22-15.5<br>0.38-1.54 | **.028-.055**<br>0.70-1.40 | 600-3000 | **.020**<br>0.51 | **.110**<br>2.79 | **.225**<br>5.72 | Tin Plated Brass | 62304-2 |
| 22-15.5<br>0.38-1.54 | **.028-.055**<br>0.70-1.40 | 600-3000 | **.016**<br>0.41 | **.110**<br>2.79 | **.225**<br>5.72 | Tin Plated Brass | 62305-2* |
| 18.5-13.5<br>0.80-2.54 | **.039-.071**<br>1.00-1.80 | 1500-5000 | **.020**<br>0.51 | **.110**<br>2.79 | **.225**<br>5.72 | Tin Plated Brass | 62306-2 |
| 18.5-13.5<br>0.80-2.54 | **.039-.071**<br>1.00-1.80 | 1500-5000 | **.016**<br>0.41 | **.110**<br>2.79 | **.225**<br>5.72 | Tin Plated Brass | 62307-2* |
| 15.5-12<br>1.54-3.46 | **.055-.083**<br>1.40-2.10 | 3000-7000 | **.020**<br>0.51 | **.140**<br>3.56 | **.265**<br>6.73 | Tin Plated Brass | 62308-2 |
| 13.5-10<br>2.54-4.90 | **.071-.098**<br>1.80-2.50 | 5000-10,000 | **.025**<br>0.64 | **.180**<br>4.57 | **.265**<br>6.73 | Tin Plated Brass | 62309-2 |
| 12-9<br>3.46-6.38 | **.083-.112**<br>2.10-2.85 | 7000-13,000 | **.025**<br>0.64 | **.180**<br>4.57 | **.265**<br>6.73 | Tin Plated Brass | 62310-2 |
| 10-6.5<br>4.90-9.45 | **.098-.137**<br>2.50-3.47 | 10,000-22,000 | **.030**<br>0.76 | **.220**<br>5.59 | **.340**<br>8.64 | Tin Plated Brass | 62311-2[1] |

*These splices are recommended for applications using wire size 28 AWG [0.32 mm] or smaller.
[1] Special high force application equipment required.

### 7 Serrations — Pigtail Type

**Product Facts**

- **Taper on both crimper and anvil improves flex life of termination**
- **Longer "flat" on tooling improves electrical performance (.125 vs. .080 [3.18 vs. 2.03])**
- **Radius on wire entry end of splice helps prevent nicking wires and improves mechanical performance**
- **Serrations are offset to sheared end to place additional serrations in "electrical" portion of crimped splice**
- **Splice CMA ranges are overlapped so that two splices are available for any given CMA**




| AWG/ mm² | Wire Range Solid Dia. | Wire Range CMA | Stock Thickness | Crimp Width | Dim. L | Material | Part Number |
|---|---|---|---|---|---|---|---|
| 22-15.5<br>0.38-1.54 | **.028-.055**<br>0.70-1.40 | 600-3000 | **.020**<br>0.51 | **.110**<br>2.79 | **.225**<br>5.72 | Brass | 62000-1 |
| 22-15.5<br>0.38-1.54 | **.028-.055**<br>0.70-1.40 | 600-3000 | **.020**<br>0.51 | **.110**<br>2.79 | **.225**<br>5.72 | Brass | 62157-1* |
| 22-15.5<br>0.38-1.54 | **.028-.055**<br>0.70-1.40 | 600-3000 | **.020**<br>0.51 | **.110**<br>2.79 | **.225**<br>5.72 | Tin Plated Brass | 62000-2 |
| 22-15.5<br>0.38-1.54 | **.028-.055**<br>0.70-1.40 | 600-3000 | **.020**<br>0.51 | **.110**<br>2.79 | **.225**<br>5.72 | Tin Plated Brass | 62157-2* |
| 22-15.5<br>0.38-1.54 | **.028-.055**<br>0.70-1.40 | 600-3000 | **.020**<br>0.51 | **.110**<br>2.79 | **.225**<br>5.72 | Tin Plated Brass | 62200-2[1] |
| 18.5-13.5<br>0.80-2.54 | **.039-.071**<br>1.00-1.80 | 1500-5000 | **.020**<br>0.51 | **.110**<br>2.79 | **.225**<br>5.72 | Brass | 62040-2 |
| 18.5-13.5<br>0.80-2.54 | **.039-.071**<br>1.00-1.80 | 1500-5000 | **.020**<br>0.51 | **.110**<br>2.79 | **.225**<br>5.72 | Tin Plated Brass | 62040-1 |
| 18.5-13.5<br>0.80-2.54 | **.039-.071**<br>1.00-1.80 | 1500-5000 | **.020**<br>0.51 | **.110**<br>2.79 | **.225**<br>5.72 | Phosphor Bronze | 964156-1 |
| 15.5-12<br>1.54-3.46 | **.055-.083**<br>1.40-2.10 | 3000-7000 | **.020**<br>0.51 | **.140**<br>3.56 | **.225**<br>5.72 | Brass | 62001-1 |
| 15.5-12<br>1.54-3.46 | **.055-.083**<br>1.40-2.10 | 3000-7000 | **.020**<br>0.51 | **.140**<br>3.56 | **.225**<br>5.72 | Tin Plated Brass | 62001-2 |
| 15.5-12<br>1.54-3.46 | **.055-.083**<br>1.40-2.10 | 3000-7000 | **.020**<br>0.51 | **.140**<br>3.56 | **.225**<br>5.72 | Tin Plated Brass | 62201-2[1] |
| 12-10<br>2.10-6.0 | **.085-.110**<br>2.10-2.85 | 7000-12,000 | **.025**<br>0.64 | **.250**<br>6.35 | **.225**<br>5.72 | Tin Plated Brass | 62295-1 |
| 12-10<br>2.10-6.0 | **.085-.110**<br>2.10-2.85 | 7000-12,000 | **.025**<br>0.64 | **.250**<br>6.35 | **.225**<br>5.72 | Brass | 62295-2 |
| 12-9<br>2.10-6.38 | **.085-.115**<br>2.10-3.47 | 7000-13,000 | **.025**<br>0.64 | **.180**<br>4.57 | **.225**<br>5.72 | Tin Plated Brass | 62002-2 |

*These splices are recommended for applications using wire size 26 AWG [0.40 mm] or smaller.
[1] Flat bottom.





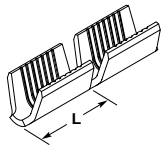
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Technical Support
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Mexico: 01-800-733-8926
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## AMPLIVAR Splices (Continued)

### 7 Serrations — Thru Type

#### Product Facts

- **Crimp bellmouth provides retention in circular cavity slot in bobbin**




| AWG/ mm² | Wire Range Solid Dia. | Wire Range CMA | Stock Thickness | Crimp Width | Dim. L | Material | Part Number |
|---|---|---|---|---|---|---|---|
| 22-15.5<br>0.38-1.54 | **.028-.055**<br>0.70-1.40 | 600-3000 | **.020**<br>0.51 | **.110**<br>2.79 | **.225**<br>5.72 | Tin Plated Brass | 1217384-1* |

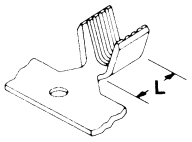
*These splices are recommended for applications using wire size 26 AWG [0.40 mm] or smaller.

### 5 Serrations — Thru Type

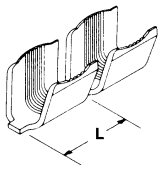
#### Product Facts

- **Wide range of thru splices**
- **Serrations centered in splice to achieve optimum electrical and mechanical performance in a thru splice**
- **CMA range accepts a wide variety of wire sizes and combinations**

A




B




| Type | AWG/ mm² | Wire Range Solid Dia. | Wire Range CMA | Stock Thickness | Crimp Width | Dim. L | Material | Part Number |
|---|---|---|---|---|---|---|---|---|
| | 17-12.5<br>1.00-2.80 | **.045-.075**<br>1.15-1.85 | 2000-5400 | **.020**<br>0.51 | **.110**<br>5.08 | **.235**<br>5.97 | Brass | 63564-1 |
| A | 10-8<br>5.00-8.00 | **.100-.125**<br>2.55-3.20 | 10,000-16,000 | **.032**<br>0.80 | **.180**<br>4.57 | **.267**<br>6.78 | Tin Plated Brass | 63561-1 |
| | 10-7.5<br>5.00-11.50 | **.100-.150**<br>2.60-3.80 | 10,400-22,900 | **.030**<br>0.76 | **.300**<br>7.62 | **.310**<br>7.87 | Tin Plated Brass | 63562-1 |
| | 22-15.5<br>0.38-1.54 | **.028-.055**<br>0.70-1.40 | 600-3000 | **.020**<br>0.51 | **.110**<br>2.79 | **.225**<br>5.72 | Brass | 42076 |
| | 22-15.5<br>0.38-1.54 | **.028-.055**<br>0.70-1.40 | 600-3000 | **.020**<br>0.51 | **.110**<br>2.79 | **.225**<br>5.72 | Brass | 42192-1* |
| | 22-15.5<br>0.38-1.54 | **.028-.055**<br>0.70-1.40 | 600-3000 | **.020**<br>0.51 | **.110**<br>2.79 | **.225**<br>5.72 | Tin Plated Brass | 42192-2* |
| | 22-15.5<br>0.38-1.54 | **.028-.055**<br>0.70-1.40 | 600-3000 | **.020**<br>0.51 | **.110**<br>2.79 | **.225**<br>5.72 | Brass | 42778-1*[1] |
| | 22-15.5<br>0.38-1.54 | **.028-.055**<br>0.70-1.40 | 600-3000 | **.020**<br>0.51 | **.110**<br>2.79 | **.225**<br>5.72 | Tin Plated Brass | 42778-2*[1] |
| | 18.5-13.5<br>0.80-2.54 | **.039-.071**<br>1.00-1.80 | 1500-5000 | **.020**<br>0.51 | **.110**<br>2.79 | **.225**<br>5.72 | Brass | 41765 |
| | 18.5-13.5<br>0.80-2.54 | **.039-.071**<br>1.00-1.80 | 1500-5000 | **.020**<br>0.51 | **.110**<br>2.79 | **.225**<br>5.72 | Tin Plated Brass | 41899 |
| | 18.5-13.5<br>0.80-2.54 | **.039-.071**<br>1.00-1.80 | 1500-5000 | **.020**<br>0.51 | **.110**<br>2.79 | **.225**<br>5.72 | Brass | 42119-1* |
| | 18.5-13.5<br>0.80-2.54 | **.039-.071**<br>1.00-1.80 | 1500-5000 | **.020**<br>0.51 | **.110**<br>2.79 | **.225**<br>5.72 | Brass | 42776-1*[1] |
| B | 18.5-13.5<br>0.80-2.54 | **.039-.071**<br>1.00-1.80 | 1500-5000 | **.020**<br>0.51 | **.110**<br>2.79 | **.225**<br>5.72 | Tin Plated Brass | 42776-2*[1] |
| | 15.5-12<br>1.54-3.46 | **.055-.083**<br>1.40-2.10 | 3000-7000 | **.020**<br>0.51 | **.140**<br>3.56 | **.225**<br>5.72 | Brass | 41766 |
| | 15.5-12<br>1.54-3.46 | **.055-.083**<br>1.40-2.10 | 3000-7000 | **.020**<br>0.51 | **.140**<br>3.56 | **.225**<br>5.72 | Tin Plated Brass | 41900 |
| | 15.5-12<br>1.54-3.46 | **.055-.083**<br>1.40-2.10 | 3000-7000 | **.020**<br>0.51 | **.140**<br>3.56 | **.225**<br>5.72 | Brass | 42779-1[1] |
| | 15.5-12<br>1.54-3.46 | **.055-.083**<br>1.40-2.10 | 3000-7000 | **.020**<br>0.51 | **.140**<br>3.56 | **.225**<br>5.72 | Tin Plated Brass | 42779-2[1] |
| | 12-10<br>3.46-6.00 | **.083-.110**<br>2.10-2.80 | 7000-12,000 | **.025**<br>0.64 | **.250**<br>6.35 | **.225**<br>5.72 | Tin Plated Brass | 61074-1[1,2] |
| | 12-9<br>3.46-6.38 | **.083-.112**<br>2.10-2.85 | 7000-13,000 | **.025**<br>0.64 | **.180**<br>4.57 | **.225**<br>5.72 | Brass | 41770 |
| | 12-9<br>3.46-6.38 | **.083-.112**<br>2.10-2.85 | 7000-13,000 | **.025**<br>0.64 | **.180**<br>4.57 | **.225**<br>5.72 | Tin Plated Brass | 41904 |
| | 12-9<br>3.46-6.38 | **.083-.112**<br>2.10-2.85 | 7000-13,000 | **.025**<br>0.64 | **.180**<br>4.57 | **.225**<br>5.72 | Brass | 42780-1[1] |
| | 12-9<br>3.46-6.38 | **.083-.112**<br>2.10-2.85 | 7000-13,000 | **.025**<br>0.64 | **.180**<br>4.57 | **.225**<br>5.72 | Tin Plated Brass | 42780-2[1] |

* These splices are recommended for applications using wire size 26 AWG [0.40 mm] or smaller.
[1] Increased terminal pitch.
[2] Increased U-diameter.



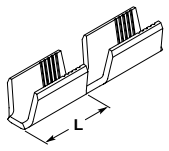
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## AMPLIVAR Splices (Continued)

### 5 Serrations — Pigtail Type

#### Product Facts

- **Serration depths are varied within the splice to give optimum electrical / mechanical performance on all wire sizes**
- **Flat bottom of splice helps keep magnet wires on bottom as required during crimping**



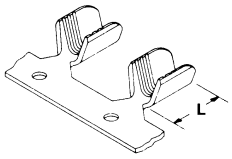

| AWG/ mm² | Wire Range Solid Dia. | Wire Range CMA | Stock Thickness | Crimp Width | Dim. L | Material | Part Number |
|---|---|---|---|---|---|---|---|
| 20-17<br>0.50-1.00 | **.030-.045**<br>0.80-1.15 | 1000-2000 | **.016**<br>0.41 | **.100**<br>2.54 | **.225**<br>5.72 | Tin Plated Brass | 62670-2*[1] |

*These splices are recommended for applications using wire size 26 AWG [0.40 mm] or smaller.
[1] Flat bottom.

### Miniature Splice — Pigtail Type

#### Product Facts

- **The Miniature AMPLIVAR splice was developed for crimping thinner copper magnet wires having a diameter between .003 and .016 [0.08 and 0.40 mm] and has to be connected with a stranded conductor**
- **The diameter of one conductor strand should not exceed the magnet wire diameter to be applied**

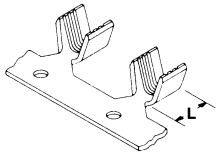



| AWG/ mm² | Wire Range Solid Dia. | Wire Range CMA | Stock Thickness | Crimp Width | Dim. L | Material | Part Number |
|---|---|---|---|---|---|---|---|
| 27-21<br>0.10-0.40 | **.014-.030**<br>0.35-0.75 | 200-850 | **.012**<br>0.30 | **.055**<br>1.40 | **.195**<br>4.95 | Tin Plated Brass | 63431-1 |
| 25-18<br>0.16-0.90 | **.015-.045**<br>0.45-1.10 | 300-1850 | **.012**<br>0.30 | **.070**<br>1.78 | **.195**<br>4.95 | Copper-Nickel | 61166-1 |
| 24-18.5<br>0.20-0.75 | **.020-.039**<br>0.55-1.00 | 480-1500 | **.014**<br>0.36 | **.080**<br>2.03 | **.195**<br>4.95 | Tin Plated Brass | 62341-1 |
| 24-18.5<br>0.20-0.75 | **.020-.039**<br>0.55-1.00 | 480-1500 | **.014**<br>0.36 | **.080**<br>2.03 | **.195**<br>4.95 | Brass | 62341-2 |
| 24-18<br>0.20-0.80 | **.020-.040**<br>0.55-1.00 | 480-1700 | **.016**<br>0.41 | **.070**<br>1.78 | **.195**<br>4.95 | Brass | 62044-1 |

### Subminiature Splice — Thru or Pigtail Type

#### Product Facts

- **The compactness of these splices makes them ideal for use in small subfractional motors, transformers, relays, solenoids, indicator lamps and small appliance terminations**
- **These splices provide the same reliability as the larger AMPLIVAR splices**




| AWG/ mm² | Wire Range Solid Dia. | Wire Range CMA | Stock Thickness | Crimp Width | Dim. L | Material | Part Number |
|---|---|---|---|---|---|---|---|
| 30-26<br>0.05-0.15 | **.010-.015**<br>0.30-0.50 | 100-300 | **.010**<br>0.25 | **.042**<br>1.08 | **.080**<br>2.03 | Tin Plated Brass | 63621-2 |
| 24-19<br>0.26-0.60 | **.020-.035**<br>0.55-0.90 | 400-1300 | **.016**<br>0.41 | **.070**<br>1.78 | **.100**<br>2.54 | Tin Plated Brass | 62194-2 |
| 24-19<br>0.26-0.60 | **.020-.035**<br>0.55-0.90 | 400-1300 | **.016**<br>0.41 | **.070**<br>1.78 | **.100**<br>2.54 | Gold Plated Brass | 62194-4 |



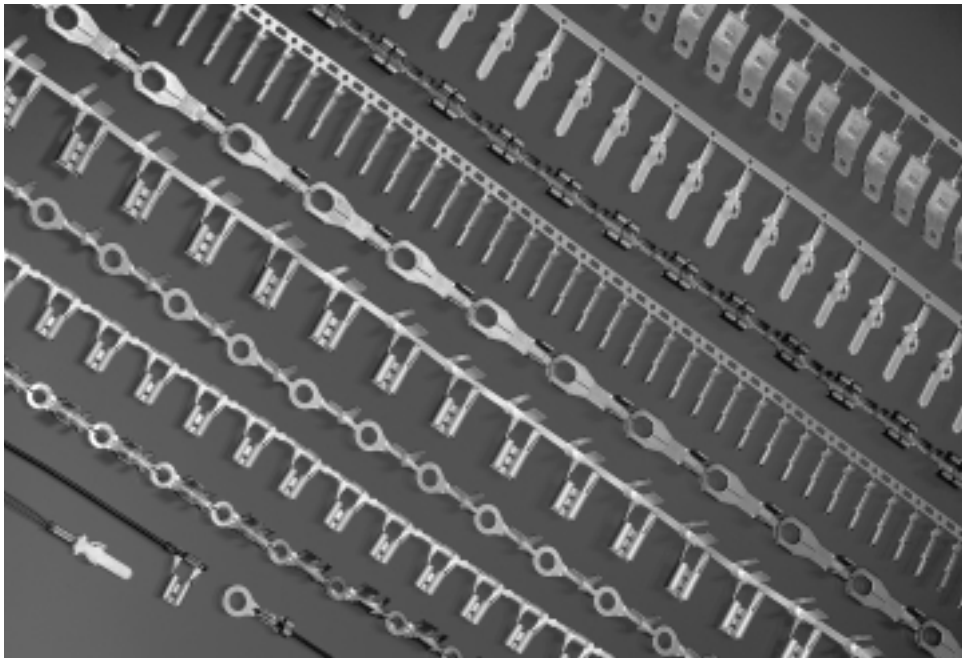


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Technical Support
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## AMPLIVAR Terminals

### Products Facts

- **Ring tongue terminals available for 2 to 3/8 stud diameters**
- **FASTON Tab terminals accept .125 [3.18], .187 [4.75] and .250 [6.35] receptacle terminals**
- **FASTON Receptacle terminals accept .187 [4.75] and .250 [6.35] tab terminals**
- **FASTON Stator Receptacle accept .250 x .032 [6.35 x 0.81] tab terminal**
- **Pin receptacle terminals accept .062 [1.57] and .090 [2.29] diameter pins**



### Applications

- **Motor windings**
- **Transformers**
- **Power supplies**
- **Starters and alternators**

AMPLIVAR magnet wire terminals are designed to terminate copper and/or aluminum magnet wire.

Terminals are insulation displacing; therefore, magnet wires do not require a separate prestripping operation.

The unique wire barrel design, with serrations and burrs, produces a superior metal-to-metal compression crimp with excellent tensile strength.

Terminals are available in a variety of ring tongue, FASTON straight, flag and stator receptacles and tab quick-disconnect style terminals.

Direct connection to magnet wire eliminates the need for separate stranded wire terminal connection to input/output devices.

Matched with AMP automated application tooling allows high production rates for strip-form terminals.

**Product Specifications** describe the product qualification test results completed by Tyco Electronics for consideration of product use in a specific application. They are intended for the Design and Product Reliability Engineer.

108-16000 — AMPLIVAR Ring Tongue Terminals

108-1718 — AMPLIVAR .125 Blade Terminals [Type A]

### Technical Documents

**Application Specifications** describe requirements for using the product in its intended application and or crimping information. They are intended for the Packaging and Design Engineer and the Machine Setup Person.

114-2145 AMPLIVAR .125 Blade Terminals

114-2146 AMPLIVAR FASTIN-FASTON Series 187 Tab Terminals

114-2070 AMPLIVAR FASTON Series 250 Tab Terminals

114-2144 AMPLIVAR FASTON Series .250 Straight Receptacle Terminals

114-2152 AMPLIVAR Flag FASTON Series 187 & 250 Receptacle Terminal

114-2080 AMPLIVAR Pin Receptacle Terminals [Type A]

114-2128 AMPLIVAR Stator Receptacle with FASTON Mating End



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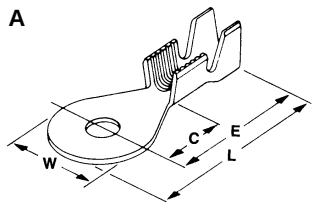
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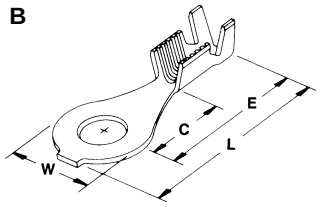
## AMPLIVAR Terminals (Continued)

### Ring Tongue Terminals

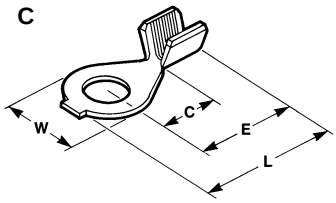
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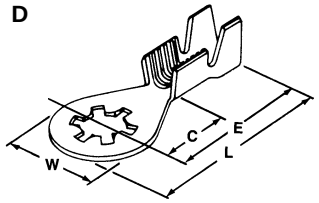

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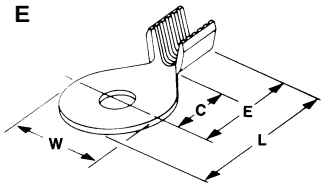

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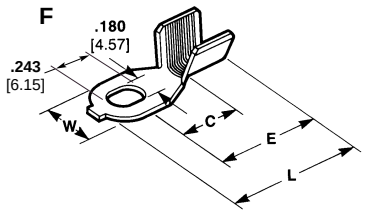

D



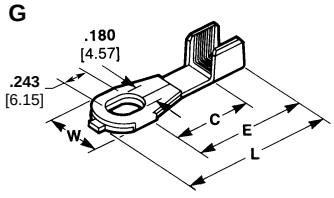

E




F




G




**Wire Size Range 29–22 AWG [0.287–0.643 mm]**

| Type | Insulation Dia. Range | Hole Dia. | Stud Size | Stock Thk. | Material | Dimensions W | L | E | C | Part Number |
|---|---|---|---|---|---|---|---|---|---|---|
| B | **.040-.060** 1.02-1.52 | **.197** 5 | 10 | **.020** 0.51 | Tin Plated Brass | **.342** 8.69 | **.833** 21.16 | **.662** 16.81 | **.312** 7.92 | 63399-1 |

**Wire Size Range 23–19 AWG [0.574–0.912 mm]**

| Type | Insulation Dia. Range | Hole Dia. | Stud Size | Stock Thk. | Material | Dimensions W | L | E | C | Part Number |
|---|---|---|---|---|---|---|---|---|---|---|
| B | **.100-.140** 2.54-3.56 | **.171** 4.34 | 8 | **.020** 0.51 | Tin Plated Brass | **.342** 8.69 | **.833** 21.16 | **.662** 16.81 | **.312** 7.92 | 60321-2 |
| A | **.125-.165** 3.18-4.19 | **.171** 4.34 | 8 | **.020** 0.51 | Tin Plated Brass | **.300** 7.62 | **.700** 17.78 | **.550** 13.97 | **.230** 5.84 | 60323-2 |
| B | **.100-.140** 2.54-3.56 | **.197** 5 | 10 | **.020** 0.51 | Tin Plated Brass | **.342** 8.69 | **.833** 21.16 | **.662** 16.81 | **.312** 7.92 | 60319-2 |
| A | **.125-.165** 3.18-4.19 | **.197** 5 | 10 | **.020** 0.51 | Tin Plated Brass | **.300** 7.62 | **.695** 17.65 | **.545** 13.84 | **.230** 5.84 | 60325-2 |

**Wire Size Range 22–18 AWG [0.643–1.024 mm]**

| Type | Insulation Dia. Range | Hole Dia. | Stud Size | Stock Thk. | Material | Dimensions W | L | E | C | Part Number |
|---|---|---|---|---|---|---|---|---|---|---|
| B | **.125-.165** 3.18-4.19 | **.265** 6.73 | 1/4 | **.025** 0.64 | Tin Plated Brass | **.420** 10.67 | **.872** 22.15 | **.662** 16.81 | **.312** 7.92 | 63612-1 |
| E | — | **.145** 3.58 | 6 | **.025** 0.64 | Tin Plated Brass | **.290** 7.37 | **.500** 12.7 | **.355** 9.02 | **.195** 4.95 | 63649-1 |
| C | — | **.265** 6.73 | 1/4 | **.025** 0.64 | Tin Plated Brass | **.420** 10.67 | **.702** 17.83 | **.492** 12.5 | **.312** 7.92 | 62835-1 |
| E | — | **.171** 4.34 | 8 | **.025** 0.64 | Brass<br>Tin Plated Brass | **.290** 7.37 | **.500** 12.7 | **.355** 9.02 | **.195** 4.95 | 63446-1<br>63446-2 |

**Wire Size Range 20–16 AWG [0.813–1.29 mm]**

| Type | Insulation Dia. Range | Hole Dia. | Stud Size | Stock Thk. | Material | Dimensions W | L | E | C | Part Number |
|---|---|---|---|---|---|---|---|---|---|---|
| A | **.125-.165** 3.18-4.19 | **.171** 4.34 | 8 | **.020** 0.51 | Tin Plated Brass | **.300** 7.62 | **.695** 17.65 | **.545** 13.84 | **.230** 5.84 | 60322-2 |
| H | — | — | 8 | **.020** 0.51 | Brass | **.340** 8.64 | **1.220** 30.98 | **.660** 16.76 | **.500** 12.7 | 505071-1 |
| L | — | — | 3/8 | **.020** 0.51 | Brass | **.625** 15.88 | **.939** 23.85 | **.627** 15.93 | **.467** 11.86 | 505075-1 |
| M | — | — | 3/8 | **.020** 0.51 | Brass | **.645** 16.38 | **.950** 24.12 | **.627** 15.93 | **.467** 11.86 | 505072-1 |

**Wire Size Range 18–14 AWG [1.024–1.628 mm]**

| Type | Insulation Dia. Range | Hole Dia. | Stud Size | Stock Thk. | Material | Dimensions W | L | E | C | Part Number |
|---|---|---|---|---|---|---|---|---|---|---|
| B | **.100-.140** 2.54-3.56 | **.171** 4.34 | 8 | **.020** 0.51 | Brass | **.342** 8.69 | **.833** 21.16 | **.662** 16.81 | **.312** 7.92 | 60320-1 |
| | **.100-.140** 2.54-3.56 | **.171** 4.34 | 8 | **.020** 0.51 | Tin Plated Brass | **.342** 8.69 | **.833** 21.16 | **.662** 16.81 | **.312** 7.92 | 60320-2 |
| | **.100-.140** 2.54-3.56 | **.197** 5 | 10 | **.020** 0.51 | Brass | **.342** 8.69 | **.833** 21.16 | **.662** 16.81 | **.312** 7.92 | 60318-1 |
| D | **.080-.120** 2.03-3.05 | **.173** 4.39 | 8 | **.028** 0.71 | Lu-Bronze[1] | **.370** 9.4 | **.915** 23.24 | **.730** 18.54 | **.380** 9.65 | 485079-1 |
| | **.080-.120** 2.03-3.05 | **.185** 4.7 | 8 | **.028** 0.71 | Lu-Bronze[1] | **.365** 9.27 | **.882** 22.4 | **.700** 17.78 | **.380** 9.65 | 485044-1 |

[1]High conductivity copper-tin-zinc alloy.

**Wire Range 17–13.5 AWG [1.151–1.78 mm]**

| Type | Insulation Dia. Range | Hole Dia. | Stud Size | Stock Thk. | Material | Dimensions W | L | E | C | Part Number |
|---|---|---|---|---|---|---|---|---|---|---|
| F | — | — | 8 | **.020** 0.51 | Brass | **.310** 7.87 | **.692** 17.58 | **.505** 12.83 | **.312** 7.92 | 63147-1 |
| | — | — | 8 | **.020** 0.51 | Tin Plated Brass | **.310** 7.87 | **.692** 17.58 | **.505** 12.83 | **.312** 7.92 | 63147-2* |

*Available on request

**Wire Size Range 14–12 AWG [1.628–2.05 mm] or (2) 15 AWG [1.45 mm]**

| Type | Insulation Dia. Range | Hole Dia. | Stud Size | Stock Thk. | Material | Dimensions W | L | E | C | Part Number |
|---|---|---|---|---|---|---|---|---|---|---|
| G | — | — | 8 | **.025** 0.64 | Brass | **.342** 8.69 | **.945** 24.00 | **.750** 19.05 | **.570** 14.48 | 62755-1 |





Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.

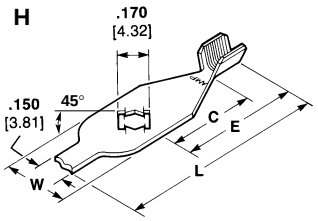
Dimensions are shown for reference purposes only. Specifications subject to change.

Technical Support
USA: 1-800-522-6752
Canada: 1-905-475-6222
Mexico: 01-800-733-8926

## AMPLIVAR Terminals (Continued)

### Stud Retaining Terminals

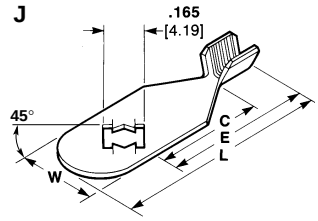
**H**




**Wire Size Range 13–11 AWG [1.83–2.3 mm]**

| Type | Insulation Dia. Range | Hole Dia. | Stud Size | Stock Thk. | Material | Dimensions W | L | E | C | Part Number |
|---|---|---|---|---|---|---|---|---|---|---|
| A | **.085-.150** 2.16-3.81 | **.180** 4.57 | 8 | **.025** 0.64 | Brass | **.342** 8.69 | **.833** 21.16 | **.662** 16.81 | **.312** 7.92 | 61710-1 |
| C | — | **.180** 4.57 | 8 | **.025** 0.64 | Tin Plated Brass | **.342** 8.69 | **.665** 16.89 | **.495** 12.57 | **.312** 7.92 | 350571-1 |
| | — | **.197** 5.00 | 10 | **.025** 0.64 | Tin Plated Brass | **.342** 8.69 | **.665** 16.89 | **.495** 12.57 | **.312** 7.92 | 640212-1 |

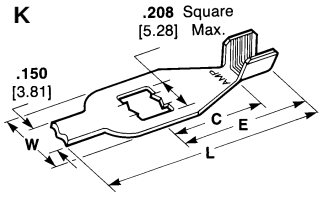
**J**




**Wire Range (1) 18 AWG [1.024 mm] and (1) 20.5 AWG [0.768 mm]**

| Type | Insulation Dia. Range | Hole Dia. | Stud Size | Stock Thk. | Material | Dimensions W | L | E | C | Part Number |
|---|---|---|---|---|---|---|---|---|---|---|
| J | — | — | 8 | **.020** 0.51 | Brass | **.340** 8.64 | **.955** 24.26 | **.660** 16.76 | **.500** 12.7 | 505044-1 |

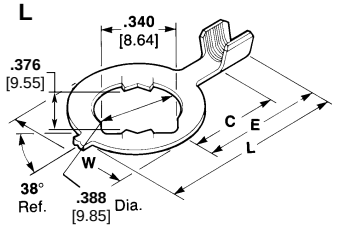
**K**




**Wire Range (2) 17 AWG [1.51 mm] or (2) 15 AWG [1.45 mm]**

| Type | Insulation Dia. Range | Hole Dia. | Stud Size | Stock Thk. | Material | Dimensions W | L | E | C | Part Number |
|---|---|---|---|---|---|---|---|---|---|---|
| B | **.150-.190 or (2) .115** 3.18-4.83 or (2) 2.92 | **.171** 4.34 | 8 | **.025** 0.64 | Tin Plated Brass | **.342** 8.69 | **.827** 21.01 | **.656** 16.66 | **.312** 7.92 | 60752-2 |
| | **.150-.190 or (2) .115** 3.18-4.83 or (2) 2.92 | **.197** 5.00 | 10 | **.025** 0.64 | Tin Plated Brass | **.342** 8.69 | **.827** 21.01 | **.656** 16.66 | **.312** 7.92 | 61151-1 |

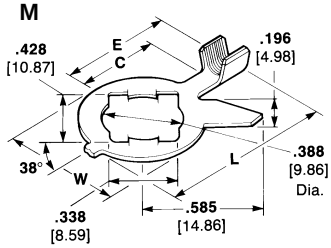
**L**




**Wire Range 16–13.5 AWG [1.29–1.78 mm]**

| Type | Insulation Dia. Range | Hole Dia. | Stud Size | Stock Thk. | Material | Dimensions W | L | E | C | Part Number |
|---|---|---|---|---|---|---|---|---|---|---|
| K | — | — | 10 | **.020** 0.51 | Brass | **.340** 8.64 | **1.220** 30.99 | **.660** 16.76 | **.500** 12.7 | 505079-1 |

**M**

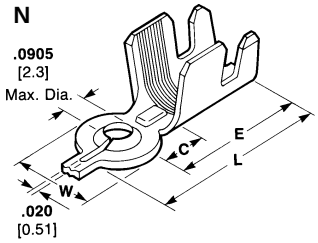



**Wire Range 14.5 AWG [1.539 mm]**

| Type | Insulation Dia. Range | Hole Dia. | Stud Size | Stock Thk. | Material | Dimensions W | L | E | C | Part Number |
|---|---|---|---|---|---|---|---|---|---|---|
| N | — | — | 2 | **.025** 0.64 | Tin Plated Brass | **.240** 6.1 | **.620** 15.75 | **.500** 12.7 | **.165** 4.19 | 505036-1 |
| | — | — | 2 | **.025** 0.64 | Brass | **.240** 6.1 | **.620** 15.75 | **.500** 12.7 | **.165** 4.19 | 505036-3 |

### Alternator Eyelet Terminal

**N**




**Wire Range (2) 13 AWG [1.83 mm]**

| Type | Insulation Dia. Range | Hole Dia. | Stud Size | Stock Thk. | Material | Dimensions W | L | E | C | Part Number |
|---|---|---|---|---|---|---|---|---|---|---|
| B | **.150-.190** 3.81-4.83 | **.171** 4.34 | 8 | **.025** 0.64 | Tin Plated Brass | **.342** 8.69 | **.827** 21.00 | **.656** 16.66 | **.312** 7.92 | 63864-1 |



Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.

Dimensions are shown for reference purposes only. Specifications subject to change.

Technical Support
USA: 1-800-522-6752
Canada: 1-905-475-6222
Mexico: 01-800-733-8926

## AMPLIVAR Terminals (Continued)

### 125 Series Blade

**Stock Thickness**

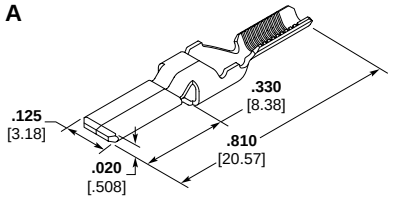
A = .013 [0.33]
B = .020 [0.51]

Mates with Power Blade Receptacle terminals 61603-1, 61604-1, 770642-1 and 1217039-1

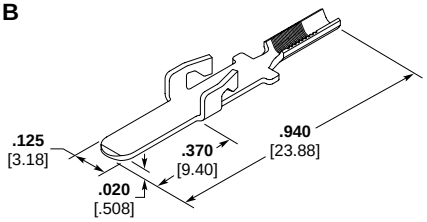
**Housings**

Contact Tyco Electronics Engineering for housing options available

A




B




| Type | Magnet Wire Range | | | | Material | Material Thickness | Part Number |
|---|---|---|---|---|---|---|---|
| | AWG | mm² | Solid Dia. | CMA | | | |
| A | 27-20.5 | 0.10-0.45 | **.015-.030** 0.35-0.75 | 200-850 | Tin Plated Brass | **.013** 0.33 | 63871-1 |
| | 24-18 | 0.2-0.8 | **.020-.040** 0.50-1.00 | 400-1600 | Tin Plated Brass | **.013** 0.33 | 63889-1 |
| | 18.5-13.5 | 0.75-2.5 | **.040-.070** 0.50-1.80 | 1500-5000 | Tin Plated Brass | **.016** 0.41 | 63870 |
| B | 27-20.5 | 0.10-0.45 | **.015-.030** 0.35-0.75 | 200-850 | Tin Plated Brass | **.013** 0.33 | 1217072-1 |
| | 24-18 | 0.2-0.8 | **.020-.040** 0.50-1.00 | 400-1600 | Tin Plated Brass | **.020** 0.51 | 1217029-1 |
| | 18.5-13.5 | 0.75-2.5 | **.040-.070** 0.50-1.80 | 1500-5000 | Tin Plated Brass | **.020** 0.51 | 1217073-1 |

### 187 Series FASTON Tabs[1]

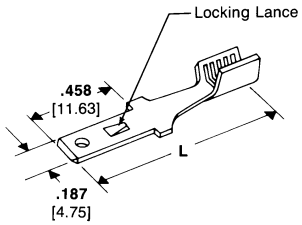
**Board Thickness**

A = .062–.072 [1.57–1.83]

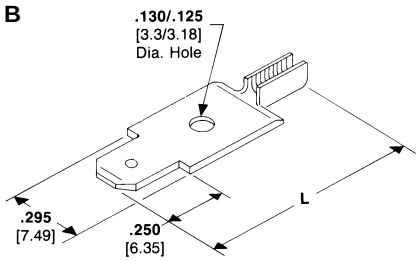
**Stock Thickness**

A = .020 [0.51]
B = .032 [0.81]

A




B



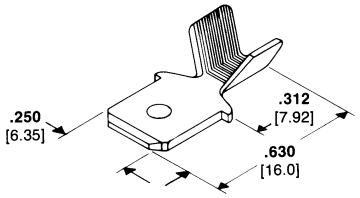

| Type | Wire Range | | Material | Dim. L | Part Number |
|---|---|---|---|---|---|
| | AWG | mm² | | | |
| B | 27-23 | 0.1-0.2 | Tin Plated Brass | **.935** 23.75 | 63484-1[2] |
| A | 24-21 | 0.2-0.4 | Tin Plated Brass | **.935** 23.75 | 61440-3† |
| | 22-16 | 0.3-1.4 | Tin Plated Brass | **1.015** 25.78 | 62447-1 |
| | 15-13 | 1.6-2.6 | Tin Plated Brass | **.935** 23.75 | 61442-3† |
| | 15-12 | 1.6-3.0 | Tin Plated Brass | **1.015** 25.78 | 62445-1 |

[2] Varnish resist coating.
† These part numbers are available upon special request, contact Tyco Electronics Engineering for details.

### 250 Series FASTON Tabs[1]

**Stock Thickness**

.032 [0.81]




| Wire Range | | Material | Part Number | Quick-Change Applicator[3] |
|---|---|---|---|---|
| AWG | mm² | | | |
| 14-12 | 2.0-3.0 | Tin Plated Brass | 62922-1[2] | 466510-1 |

[2] Varnish resist coating.
[3] Quick-Change Applicator for AMP-O-LECTRIC Machine 565435-5. For AMPOMATOR Machine and other machines not listed, contact Tyco Electronics.

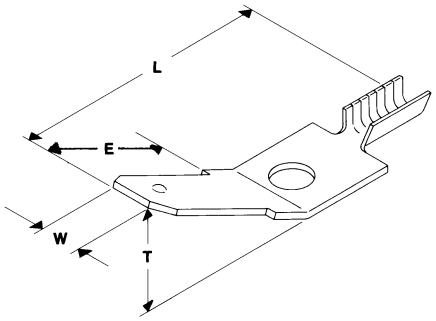
[1]Mates with FASTON receptacles. See AMP Catalog 82004.

## AMPLIVAR Terminals (Continued)

### 250 Series FASTON Tabs[1]
(Continued)

**Stock Thickness**
.032 [0.81]

[1] Mates with FASTON receptacles. See AMP Catalog 82004.

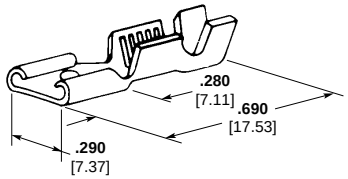



| Wire Range AWG | Wire Range mm² | Material | Dimensions W | Dimensions L | Dimensions E | Dimensions T | Part Number |
|---|---|---|---|---|---|---|---|
| 28-23.5 | 0.08-0.2 | Tin Plated Brass | **.250** 6.35 | **.580** 14.73 | **.342** 8.69 | 45° | 63136-1 |
| 25-19.5 | 0.16-0.6 | Tin Plated Brass | **.250** 6.35 | **.650** 16.51 | **.450** 11.43 | 30° | 63140-1 |
| 23-19 | 0.2-0.6 | Tin Plated Brass | **.250** 6.35 | **.225** 5.72 | **.583** 14.81 | 15° | 63165-1 |

### 250 Series FASTON Receptacles[1]

**Stock Thickness**
.016 [0.41]

[1] Mates with FASTON tabs. See AMP Catalog 82004.




| Magnet Wire Range CMA | Magnet Wire Range mm² Dia. | Insulation Diameter | Mating Tab Thk. | Material | Material Thickness | Part Number | Applicator No. |
|---|---|---|---|---|---|---|---|
| 24-19 | 0.51-0.98 | **.050-.080** 1.30-2.00 | **.020** 0.51 | Brass / Tin Plated Brass | **.016** 0.41 | 63623-1[1] / 63623-2[1] | 567451-2[2] |
| 23-19 or (2) 24 or (2) 26 | 0.60-0.98 or (2) 0.57 or (2) 0.45 | **.050-.100** 1.30-2.55 | **.025** 0.64 | Brass | **.016** 0.41 | 62069-1 | 567343-2[2] |
| 20-16 or (2) 23 or (2) 20 | 0.85-1.37 or (2) 0.63 or (2) 0.88 | **.100-.140 or (2) .060 Max.** 2.55-3.55 | **.032** [0.81] | Brass / Tin Plated Brass | **.016** 0.41 | 60384-1 / 60384-2 | 466010-1[2] |
| 20-16 | 0.85-1.37 | **.100-.140** 2.55-3.55 | **.020** 0.51 | Brass | **.016** 0.41 | 62080-1 | 466010-1[2] |
| 18-14 or (2) 17 | 1.02-1.71 | **.120-.170 or (2) .060 Max.** 3.05-4.30 | .032 [0.81] | Tin Plated Brass | **.016** 0.41 | 60385-2 | 466816-1[2] |
| 18-14 or (2) 19 | 1.02-1.71 | **.120-.170** 3.05-4.30 | **.020** 0.51 | Brass | **.016** 0.41 | 63622-1[1] | 466816-1[2] |
| 18-14 or (2) 19 | 1.02-1.71 | **.120-.170** 3.05-4.30 | **.020** 0.51 | Brass | **.016** 0.41 | 1217835-1[1] | 466816-1[2] |

[1] Low insertion force
[2] Quick-Change Applicator for AMP-O-LECTRIC Machine 565435-5.



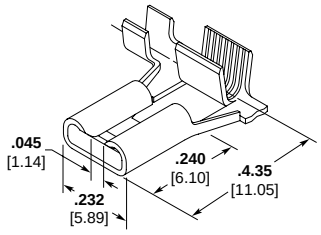
Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.
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Technical Support
USA: 1-800-522-6752
Canada: 1-905-475-6222
Mexico: 01-800-733-8926
www.tycoelectronics.com

## AMPLIVAR Terminals (Continued)

### 187 Series FASTON Flag Receptacles

**Stock Thickness**

.016 [0.41]



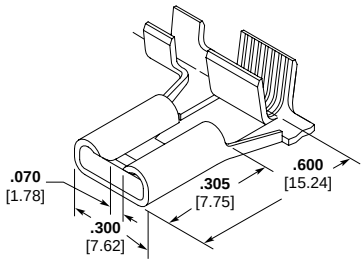

| Magnet Wire Range | | Insulation Diameter | Mating Tab Thk. | Material | Material Thickness | Part Number | Applicator No. |
|---|---|---|---|---|---|---|---|
| CMA | mm² Dia. | | | | | | |
| 500-960 | 0.56-0.79 | **.020-.040** 0.51-1.02 | **.020** 0.51 | Tin Plated Brass | **.016** 0.41 | 63942-1 | 566411-1[1] |
| 24-20 AWG | 0.51-0.81 | **.020-.040** 0.51-1.02 | **.032** 0.81 | Tin Plated Brass | **.016** 0.41 | 1217624-1 | 566411-1[1] |
| 1500-2350 | 0.99-1.22 | **.020-.040** 0.51-1.02 | **.020** 0.51 | Tin Plated Brass | **.016** 0.41 | 63941-1 | 566410-1[1] |
| 2000-4050 | 1.14-1.63 | **.020-.040** 0.51-1.02 | **.020** 0.51 | Tin Plated Brass | **.016** 0.41 | 63940-1 | 680353-3[2] |
| 2000-4050 | 1.14-1.63 | **.020-.040** 0.51-1.02 | **.032** 0.81 | Tin Plated Brass | **.016** 0.41 | 1217417-1 | 680353-3[2] |

[1] Standard Applicator for "G" Splice Terminator No. 356462-2.
[2] Quick-Change Applicator for "G" Splice Terminator No. 356462-1.

### 250 Series FASTON Flag Receptacles

**Stock Thickness**

.018 [0.45]




| Magnet Wire Range | | Insulation Diameter | Mating Tab Thk. | Material | Material Thickness | Part Number | Applicator No. |
|---|---|---|---|---|---|---|---|
| CMA | mm² Dia. | | | | | | |
| 16-12 | 1.29-2.13 | **.120-.170** 3.05-4.32 | **.032** 0.81 | Tin Plated Phos Bronze | **.018** 0.45 | 63944-1 | 680421-3[1] |

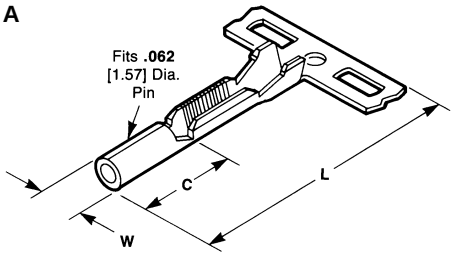
[1] Quick-Change Applicator for "G" Splice Terminator No. 356462-1.

### Pin Receptacles

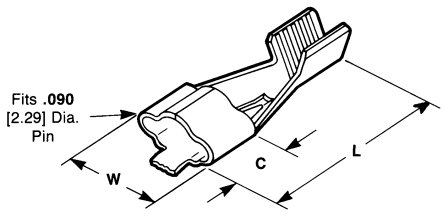
**Stock Thickness**

.016 [0.41]

**A**




**B**




| Type | Wire Range | | Insulation Dia. Range | Material | Dimensions | | | Part Number |
|---|---|---|---|---|---|---|---|---|
| | AWG | mm² | | | W Max. | L | C | |
| A | 29-22 | 0.07-0.3 | **.040-.060** 1.02-1.52 | Tin Plated Brass | **.084** 2.13 | **.590** 14.99 | **.195** 4.95 | 63506-1 |
| B | 21-16 | 0.4-1.4 | — | Tin Plated Phos. Bronze | **.235** 5.97 | **.660** 16.76 | **.250** 6.35 | 60177-2 |

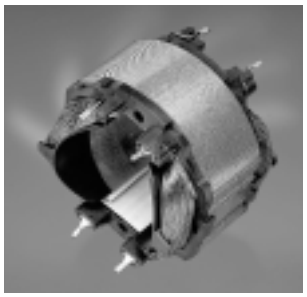


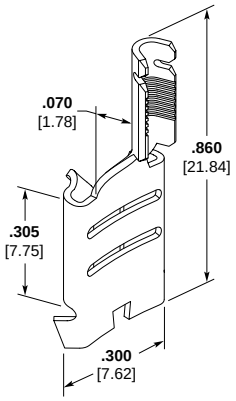


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Technical Support
USA: 1-800-522-6752
Canada: 1-905-475-6222
Mexico: 01-800-733-8926
www.tycoelectronics.com

## AMPLIVAR Terminals (Continued)

### 250 Series Stator Receptacles — 7 Serrations






| Magnet Wire Range | | | | Mating Tab Thickness | Stock Thickness | Crimp Width | Material | Part Number |
|---|---|---|---|---|---|---|---|---|
| AWG | mm² | Solid Dia. | CMA | | | | | |
| 27-22 | 0.10-0.3 | **.014-.026** 0.35-0.66 | 200-700 | **.032** 0.81 | **.018** 0.44 | **.070** 1.77 | Tin Plated Brass | 63480-1 |
| 21-15 | 0.4-1.6 | **.028-.060** 0.71-1.52 | 800-3600 | **.032** 0.81 | **.018** 0.44 | **.110** 2.79 | Tin Plated Brass | 62381-1 |
| 22-15.5 | 0.3-1.5 | **.053-.086** 1.35-2.18 | 2800-7400 | **.032** 0.81 | **.018** 0.44 | **.155** 3.94 | Tin Plated Brass | 63964-1 |

### Stator Terminal — Receptacle .250 x .032 [6.35 x 0.81]

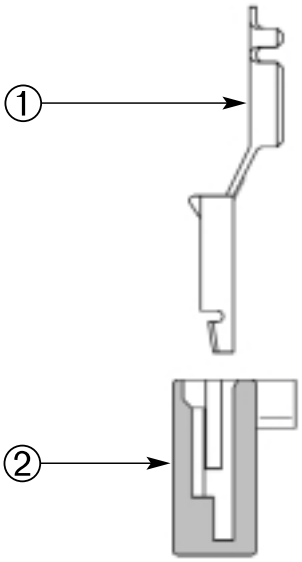
① **Stator Terminal** with Receptacle .250 x .032 [6.35 x 0.81]

② **Plastic Cavity**

Production only according to Tyco Electronics Specifications (Contact Tyco Electronics Engineering for details).

For design and material selection Tyco Electronics Engineering **has to be** contacted before decision.

The terminal is separated from the strip and placed automatically into the cavity.

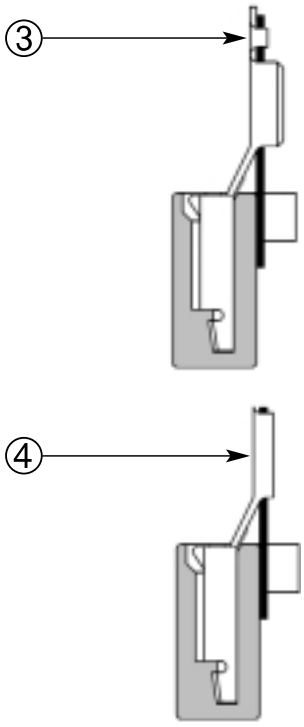



③ **Wire Clamping Barrel**

The magnet wire is positioned via posts into the AMPLIVAR crimp barrel and fixed inside clamping barrel.

④ **AMPLIVAR Crimp**

The AMP application equipment crimps the AMPLIVAR connection and cuts the extending clamping barrel in one operation.




**Additional versions upon request.**

**Application Tooling for Production Line Integrating available upon request.**



Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.

Dimensions are shown for reference purposes only. Specifications subject to change.

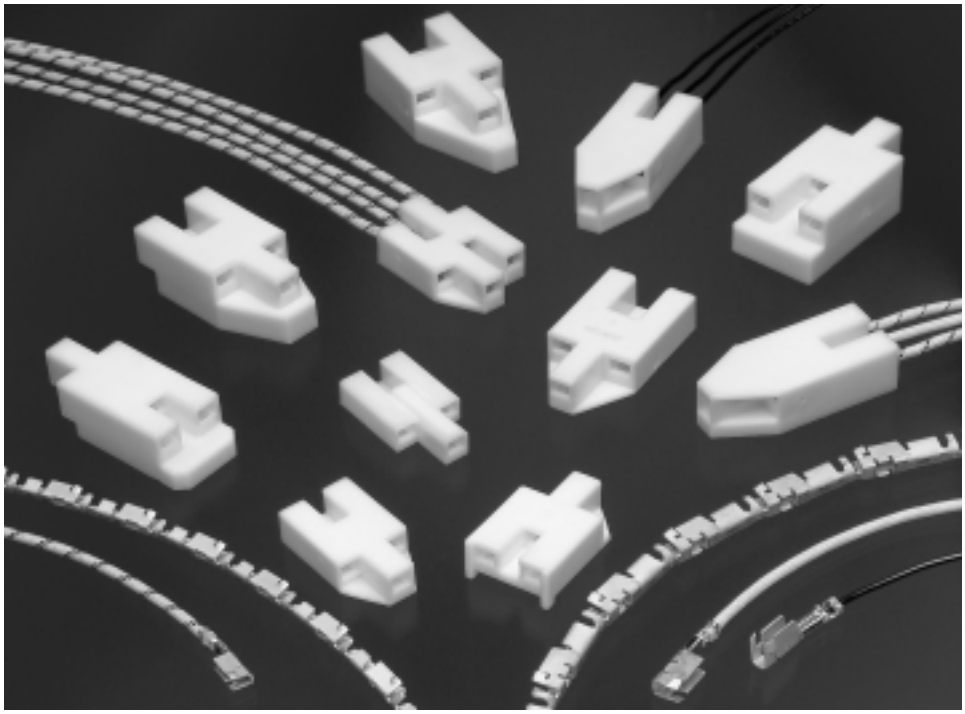
Technical Support
USA: 1-800-522-6752
Canada: 1-905-475-6222
Mexico: 01-800-733-8926

www.tycoelectronics.com

## Cluster Blocks

### Product Facts

- **Pin receptacle terminals available in tin-plated phosphor bronze**
- **Versions available to accept .090 [2.29] and .125 [3.18] header pins**
- **Accepts wire range 18–16 AWG [0.8–1.4 mm$^2$] and 14–12 AWG [2.0–3.0 mm$^2$]**
- **Thermoplastic polyester housing**
- **Impervious to many oils and refrigerants**
- **Insulation compatibility**
- **Housings available to accept standard and reversed header pin layouts**
- **High-performance electrical and mechanical contact**
- **High-impact resistance housings**
- **Assemblies accept pins from one side only to prevent reversed polarity**
- **High-speed application of pin receptacle terminals with AMP automatic terminating machines and quick-change applicators for high volume production rates at the lowest installed cost**
- **Pin receptacle terminals are easily removed from the housing for maintenance and repair**
- **Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476**



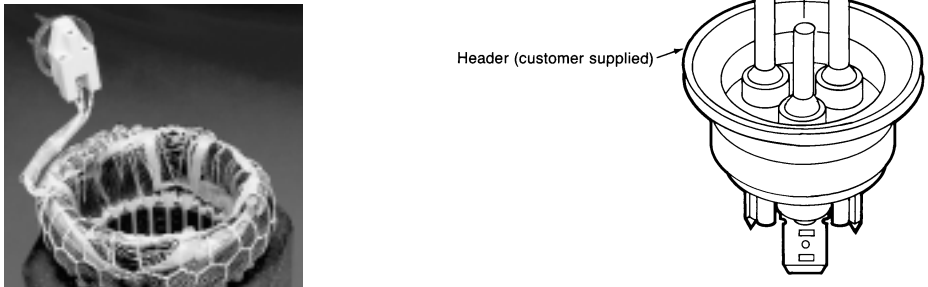
Tyco Electronics features AMP Cluster Blocks that offer manufacturers of air conditioning and refrigeration products a low-cost, fully insulated, quick-connect means for electrically connecting sealed hermetic header pins on compressors.

Cluster Blocks feature high impact resistance to shock and abuse, and long-life performance in the presence of oils and refrigerants. Since the connectors accept pins from only one side, the danger of reversing polarity at the time of installation is prevented.

The one-piece housings are molded from thermoplastic polyester. The connector accepts .090 [2.29] and .125 [3.18] diameter pin sizes in either standard or reverse pin layouts.

Housings accept both lead wire and AMPLIVAR direct connect pin receptacle terminals made from phosphor bronze material. These are precision formed and available on reels for high-speed application.

High retention pin receptacle terminals are available to provide optimum terminal retention in housings.

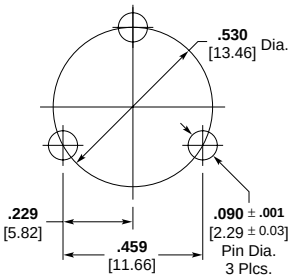




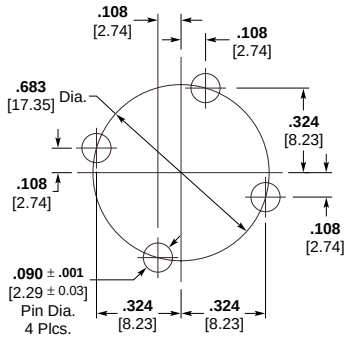

**Typical Assembly**

## Cluster Blocks .090 [2.29] Pin Size (Lead Wire)

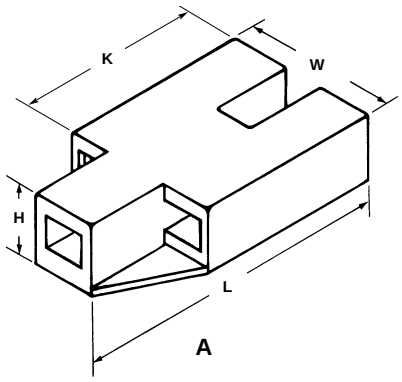
### Housings



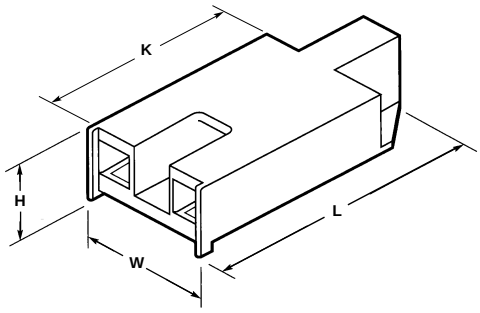

**Pin Location A and B**



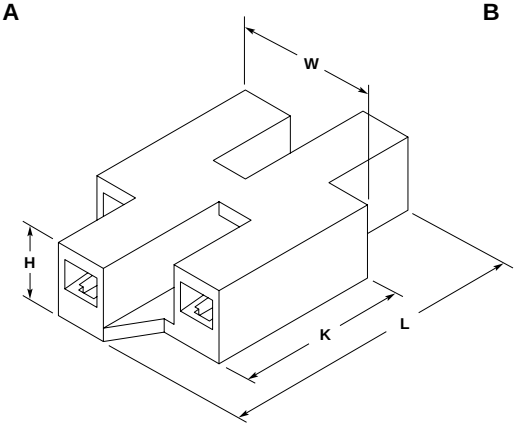

**Pin Location C**




**A**



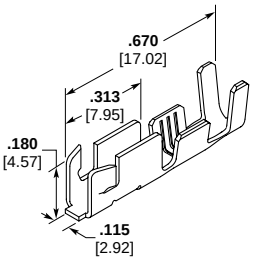

**B**



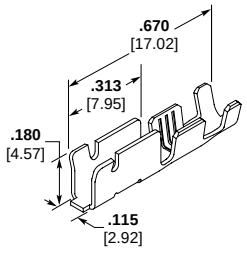

**C**

| Type | Center Pin Position | Header Pin Circle Dia. | Dim. L | Dim. W | Dim. H | Dim. K | Material | Part Number |
|---|---|---|---|---|---|---|---|---|
| A | Forward | **.530** 13.46 | **1.245** 31.60 | **.710** 18.05 | **.355** 9.00 | **.850** 21.60 | PBT Polyester 15% Glass Reinforced | 1217263-1 |
| | Forward | **.530** 13.46 | **1.240** 31.50 | **.710** 18.05 | **.320** 8.15 | **.840** 21.35 | PBT Polyester 15% Glass Reinforced | 360050-1 |
| | Forward | **.530** 13.46 | **1.220** 31.00 | **.695** 17.65 | **.260** 6.60 | **.820** 20.85 | PBT Polyester 15% Glass Reinforced | 521078-1 |
| B | Back | **.530** 13.46 | **1.225** 31.10 | **.810** 20.55 | **.320** 8.15 | **.840** 21.35 | PBT Polyester 15% Glass Reinforced | 360033-1 |
| | Back | **.530** 13.46 | **1.200** 30.50 | **.695** 17.65 | **.310** 7.85 | **.805** 20.40 | PBT Polyester Non-Reinforced | 281006-0 |
| C | — | **.683** 17.35 | **1.490** 37.85 | **.900** 22.85 | **.355** 9.00 | **.845** 21.45 | PBT Polyester 15% Glass Reinforced | 1217262-1 |

### Pin Receptacles




**A**




**B**

| Type | AWG/ mm² | Wire Range Solid Dia. | CMA | Crimp Width | Insulation Diameter | Crimp Width | Stock Thickness | Material | Part Number |
|---|---|---|---|---|---|---|---|---|---|
| A | 22-14 0.3-2.0 | **.025-.065** 0.65-1.65 | — | **.100** 2.54 | **.080-.150** 2.00-3.80 | **.130** 3.30 | **.016** 0.41 | Tin Plated Phos Bronze | 1217264-1 |
| B | 18-16 0.8-1.4 | **.040-.050** 1.00-1.30 | — | **.110** 2.79 | **.060-.100** 1.50-2.55 | **.140** 3.56 | **.016** 0.41 | Tin Plated Phos Bronze | 62131-3 |
| | 18-16 0.8-1.4 | **.040-.050** 1.00-1.30 | — | **.110** 2.79 | **.090-.170** 2.30-4.30 | **.180** 4.57 | **.016** 0.41 | Tin Plated Phos Bronze | 63448-1 |



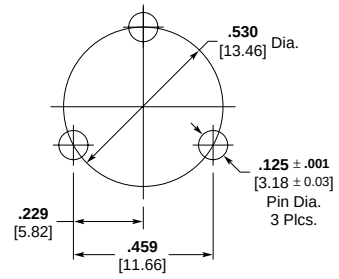
Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.

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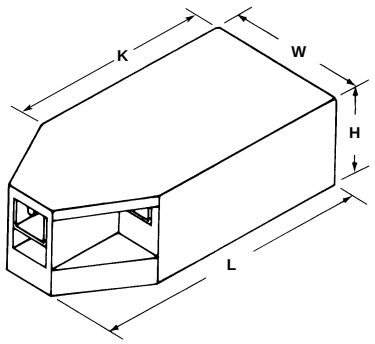
Technical Support
USA: 1-800-522-6752
Canada: 1-905-475-6222
Mexico: 01-800-733-8926

## Cluster Blocks .125 [3.18] Pin Size (Lead Wire and Direct Connect)

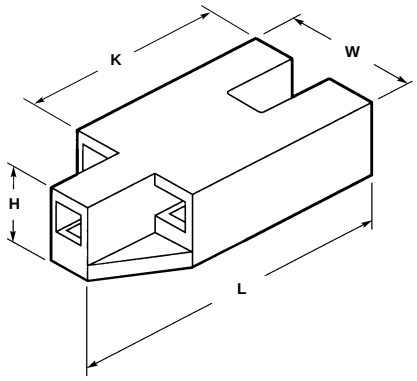
### Housings



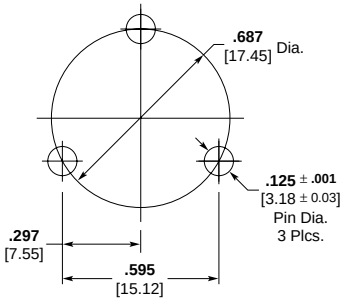

Pin Location
A and D



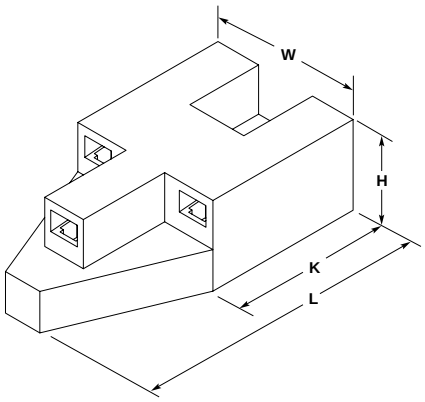

A



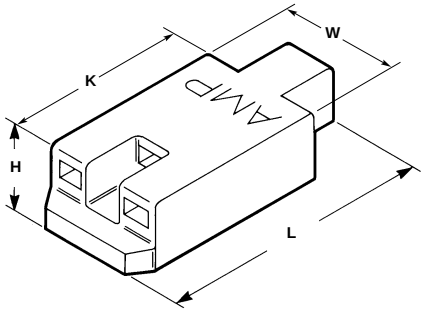

B



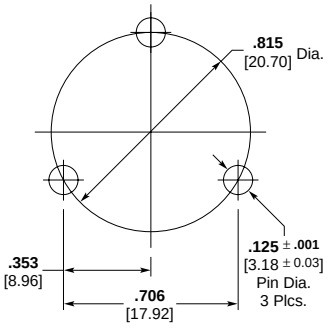

Pin Location
B




C




D




Pin Location
C

| Type | Center Pin Position | Header Pin Circle Dia. | Dim. L | Dim. W | Dim. H | Dim. K | Material | Part Number |
|---|---|---|---|---|---|---|---|---|
| A | Forward | **.530** 13.46 | **1.755** 44.60 | **.765** 19.45 | **.525** 13.35 | **1.230** 31.25 | PBT Polyester 15% Glass Reinforced | 1217181-1 |
| | Forward | **.530** 13.46 | **1.755** 44.60 | **.765** 19.45 | **.470** 11.95 | **1.230** 31.25 | PBT Polyester 15% Glass Reinforced | 360052-1 |
| B | Forward | **.687** 17.45 | **1.730** 43.95 | **.895** 22.75 | **.615** 15.60 | **1.080** 27.45 | PBT Polyester 15% Glass Reinforced | 1217186-1 |
| | Forward | **.687** 17.45 | **1.595** 40.50 | **.895** 22.75 | **.380** 9.65 | **1.080** 27.45 | PBT Polyester 15% Glass Reinforced | 520995-1 |
| C | Forward | **.815** 20.70 | **1.975** 50.15 | **1.015** 25.80 | **.590** 15.00 | **1.050** 26.65 | PBT Polyester Non-Reinforced | 1217261-1 |
| D | Back | **.530** 13.46 | **1.860** 47.25 | **.765** 19.45 | **.525** 13.35 | **1.225** 31.10 | PBT Polyester 15% Glass Reinforced | 1217200-1 |
| | Back | **.530** 13.46 | **1.755** 44.60 | **.765** 19.45 | **.470** 11.95 | **1.225** 31.10 | PBT Polyester 15% Glass Reinforced | 360051-1 |
| | Back | **.687** 17.45 | **1.850** 47.00 | **.895** 22.75 | **.615** 15.60 | **1.225** 31.10 | PBT Polyester 15% Glass Reinforced | 1217187-1 |





Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.

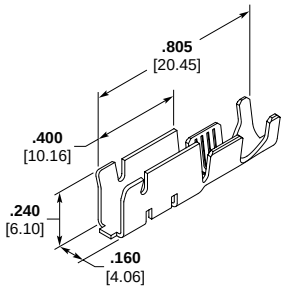
Dimensions are shown for reference purposes only. Specifications subject to change.

Technical Support
USA: 1-800-522-6752
Canada: 1-905-475-6222
Mexico: 01-800-733-8926

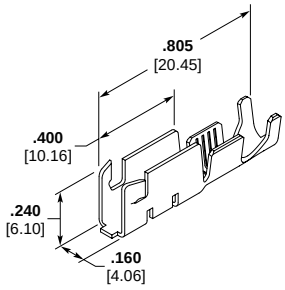
www.tycoelectronics.com

## Cluster Blocks .125 [3.18] Pin Size (Lead Wire and Direct Connect) (Continued)

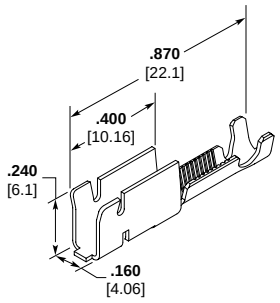
### Pin Receptacles



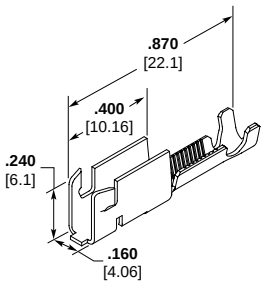

**A**
**Lead Wire**




**B**
**Lead Wire**




**C**
**AMPLIVAR Direct Connect**




**D**
**AMPLIVAR Direct Connect**

| Type | AWG/ mm² | Wire Range Solid Dia. | CMA | Crimp Width | Insulation Diameter | Crimp Width | Stock Thickness | Material | Part Number |
|---|---|---|---|---|---|---|---|---|---|
| A | 18-16<br>0.8-1.4 | **.040-.050**<br>1.00-1.30 | — | **.110**<br>2.79 | **.090-.130**<br>2.30-3.30 | **.155**<br>3.94 | **.020**<br>0.51 | Tin Plated Phos Bronze | 62244-3 |
| | 18-16<br>0.8-1.4 | **.040-.050**<br>1.00-1.30 | — | **.110**<br>2.79 | **.090-.130**<br>2.30-3.30 | **.155**<br>3.94 | **.020**<br>0.51 | Phos Bronze | 62244-5 |
| | 14-10<br>2.0-6.0 | **.065-.100**<br>1.60-2.60 | — | **.140**<br>3.56 | **.130-.170**<br>3.30-4.30 | **.180**<br>4.57 | **.020**<br>0.51 | Tin Plated Phos Bronze | 62243-3 |
| B | 18-16<br>0.8-1.4 | **.040-.050**<br>1.00-1.30 | — | **.110**<br>2.79 | **.090-.130**<br>2.30-3.30 | **.155**<br>3.94 | **.020**<br>0.51 | Tin Plated Phos Bronze | 1217176-1 |
| | 14-10<br>2.0-6.0 | **.065-.100**<br>1.60-2.60 | — | **.140**<br>3.56 | **.130-.170**<br>3.30-4.30 | **.170**<br>4.32 | **.020**<br>0.51 | Tin Plated Phos Bronze | 1217175-1 |
| C | — | **.020-.040**<br>0.50-1.00 | 400-1600 | **.090**<br>2.27 | **.060-.100**<br>1.50-2.55 | **.140**<br>3.56 | **.020**<br>0.51 | Tin Plated Phos Bronze | 63908-1 |
| | — | **.020-.040**<br>0.50-1.00 | 400-1600 | **.090**<br>2.27 | **.060-.100**<br>1.50-2.55 | **.140**<br>3.56 | **.020**<br>0.51 | Tin Plated Phos Bronze | 63453-1 |
| | — | **.040-.065**<br>1.00-1.65 | 1500-4200 | **.110**<br>2.79 | **.075-.125**<br>1.90-3.20 | **.155**<br>3.94 | **.020**<br>0.51 | Tin Plated Phos Bronze | 63907-1 |
| | — | **.040-.065**<br>1.00-1.65 | 1500-4200 | **.110**<br>2.79 | **.075-.125**<br>1.90-3.20 | **.155**<br>3.94 | **.020**<br>0.51 | Tin Plated Phos Bronze | 63454-1 |
| | — | **.065-.090**<br>1.65-2.30 | 4000-8500 | **.140**<br>3.56 | **.090-.170**<br>2.30-4.30 | **.170**<br>4.32 | **.020**<br>0.51 | Tin Plated Phos Bronze | 63906-1 |
| | — | **.065-.090**<br>1.65-2.30 | 4000-8500 | **.140**<br>3.56 | **.090-.170**<br>2.30-4.30 | **.170**<br>4.32 | **.020**<br>0.51 | Tin Plated Phos Bronze | 63455-1 |
| | — | **.065-.090**<br>1.65-2.30 | 4000-8500 | **.160**<br>4.06 | **.090-.170**<br>2.30-4.30 | **.170**<br>4.32 | **.020**<br>0.51 | Tin Plated Phos Bronze | 1217122-1 |
| D | — | **.020-.040**<br>0.50-1.00 | 400-1600 | **.090**<br>2.27 | **.060-.100**<br>1.50-2.55 | **.140**<br>3.56 | **.020**<br>0.51 | Tin Plated Phos Bronze | 1217670-1 |
| | — | **.020-.040**<br>0.50-1.00 | 400-1600 | **.090**<br>2.27 | **.060-.100**<br>1.50-2.55 | **.140**<br>3.56 | **.020**<br>0.51 | Tin Plated Phos Bronze | 1217172-1 |
| | — | **.040-.065**<br>1.00-1.65 | 1500-4200 | **.110**<br>2.79 | **.075-.125**<br>1.90-3.20 | **.155**<br>3.94 | **.020**<br>0.51 | Tin Plated Phos Bronze | 1217671-1 |
| | — | **.040-.065**<br>1.00-1.65 | 1500-4200 | **.110**<br>2.79 | **.075-.125**<br>1.90-3.20 | **.155**<br>3.94 | **.020**<br>0.51 | Tin Plated Phos Bronze | 1217174-1 |
| | — | **.065-.090**<br>1.65-2.30 | 4000-8500 | **.140**<br>3.56 | **.090-.170**<br>2.30-4.30 | **.170**<br>4.32 | **.020**<br>0.51 | Tin Plated Phos Bronze | 1217672-1 |
| | — | **.065-.090**<br>1.65-2.30 | 4000-8500 | **.140**<br>3.56 | **.110-.150**<br>2.80-3.80 | **.170**<br>4.32 | **.020**<br>0.51 | Tin Plated Phos Bronze | 1217173-1 |



Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.

Dimensions are shown for reference purposes only. Specifications subject to change.

Technical Support
USA: 1-800-522-6752
Canada: 1-905-475-6222
Mexico: 01-800-733-8926

## AMPLIVAR and Cluster Blocks Application Tooling

### AMPLIVAR Product Terminator (APT)

#### Product Facts

- **No need to strip magnet wire**
- **Connects up to 3 wires in 1 splice**
- **Crimp Quality Monitor (CQM) system measures crimp heights**
- **Machine shut height easily adjusts in .0005 [0.013] increments**
- **Quick-change tooling without major shut-height adjustments**

#### Specifications

**Weight** — Approximately 150 lb [68 kg] with CQM

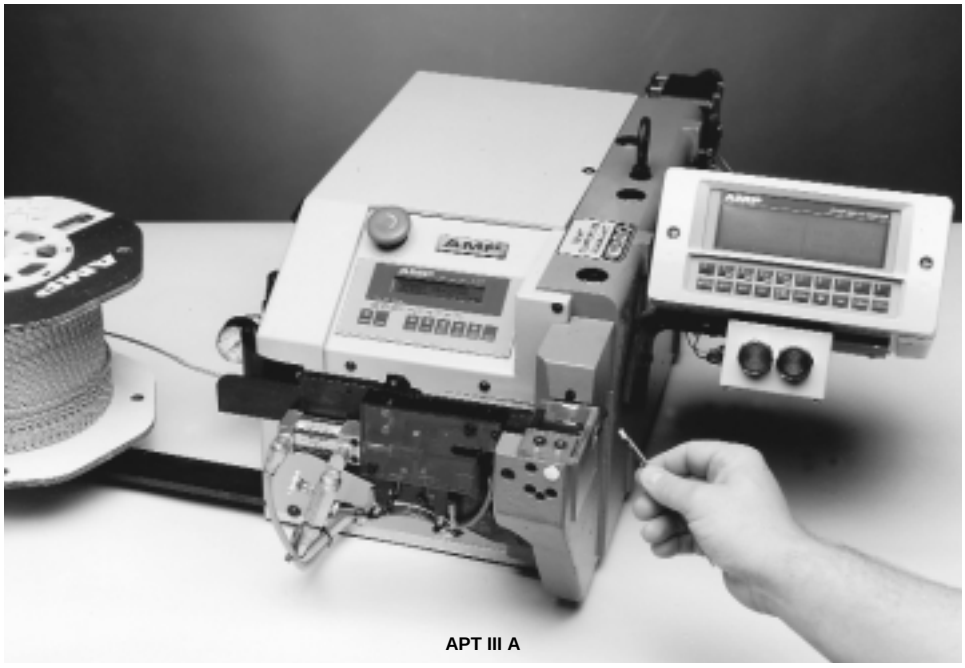
**Width** — 38 [965] with CQM and product reel

**Depth** — 35 [889]

**Height** — 14 [356]

**Electrical** — 120 VAC, 60 Hz, 1 A, 1f, or 240 VAC, 50 Hz, .5 A, 1f

**Air** — 80-100 psi [5.52-7.59 bar], 22 scfm [0.000141 m3/s]



**APT III A**

For pigtail splices or direct connection of contacts to magnet wire, the AMPLIVAR Product Terminator (APT) and strip-form AMPLIVAR products offer a fast and efficient system, with no need to strip mag-wire insulation. To apply a splice or contact, simply place the wires in the target area and depress the foot switch. The machine automatically shears the splice or contact from the strip, crimps it, shears off excess wire, and advances the next splice or contact into position.

APT semi-automatic bench machines are available in two versions: the IIIA with automatic precision adjustment controlled by the Crimp Quality Monitor (CQM), and the IIE with manual precision adjustment.

With CQM, the APT IIIA assists in achieving 6-sigma processing capability. In addition to providing 100% inspection and automatic adjustment of crimp heights as needed, the CQM also evaluates the quality of each crimp. If a questionable crimp is detected, visual and audible alarms alert the operator.

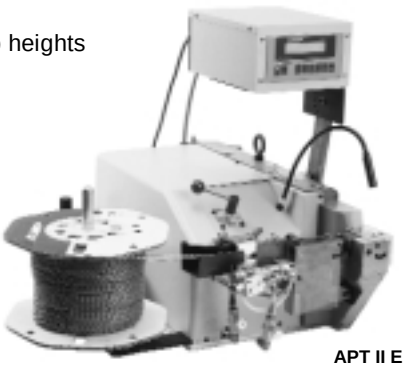
For operations with multiple wire sizes, the APT IIIA provides programmable sequencing of different crimp-height settings, and it can store up to 2,000 different programs of 7 different settings each. The maximum time to auto-adjust between programmed crimp heights is 2 seconds.

The lower cost, manual adjust IIE is a simpler version without CQM capability, with the advantage of faster set-up times.

To avoid the need to change product reels when wire combinations are smaller than the CMA range of the splice or contact, an optional stuffer (part no. 679323-1 for APT IIIA, part no. 679323-2 for APT IIE.) inserts a stuffer wire into the splice or contact prior to crimping, increasing the total CMA to the recommended range. The wire stuffer unit is for pigtail splices only.



**APT III A with vertical base (679984-1) for direct connect terminals**



**APT II E**

## AMPLIVAR and Cluster Blocks Application Tooling (Continued)

### AMPLIVAR Product Terminator (APT) (Continued)

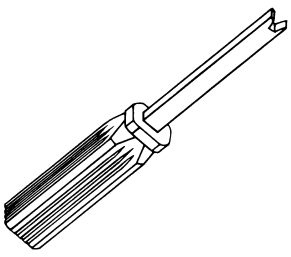
#### Machine Ordering Information

A "Base Part Number" is selected from the Basic Machine Part Numbers table. Then, a dash number or numbers are selected from one of the other two tables depending on the type of product to be applied.

**Note:** The wire stuffer is available for Pigtail-Type Splice only and may be added to the machine after installation.

679323-1 — APT IIIA

679323-2 — APT IIE



**Extraction Tool Part No. 274186-1**

#### Basic Machine Part Numbers

| Machine Features | | | | Base Part Number* | |
|---|---|---|---|---|---|
| Precision Adjust | Crimp Quality Monitor | Programmable Crimp-Height Sequencing | Model | Pigtail-type Splice | Direct Connect Contact |
| Manual | Not included | Not included | APT IIE** | ☐-1338906- ☐ | ☐-1338907- ☐ |
| Automatic | Included | Included | APT IIIA | ☐-679453- ☐ | ☐-679457- ☐ |

*See tables below for suffix and prefix dash numbers which indicate product to be applied, product crimp width, and voltage requirement.
**Not upgradable to an APT IIIA

#### AMPLIVAR Pigtail-Type Splice Suffix and Prefix Dash Numbers

(Aluminum base 679984-1 not included)

| Pigtail-type Splice Base Number | Crimp Width | 120/240 VAC IIE Machine ☐-1338906-☐ | 120/240 VAC IIIA Machine ☐-679453-☐ |
|---|---|---|---|
| 42775<br>42776 | .110 [2.79] | 1-( )-1 | 3-( )-7 |
| 42777<br>42778 | .110 [2.79] | 1-( )-2 | 3-( )-8 |
| 42779 | .140 [3.56] | ( )-8 | 3-( )-4 |
| 62000 | .110 [2.79] | 1-( )-2 | 3-( )-8 |
| 62001 | .140 [3.56] | ( )-7 | 3-( )-3 |
| 62001 | .180 [4.57] | ( )-6 | 3-( )-2 |
| 62201 | .140 [3.56] | ( )-8 | 3-( )-4 |
| 62002 | .180 [4.57] | ( )-3 | 2-( )-9 |
| 62040 | .110 [2.79] | 1-( )-1 | 3-( )-7 |
| 62157<br>62200 | .110 [2.79] | 1-( )-2 | 3-( )-8 |
| 62295 | .250 [6.35] | ( )-1 | 2-( )-7 |
| 62303 | .080 [2.03] | 1-( )-3 | 3-( )-9 |
| 62304<br>62305 | .110 [2.79] | 1-( )-2 | 3-( )-8 |
| 62306 | .140 [3.56] | 1-( )-0 | 3-( )-6 |
| 62306<br>62307 | .110 [2.79] | 1-( )-1 | 3-( )-7 |
| 62308 | .140 [3.56] | ( )-9 | 3-( )-5 |
| 62308 | .180 [4.57] | ( )-6 | 3-( )-2 |
| 62309 | .220 [5.59] | 5-( )-4 | 5-( )-3 |
| 62309 | .180 [4.57] | ( )-5 | 3-( )-1 |
| 62310 | .220 [5.59] | ( )-2 | 2-( )-8 |
| 62310 | .180 [4.57] | ( )-4 | 3-( )-0 |
| 280002 | .110 [2.79] | 1-( )-1 | 3-( )-7 |
| 280004 | .110 [2.79] | 1-( )-2 | 3-( )-8 |
| 964156 | .110 [2.79] | 1-( )-1 | 3-( )-7 |

#### AMPLIVAR Direct Connect Contact Suffix and Prefix Dash Numbers

(Aluminum base 679984-1 included)

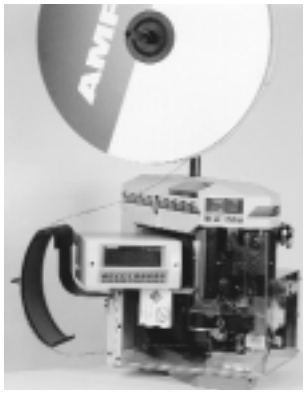
| Direct Connect Contact Base Number | Crimp Width | 120/240 VAC IIE Machine ☐-1338907-☐ | 120/240 VAC IIIA Machine ☐-679457-☐ |
|---|---|---|---|
| 63453 | .090 [2.286] | ( )-3 | ( )-8 |
| 63454 | .110 [2.79] | ( )-2 | ( )-7 |
| 63455 | .140 [3.56] | ( )-1 | ( )-6 |
| 63548 | .090 [2.286] | ( )-5 | 1-( )-0 |
| 63549 | .110 [2.79] | ( )-4 | ( )-9 |
| 63906 | .140 [3.56] | ( )-1 | ( )-6 |
| 63907 | .110 [2.79] | ( )-2 | ( )-7 |
| 63908 | .090 [2.286] | ( )-3 | ( )-8 |
| 1217122 | .160 [4.064] | 1-( )-1 | 1-( )-2 |
| 1217172 | .090 [2.286] | ( )-3 | ( )-8 |
| 1217173 | .140 [3.56] | ( )-1 | ( )-6 |
| 1217174 | .110 [2.79] | ( )-2 | ( )-7 |
| 1217670 | .090 [2.286] | ( )-3 | ( )-8 |
| 1217671 | .110 [2.79] | ( )-2 | ( )-7 |
| 1217672 | .140 [3.56] | ( )-1 | ( )-6 |



Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.
Dimensions are shown for reference purposes only. Specifications subject to change.
Technical Support
USA: 1-800-522-6752
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Mexico: 01-800-733-8926
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## AMPLIVAR and Cluster Blocks Application Tooling (Continued)

### AMP-O-LECTRIC Termination Machines



**Model "G"**

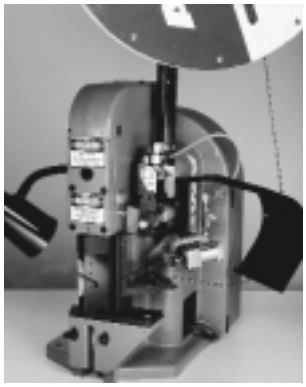
A totally new design of our most popular machine for bench-top operation. It features a quiet and highly-reliable direct motor drive, electronic controls for ease of setup and operation, and improved guarding and lighting for operator convenience and safety. All versions also include either manual or automatic precision adjustment for crimp height. For use with miniature style applicators only.

(Shown with optional Crimp Quality Monitor.)

**Specifications**

**Weight** — Approximately 240 lb [110 kg]
**Height** — 20 [508] without reel
**Width** — 18.7-25.3 [475-643] depending on type of applicator used
**Depth** — 21.5-28.1 [546-713] depending on type of applicator used
**Electrical** — 120 or 220 VAC, 50 or 60 Hz
**Air** — 90-110 psi [6.21-7.59 bar] when required for use with air-feed applicators

For complete information, request Catalog 65828.



**Model "K"**

These machines are used with standard style applicators, generally to apply one size and type of terminal without the need for frequent changeovers of applicators or adjustment of crimp height. The basic model is Part Number 1-471273-2. Part Number 1-471273-3 is equipped with a mechanical feed assembly for applicators requiring this type of feed for advancing the terminal strip.

**Specifications**

**Weight** — Approximately 230 lb [104 kg]
**Height** — 24 [610] without reel
**Width** — 21 [533]
**Depth** — 20 [508]
**Electrical** — 120 VAC, 60 Hz, 6 A
**Air** — 90-110 psi [6.21-7.59 bar] when required for use with air-feed applicators

### Crimp Quality Monitor



This unique system provides 100% on-the-fly crimp inspection. It measures the crimp height of each termination, and evaluates the quality of each crimp. If a crimp is questionable, the monitor alerts the operator with both visual and audible alarms. It also provides ports for printing and networking.

When used with AMP-O-LECTRIC Model "G" Termination Machines, the monitor is mounted to the machine. When used with AMPOMATOR CLS IV Lead Making Machines, it is integrated into the machine's operating system, with the information displayed on the machine's touch screen.

**Specifications**

**Height** — 4.5 [114]
**Width** — 8.5 [216]
**Depth** — 9 [229]
**Electrical** — 120 VAC, 50 or 60 Hz, or 220 VAC, 50 or 60 Hz
**Printer Port** — Serial Interface

For further information, request Catalog 82275.





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## AMPLIVAR and Cluster Blocks Application Tooling (Continued)

**Model G Splice Terminating Machine, P/N 356462-2 & Applicator**



**Semiautomatic bench machine** crimps reeled splice product. Uses Standard G Splice Applicators to provide access to both sides of the splice product. Features a quiet, reliable motor drive, microprocessor controls for ease of setup and operation and guarding and lighting designed for operator convenience. Manual precision crimp height adjust is standard and machine-mounted sensors are available for crimp quality monitoring.

**Specifications**

**AMP-O-LECTRIC Model "G" Thru Splice Terminator**

**Capacity** — 5 000 lb [2 224 N] max. crimp force

**Deflection** — .003 [0.076] max. per 1 000 lb [445 N] crimp force

**Noise** — 76 dB max. at 5 000 lb [2 224 N] full capacity

**Weight** — Approx. 240 lb [109 kg]

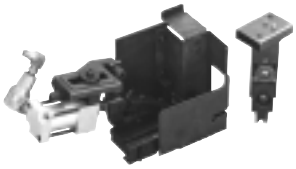
**Height** — 20 [508]

**Electrical** — 120/220 VAC, 50/60 Hz; Avg. 2.6 A at 120 VAC when used as a bench-top unit at 2 000 cycles per hour operating rate

**Air** — 90-110 psi [6.21-7.58 bar], 6 scfm [0.00283 $m^3/s$] (when required for use with air-feed applicators)

For more information, order Catalog 889021.

**Standard G Splice Applicator**
*Available for the AMP-O-LECTRIC Model G splice terminator only.*



**Two-piece applicator** for crimping end- or side-feed reeled splice products. Provides access to both sides of splice for increased ease of use and productivity. Applicators use an air feed mechanism.

**Entry Level Terminator (ELT), 1338600-(x)**



Semiautomatic Bench Terminator for side- and end-feed reeled terminals and contacts. The ELT uses a DC motor with gear box drive. The result is a small-footprint design that is fast and quiet. Cycle time is less than 0.400 sec. with an operation sound level of 76dBa. With a crimp force capacity of 3,000 pounds, the ELT is available for all but the highest crimp force applications. Optional equipment is also available to meet your specific application requirements.

**Specifications**

**Width**—16.8 [427]

**Depth**—20.6 [523]

**Height**—20 [510] w/o reel support

**Weight**—approx. 150 lb [68 kg]

**Electrical**—100-240 VAC, 50/60 Hz, 6 A *(Note: Avg <1 A at 120 VAC when used as a bench-top unit at 2,000 cycles per hour operating rate)*

**Air**—90-100 psi [6.21-6.90 bar], 6 scfm [0.00282 $m^3/s$] when required for use with air-feed applicators *(Note: Optional Air Feed Valve Assembly Required)*

**Wire Range**—Up to 14 AWG [2.5 $mm^2$]

For more information, request catalog 1308382.



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## AMPLIVAR and Cluster Blocks Application Tooling (Continued)

### Applicators



**End- and Side-Feed Heavy-Duty Miniature (HDM) Applicators**

AMP applicators are designed to exacting specifications to produce consistent, high-quality terminations.

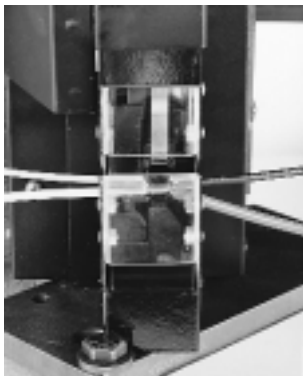
HDM applicators are quickly interchangeable and easily repaired. They feature simple dial-in settings for adjusting crimp height for terminating different wire combinations within the designated CMA range.

These applicators are used with both bench machines and fully-automatic lead makers. They can also be used for crimp quality monitoring on systems equipped with the CQM G-Adapter. Call the AMP Tooling Assistance Center at 1-800-722-1111 for further information.



**Standard (STD) Applicators**

Standard style applicators are generally used for long production runs using dedicated equipment, or when splicing a coil, for example, that needs to be positioned close to the crimping area in the applicator. The crimp height can be adjusted by raising or lowering the base mount.



**Standard Style Applicator for Large CMA Splice, Part Number 566372-2**

This applicator was designed specifically to apply AMP 5 000-16 000 CMA Splice, Part Number 63625-1. It features a highly-visible, close-up crimp area—less than 1 [25] from the front of the guard. You can easily splice multiple wires by simply rotating them down through the front of the guard into the crimp area.

It is an air-feed applicator, and can be used with Model “K” Part Number 1-471273-3.





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## AMPLIVAR and Cluster Blocks Application Tooling (Continued)

### AMPOMATOR CLS IV+ Lead-Making Machines, 356500-1, -2



Fully-automatic machines that measure, cut, strip and terminate single leads. Microprocessor-controlled, and programmed and operated using an easy-to-follow, menu-driven touchscreen. Features include direct-drive terminating units with precision crimp height adjustment, fully programmable setups, wire runout and splice detection, and motorized pre-feed with wire straightener. Crimp quality monitoring is also available.

**Specifications**

**Width**—159 [4 040]

**Depth**—68 [1 730]

**Height**—86 [2 185] with 24 [610] dia. reel

**Weight**—2 000 lb [907 kg]

**Electrical**—220 VAC, 50 or 60 Hz, single phase, 25 A, with neutral and ground

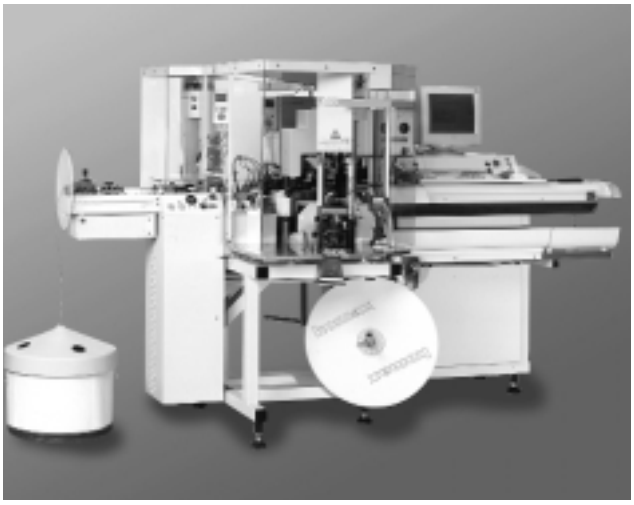
**Air**—90 psi [6.21 bar], 15 scfm [0.0071 $m^3/s$] sustained

**Wire Range**—26-10 AWG [0.12-6 $mm^2$] stranded, 26-16 AWG [0.12-1.4 $mm^2$] solid

**Lead Lengths**—3-90 [76.2-2 285], 90-1 000 [2 285-25 400] with long lead conveyors

For more information, request Catalog **124324**.

### Gamma 333 PC Lead-Making Machine, Three Stations, 1-528324-1



With its capacity to accommodate an additional processing station on side 1, the Gamma 333 PC can perform a number of new processes. It can produce two-ended crimp leads, process double crimp connections with three different terminals or apply seals on one end of the wire. Tinning and ink jet marking are two further options. Process monitoring is integrated into the system, for accurate trimming and stripping of the wires.

**Specifications**

**Length**—125 [3137]

**Width**—54.2 [1377]

**Height**—70.5 [1790]

**Length Range**— 2.36 in-32.8 ft [60-10,000] (optional 30mm)

**Cross-Section Range** — AWG 26-AWG 10 [0.125$mm^2$-5$mm^2$]

**Noise Level**—<76dB (without crimping modules)

**Electrical**—3x208 - 480V, 50-60Hz; 6kVA

**Compressed Air**—5-6 bar

**Air Consumption**—6.5$m^3/h$

**Weight**—1850 lbs [840 kg] with two crimping modules

For more information, request Catalog **1307901**.



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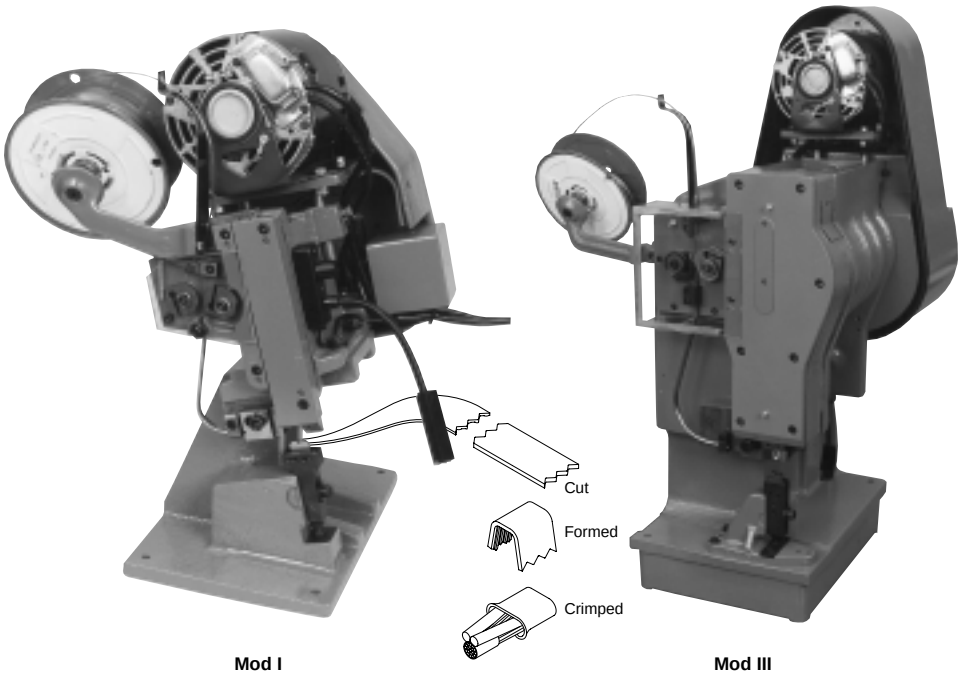
## MTM Crimpband Splices

### Product Facts

- **Made from a continuous coil of "Ribbon Connector" material**
- **Magnet wires MTM Crimpband splices have machine-piercing serrations designed for displacing magnet wire insulation.**
- **Available in brass, tin-plated brass, and copper-nickel alloy material**
- **Make parallel or pigtail connections on same machine**
- **100% of Crimpband material is used in scrap free terminations**
- **Crimpband material coupled with appropriate toolsets accommodate specific CMA ranges**
- **Produced in Tyco Electronics equipment on your production floor**
- **Meets UL 486C crimp tensile requirements**

### Applications

- **Motors windings and connections**
- **Coil connections**
- **Transformer windings and connections**
- **Lighting ballasts**
- **Power supplies**




**Mod I** **Mod III**

Tyco Electronics features the AMP MTM Crimpband system that is comprised of two key features: the semi-automatic termination machine and a reel of MTM Crimpband material.

In a one-step crimping operation, the machine feeds, cuts, forms and crimps the material to provide a low-cost, high reliability crimp connection.

The MTM Crimpband splices are formed during the crimping process from machined longitudinal grooved material that pierces magnet wire varnish film insulation during crimping.

MTM Crimpband splices are specifically designed to terminate magnet wire to itself or in combination with standard solid or stranded lead wire.

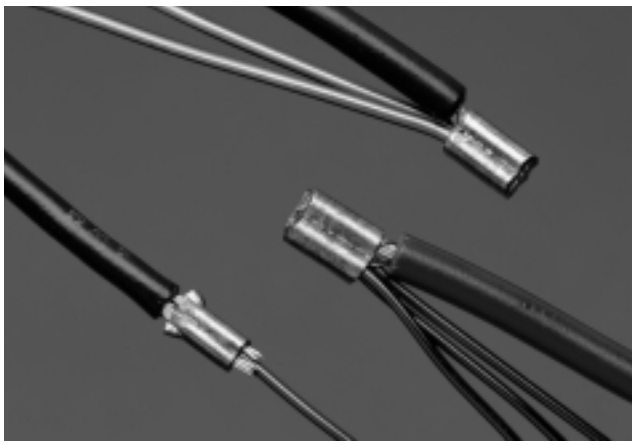
Three magnet wires maximum can be terminated together with stranded lead wire in one splice.

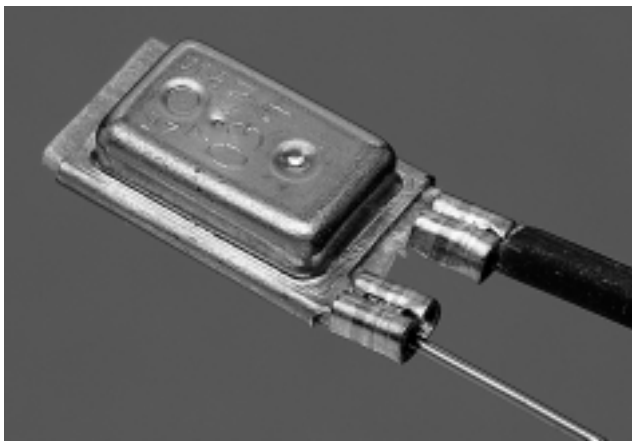
Tyco Electronics provides a wide range of toolset types and Crimpband splices to meet various production requirements.

Depending on your specific application, MTM Crimpband splices are available in 7, 9, 11 and 13 serration versions for terminations in the 400 to 13,000 CMA range.

When aluminum magnet wire is used, MTM Crimpband splices must be tin plated.









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## MTM Crimpband Splices (Continued)

### MTM Crimpband Interconnection System

#### How the System Operates

① **Feed (Magnet Wire Connector Material)**
Machine feeds strip until the strip hits the wire stop.

② **Shear (Blank Length)**
The strip is cut by the cutter block former bar insert tooling.

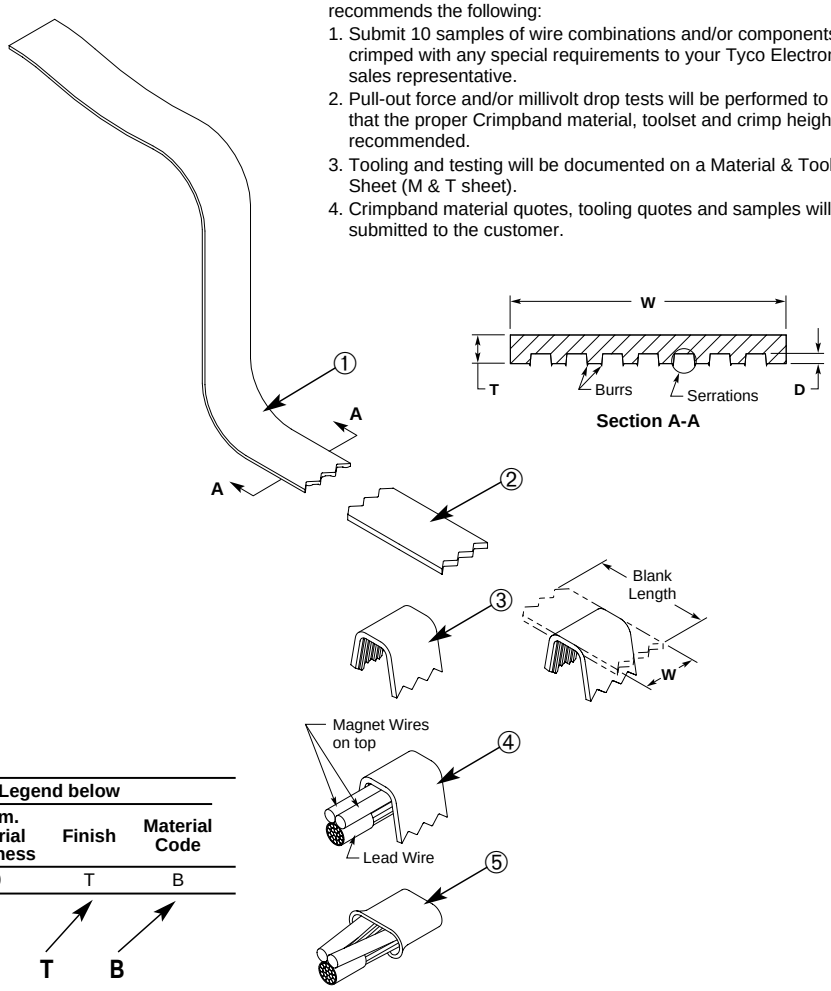
③ **Bend (Crimp Formed)**
The former bar drives the cut strip over the anvil, bending the cut strip into an upside down “U”.

④ **Wire (Placement)**
In Pigtail and Parallel (Thru) splices magnet wires must be placed on top of the lead wire.

⑤ **Crimp (Crimp Formed)**
The anvil retracts as the driver takes the formed strip down into the clincher.

**Notes:** To insure that the proper Crimpband splice is chosen, Tyco Electronics recommends the following:

1. Submit 10 samples of wire combinations and/or components to be crimped with any special requirements to your Tyco Electronics sales representative.
2. Pull-out force and/or millivolt drop tests will be performed to insure that the proper Crimpband material, toolset and crimp heights are recommended.
3. Tooling and testing will be documented on a Material & Tooling Sheet (M & T sheet).
4. Crimpband material quotes, tooling quotes and samples will be submitted to the customer.




#### Connector Specification Code

| Machine Basis | See Figure 1 and/or Legend below | | | | |
|---|---|---|---|---|---|
| | B.L. Dim. Tooling Size | W Dim. Connector Width | T Dim. Material Thickness | Finish | Material Code |
| L | 092 | 6R | 20 | T | B |

**Splice No. Example:** **L 092 6R 20 T B**

#### Legend

| Machine Basis | | |
|---|---|---|
| L | P | G* |
| Leased | Purchase | General |

* Customer has their own Tooling

| Tooling Size Code | Blank Length B/L (Nom.) |
|---|---|
| 032 | .167 |
| 032/036 | .228 |
| 036 | .224 |
| 045 | .246 |
| 051 | .267 |
| 061 | .292 |
| 061/076 | .324 |
| 076 | .339 |
| 076/092 | .361 |
| 092 | .379 |
| 092/125 | .413 |
| 125 | .446 |
| 125/160 | .485 |
| 125/165 | .506 |
| 165 | .546 |

**Note:** For B/L above, .546 consult Tyco Electronics for tooling size code.

| Connector Width Code | | W |
|---|---|---|
| 4R | 5 Serrations | .138 |
| 6R | 7 Serrations | .154 |
| 8R | 9 Serrations | .194 |
| 10R | 11 Serrations | .234 |

| Material Thickness Code | T±.002 Dim. | D Serration Depth |
|---|---|---|
| 12 | .012 | .005 |
| 14 | .014 | .005 |
| 16 | .016 | .007 |
| 20 | .020 | .007 |
| 25 | .025 | .007 |

| Material Code | Material/Finish |
|---|---|
| B | CDA 260 Brass |
| A | CDA 725 Copper/ Nickel Alloy |
| TB | Pre-Tin over CDA 260 Brass |

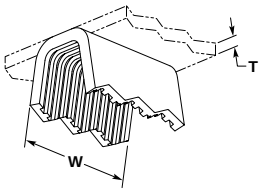
| Wire Size AWG | UL486C Pull Out Force Requirements Underwriters Laboratory (lbs.) |
|---|---|
| 26 | 3 |
| 24 | 5 |
| 22 | 8 |
| 20 | 10 |
| 18 | 10 |
| 16 | 15 |
| 14 | 25 |
| 12 | 35 |
| 10 | 40 |



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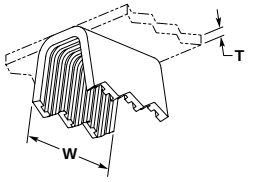
## MTM Crimpband Splices (Continued)

### 11 Serrations




| AWG/ mm² | Wire Range Solid Dia. | CMA Range | Stock Thk. (T) | Mat'l Width (W) | Material | Toolset | Part Number | Descriptive X-ref |
|---|---|---|---|---|---|---|---|---|
| 14½-11½<br>1.80-4.00 | **.059-.087**<br>1.50-2.21 | 3500-7500 | **.025**<br>0.64 | **.234**<br>5.94 | Brass | 125/165 | 1601842-1 | P125/<br>16510R25B |
| 14½-11½<br>1.80-4.00 | **.059-.087**<br>1.50-2.21 | 3500-7500 | **.025**<br>0.64 | **.234**<br>5.94 | Tin Plated Brass | 125/165 | 1601705-1 | L125/<br>16510R25TB |
| 13½-10½<br>2.54-4.50 | **.071-.097**<br>1.70-2.46 | 4500-9500 | **.025**<br>0.64 | **.234**<br>5.94 | Brass | 165/200 | 1601847-1 | P165/<br>20010R25B |
| 13½-10½<br>2.54-4.50 | **.071-.097**<br>1.70-2.46 | 4500-9500 | **.025**<br>0.64 | **.234**<br>5.94 | Tin Plated Brass | 165/200 | 1601848-1 | P165/<br>20010R25TB |

### 9 Serrations

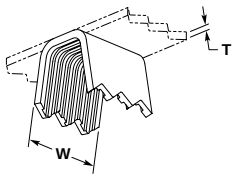



| AWG/ mm² | Wire Range Solid Dia. | CMA Range | Stock Thk. (T) | Mat'l Width (W) | Material | Toolset | Part Number | Descriptive X-ref |
|---|---|---|---|---|---|---|---|---|
| 24-20<br>0.20-0.50 | **.020-.033**<br>0.51-0.84 | 400-1100 | **.016**<br>0.41 | **.194**<br>4.93 | Tin Plated Brass | 032/036 | 1601794-1† | P032/<br>0368R16TB |
| 20½-16<br>0.45-1.30 | **.030-.051**<br>0.76-1.29 | 900-2600 | **.018**<br>0.46 | **.194**<br>4.93 | Tin Plated Brass | 061 | 1601607-1† | L0618R16TB |
| 20½-16<br>0.45-1.30 | **.030-.051**<br>0.76-1.29 | 900-2600 | **.018**<br>0.46 | **.194**<br>4.93 | Brass | 061 | 1601608-1 | L0618R20B |
| 20½-16<br>0.45-1.30 | **.030-.051**<br>0.76-1.29 | 900-2600 | **.018**<br>0.46 | **.194**<br>4.93 | Tin Plated Brass | 061 | 1601814-1† | P0618R20TB |
| 18-14<br>0.80-2.00 | **.040-.063**<br>1.02-1.60 | 1600-4000 | **.016**<br>0.41 | **.194**<br>4.93 | Tin Plated Brass | 076 | 1601824-1 | P0768R16TB |
| 18-14<br>0.80-2.00 | **.040-.063**<br>1.02-1.60 | 1600-4000 | **.020**<br>0.51 | **.194**<br>4.93 | Tin Plated Brass | 076 | 1601857-1 | PO768R20TB |
| 18-14<br>0.80-2.00 | **.040-.063**<br>1.02-1.60 | 1800-4600 | **.020**<br>0.51 | **.194**<br>4.93 | Brass | 076/092 | 1601823-1 | P076/<br>0928R20B |
| 18-14<br>0.80-2.00 | **.040-.063**<br>1.02-1.60 | 1800-4600 | **.020**<br>0.51 | **.194**<br>4.93 | Tin Plated Brass | 076/092 | 1601639-1 | L076/<br>0928R20TB |
| 16-12<br>1.30-3.46 | **.051-.078**<br>1.29-1.98 | 2600-6100 | **.020**<br>0.51 | **.194**<br>4.93 | Brass | 092/125 | 1601833-1 | P092/<br>1258R20B |
| 16-12<br>1.30-3.46 | **.051-.078**<br>1.29-1.98 | 2600-6100 | **.020**<br>0.51 | **.194**<br>4.93 | Tin Plated Brass | 092/125 | 1601677-1 | L092/<br>1258R20TB |
| 16-12<br>1.30-3.46 | **.051-.078**<br>1.29-1.98 | 2600-6100 | **.025**<br>0.64 | **.194**<br>4.93 | Brass | 092/125 | 1601678-1† | L092/<br>1258R25B |
| 16-12<br>1.30-3.46 | **.051-.078**<br>1.29-1.98 | 2600-6100 | **.025**<br>0.64 | **.194**<br>4.93 | Tin Plated Brass | 092/125 | 1601835-1† | P092/<br>1258R25TB |
| 15½-12<br>1.54-3.46 | **.055-.082**<br>1.40-2.10 | 3000-6750 | **.016**<br>0.41 | **.194**<br>4.93 | Brass | 125 | 1601717-1† | L1258R16B |
| 15½-12<br>1.54-3.46 | **.055-.082**<br>1.40-2.10 | 3000-6750 | **.016**<br>0.41 | **.194**<br>4.93 | Tin Plated Brass | 125 | 1601718-1 | L1258R16TB |
| 15½-12<br>1.54-3.46 | **.055-.082**<br>1.40-2.10 | 3000-6750 | **.020**<br>0.51 | **.194**<br>4.93 | Brass | 125 | 1601846-1 | P1258R20B |
| 15½-12<br>1.54-3.46 | **.055-.082**<br>1.40-2.10 | 3000-6750 | **.025**<br>0.64 | **.194**<br>4.93 | Brass | 125 | 1601719-1 | L1258R25B |
| 14½-11½<br>1.80-4.00 | **.059-.087**<br>1.50-2.21 | 3500-7500 | **.025**<br>0.64 | **.194**<br>4.93 | Brass | 125/165 | 1601706-1 | L125/<br>1658R25B |
| 14½-11½<br>1.80-4.00 | **.059-.087**<br>1.50-2.21 | 3500-7500 | **.025**<br>0.64 | **.194**<br>4.93 | Tin Plated Brass | 125/165 | 1601707-1 | L125/<br>1658R25TB |
| 14-11<br>2.00-4.20 | **.063-.092**<br>1.60-2.34 | 4000-8500 | **.025**<br>0.64 | **.194**<br>4.93 | Tin Plated Brass | 165 | 1601750-1† | L1658R25TB |
| 11½-9<br>4.00-6.50 | **.084-.114**<br>2.13-2.90 | 7000-13000 | **.025**<br>0.64 | **.194**<br>4.93 | Tin Plated Brass | 200/202 | 1601761-1 | L200/<br>2028R25TB |

† These part numbers are available upon special request; contact Tyco Electronics Engineering for details.

## MTM Crimpband Splices (Continued)

### 7 Serrations




| AWG/ mm² | Wire Range Solid Dia. | CMA Range | Stock Thk. (T) | Mat'l Width (W) | Material | Toolset | Part Number | Descriptive X-ref |
|---|---|---|---|---|---|---|---|---|
| 27½-21<br>0.09-0.40 | **.013-.028**<br>0.33-0.71 | 170-800 | **.012**<br>0.30 | **.154**<br>3.91 | Brass | 032 | 1601800-1 | P0326R12BUF[1] |
| 24-20<br>0.20-0.50 | **.020-.033**<br>0.51-0.84 | 400-1100 | **.012**<br>0.30 | **.154**<br>3.91 | Brass | 032/036 | 1601539-1 | L032/<br>0366R12B |
| 24-20<br>0.20-0.50 | **.020-.033**<br>0.51-0.84 | 400-1100 | **.012**<br>0.30 | **.154**<br>3.91 | Cu Ni | 032/036 | 1601538-1 | L032/<br>0366R12AUF[1] |
| 24-20<br>0.20-0.50 | **.020-.033**<br>0.51-0.84 | 400-1100 | **.016**<br>0.41 | **.154**<br>3.91 | Brass | 032/036 | 1601540-1 | L032/<br>0366R16B |
| 24-20<br>0.20-0.50 | **.020-.033**<br>0.51-0.84 | 400-1100 | **.016**<br>0.41 | **.154**<br>3.91 | Tin Plated Brass | 032/036 | 1601793-1 | P032/<br>0366R16TB |
| 22-19<br>0.38-0.60 | **.024-.036**<br>0.70-0.91 | 600-1300 | **.016**<br>0.41 | **.154**<br>3.91 | Brass | 045 | 1601559-1 | L0456R16B |
| 22-19<br>0.38-0.60 | **.024-.036**<br>0.70-0.91 | 600-1300 | **.020**<br>0.51 | **.154**<br>3.91 | Brass | 045 | 1601560-1† | L0456R20B |
| 20½-16<br>0.45-1.30 | **.030-.051**<br>0.76-1.29 | 900-2600 | **.016**<br>0.41 | **.154**<br>3.91 | Brass | 061 | 1601604-1 | L0616R16B |
| 20½-16<br>0.45-1.30 | **.030-.051**<br>0.76-1.29 | 900-2600 | **.016**<br>0.41 | **.154**<br>3.91 | Tin Plated Brass | 061 | 1601606-1 | L0616R16TB |
| 18-14<br>0.80-2.00 | **.040-.063**<br>1.02-1.60 | 1600-4000 | **.016**<br>0.41 | **.154**<br>3.91 | Brass | 076 | 1601644-1 | L0766R16B |
| 18-14<br>0.80-2.00 | **.040-.063**<br>1.02-1.60 | 1600-4000 | **.016**<br>0.41 | **.154**<br>3.91 | Tin Plated Brass | 076 | 1601646-1† | L0766R16TB |
| 18-14<br>0.80-2.00 | **.040-.063**<br>1.02-1.60 | 1600-4000 | **.020**<br>0.51 | **.154**<br>3.91 | Brass | 076 | 1601647-1† | L0766R20B |
| 17½-13½<br>0.95-2.54 | **.042-.068**<br>1.07-1.80 | 1800-4600 | **.016**<br>0.41 | **.154**<br>3.91 | Brass | 076/092 | 1601637-1 | L076/<br>0926R16BX |
| 16½-13<br>1.10-2.60 | **.047-.072**<br>1.19-1.83 | 2200-5200 | **.016**<br>0.41 | **.154**<br>3.91 | Tin Plated Brass | 092 | 1601683-1 | L0926R16TB |
| 16-12<br>1.30-3.46 | **.051-.078**<br>1.29-1.98 | 2600-6100 | **.016**<br>0.41 | **.154**<br>3.91 | Tin Plated Brass | 092/125 | 1601675-1 | L092/<br>1256R16TB |
| 16-12<br>1.30-3.46 | **.051-.078**<br>1.29-1.98 | 2600-6100 | **.020**<br>0.51 | **.154**<br>3.91 | Brass | 092/125 | 1601832-1 | P092/<br>1256R20B |
| 15½-12<br>1.54-3.46 | **.055-.082**<br>1.40-2.10 | 3000-6750 | **.012**<br>0.30 | **.154**<br>3.91 | Brass | 125 | 1601844-1 | P1256R12B |
| 15½-12<br>1.54-3.46 | **.055-.082**<br>1.40-2.10 | 3000-6750 | **.016**<br>0.41 | **.154**<br>3.91 | Brass | 125 | 1601845-1 | P1256R16B |
| 15½-12<br>1.54-3.46 | **.055-.082**<br>1.40-2.10 | 3000-6750 | **.016**<br>0.41 | **.154**<br>3.91 | Tin Plated Brass | 125 | 1601716-1† | L1256R16TB |

[1] UF designates Ultra-Fine serrations which are recommended for applications using wire size 28 AWG [0.32 mm] or smaller.
† These part numbers are available upon special request; contact Tyco Electronics Engineering for details.



Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.
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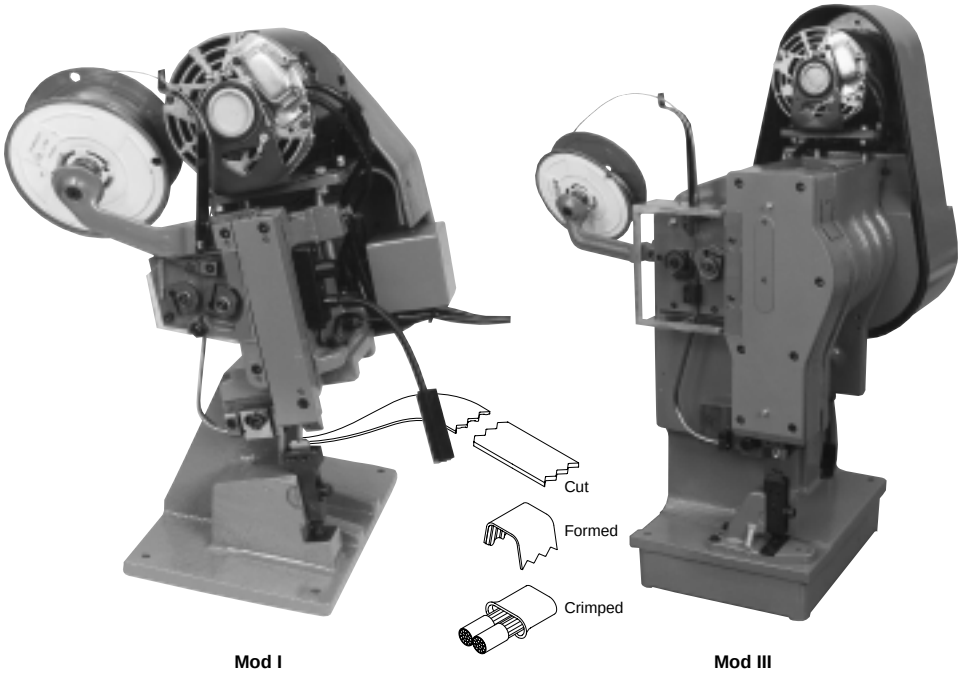
## RTM Crimpband Splices

### Product Facts

- **Made from a continuous coil of "Ribbon Connector" material**
- **RTM Crimpband have grooved serrations for improved axial retention.**
- **Available in brass, tin-plated brass and copper-nickel alloy (CA725) material**
- **Make parallel or pigtail connections on same machine**
- **Used for electrical and non-electrical connections.**
- **100% of RTM Crimpband material is used in scrap free terminations**
- **Crimpband material coupled with appropriate toolsets accommodate specific CMA ranges**
- **Produced in Tyco Electronics equipment on your production floor**
- **Meets UL 486C crimp tensile requirements**

### Applications

- **Stranded and solid wire-to-wire connections**
- **Light bulb LED assembly**
- **Switch lead assembly**
- **Resistor lead assembly**
- **Printed circuit board lead assembly**
- **Flex-film lead assembly**
- **Glass reed switch lead assembly**




**Mod I** **Mod III**

Tyco Electronics features the AMP RTM Crimpband system that is comprised of two key features: the semi-automatic termination machine and a reel of RTM Crimpband material.

In a one-step crimping operation, the machine feeds, cuts, forms and crimps the material to provide a low-cost, high reliability crimp connection.

The RTM Crimpband splices are formed during the crimping process from milled longitudinal groove material that produce rolled, rounded serrations.

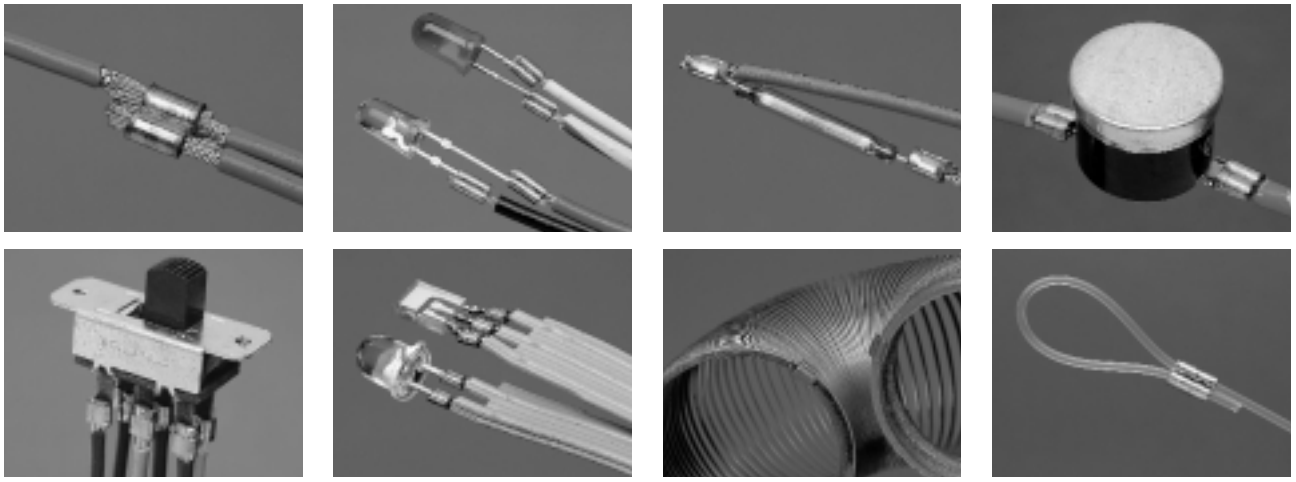
They are designed to terminate pre-stripped stranded and solid wire conductors together as well as wire conductors to switch tabs, resistors, printed circuit board, flex circuit and light bulb LED and glass reed switch assemblies, etc.

The flexibility of the RTM Crimpband system provides opportunity for use in custom applications for either electrical and / or mechanical connections.

Tyco Electronics provides a wide range of toolset types and crimpband splices to meet various production requirements.

Depending on your specific application, RTM Crimpband splices are available in 3, 6, 7, 8, 9, 10 14 and 20 ridge serration versions for terminations in the 170 to 13,000 CMA range.





## RTM Crimpband Splices (Continued)

### RTM Crimpband Interconnection System

#### How the System Operates

① **Feed (Ribbon Connector Material)**
Machine feeds strip until the strip hits the wire stop.

② **Shear (Blank Length)**
The strip is cut by the cutter block former bar insert tooling.

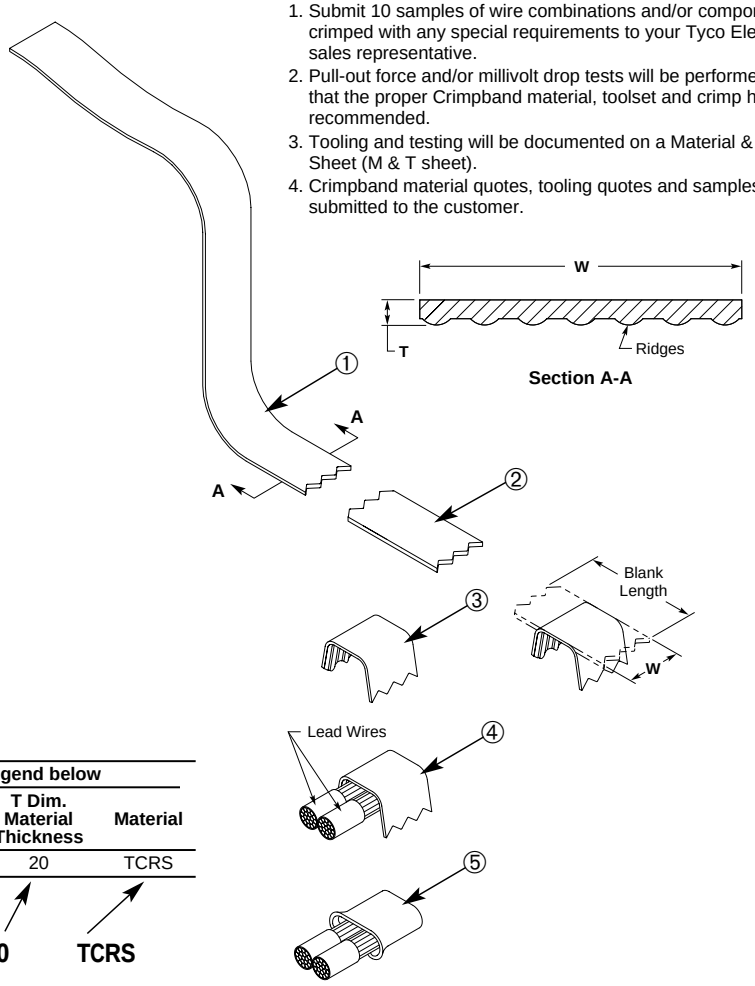
③ **Bend (Crimp Formed)**
The former bar drives the cut strip over the anvil, bending the cut strip into an upside down "U".

④ **Wire (Placement)**
Pigtail and Parallel (Thru) splice terminations are made on the same machine.

⑤ **Crimp (Crimp Formed)**
The anvil retracts as the driver takes the formed strip down into the clincher.

**Notes:** To insure that the proper Crimpband splice is chosen, Tyco Electronics recommends the following:

1. Submit 10 samples of wire combinations and/or components to be crimped with any special requirements to your Tyco Electronics sales representative.
2. Pull-out force and/or millivolt drop tests will be performed to insure that the proper Crimpband material, toolset and crimp heights are recommended.
3. Tooling and testing will be documented on a Material & Tooling Sheet (M & T sheet).
4. Crimpband material quotes, tooling quotes and samples will be submitted to the customer.




### Connector Specification Code

| Machine Basis | See Figure 1 and/or Legend below | | | |
|---|---|---|---|---|
| | B.L. Dim. Tooling Size | W Dim. Connector Width | T Dim. Material Thickness | Material |
| L | 092 | F | 20 | TCRS |

**Splice No. Example:** **L** **092** **F** **20** **TCRS**

### Legend

| Machine Basis | |
|---|---|
| L | P |
| Leased | Purchase |

| Tooling Size Code | Blank Length B/L (Nom.) |
|---|---|
| 032 | .167 |
| 032/036 | .228 |
| 036 | .224 |
| 045 | .246 |
| 051 | .267 |
| 061 | .292 |
| 061/076 | .324 |
| 076 | .339 |
| 076/092 | .361 |
| 092 | .379 |
| 092/125 | .413 |
| 125 | .446 |
| 125/160 | .485 |
| 125/165 | .506 |
| 165 | .546 |

**Note:** For B/L above, .546 consult factory for tooling size code

| Connector Width Code | W Dim. | N No. of Ridges |
|---|---|---|
| B | .076 | 3 |
| C | .138 | 6 |
| D | .154 | 7 |
| E | .185 | 8 |
| F | .216 | 9 |
| G | .234 | 10 |
| H | .247 | 10 |
| L | .086 | 3 |
| M | .330 | 14 |
| N | .500 | 20 |
| P | .114 | 5 |

| Material Thickness Code | T±.002 Dim. |
|---|---|
| 12 | .012 |
| 16 | .016 |
| 18 | .018 |
| 20 | .020 |
| 22 | .022 |
| 24 | .024 |
| 25 | .025 |

| Material Code | Material/Finish |
|---|---|
| B | CDA 260 Brass |
| A | CDA 725 Copper/ Nickel Alloy |
| TB | Pre-Tin over CDA 260 Brass |
| TCRS | 1010 Cold Rolled Steel, Tin Plated |
| SS | 301 or 302 Stainless Steel |
| ST | Stainless Steel, Tin Plated |

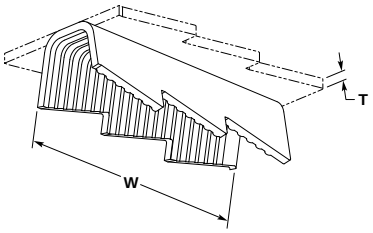
| Wire Size AWG | UL486C Pull Out Force Requirements Underwriters Laboratory (lbs.) |
|---|---|
| 26 | 3 |
| 24 | 5 |
| 22 | 8 |
| 20 | 10 |
| 18 | 10 |
| 16 | 15 |
| 14 | 25 |
| 12 | 35 |
| 10 | 40 |



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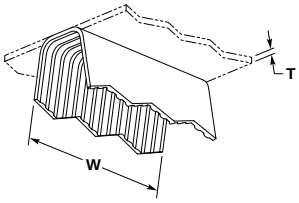
## RTM Crimpband Splices (Continued)

### 20 Ridges




| AWG/ mm² | Wire Range Solid Dia. | CMA Range | Stock Thk. (T) | Mat'l Width (W) | Material | Toolset | Part Number | Descriptive X-ref |
|---|---|---|---|---|---|---|---|---|
| 11½-9<br>4.00-6.50 | **.084-.114**<br>2.13-2.90 | 7000-13000 | **.020**<br>0.51 | **.500**<br>12.70 | Tin Plated Brass | 200/202 | 1601771-1 | L200/202N20TB |

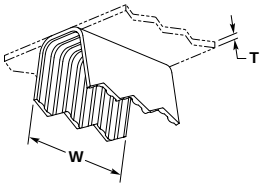
### 14 Ridges




| AWG/ mm² | Wire Range Solid Dia. | CMA Range | Stock Thk. (T) | Mat'l Width (W) | Material | Toolset | Part Number | Descriptive X-ref |
|---|---|---|---|---|---|---|---|---|
| 22-19<br>0.38-0.60 | **.024-.036**<br>0.61-0.91 | 600-1300 | **.012**<br>0.30 | **.330**<br>8.38 | Cu Ni | 045 | 1601577-1† | L045M12A |
| 22-19<br>0.38-0.60 | **.024-.036**<br>0.61-0.91 | 600-1300 | **.012**<br>0.30 | **.330**<br>8.38 | Brass | 045 | 1601578-1 | L045M12B |

† These part numbers are available upon special request; contact Tyco Electronics Engineering for details.

### 10 Ridges




| AWG/ mm² | Wire Range Solid Dia. | CMA Range | Stock Thk. (T) | Mat'l Width (W) | Material | Toolset | Part Number | Descriptive X-ref |
|---|---|---|---|---|---|---|---|---|
| 22-19<br>0.38-0.60 | **.024-.036**<br>0.61-0.91 | 600-1300 | **.012**<br>0.30 | **.234**<br>5.94 | Brass | 045 | 1601575-1 | L045G12B |
| 21-18½<br>0.40-0.75 | **.028-.039**<br>0.71-0.99 | 800-1500 | **.016**<br>0.41 | **.234**<br>5.94 | Cu Ni | 051 | 1601593-1† | L051G16A |
| 20½-16<br>0.45-1.30 | **.030-.051**<br>0.76-1.29 | 900-2600 | **.012**<br>0.30 | **.234**<br>5.94 | Brass | 061 | 1601632-1† | L061G12B |
| 20½-16<br>0.45-1.30 | **.030-.051**<br>0.76-1.29 | 900-2600 | **.020**<br>0.51 | **.234**<br>5.94 | Brass | 061 | 1601633-1 | L061G20B |
| 11½-9<br>4.00-6.50 | **.084-.114**<br>2.13-2.90 | 7000-13000 | **.020**<br>0.51 | **.234**<br>5.94 | Brass | 200/202 | 1601853-1 | P200/ 202G20B |
| 11½-9<br>4.00-6.50 | **.084-.114**<br>2.13-2.90 | 7000-13000 | **.025**<br>0.64 | **.234**<br>5.94 | Brass | 200/202 | 1601769-1 | L200/ 202G25BX |

† These part numbers are available upon special request; contact Tyco Electronics Engineering for details.





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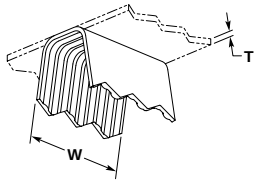
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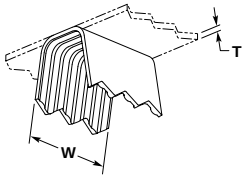
## RTM Crimpband Splices (Continued)

### 9 Ridges



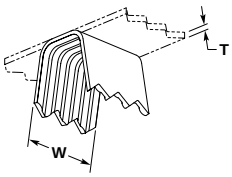

| AWG/ mm² | Wire Range Solid Dia. | CMA Range | Stock Thk. (T) | Mat'l Width (W) | Material | Toolset | Part Number | Descriptive X-ref |
|---|---|---|---|---|---|---|---|---|
| 22-19<br>0.38-0.60 | **.024-.036**<br>0.61-0.91 | 600-1300 | **.012**<br>0.30 | **.216**<br>5.49 | Stainless Steel | 045 | 1601807-1 | P045F12SS |
| 20½-16<br>0.45-1.30 | **.030-.051**<br>0.76-1.29 | 900-2600 | **.012**<br>0.30 | **.216**<br>5.49 | Stainless Steel | 061 | 1601520-1 | G061F12SS |

### 8 Ridges




| AWG/ mm² | Wire Range Solid Dia. | CMA Range | Stock Thk. (T) | Mat'l Width (W) | Material | Toolset | Part Number | Descriptive X-ref |
|---|---|---|---|---|---|---|---|---|
| 24-20<br>0.20-0.50 | **.020-.033**<br>0.51-0.84 | 400-1100 | **.012**<br>0.30 | **.185**<br>4.70 | Cu Ni | 032/036 | 1601553-1 | L032/<br>036E12A |
| 18-14<br>0.80-2.00 | **.040-.063**<br>1.02-1.60 | 1600-4000 | **.018**<br>0.46 | **.185**<br>4.70 | Tin Plated CRS | 076 | 1601669-1 | L076E18TCRS |
| 11½-9<br>4.00-6.50 | **.084-.114**<br>2.13-2.90 | 7000-13000 | **.024**<br>0.61 | **.185**<br>4.70 | Brass | 200/202 | 1601768-1 | L200/<br>202E24B |

### 7 Ridges




| AWG/ mm² | Wire Range Solid Dia. | CMA Range | Stock Thk. (T) | Mat'l Width (W) | Material | Toolset | Part Number | Descriptive X-ref |
|---|---|---|---|---|---|---|---|---|
| 24-20<br>0.20-0.50 | **.020-.033**<br>0.51-0.84 | 400-1100 | **.012**<br>0.30 | **.154**<br>3.91 | Brass | 032/036 | 1601550-1 | L032/<br>036D12B |
| 24-20<br>0.20-0.50 | **.020-.033**<br>0.51-0.84 | 400-1100 | **.016**<br>0.41 | **.154**<br>3.91 | Cu Ni | 032/036 | 1601551-1 | L032/<br>036D16A |
| 24-20<br>0.20-0.50 | **.020-.033**<br>0.51-0.84 | 400-1100 | **.016**<br>0.41 | **.154**<br>3.91 | Brass | 032/036 | 1601797-1 | P032/<br>036D16B |
| 24-20<br>0.20-0.50 | **.020-.033**<br>0.51-0.84 | 400-1100 | **.016**<br>0.41 | **.154**<br>3.91 | Tin Plated Brass | 032/036 | 1601798-1 | P032/<br>036D16TB |
| 22-19<br>0.38-0.60 | **.024-.036**<br>0.61-0.91 | 600-1300 | **.012**<br>0.30 | **.154**<br>3.91 | Brass | 045 | 1601572-1 | L045D12B |
| 22-19<br>0.38-0.60 | **.024-.036**<br>0.61-0.91 | 600-1300 | **.016**<br>0.41 | **.154**<br>3.91 | Cu Ni | 045 | 1601573-1 | L045D16A |



Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.

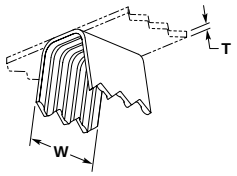
Dimensions are shown for reference purposes only. Specifications subject to change.

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## RTM Crimpband Splices (Continued)

### 7 Ridges (Continued)




| AWG/ mm² | Wire Range Solid Dia. | CMA Range | Stock Thk. (T) | Mat'l Width (W) | Material | Toolset | Part Number | Descriptive X-ref |
|---|---|---|---|---|---|---|---|---|
| 22-19<br>0.38-0.60 | **.024-.036**<br>0.61-0.91 | 600-1300 | **.016**<br>0.41 | **.154**<br>3.91 | Brass | 045 | 1601507-1† | G045D16B |
| 21-18½<br>0.40-0.75 | **.028-.039**<br>0.71-0.99 | 800-1500 | **.012**<br>0.30 | **.154**<br>3.91 | Brass | 051 | 1601587-1 | L051D12B |
| 21-18½<br>0.40-0.75 | **.028-.039**<br>0.71-0.99 | 800-1500 | **.016**<br>0.41 | **.154**<br>3.91 | Brass | 051 | 1601588-1 | L051D16B |
| 21-18½<br>0.40-0.75 | **.028-.039**<br>0.71-0.99 | 800-1500 | **.020**<br>0.51 | **.154**<br>3.91 | Nickel Plated Steel | 051 | 1601591-1 | L051D20NPS |
| 21-18½<br>0.40-0.75 | **.028-.039**<br>0.71-0.99 | 800-1500 | **.020**<br>0.51 | **.154**<br>3.91 | Tin Plated CRS | 051 | 1601811-1† | P051D20TCRS |
| 20½-16<br>0.45-1.30 | **.030-.051**<br>0.76-1.29 | 900-2600 | **.012**<br>0.30 | **.154**<br>3.91 | Cu Ni | 061 | 1601818-1† | P061D12A |
| 20½-16<br>0.45-1.30 | **.030-.051**<br>0.76-1.29 | 900-2600 | **.012**<br>0.30 | **.154**<br>3.91 | Brass | 061 | 1601620-1† | L061D12B |
| 20½-16<br>0.45-1.30 | **.030-.051**<br>0.76-1.29 | 900-2600 | **.012**<br>0.30 | **.154**<br>3.91 | Tin Plated Brass | 061 | 1601514-1† | G061D12TB |
| 20½-16<br>0.45-1.30 | **.030-.051**<br>0.76-1.29 | 900-2600 | **.016**<br>0.41 | **.154**<br>3.91 | Cu Ni | 061 | 1601819-1 | P061D16A |
| 20½-16<br>0.45-1.30 | **.030-.051**<br>0.76-1.29 | 900-2600 | **.016**<br>0.41 | **.154**<br>3.91 | Brass | 061 | 1601820-1 | P061D16B |
| 20½-16<br>0.45-1.30 | **.030-.051**<br>0.76-1.29 | 900-2600 | **.016**<br>0.41 | **.154**<br>3.91 | Tin Plated Brass | 061 | 1601623-1 | L061D16TB |
| 20½-16<br>0.45-1.30 | **.030-.051**<br>0.76-1.29 | 900-2600 | **.018**<br>0.46 | **.154**<br>3.91 | Brass | 061 | 1601625-1 | L061D18B |
| 20½-16<br>0.45-1.30 | **.030-.051**<br>0.76-1.29 | 900-2600 | **.018**<br>0.46 | **.154**<br>3.91 | Tin Plated Brass | 061 | 1601628-1 | L061D18TB |
| 20½-16<br>0.45-1.30 | **.030-.051**<br>0.76-1.29 | 900-2600 | **.020**<br>0.51 | **.154**<br>3.91 | Cu Ni | 061 | 1601629-1 | L061D20A |
| 20½-16<br>0.45-1.30 | **.030-.051**<br>0.76-1.29 | 900-2600 | **.020**<br>0.51 | **.154**<br>3.91 | Brass | 061 | 1601630-1 | L061D20B |
| 20½-16<br>0.45-1.30 | **.030-.051**<br>0.76-1.29 | 900-2600 | **.020**<br>0.51 | **.154**<br>3.91 | Tin Plated Brass | 061 | 1601631-1 | L061D20TBX |
| 20-15<br>0.60-1.60 | **.033-.057**<br>0.84-1.45 | 1100-3200 | **.016**<br>0.41 | **.154**<br>3.91 | Brass | 061/076 | 1601601-1 | L061/076D16B |
| 19½-14½<br>0.60-1.80 | **.035-.061**<br>0.89-1.54 | 1200-3700 | **.016**<br>0.41 | **.154**<br>3.91 | Brass | 061/092 | 1601603-1 | L061/092D16B |
| 18-14<br>0.80-2.00 | **.040-.063**<br>1.02-1.60 | 1600-4000 | **.012**<br>0.30 | **.154**<br>3.91 | Cu Ni | 076 | 1601828-1 | P076D12A |
| 18-14<br>0.80-2.00 | **.040-.063**<br>1.02-1.60 | 1600-4000 | **.012**<br>0.30 | **.154**<br>3.91 | Brass | 076 | 1601655-1† | L076D12B |
| 18-14<br>0.80-2.00 | **.040-.063**<br>1.02-1.60 | 1600-4000 | **.016**<br>0.41 | **.154**<br>3.91 | Cu Ni | 076 | 1601656-1 | L076D16A |
| 18-14<br>0.80-2.00 | **.040-.063**<br>1.02-1.60 | 1600-4000 | **.016**<br>0.41 | **.154**<br>3.91 | Brass | 076 | 1601829-1 | P076D16B |
| 18-14<br>0.80-2.00 | **.040-.063**<br>1.02-1.60 | 1600-4000 | **.016**<br>0.41 | **.154**<br>3.91 | Tin Plated Brass | 076 | 1601658-1 | L076D16TB |
| 18-14<br>0.80-2.00 | **.040-.063**<br>1.02-1.60 | 1600-4000 | **.018**<br>0.46 | **.154**<br>3.91 | Cu Ni | 076 | 1601660-1 | L076D18AX |
| 18-14<br>0.80-2.00 | **.040-.063**<br>1.02-1.60 | 1600-4000 | **.018**<br>0.46 | **.154**<br>3.91 | Brass | 076 | 1601661-1 | L076D18B |
| 18-14<br>0.80-2.00 | **.040-.063**<br>1.02-1.60 | 1600-4000 | **.018**<br>0.46 | **.154**<br>3.91 | Tin Plated Brass | 076 | 1601664-1 | L076D18TB |
| 18-14<br>0.80-2.00 | **.040-.063**<br>1.02-1.60 | 1600-4000 | **.020**<br>0.51 | **.154**<br>3.91 | Brass | 076 | 1601665-1 | L076D20B |
| 18-14<br>0.80-2.00 | **.040-.063**<br>1.02-1.60 | 1600-4000 | **.020**<br>0.51 | **.154**<br>3.91 | | 076 | 1601667-1 | L076D20TCRS |
| 18-14<br>0.80-2.00 | **.040-.063**<br>1.02-1.60 | 1600-4000 | **.024**<br>0.61 | **.154**<br>3.91 | Brass | 076 | 1601668-1 | L076D24B |

† These part numbers are available upon special request; contact Tyco Electronics Engineering for details.





Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.

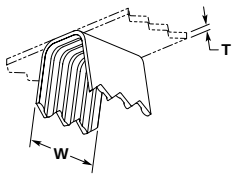
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Technical Support
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## RTM Crimpband Splices (Continued)

### 7 Ridges (Continued)




| AWG/ mm² | Wire Range Solid Dia. | CMA Range | Stock Thk. (T) | Mat'l Width (W) | Material | Toolset | Part Number | Descriptive X-ref |
|---|---|---|---|---|---|---|---|---|
| 17½-13<br>0.95-2.54 | **.042-.068**<br>1.07-1.80 | 1800-4600 | **.016**<br>0.41 | **.154**<br>3.91 | Brass | 076/092 | 1601642-1 | L076/<br>092D16BX |
| 16½-13<br>1.10-2.60 | **.047-.072**<br>1.19-1.83 | 2200-5200 | **.016**<br>0.41 | **.154**<br>3.91 | Cu Ni | 092 | 1601689-1 | L092D16ASP |
| 16½-13<br>1.10-2.60 | **.047-.072**<br>1.19-1.83 | 2200-5200 | **.016**<br>0.41 | **.154**<br>3.91 | Brass | 092 | 1601691-1 | L092D16B |
| 16½-13<br>1.10-2.60 | **.047-.072**<br>1.19-1.83 | 2200-5200 | **.016**<br>0.41 | **.154**<br>3.91 | Tin Plated Brass | 092 | 1601693-1 | L092D16TB |
| 16½-13<br>1.10-2.60 | **.047-.072**<br>1.19-1.83 | 2200-5200 | **.018**<br>0.46 | **.154**<br>3.91 | Cu Ni | 092 | 1601694-1 | L092D18A |
| 16½-13<br>1.10-2.60 | **.047-.072**<br>1.19-1.83 | 2200-5200 | **.018**<br>0.46 | **.154**<br>3.91 | Brass | 092 | 1601695-1 | L092D18B |
| 16½-13<br>1.10-2.60 | **.047-.072**<br>1.19-1.83 | 2200-5200 | **.018**<br>0.46 | **.154**<br>3.91 | Tin Plated Brass | 092 | 1601841-1 | P092D18TB |
| 16½-13<br>1.10-2.60 | **.047-.072**<br>1.19-1.83 | 2200-5200 | **.020**<br>0.51 | **.154**<br>3.91 | Brass | 092 | 1601528-1† | G092D20B |
| 16-12<br>1.30-3.46 | **.051-.078**<br>1.29-1.98 | 2600-6100 | **.020**<br>0.51 | **.154**<br>3.91 | Cu Ni | 092/125 | 1601680-1 | L092/<br>125D20A |
| 16-12<br>1.30-3.46 | **.051-.078**<br>1.29-1.98 | 2600-6100 | **.020**<br>0.51 | **.154**<br>3.91 | Brass | 092/125 | 1601681-1 | L092/<br>125D20B |
| 16-12<br>1.30-3.46 | **.051-.078**<br>1.29-1.98 | 2600-6100 | **.020**<br>0.51 | **.154**<br>3.91 | Tin Plated CRS | 092/125 | 1601682-1 | 092/<br>125D20TCRS |
| 15½-12<br>1.54-3.46 | **.055-.082**<br>1.40-2.10 | 3000-6750 | **.016**<br>0.41 | **.154**<br>3.91 | Brass | 125 | 1601529-1 | G125D16B |
| 15½-12<br>1.54-3.46 | **.055-.082**<br>1.40-2.10 | 3000-6750 | **.018**<br>0.46 | **.154**<br>3.91 | Cu Ni | 125 | 1601531-1 | G125D18A |
| 15½-12<br>1.54-3.46 | **.055-.082**<br>1.40-2.10 | 3000-6750 | **.018**<br>0.46 | **.154**<br>3.91 | Brass | 125 | 1601726-1 | L125D18B |
| 15½-12<br>1.54-3.46 | **.055-.082**<br>1.40-2.10 | 3000-6750 | **.018**<br>0.46 | **.154**<br>3.91 | Tin Plated Brass | 125 | 1601729-1 | L125D18TBX |
| 15½-12<br>1.54-3.46 | **.055-.082**<br>1.40-2.10 | 3000-6750 | **.020**<br>0.51 | **.154**<br>3.91 | Brass | 125 | 1601730-1 | L125D20B |
| 15½-12<br>1.54-3.46 | **.055-.082**<br>1.40-2.10 | 3000-6750 | **.020**<br>0.51 | **.154**<br>3.91 | Tin Plated Brass | 125 | 1601731-1 | L125D20TB |
| 15½-12<br>1.54-3.46 | **.055-.082**<br>1.40-2.10 | 3000-6750 | **.020**<br>0.51 | **.154**<br>3.91 |  | 125 | 1601733-1 | L125D20TCRS |
| 14½-11½<br>1.80-4.00 | **.059-.087**<br>1.50-2.21 | 3500-7500 | **.018**<br>0.46 | **.154**<br>3.91 | Tin Plated Brass | 125/165 | 1601709-1 | L125/<br>165D18TB |
| 14½-11½<br>1.80-4.00 | **.059-.087**<br>1.50-2.21 | 3500-7500 | **.020**<br>0.51 | **.154**<br>3.91 | Cu Ni | 125/165 | 1601710-1 | L125/<br>165D20A |
| 14½-11½<br>1.80-4.00 | **.059-.087**<br>1.50-2.21 | 3500-7500 | **.020**<br>0.51 | **.154**<br>3.91 | Brass | 125/165 | 1601711-1 | L125/<br>165D20B |
| 14½-11½<br>1.80-4.00 | **.059-.087**<br>1.50-2.21 | 3500-7500 | **.020**<br>0.51 | **.154**<br>3.91 | Tin Plated Brass | 125/165 | 1601712-1 | L125/<br>165D20TB |
| 14-11<br>2.00-4.20 | **.063-.092**<br>1.60-2.34 | 4000-8500 | **.020**<br>0.51 | **.154**<br>3.91 | Cu Ni | 165 | 1601754-1† | L165D20A |
| 14-11<br>2.00-4.20 | **.063-.092**<br>1.60-2.34 | 4000-8500 | **.020**<br>0.51 | **.154**<br>3.91 | Brass | 165 | 1601755-1 | L165D20B |
| 13½-10½<br>2.54-4.50 | **.071-.097**<br>1.70-2.46 | 4500-9500 | **.020**<br>0.51 | **.154**<br>3.91 | Brass | 165/200 | 1601532-1 | G165/<br>200D20B |
| 11½-9<br>4.00-6.50 | **.084-.114**<br>2.13-2.90 | 7000-13000 | **.016**<br>0.41 | **.154**<br>3.91 | Brass | 200/202 | 1601764-1 | L200/<br>202D16B |
| 11½-9<br>4.00-6.50 | **.084-.114**<br>2.13-2.90 | 7000-13000 | **.020**<br>0.51 | **.154**<br>3.91 | Cu Ni | 200/202 | 1601765-1 | L200/<br>202D20A |
| 11½-9<br>4.00-6.50 | **.084-.114**<br>2.13-2.90 | 7000-13000 | **.020**<br>0.51 | **.154**<br>3.91 | Brass | 200/202 | 1601852-1 | P200/<br>202D20B |
| 11½-9<br>4.00-6.50 | **.084-.114**<br>2.13-2.90 | 7000-13000 | **.020**<br>0.51 | **.154**<br>3.91 | Tin Plated Brass | 200/202 | 1601766-1 | L200/<br>202D20TB |

† These part numbers are available upon special request; contact Tyco Electronics Engineering for details.



Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.

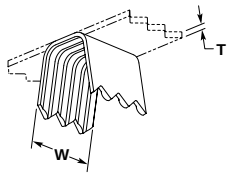
Dimensions are shown for reference purposes only. Specifications subject to change.

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## RTM Crimpband Splices (Continued)

### 6 Ridges




| AWG/ mm² | Wire Range Solid Dia. | CMA Range | Stock Thk. (T) | Mat'l Width (W) | Material | Toolset | Part Number | Descriptive X-ref |
|---|---|---|---|---|---|---|---|---|
| 24-20<br>0.20-0.50 | **.020-.033**<br>0.51-0.84 | 400-1100 | **.012**<br>0.30 | **.138**<br>3.51 | Tin Plated Brass | 032/036 | 1601548-1 | L032/<br>036C12TB |
| 24-20<br>0.20-0.50 | **.020-.033**<br>0.51-0.84 | 400-1100 | **.016**<br>0.41 | **.138**<br>3.51 | Brass | 032/036 | 1601549-1 | L032/<br>036C16B |
| 22-19<br>0.38-0.60 | **.024-.036**<br>0.61-0.91 | 600-1300 | **.012**<br>0.30 | **.138**<br>3.51 | Brass | 045 | 1601566-1 | L045C12B |
| 22-19<br>0.38-0.60 | **.024-.036**<br>0.61-0.91 | 600-1300 | **.016**<br>0.41 | **.138**<br>3.51 | Cu Ni | 045 | 1601569-1 | L045C16A |
| 22-19<br>0.38-0.60 | **.024-.036**<br>0.61-0.91 | 600-1300 | **.016**<br>0.41 | **.138**<br>3.51 | Brass | 045 | 1601571-1 | L045C16B |
| 21-18½<br>0.40-0.75 | **.028-.039**<br>0.71-0.99 | 800-1500 | **.012**<br>0.30 | **.138**<br>3.51 | Brass | 051 | 1601808-1† | P051C12B |
| 21-18½<br>0.40-0.75 | **.028-.039**<br>0.71-0.99 | 800-1500 | **.016**<br>0.41 | **.138**<br>3.51 | Cu Ni | 051 | 1601809-1 | P051C16A |
| 21-18½<br>0.40-0.75 | **.028-.039**<br>0.71-0.99 | 800-1500 | **.016**<br>0.41 | **.138**<br>3.51 | Brass | 051 | 1601810-1 | P051C16B |
| 21-18½<br>0.40-0.75 | **.028-.039**<br>0.71-0.99 | 800-1500 | **.018**<br>0.46 | **.138**<br>3.51 | Brass | 051 | 1601586-1† | L051C18B |
| 20½-16<br>0.45-1.30 | **.030-.051**<br>0.76-1.29 | 900-2600 | **.016**<br>0.41 | **.138**<br>3.51 | Cu Ni | 061 | 1601614-1 | L061C16A |
| 20½-16<br>0.45-1.30 | **.030-.051**<br>0.76-1.29 | 900-2600 | **.016**<br>0.41 | **.138**<br>3.51 | Brass | 061 | 1601511-1 | G061C16B |
| 20½-16<br>0.45-1.30 | **.030-.051**<br>0.76-1.29 | 900-2600 | **.016**<br>0.41 | **.138**<br>3.51 | Tin Plated Brass | 061 | 1601617-1 | L061C16TB |
| 20½-16<br>0.45-1.30 | **.030-.051**<br>0.76-1.29 | 900-2600 | **.018**<br>0.46 | **.138**<br>3.51 | Cu Ni | 061 | 1601618-1 | L061C18AX |
| 20½-16<br>0.45-1.30 | **.030-.051**<br>0.76-1.29 | 900-2600 | **.018**<br>0.46 | **.138**<br>3.51 | Brass | 061 | 1601619-1 | L061C18B |
| 20½-16<br>0.45-1.30 | **.030-.051**<br>0.76-1.29 | 900-2600 | **.020**<br>0.51 | **.138**<br>3.51 | Brass | 061 | 1601513-1† | G061C20B |
| 20-15<br>0.60-1.60 | **.033-.057**<br>0.84-1.45 | 1100-3200 | **.016**<br>0.41 | **.138**<br>3.51 | Brass | 061/076 | 1601597-1 | L061/<br>076C16B |
| 20-15<br>0.60-1.60 | **.033-.057**<br>0.84-1.45 | 1100-3200 | **.016**<br>0.41 | **.138**<br>3.51 | Tin Plated Brass | 061/076 | 1601599-1 | L061/<br>076C16TB |
| 20-15<br>0.60-1.60 | **.033-.057**<br>0.84-1.45 | 1100-3200 | **.018**<br>0.46 | **.138**<br>3.51 | Brass | 061/076 | 1601600-1† | L061/<br>076C18B |
| 18-14<br>0.80-2.00 | **.040-.063**<br>1.02-1.60 | 1600-4000 | **.016**<br>0.41 | **.138**<br>3.51 | Cu Ni | 076 | 1601650-1 | L076C16A |
| 18-14<br>0.80-2.00 | **.040-.063**<br>1.02-1.60 | 1600-4000 | **.016**<br>0.41 | **.138**<br>3.51 | Brass | 076 | 1601651-1 | L076C16B |
| 18-14<br>0.80-2.00 | **.040-.063**<br>1.02-1.60 | 1600-4000 | **.018**<br>0.46 | **.138**<br>3.51 | Cu Ni | 076 | 1601652-1† | L076C18A |
| 18-14<br>0.80-2.00 | **.040-.063**<br>1.02-1.60 | 1600-4000 | **.018**<br>0.46 | **.138**<br>3.51 | Brass | 076 | 1601827-1 | P076C18B |
| 18-14<br>0.80-2.00 | **.040-.063**<br>1.02-1.60 | 1600-4000 | **.018**<br>0.46 | **.138**<br>3.51 |  | 076 | 1601654-1† | L076C18TCRS |
| 17½-13<br>0.95-2.54 | **.042-.068**<br>1.07-1.80 | 1800-4600 | **.016**<br>0.41 | **.138**<br>3.51 | Brass | 076/092 | 1601640-1 | L076/<br>092C16B |
| 16½-13<br>1.10-2.60 | **.047-.072**<br>1.19-1.83 | 2200-5200 | **.016**<br>0.41 | **.138**<br>3.51 | Cu Ni | 092 | 1601837-1 | P092C16AX |
| 16½-13<br>1.10-2.60 | **.047-.072**<br>1.19-1.83 | 2200-5200 | **.016**<br>0.41 | **.138**<br>3.51 | Brass | 092 | 1601687-1 | L092C16B |
| 15½-12<br>1.54-3.46 | **.055-.082**<br>1.40-2.10 | 3000-6750 | **.016**<br>0.41 | **.138**<br>3.51 | Tin Plated Brass | 125 | 1601721-1 | L125C16TB |
| 15½-12<br>1.54-3.46 | **.055-.082**<br>1.40-2.10 | 3000-6750 | **.018**<br>0.46 | **.138**<br>3.51 | Cu Ni | 125 | 1601722-1 | L125C18A |
| 15½-12<br>1.54-3.46 | **.055-.082**<br>1.40-2.10 | 3000-6750 | **.018**<br>0.46 | **.138**<br>3.51 | Brass | 125 | 1601723-1 | L125C18B |

† These part numbers are available upon special request; contact Tyco Electronics Engineering for details.





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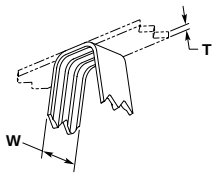
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## RTM Crimpband Splices (Continued)

### 3 Ridges




| AWG/ mm² | Wire Range Solid Dia. | CMA Range | Stock Thk. (T) | Mat'l Width (W) | Material | Toolset | Part Number | Descriptive X-ref |
|---|---|---|---|---|---|---|---|---|
| 27½-21<br>0.09-0.40 | **.013-.028**<br>0.33-0.71 | 170-800 | **.012**<br>0.30 | **.076**<br>1.93 | Brass | 032 | 1601555-1 | L032B12B |
| 24-20<br>0.20-0.50 | **.020-.033**<br>0.51-0.84 | 400-1100 | **.012**<br>0.30 | **.076**<br>1.93 | Cu Ni | 032/036 | 1601542-1 | L032/<br>036B12A |
| 24-20<br>0.20-0.50 | **.020-.033**<br>0.51-0.84 | 400-1100 | **.012**<br>0.30 | **.076**<br>1.93 | Brass | 032/036 | 1601795-1 | P032/<br>036B12B |
| 24-20<br>0.20-0.50 | **.020-.033**<br>0.51-0.84 | 400-1100 | **.016**<br>0.41 | **.076**<br>1.93 | Brass | 032/036 | 1601545-1 | L032/<br>036B16B |
| 24-20<br>0.20-0.50 | **.020-.033**<br>0.51-0.84 | 400-1100 | **.016**<br>0.41 | **.076**<br>1.93 | Tin Plated Brass | 032/036 | 1601546-1 | L032/<br>036B16TB |
| 24-20<br>0.20-0.50 | **.020-.033**<br>0.51-0.84 | 400-1100 | **.018**<br>0.46 | **.076**<br>1.93 | Brass | 032/036 | 1601547-1† | L032/<br>036B18B |
| 22-19<br>0.38-0.60 | **.024-.036**<br>0.61-0.91 | 600-1300 | **.016**<br>0.41 | **.076**<br>1.93 | Cu Ni | 045 | 1601503-1 | G045B16A |
| 22-19<br>0.38-0.60 | **.024-.036**<br>0.61-0.91 | 600-1300 | **.016**<br>0.41 | **.076**<br>1.93 | Brass | 045 | 1601562-1 | L045B16B |
| 22-19<br>0.38-0.60 | **.024-.036**<br>0.61-0.91 | 600-1300 | **.016**<br>0.41 | **.076**<br>1.93 | Tin Plated Brass | 045 | 1601504-1† | G045B16TB |
| 22-19<br>0.38-0.60 | **.024-.036**<br>0.61-0.91 | 600-1300 | **.016**<br>0.41 | **.076**<br>1.93 | Tin Plated Brass | 045 | 1601564-1 | L045B16TBSP |
| 21-18½<br>0.40-0.75 | **.028-.039**<br>0.71-0.99 | 800-1500 | **.016**<br>0.41 | **.076**<br>1.93 | Cu Ni | 051 | 1601580-1† | L051B16A |
| 21-18½<br>0.40-0.75 | **.028-.039**<br>0.71-0.99 | 800-1500 | **.016**<br>0.41 | **.076**<br>1.93 | Brass | 051 | 1601582-1† | L051B16B |
| 21-18½<br>0.40-0.75 | **.028-.039**<br>0.71-0.99 | 800-1500 | **.016**<br>0.41 | **.076**<br>1.93 | Tin Plated Brass | 045 | 1601583-1† | L051B16TB |
| 21-18½<br>0.40-0.75 | **.028-.039**<br>0.71-0.99 | 800-1500 | **.020**<br>0.51 | **.076**<br>1.93 | Brass | 051 | 1601584-1 | L051B20B |
| 20½-16<br>0.45-1.30 | **.030-.051**<br>0.76-1.29 | 900-2600 | **.016**<br>0.41 | **.076**<br>1.93 | Tin Plated Brass | 061 | 1601612-1† | L061B16TB |
| 20½-16<br>0.45-1.30 | **.030-.051**<br>0.76-1.29 | 900-2600 | **.016**<br>0.41 | **.076**<br>1.93 | Cu Ni | 061 | 1601610-1 | L061B16A |
| 20½-16<br>0.45-1.30 | **.030-.051**<br>0.76-1.29 | 900-2600 | **.016**<br>0.41 | **.076**<br>1.93 | Brass | 061 | 1601611-1 | L061B16B |
| 20½-16<br>0.45-1.30 | **.030-.051**<br>0.76-1.29 | 900-2600 | **.016**<br>0.41 | **.076**<br>1.93 | Brass | 061 | 1601635-1 | L061L16B |
| 20-15<br>0.60-1.60 | **.033-.057**<br>0.84-1.45 | 1100-3200 | **.016**<br>0.41 | **.076**<br>1.93 | Tin Plated Brass | 061/076 | 1601596-1 | L061/<br>076B16TBX |
| 18-14<br>0.80-2.00 | **.040-.063**<br>1.02-1.60 | 1600-4000 | **.016**<br>0.41 | **.076**<br>1.93 | Brass | 076 | 1601825-1 | P076B16B |
| 18-14<br>0.80-2.00 | **.040-.063**<br>1.02-1.60 | 1600-4000 | **.020**<br>0.51 | **.076**<br>1.93 | Brass | 076 | 1601649-1 | L076B20B |

† These part numbers are available upon special request; contact Tyco Electronics Engineering for details.



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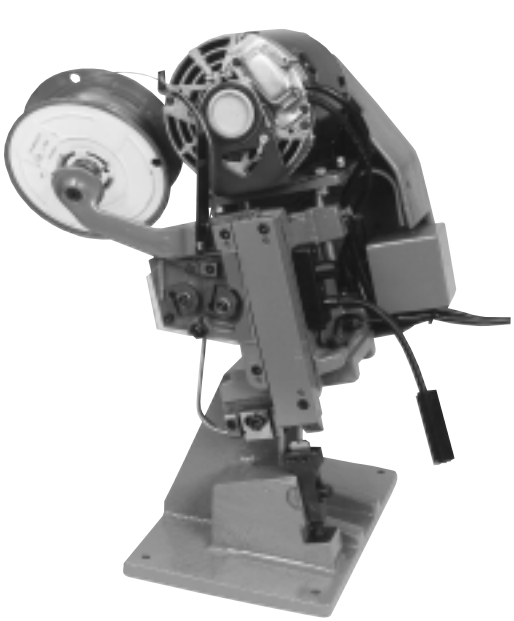
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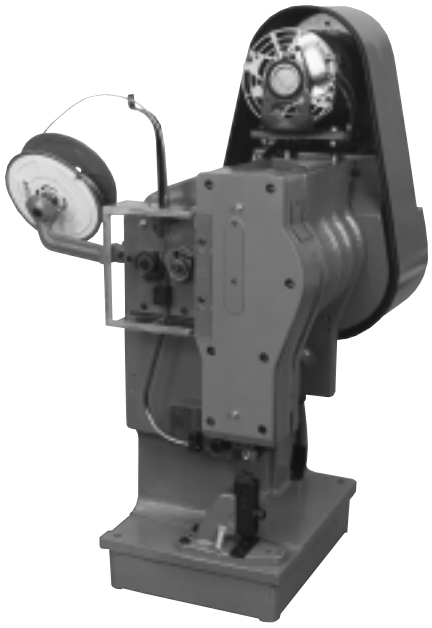
## Crimpband Application Tooling

### Product Facts

- **High Speed Operation — Many times faster than soldering, up to 2,000 crimps per hour**
- **Reliable — Creates uniform connection, unlike soldering**
- **Dependable — The connection is stronger than the wires being crimped**
- **Clean — No heat or noxious solder fumes**
- **Scrap Free — No leftover scrap material**
- **Easy Operation — Simple operator training**
- **Economical — Proven reduction in assembly costs**



Mod I



Mod III

Tyco Electronics offers solderless crimping systems to handle a wide range of wire connections including solid and stranded lead wire, insulated magnet wire, and component leads. Each system is comprised of continuous, serrated Crimpband material and a crimping machine. The Tyco Electronics solution allows the flexibility to create a shape and size, which optimizes the crimp's electrical and mechanical performance.

The Tyco Electronics crimping system produces a very economical and reliable interconnection. Utilizing a continuous Crimpband material the machine will feed, cut form, and crimp your application resulting in a very strong and uniform interconnect crimp.

Whether your application required a wire-to-wire, wire to component leads, wire to terminals, or magnet wire splice termination, the very flexible and dependable crimping machine will provide high-speed scrap free interconnects.

Substantial increase in production interconnection rates can be realized versus traditional soldering. Not to mention it completely eliminates the noxious fumes.

The Mod I crimping system is used when running standard RTM and MTM Crimpband product. In addition, left and right horn termination machines are available when your application requires additional working envelope. The Mod III crimping system is used when stainless steel splices or when large wire gauge applications warrant additional force requirements.

### Tooling and Equipment Selector

| Volume To Be Crimped | | Recommended Equipment | |
|---|---|---|---|
| CMA | in²/mm² | Toolset Size | Machine |
| 140-800 | **.003-.016**<br>0.07 - 0.40 | 032 | Mod I |
| 400-1200 | **.008-.024**<br>0.20 - 0.60 | 032/036 | Mod I |
| 600-1600 | **.012-.032**<br>0.30 - 0.81 | 045 | Mod I |
| 900-2600 | **.018-.052**<br>0.45 - 1.31 | 061 | Mod I |
| 1600-4000 | **.032-.080**<br>0.81 - 2.02 | 076 | Mod I |
| 2200-5200 | **.044-.104**<br>1.11 - 2.63 | 092 | Mod I |
| 3000-6750 | **.060-.135**<br>1.52 - 3.42 | 125 | Mod I |
| 4000-8500 | **.080-.170**<br>2.02 - 4.31 | 165 | Mod III |
| 5000-11000 | **.010-.219**<br>2.53 - 5.57 | 200 | Mod III |
| 6000-13000 | **.120-.259**<br>3.04 - 6.58 | 200/202 | Mod III |

1. Calculate the combined volume of the wires or components in a crimp.
2. Select Tooling and Machine.
3. Submit samples for test and equipment conditioning.
4. Toolsets are easily interchangeable within same machine type.





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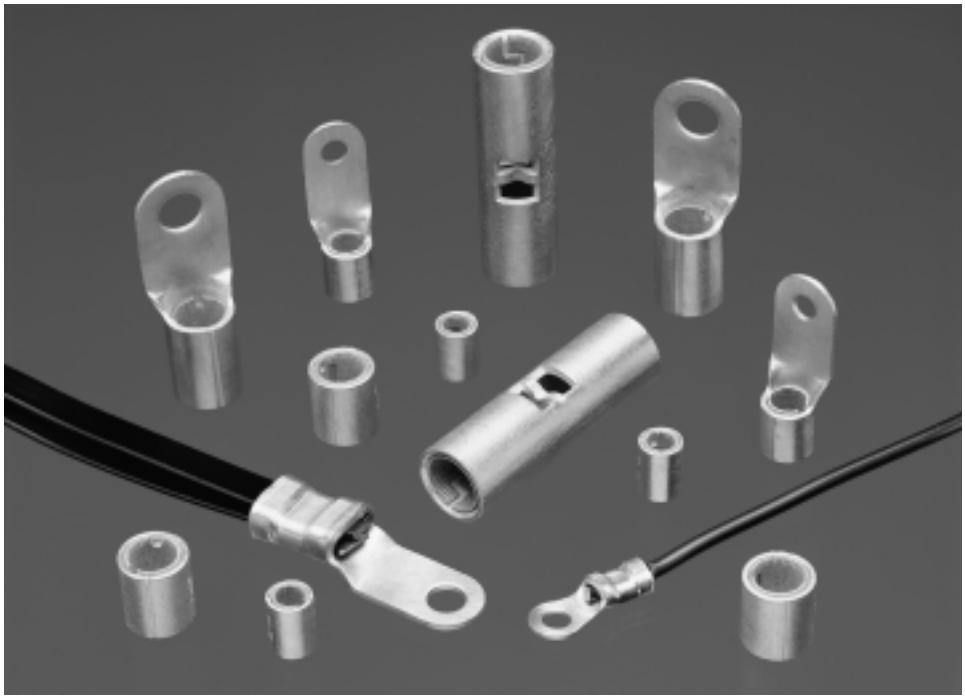
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## COPALUM Terminals and Splices (For Solid and Stranded Aluminum or Copper Wire)

### Product Facts

- **COPALUM terminates film insulated solid aluminum, film insulated solid copper, or uninsulated stranded copper conductors — individually or in combination**
- **Round wire — up to 10 wires can be terminated in a single terminal or splice**
- **Stripping of film insulated solid conductors not required when the insulation piercing technique/ tooling are utilized**
- **Eliminates messy inhibitors**
- **Available for a broad range of wire sizes — from 16 to 4/0 AWG [1.25 to 105 mm$^2$]**
- **Provides stable electrical and mechanical performance in a low-cost reliable termination**



### Applications

- **Transformers**
- **Coil windings**
- **Motors**
- **Regulators**

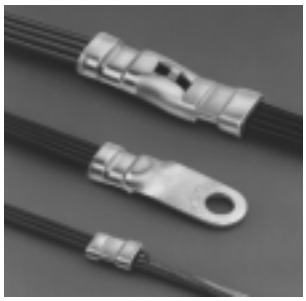
COPALUM terminals and splices provide reliable, low cost terminations for film insulated solid aluminum, film insulated solid copper, or uninsulated stranded copper conductors. Stranded solid, round and rectangular conductors can be terminated in the same wire barrel, individually or in combinations falling within a specified CMA range.

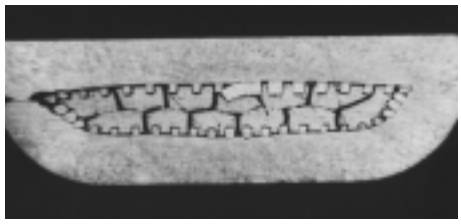
The combination of an insulation displacement crimp configuration and an integral perforated inner sleeve design penetrates the film insulation, creating an electrical interface between the conductor and terminal. Adequate surface contact is achieved due to the high-density hole pattern of the sleeve.

The crimp shears the film insulation and the conductor extrudes into the perforated sleeve, producing a hermetic seal. These terminations can be exposed to the typical gaseous and oil environments found in oil and air-cooled transformers or air and fluid-cooled motors.

A secondary mechanical crimp section flanks the electrical crimp and provides a robust interface which optimizes the mechanical properties (tensile strength, vibration, resistance, flex life) of the electrical crimp. The insulation piercing crimp design permits parallel, butt or pigtail splicing.

The crimp design allows solid copper, solid aluminum and stranded copper to be terminated in the same wire barrel if certain restrictions regarding size, number and total CMA of conductors being terminated are observed.





**Cross Section of Insulation Piercing Crimp**



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## COPALUM Terminals and Splices (For Solid and Stranded Aluminum or Copper Wire) (Continued)

### General Application Guidelines

To assist you in obtaining the optimum COPALUM insulation piercing crimp termination for solid copper, solid aluminum and stranded copper in the same wire barrel, the following guidelines regarding size, number and total CMA of conductors being terminated are recommended:

1. A maximum of 10 equal size round wires, or a maximum of 6 equal square wires may be crimped without insulation removal.
2. Four rectangular wires (where T ≥ 1/4W) or 2 rectangular wires (where T ≤ 1/4W) may be crimped without insulation removal.
3. When crimping different size solid conductors, size should not vary by more than 1 wire gauge, and preferably by no more than 1/2 wire gauge.
4. To use parallel splices with round magnet wire, the CMA of the lead wire should be less than the sum of the magnet wire CMA, and the total number of conductors (lead and magnet) must be less than six.
5. To use a butt splice when the lead wire CMA is ≥ the combined magnet wire CMA.
6. In a solid (or combination of solids) aluminum and stranded copper application, the maximum amount of CMA fill for the copper conductor should not exceed 40% of the total CMA being crimped.
7. Due to the closed barrel, it may not be possible for a particular CMA loading to fit in the normally recommended connector. In instances where 7 or more equal round conductors or a combination of solid aluminum and stranded copper is used, and the total CMA is at least 50% of the maximum CMA of the next larger size connector, this larger size connector may be used.
8. For applications using wire combinations not covered by guidelines above, consult Tyco Electronics Engineering.

**Warning:** Not approved for reconnection of residential aluminum branch circuit wiring. (Refer to Catalog 82205.)

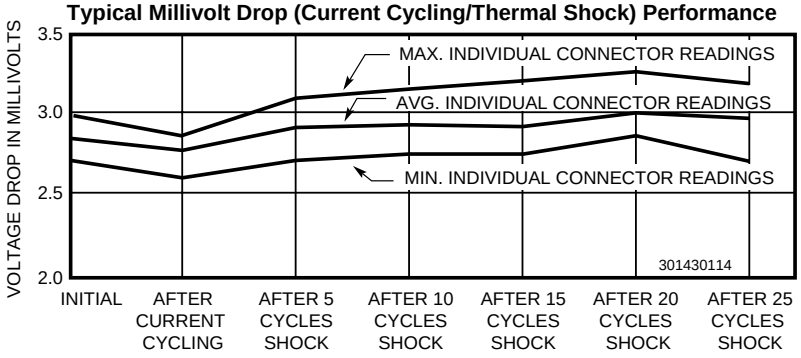
### Test Results of Insulation Piercing Crimp Terminations

**Current Cycling —** 100 cycles @ 35 amperes, AC; each cycle consisting of 15 min. "on current" and 15 min. "off current"

**Thermal Shock —** 0.5 hr. @ +150°C and 0.17 hr. in ice water per cycle; 5 amperes, DC

**Products Tested —** COPALUM parallel splices, wire size 8 AWG [8 mm²] using two 14 AWG [2 mm²] solid aluminum conductors (unstripped) and one 14 AWG [2 mm²] stranded copper wire conductor (stripped). Graph curves represent individual conductor readings.

**Typical Millivolt Drop (Current Cycling/Thermal Shock) Performance**




### Technical Documents

**Product Specification —**
108-13013

**Application Specification —**
114-02121

**Test Reports —**

110-13506 — Copper lead wire to aluminum magnet wire in a COPALUM parallel splice

502-1084 — COPALUM butt splice performance in several copper lead wire to copper magnet wire combinations

502-1085 — Performance comparison: COPALUM butt splice vs. brazing process

COPALUM



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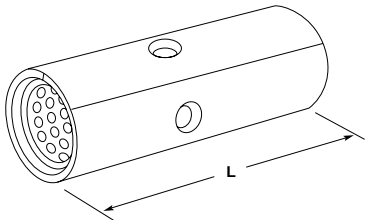
## COPALUM Terminals and Splices (For Solid and Stranded Aluminum or Copper Wire) (Continued)

### Butt Splices

**Wire Size Range —**

**Aluminum — AWG 16 to 10 [1.25 to 5.0 mm²], CMA 2,050 to 13,100**

**Copper — AWG 18 to 12 [0.8 to 3 mm²], CMA 1,290 to 8,230**

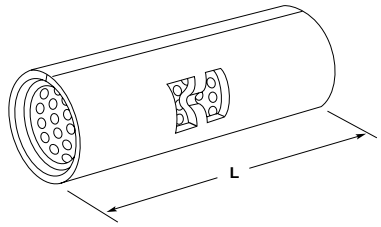



| Wire Size [mm²] Circular Mils | | Dim. L Max. | Part Numbers | | | |
|---|---|---|---|---|---|---|
| | | | Hand Tool | Heads for Pneumatic Tools | | Splice |
| Aluminum | Copper | | | 626 Tooling | 68068 | |
| 16-14<br>[1.25]<br>2050-5180 | 18-16<br>[0.8]<br>1290-3260 | **.701**<br>17.81 | 68140-1 | 189447-1 | 68100 | 52001 |
| 12-10<br>[5.0]<br>5180-13100 | 14-12<br>[3.0]<br>3260-8230 | **.799**<br>20.29 | 68141-1 | 189444-1 | 68100<br>68101 | 52004 |

**Wire Size Range —**

**Aluminum — AWG 8 to 4/0 [8.0 to 105 mm²], CMA 13,100 to 231,000**

**Copper — AWG 12 to 3/0 [5.0 to 85 mm²], CMA 5,180 to 190,000**




| Wire Size [mm²] Circular Mils | | Dim. L Max. | Part Numbers | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Heads for Pneumatic Tools | | | Tooling for Power Unit 69120 | | Splice |
| Aluminum | Copper | | 626 Tooling | 69015 | 68068 | Head | Die Insert | |
| 8<br>[8.0]<br>13100-20800 | 12-10<br>[5.0]<br>5180-13100 | **1.195**<br>30.35 | 662546-1 | 68081 | 68101<br>68192-1 | 69099 | 68084 | 51826 |
| 6<br>[14]<br>20800-33100 | 8<br>[8.0]<br>13100-20800 | **1.340**<br>34.04 | — | 68082 | 68102 | 69099 | 68085 | 51941 |
| 4<br>[21]<br>33100-52600 | 6<br>[14]<br>20800-33100 | **1.630**<br>41.4 | — | 68038 | — | 69099 | 68086 | 51942 |
| 2<br>[35]<br>52600-83700 | 4<br>[21]<br>33100-52600 | **1.995**<br>50.67 | — | — | — | 69099 | 68130 | 52007 |
| 1/0<br>[50]<br>83700-119500 | 2<br>[35]<br>52600-83700 | **1.985**<br>50.42 | — | — | — | 69099 | 68131 | 52010 |
| 2/0<br>[70]<br>119500-150500 | 1/0<br>[50]<br>83700-119500 | **1.985**<br>50.42 | — | — | — | 69099 | 68132 | 52013 |
| 3/0<br>[85]<br>150500-190000 | 2/0<br>[70]<br>119500-150500 | **1.985**<br>50.42 | — | — | — | 69099 | 68133 | 52016 |
| 4/0<br>[105]<br>190000-231000 | 3/0<br>[85]<br>150500-190000 | **1.985**<br>50.42 | — | — | — | 69082 | 68129 | 52019 |



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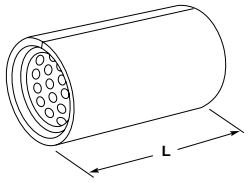
## COPALUM Terminals and Splices (For Solid and Stranded Aluminum or Copper Wire) (Continued)

### Parallel Splices

**Wire Size Range —**

**Aluminum — AWG 16 to 4/0 [1.25 to 105 mm²], CMA 2,050 to 231,000**

**Copper — AWG 18 to 3/0 [0.8 to 85 mm²] , CMA 1,290 to 190,000**




| Wire Size [mm²] Circular Mils | Dim. L Max. | Part Numbers | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | Hand Tool | Heads for Pneumatic Tools | | | Tooling for Power Unit 69120 | | Splice |
| | | | 69015 | 626 Tooling | 68068 | Head | Die Insert | |
| 16-14 [1.25] 2050-5180 | **.283** 7.19 | 68140-1 | — | 189447-1 | 68100 | — | — | 52791 |
| 12-10 [5.0] 5180-13100 | **.375** 9.53 | 68141-1 | — | 189444-1 | 68100 68101 | — | — | 52792 |
| 8 [8.0] 13100-20800 | **.437** 11.1 | — | 68081 | 662546-1 | 68101 68192-1 | 69099 | 68084 | 52745 |
| 6 [14] 20800-33100 | **.450** 11.43 | — | 68082 | — | 68102 | 69099 | 68085 | 52746 |
| 4 [21] 33100-52600 | **.562** 14.27 | — | 68038 | — | — | 69099 | 68086 | 52747 |
| 2 [35] 52600-83700 | **.781** 19.84 | — | — | — | — | 69099 | 68130 | 52748 |
| 1/0 [50] 83700-119500 | **.734** 18.64 | — | — | — | — | 69099 | 68131 | 52749 |
| 2/0 [70] 11950-150500 | **.734** 18.64 | — | — | — | — | 69099 | 68132 | 52750 |
| 3/0 [85] 150500-190000 | **.749** 19.02 | — | — | — | — | 69099 | 68133 | 52751 |
| 4/0 [105] 190000-231000 | **.765** 19.43 | — | — | — | — | 69082 | 68129 | 52752 |

**Important:**

When two or more wires are used in a parallel splice, the combined cross-section area must be within the CMA range listed.





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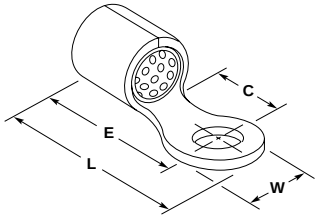
## COPALUM Terminals and Splices (For Solid and Stranded Aluminum or Copper Wire) (Continued)

### Ring Tongue Terminals

**Wire Size Range —**

**Aluminum — AWG 16 to 10 [1.25 to 5.0 mm²], CMA 2,050 to 13,100**

**Copper — AWG 18 to 12 [0.8 to 3.0 mm²], CMA 1,290 to 8,230**

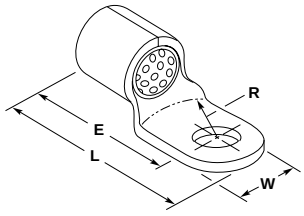



| Wire Size [mm²] Circular Mils | Tongue Thickness Max. | Stud Size | Dimensions | | | | Part Numbers | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | W | L Max. | E Max. | C Min. | Hand Tool | Heads for Pneumatic Tools | | Terminal |
| | | | | | | | | 626 Tooling | 68068 | |
| 16-14 [1.25] 2050-5180 | **.033** 0.84 | **1/4** M6 | **.531** 13.49 | **1.107** 28.12 | **.839** 21.31 | **.564** 14.33 | 68140-1 | 189447-1 | 68100 | 52587-1 |
| 12-10 [5.0] 5180-13100 | **.042** 1.07 | **6** M3.5 | **.375** 9.53 | **.835** 21.21 | **.645** 16.38 | **.302** 7.67 | 68141-1 | 189444-1 | 68100 68101 | 51979 |
| | | **8** M4 | **.375** 9.53 | **.835** 21.21 | **.645** 16.38 | **.302** 7.67 | 68141-1 | 189444-1 | 68100 68101 | 51979-1 |
| | | **10** — | **.375** 9.53 | **.835** 21.21 | **.645** 16.38 | **.302** 7.67 | 68141-1 | 189444-1 | 68100 68101 | 51979-2 |
| | | **1/4** M6 | **.375** 9.53 | **.835** 21.21 | **.645** 16.38 | **.302** 7.67 | 68141-1 | 189444-1 | 68100 68101 | 51979-3 |
| | | **1/4** M6 | **.593** 15.06 | **1.173** 29.79 | **.874** 22.20 | **.531** 13.49 | 68141-1 | 189444-1 | 68100 68101 | 52590-1 |
| | | **5/16** M8 | **.593** 15.06 | **1.173** 29.79 | **.874** 22.20 | **.531** 13.49 | 68141-1 | 189444-1 | 68100 68101 | 52590-2 |

**Wire Size Range —**

**Aluminum — AWG 8 to 6 [8.0 to 14 mm²], CMA 13,100 to 33,100**

**Copper — AWG 12 to 8 [3.0 to 8.0 mm²], CMA 1,290 to 13,100**




| Wire Size [mm²] Circular Mils | Tongue Thickness Max. | Stud Size | Dimensions | | | | Part Numbers | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | W | L Max. | E Max. | R Max. | Heads for Pneumatic Tools | | | Heads & Die Inserts for Power Unit 69120 | | Terminal |
| | | | | | | | 626 Tooling | 69015 | 68068 | Head | Die Insert | |
| 8 [8.0] 13100-20800 | **.048** 1.22 | **10** — | **.500** 12.70 | **1.384** 35.15 | **1.131** 28.73 | **.560** 14.22 | 662546-1 | 68081 | 68101 68192-1 | 69099 | 68084 | 50720 |
| | | **1/4** M6 | **.500** 12.70 | **1.384** 35.15 | **1.131** 28.73 | **.560** 14.22 | 662546-1 | 68081 | 68101 68192-1 | 69099 | 68084 | 50720-1 |
| | | **5/16** M8 | **.625** 15.88 | **1.446** 36.73 | **1.131** 28.73 | **.560** 14.22 | 662546-1 | 68081 | 68101 68192-1 | 69099 | 68084 | 50720-2 |
| | | **10MM** — | **.625** 15.88 | **1.446** 36.73 | **1.131** 28.73 | **.560** 14.22 | 662546-1 | 68081 | 68101 68192-1 | 69099 | 68084 | 184076-1 |
| 6 [14] 20800-33100 | **.051** 1.30 | **10** — | **.500** 12.70 | **1.415** 35.94 | **1.162** 29.51 | **.580** 14.73 | — | 68082 | 68102 | 69099 | 68085 | 50719 |
| | | **1/4** M6 | **.500** 12.70 | **1.415** 35.94 | **1.162** 29.51 | **.580** 14.73 | — | 68082 | 68102 | 69099 | 68085 | 50719-1 |
| | | **5/16** M8 | **.679** 17.25 | **1.504** 38.20 | **1.162** 29.51 | **.580** 14.73 | — | 68082 | 68102 | 69099 | 68085 | 50719-2 |
| | | **3/8** — | **.679** 17.25 | **1.504** 38.20 | **1.162** 29.51 | **.580** 14.73 | — | 68082 | 68102 | 69099 | 68085 | 50719-3 |
| | | **10MM** — | **.679** 17.25 | **1.504** 38.20 | **1.162** 29.51 | **.580** 14.73 | — | 68082 | 68102 | 69099 | 68085 | 184079-1 |



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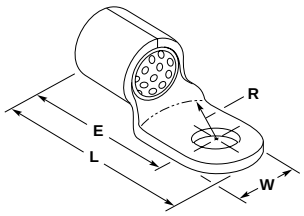
## COPALUM Terminals and Splices (For Solid and Stranded Aluminum or Copper Wire) (Continued)

### Ring Tongue Terminals

**Wire Size Range —**

**Aluminum — AWG 4 to 4/0 [21 to 105 mm²], CMA 33,100 to 231,000**

**Copper — AWG 6 to 3/0 [14 to 85 mm²], CMA 20,800 to 190,000**




| Wire Size [mm²] Circular Mils | Tongue Thickness Max. | Stud Size | Dimensions W | Dimensions L Max. | Dimensions E Max. | Dimensions R Max. | Part Numbers Heads & Die Inserts for Power Unit 69120 Head | Part Numbers Heads & Die Inserts for Power Unit 69120 Die Insert | Part Numbers Terminal |
|---|---|---|---|---|---|---|---|---|---|
| 4 [21] 33100-52600 | .060 1.52 | 10 — | .531 13.49 | 1.630 41.40 | 1.362 34.59 | .625 15.88 | 69099 | 68086 | 50717 |
| | | 1/4 M6 | .531 13.49 | 1.630 41.40 | 1.362 34.59 | .625 15.8 | 69099 | 68086 | 50717-1 |
| | | 5/16 M8 | .531 13.49 | 1.630 41.40 | 1.362 34.59 | .62 15.88 | 69099 | 68086 | 50717-2 |
| | | 3/8 — | .675 17.15 | 1.702 43.23 | 1.362 34.59 | .625 15.88 | 69099 | 68086 | 50717-3 |
| | | 1/2 — | .675 17.15 | 1.702 43.23 | 1.362 34.59 | .625 15.88 | 69099 | 68086 | 50717-5 |
| | | 10MM — | .675 17.15 | 1.702 43.23 | 1.362 34.59 | .625 15.88 | 69099 | 68086 | 184082-1 |
| 2 [35] 52600-83700 | .060 1.52 | 1/4 M6 | .675 17.15 | 1.859 47.22 | 1.541 39.14 | .625 15.88 | 69099 | 68130 | 51982 |
| | | 5/16 M8 | .675 17.15 | 1.859 47.22 | 1.541 39.14 | .625 15.88 | 69099 | 68130 | 51982-1 |
| | | 3/8 — | .675 17.15 | 1.859 47.22 | 1.541 39.14 | .625 15.88 | 69099 | 68130 | 51982-2 |
| | | 1/2 — | .807 20.50 | 1.925 48.90 | 1.541 39.14 | .625 15.88 | 69099 | 68130 | 51982-3 |
| | | 10MM — | .807 20.50 | 1.925 48.90 | 1.541 39.14 | .625 15.88 | 69099 | 68130 | 184084-1 |
| 1/0 [50] 83700-119500 | .073 1.85 | 1/4 M6 | .675 17.15 | 1.859 47.22 | 1.541 39.14 | .625 15.88 | 69099 | 68131 | 51986 |
| | | 5/16 M8 | .675 17.15 | 1.859 47.22 | 1.541 39.14 | .625 15.88 | 69099 | 68131 | 51986-1 |
| | | 3/8 — | .675 17.15 | 1.859 47.22 | 1.541 39.14 | .625 15.88 | 69099 | 68131 | 51986-2 |
| | | 1/2 — | .807 20.50 | 1.925 48.90 | 1.541 39.14 | .625 15.88 | 69099 | 68131 | 51986-3 |
| | | 10MM — | .807 20.50 | 1.925 48.90 | 1.541 39.14 | .625 15.88 | 69099 | 68131 | 184087-1 |
| 2/0 [70] 119500-150500 | .083 2.11 | 5/16 M8 | .926 23.52 | 1.930 49.02 | 1.560 39.62 | .625 15.88 | 69099 | 68132 | 51989-1 |
| | | 3/8 — | .926 23.52 | 1.930 49.02 | 1.560 39.62 | .625 15.88 | 69099 | 68132 | 51989-2 |
| | | 1/2 — | .926 23.52 | 1.930 49.02 | 1.560 39.62 | .625 15.88 | 69099 | 68132 | 51989-3 |
| | | 10MM — | .926 23.52 | 1.930 49.02 | 1.560 39.62 | .625 15.88 | 69099 | 68132 | 184090-1 |
| 3/0 [85] 150500-190000 | .094 2.39 | 7/16 — | 1.020 25.91 | 2.112 53.64 | 1.645 41.66 | .625 15.88 | 69099 | 68133 | 51992-2 |
| | | 1/2 — | 1.020 25.91 | 2.112 53.64 | 1.645 41.66 | .625 15.88 | 69099 | 68133 | 51992-3 |
| | | 10MM — | 1.020 25.91 | 2.112 53.64 | 1.645 41.66 | .625 15.88 | 69099 | 68133 | 184092-1 |
| 4/0 [105] 190000-231000 | .105 2.67 | 1/2 — | 1.087 27.61 | 2.178 55.32 | 1.676 42.57 | .625 15.88 | 69082 | 68129 | 51995-2 |
| | | 10MM — | 1.087 27.61 | 2.178 55.32 | 1.676 42.57 | .625 15.88 | 69082 | 68129 | 184094-1 |





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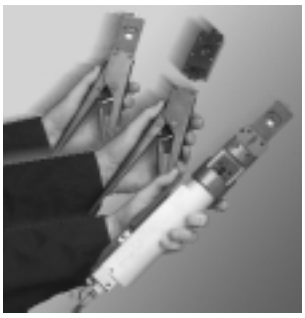
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## COPALUM Application Tooling

### 626 Pneumatic Tool System



Lightweight, air-operated modular tooling system. Accepts a wide variety of interchangeable heads for crimping various types of contacts, terminals and splices onto wires ranging 6-26 AWG [13-0.12 $mm^2$], plus coaxial and fiber optic cable. Available with either hand- or foot-actuation switch. Optional ratchet control available to provide complete crimp cycle.

**Specifications**

**Outside Diameter**—1.83 [46.5]

**Length**—11.6-12.9 [295-327]

**Grip Span**—2.19 [55.6] over button/handle

**Weight**—2.3-3.3 lb [1.0-1.5 kg]

**Air**—90-100 psi [6.21-6.89 bar], 11.14 $in^3$ [0.00018 $m^3$]

**Cycle Time**—0.7-0.8 sec (16-14 AWG [1.3-2 $mm^2$] PIDG Terminals)

For more information, request Catalog **124208**.

**Power Unit**

| Style | Power Unit Part Number |
|---|---|
| Hand Actuated | 189721-1* |
| Foot Actuated | 189722-1* |

*Change to -2 suffix to order Power Unit for use with "C" Head die set adapter.

**Notes:**

1. Power Units with a '1 suffix can be converted to -2 by ordering Booster Addition Kit part no. 189720-1
2. 10 ft [3.05] Air Supply Hose, part no. 38111, is included with each power unit
3. Order Tool Holders, Crimping Heads/Adapters separately.

**Tool Holder**

| w/Ratchet Control | w/o Ratchet Control |
|---|---|
| 356302-1 | 189767-1 |

**Crimp Heads**

| AWG | Part Number |
|---|---|
| 16-14 | 189447-1 |
| 12-10 | 189444-1 |
| 8 | 602546-1 |

### Bench Mount Assembly Part Number 856402-1*



Fully adjustable stand allows operator free use of both hands — recommended for maximum productivity.

**Specifications**

**Base Size** — 8 x 8 [200 x 200]

**Weight** — 6.5 lb [2.9 kg]

**Bench Mounting Dimensions** — Base has two, 1/4 - 20 tapped holes on 6 [150] centerlines

***Note**: Not for use in the European Community



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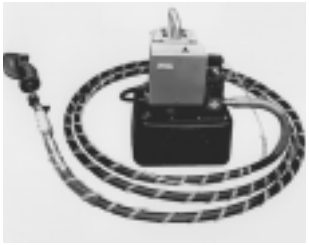
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## COPALUM Application Tooling (Continued)

### DYNA-CRIMP Electric-Hydraulic Power Units, 69120-1, -2, plus Heads



Power units for crimping large terminals and splices, including AMPOWER and SOLISTRAND terminals, onto wires ranging from 8 AWG [8 $mm^2$] through 1 000 kcmil [507 $mm^2$]. Heads and die sets are interchangeable. Available with either hand- or foot-actuation switch, and hose/coupling assemblies up to 28 ft [8.5 m] in length.

**Specifications**

**Width**—9.5 [240]

**Depth**—11.5 [292]

**Height**—18.2 [464]

**Weight**—65 lb [29 kg]

**Electrical**—120 VAC, 60 Hz (69120-1); 220 VAC, 50 or 60 Hz (69120-2); 3 240 VA max.

For more information, request Instruction Sheet **408-1965**.

**Accessories for DYNA-CRIMP Power Units 69120-1 (115 V) or 69120-2 (230 V)**

| Accessory Part No. | Description |
|---|---|
| 59907-7 | 7 ft. [2.13m] Handle Control Assembly — Hose and Cord* |
| 1-59907-5 | 15 ft. [4.57m] Handle Control Assembly — Hose and Cord* |
| 2-59907-1 | 21 ft. [6.4m] Handle Control Assembly — Hose and Cord* |
| 2-59908-1 | 21 ft. [6.4 m] Handle Control Assembly — Cord w/o Hose* |
| 2-59907-8 | 28 ft [8.53m] Handle Control Assembly — Hose and Cord* |
| 68284-1 | 15 ft. [4.57m] Foot Switch Assembly (requires hose assembly) |
| 59909-3 | 3 ft [0.91m] Hose Assembly** |
| 59909-7 | 7 ft. [2.13m] Hose Assembly** |
| 1-59909-5 | 15 ft. [4.57m] Hose Assembly** |
| 2-59909-1 | 21 ft. [6.4m] Hose Assembly** |
| 59220 | 3-Way Multi-Directional Valve (for use with foot switch only) |
| 59220-2 | 3-Way Multi-directional valve (for use with foot switch only) |

* Pressure release on Power Unit only

** 311470-1 Quick Disconnect Coupling (Hose Half) and 68284-1 Foot Switch Assembly required

### Pneumatic Power Units, 68068, 69015



Designed for medium production, these semi-automatic power tools offer the convenience of hand tools plus the effortless precision and speed of machines. They are built for long, rugged service and are equipped with removable crimping dies for terminating a variety of AMP products.

**Wire range:** — 16 AWG to 6 AWG (68068), 8 AWG to 4 AWG (69015)

**CMA range:** — 2,050 to 33,100 (68068), 20,800 to 52,600 (69015)

Note: Part Number 68068-3, tool with foot pedal, can be bench mounted.





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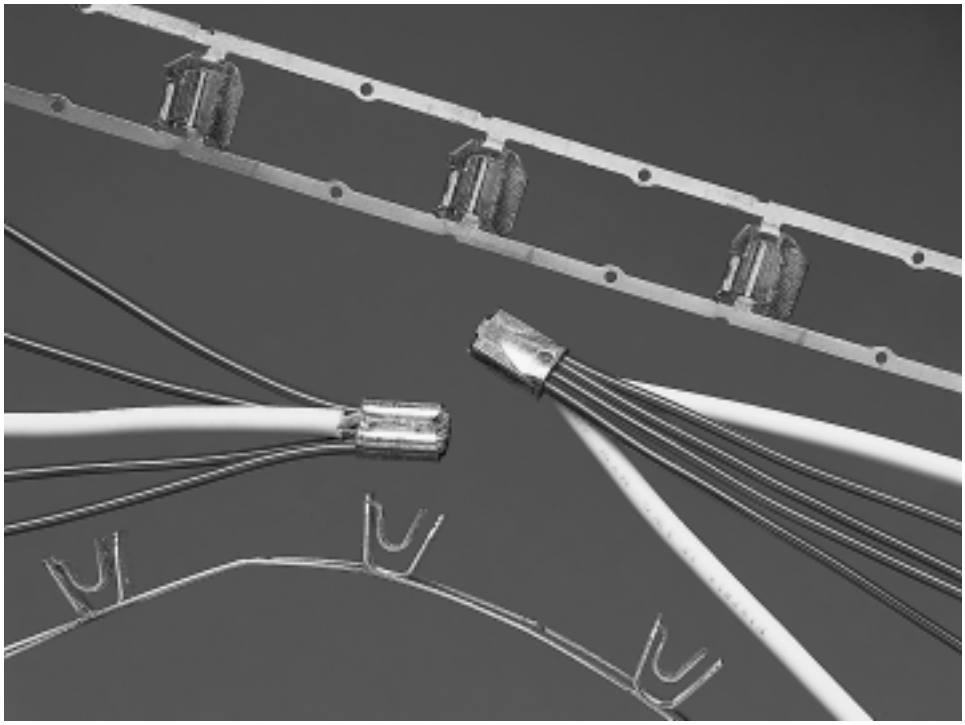
## Power Splice

### Product Facts

- **Compression crimp eliminates cold solder points, weld burns and wire enbrittlement usually connected with thermal-type terminations**
- **Precisely controlled crimp termination helps eliminate human error, for maximum reliability**
- **Excellent tensile strength, up to 90 lbs axial retention, vibration resistant**
- **Provides a superior electrical connection that is free of many contaminates such as stripper residue and solder flux**
- **8000 - 38,000 CMA nominal capacity**
- **Accepts up to six magnet wires and two standard solid or stranded lead wires**
- **Superior test results: low resistance, high stability**
- **High termination rates, low wire consumption and the elimination of rejects caused by solder flux or heat damage results in the lowest applied costs**

### Applications

- **Hermetic/Compressor motors**
- **Squirrel Cage DC motors**
- **Capacitor Start motors**
- **Gear & Traction motors**
- **Power supplies**
- **Liner, Torroid & RF transformers**
- **Circuit breakers & welders**



Tyco Electronics features the AMP Power Splice terminal that is specifically designed to terminate a wide range of lead and magnet wire combinations.

The splice contains two cavities that separate and cradle magnet wire and stripped lead wires prior to crimping.

The outer saddle accepts up to six-magnet wire allowing for a CMA range of 15,000 to 30,000.

The inner saddle accepts pre-stripped lead wires that total up to 10,900 CMA.



In a one step automatic operation, the magnet wire film insulation is multiple ring-stripped as it is forced into the serrations while the lead wire is simultaneously terminated during the precisely controlled crimp

The outer saddle has machined, sharp edges made by a special production process that pierces the insulating layer of the magnet wire in a manner that provides a large contact area.

The resulting termination produces a high tensile strength, air sealed connection that is as resistant to corrosion as the insulated conductor with up to 90 lbs axial retention.

As many as six magnet wires can be terminated simultaneously in one splice in combination with up to two pre-stripped standard solid or stranded lead wire.

A semi-automatic machine provides high output per hour terminations.



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## Technical Information

### Tensile Strength of Magnet Wire[1]

| Wire Size | Nominal Dia. Copper (lbs.) | Nominal Dia. Aluminum (lbs.) |
|---|---|---|
| 8 | 438 | 142 |
| 9 | 340 | 113 |
| 10 | 269 | 89 |
| 11 | 213 | 71 |
| 12 | 189 | 56 |
| 13 | 134 | 44 |
| 14 | 106 | 35 |
| 15 | 84 | 28 |
| 16 | 66 | 22 |
| 17 | 53 | 17 |
| 18 | 42 | 14 |
| 19 | 33 | 11 |
| 20 | 6 | 8 |
| 21 | 21 | 7 |
| 22 | 16 | 5 |
| 23 | 13 | 4 |
| 24 | 10 | 3 |
| 25 | 8 | 2.7 |
| 26 | 6 | 2.1 |
| 27 | 5 | 1.7 |
| 28 | 4 | 1.3 |
| 29 | 3 | 1.1 |
| 30 | 2 | .86 |
| 31 | 2 | .68 |
| 32 | 1 | .55 |
| 33 | 1 | .43 |
| 34 | 1 | .34 |
| 35 | .81 | .27 |
| 36 | .65 | .21 |
| 37 | .65 | .21 |
| 38 | .42 | .13 |
| 39 | .32 | .10 |
| 40 | .25 | .083 |
| 41 | .20 | .067 |
| 42 | .16 | .054 |
| 43 | .12 | .041 |
| 44 | .10 | .034 |
| 45 | .08 | .027 |
| 46 | .06 | .022 |
| 47 | .05 | .017 |
| 48 | .04 | .013 |
| 49 | .03 | .010 |
| 50 | .02 | .009 |
| 51 | .02 | .007 |
| 52 | .01 | .005 |

[1] Magnet wire tensile will change as the psi of magnet wire changes.

**Note:** Copper magnet wire is calculated at 33,000 psi. Aluminum magnet wire is calculated at 11,000 psi (EC grade). Magnet wire should be tensiled on each coil. After termination of the AMPLIVAR splice, the tensile strength will be 70% (min.) of the original magnet wire tensile values.

| C. | F. | C. | F. | C. | F. | C. | F. |
|---|---|---|---|---|---|---|---|
| –80 | –112.0 | 9 | 48.2 | 47 | 116.6 | 85 | 185.0 |
| –70 | –94.0 | 10 | 50.0 | 48 | 118.4 | 86 | 186.8 |
| –60 | –76.0 | 11 | 51.8 | 49 | 120.2 | 87 | 188.6 |
| –50 | –58.0 | 12 | 53.6 | 50 | 122.0 | 88 | 190.4 |
| –45 | –49.1 | 13 | 55.4 | 51 | 123.8 | 89 | 192.2 |
| –40 | –40.0 | 14 | 57.2 | 52 | 125.6 | 90 | 194.0 |
| –35 | –31.0 | 15 | 59.0 | 53 | 127.4 | 91 | 195.8 |
| –30 | –22.0 | 16 | 60.8 | 54 | 129.2 | 92 | 197.6 |
| –25 | –13.0 | 17 | 62.6 | 55 | 131.0 | 93 | 199.4 |
| –20 | – 4.0 | 18 | 64.4 | 56 | 132.8 | 94 | 201.2 |
| –19 | – 2.2 | 19 | 66.2 | 57 | 134.6 | 95 | 203.0 |
| –18 | – .4 | 20 | 68.0 | 58 | 136.4 | 96 | 204.8 |
| –17 | 1.4 | 21 | 69.8 | 59 | 138.2 | 97 | 206.6 |
| –16 | 3.2 | 22 | 71.6 | 60 | 140.0 | 98 | 208.4 |
| –15 | 5.0 | 23 | 73.4 | 61 | 141.8 | 99 | 210.2 |
| –14 | 6.8 | 24 | 75.2 | 62 | 143.6 | 100 | 212.0 |
| –13 | 8.6 | 25 | 77.0 | 63 | 145.4 | 110 | 230.0 |
| –12 | 10.4 | 26 | 78.8 | 64 | 147.2 | 120 | 248.0 |
| –11 | 12.2 | 27 | 80.6 | 65 | 149.0 | 130 | 266.0 |
| –10 | 14.0 | 28 | 82.4 | 66 | 150.8 | 140 | 284.0 |
| – 9 | 15.8 | 29 | 84.2 | 67 | 152.6 | 150 | 302.0 |
| – 8 | 17.6 | 30 | 86.0 | 68 | 154.4 | 160 | 320.0 |
| – 7 | 19.4 | 31 | 87.8 | 69 | 156.2 | 170 | 338.0 |
| – 6 | 21.2 | 32 | 89.6 | 70 | 158.0 | 180 | 356.0 |
| – 5 | 23.0 | 33 | 91.4 | 71 | 159.8 | 190 | 374.0 |
| – 4 | 24.8 | 34 | 93.2 | 72 | 161.6 | 200 | 392.0 |
| – 3 | 26.6 | 35 | 95.0 | 73 | 163.4 | 220 | 428.0 |
| – 2 | 8.4 | 36 | 96.8 | 74 | 165.2 | 240 | 464.0 |
| – 1 | 30.2 | 37 | 98.6 | 75 | 167.0 | 260 | 500.0 |
| 0 | 32.0 | 38 | 100.4 | 76 | 168.8 | 280 | 536.0 |
| 1 | 33.8 | 39 | 102.2 | 77 | 170.6 | 300 | 572.0 |
| 2 | 35.6 | 40 | 104.0 | 78 | 172.4 | 400 | 752.0 |
| 4 | 39.2 | 42 | 107.6 | 80 | 176.0 | 600 | 1112.0 |
| 5 | 41.0 | 43 | 109.4 | 81 | 177.8 | 700 | 1292.0 |
| 6 | 42.8 | 44 | 111.2 | 82 | 179.6 | 800 | 1472.0 |
| 7 | 44.6 | 45 | 113.0 | 83 | 181.4 | 900 | 1652.0 |
| 8 | 46.4 | 46 | 114.8 | 84 | 183.2 | 1000 | 1832.0 |

$C = 5/9 (F. - 32)$
$F = 9/5C. + 32$





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## Technical Information (Continued)

### Circular Mil Area (CMA) and Diameter for Magnet Wires (AWG Wire Size Range 52–25 1/2)

| AWG Bare Wire | Bare Wire Dia. | | CMA Bare | Single Film Coated Dia. | | CMA Single Film Coated | Heavy Film Coated Dia. | | CMA Heavy Film Coated |
|---|---|---|---|---|---|---|---|---|---|
| | in. | mm | | in. | mm | | in. | mm | |
| 52 | .0008 | .020 | 0.6 | .0010 | .025 | 1.0 | .0011 | .028 | 1.2 |
| 51 | .0009 | .023 | 0.8 | .0011 | .028 | 1.2 | .0012 | .031 | 1.5 |
| 50 | .0010 | .025 | 1.0 | .0012 | .031 | 1.5 | .0013 | .033 | 1.7 |
| 49 | .0011 | .028 | 1.2 | .0013 | .033 | 1.7 | .0014 | .035 | 2.0 |
| 48 | .0012 | .031 | 1.5 | .0014 | .035 | 2.0 | .0015 | .038 | 2.2 |
| 47 | .0014 | .035 | 2.0 | .0016 | .040 | 2.5 | .0018 | .045 | 3.1 |
| 46 | .0016 | .040 | 2.5 | .0017 | .043 | 2.9 | .0019 | .048 | 3.6 |
| 45 | .0018 | .045 | 3.1 | .0019 | .048 | 3.6 | .0021 | .053 | 4.4 |
| 44 | .0020 | .050 | 4.0 | .0022 | .056 | 4.8 | .0025 | .063 | 6.2 |
| 43 | .0022 | .056 | 4.8 | .0025 | .063 | 6.2 | .0027 | .069 | 7.3 |
| 42 | .0025 | 0.06 | 6.3 | .0028 | 0.07 | 8 | .0030 | 0.08 | 9 |
| 41 | .0028 | 0.07 | 7.8 | .0031 | 0.08 | 10 | .0034 | 0.09 | 12 |
| 40 | .0031 | 0.08 | 9.6 | .0035 | 0.09 | 12 | .0038 | 0.10 | 14 |
| 39 | .0035 | 0.09 | 12 | .0039 | 0.10 | 15 | .0043 | 0.11 | 18 |
| 38 | .0040 | 0.10 | 16 | .0045 | 0.11 | 20 | .0049 | 0.12 | 24 |
| 37 | .0045 | 0.11 | 20 | .0050 | 0.13 | 25 | .0055 | 0.14 | 30 |
| 36 | .0050 | 0.13 | 25 | .0056 | 0.14 | 31 | .0060 | 0.15 | 36 |
| 35 | .0056 | 0.14 | 31 | .0062 | 0.16 | 38 | .0067 | 0.17 | 45 |
| 35 | .0056 | 0.14 | 31 | .0062 | 0.16 | 38 | .0067 | 0.17 | 45 |
| 34 | .0063 | 0.16 | 40 | .0069 | 0.18 | 48 | .0075 | 0.19 | 56 |
| 33 | .0071 | 0.18 | 50 | .0077 | 0.20 | 59 | .0085 | 0.22 | 72 |
| 32 | .0080 | 0.20 | 64 | .0084 | 0.21 | 71 | .0095 | 0.24 | 90 |
| 31 | .0089 | 0.23 | 79 | .0092 | 0.23 | 85 | .0105 | 0.27 | 110 |
| 30 1/2 | .0095 | 0.24 | 90 | .0099 | 0.25 | 98 | .0111 | 0.28 | 123 |
| 30 | .0100 | 0.25 | 100 | .0106 | 0.27 | 112 | .0116 | 0.29 | 135 |
| 29 1/2 | .0107 | 0.27 | 115 | .0114 | 0.29 | 130 | .0123 | 0.31 | 151 |
| 29 | .0113 | 0.29 | 128 | .0120 | 0.30 | 144 | .0130 | 0.33 | 169 |
| 28 1/2 | .0120 | 0.30 | 144 | .0126 | 0.32 | 159 | .0137 | 0.35 | 187 |
| 28 | .0126 | 0.32 | 159 | .0136 | 0.35 | 185 | .0144 | 0.37 | 207 |
| 27 1/2 | .0134 | 0.34 | 180 | .0144 | 0.37 | 207 | .0153 | 0.39 | 234 |
| 27 | .0142 | 0.36 | 202 | .0152 | 0.39 | 231 | .0161 | 0.41 | 259 |
| 26 1/2 | .0151 | 0.38 | 225 | .0160 | 0.41 | 256 | .0170 | 0.43 | 289 |
| 26 | .0159 | 0.40 | 258 | .0170 | 0.43 | 289 | .0179 | 0.45 | 320 |
| 25 1/2 | .0169 | 0.43 | 289 | .0180 | 0.46 | 324 | .0190 | 0.48 | 361 |



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## Technical Information (Continued)

### Circular Mil Area (CMA) and Diameter for Magnet Wires (AWG Wire Size Range 25–8)

| AWG Bare Wire | Bare Wire Dia. | | CMA Bare | Single Film Coated Dia. | | CMA Single Film Coated | Heavy Film Coated Dia. | | CMA Heavy Film Coated |
|---|---|---|---|---|---|---|---|---|---|
| | in. | mm | | in. | mm | | in. | mm | |
| 25 | .0179 | 0.45 | 320 | .0190 | 0.48 | 361 | .0200 | 0.51 | 400 |
| 24 1/2 | .0190 | 0.48 | 361 | .0200 | 0.51 | 400 | .0212 | 0.54 | 449 |
| 24 | .0201 | 0.51 | 404 | .0213 | 0.54 | 455 | .0223 | 0.57 | 497 |
| 23 1/2 | .0214 | 0.54 | 458 | .0226 | 0.57 | 511 | .0236 | 0.60 | 557 |
| 23 | .0226 | 0.57 | 511 | .0238 | 0.60 | 566 | .0249 | 0.63 | 620 |
| 22 1/2 | .0240 | 0.61 | 576 | .0252 | 0.64 | 635 | .0263 | 0.67 | 692 |
| 22 | .0253 | 0.64 | 640 | .0266 | 0.68 | 708 | .0277 | 0.70 | 767 |
| 21 1/2 | .0269 | 0.68 | 724 | .0282 | 0.72 | 795 | .0293 | 0.74 | 858 |
| 21 | .0285 | 0.72 | 812 | .0298 | 0.76 | 888 | .0310 | 0.79 | 961 |
| 20 1/2 | .0303 | 0.77 | 918 | .0315 | 0.80 | 992 | .0328 | 0.83 | 1,076 |
| 20 | .0320 | 0.81 | 1,024 | .0334 | 0.85 | 1,116 | .0346 | 0.88 | 1,197 |
| 19 1/2 | .0340 | 0.86 | 1,156 | .0353 | 0.90 | 1,246 | .0365 | 0.93 | 1,340 |
| 19 | .0359 | 0.91 | 1,289 | .0373 | 0.95 | 1,391 | .0386 | 0.98 | 1,490 |
| 18 1/2 | .0381 | 0.97 | 1,452 | .0395 | 1.00 | 1,560 | .0409 | 1.04 | 1,673 |
| 18 | .0403 | 1.02 | 1,624 | .0418 | 1.06 | 1,747 | .0431 | 1.09 | 1,858 |
| 17 1/2 | .0428 | 1.09 | 1,832 | .0443 | 1.13 | 1,962 | .0456 | 1.16 | 2,079 |
| 17 | .0453 | 1.15 | 2,052 | .0468 | 1.19 | 2,190 | .0482 | 1.22 | 2,323 |
| 16 1/2 | .0481 | 1.22 | 2,314 | .0496 | 1.26 | 2,460 | .0510 | 1.30 | 2,601 |
| 16 | .0508 | 1.29 | 2,581 | .0524 | 1.33 | 2,746 | .0583 | 1.37 | 2,894 |
| 15 1/2 | .0540 | 1.37 | 2,916 | .0560 | 1.42 | 3,136 | .0570 | 1.45 | 3,249 |
| 15 | .0571 | 1.45 | 3,260 | .0587 | 1.49 | 3,446 | .0602 | 1.53 | 3,624 |
| 14 1/2 | .0606 | 1.54 | 3,672 | .0622 | 1.58 | 3,869 | .0639 | 1.62 | 4,082 |
| 14 | .0641 | 1.63 | 4,109 | .0658 | 1.67 | 4,330 | .0675 | 1.71 | 4,556 |
| 13 1/2 | .0681 | 1.73 | 4,638 | .0698 | 1.77 | 4,872 | .0711 | 1.81 | 5,055 |
| 13 | .0720 | 1.83 | 5,184 | .0738 | 1.87 | 5,446 | .0749 | 1.90 | 5,670 |
| 12 1/2 | .0764 | 1.94 | 5,837 | .0783 | 1.99 | 6,131 | .0793 | 2.01 | 6,188 |
| 12 | .0808 | 2.05 | 6,529 | .0827 | 2.10 | 6,839 | .0838 | 2.13 | 7,090 |
| 11 1/2 | .0858 | 2.18 | 7,362 | .0877 | 2.23 | 7,691 | .0888 | 2.26 | 7,885 |
| 11 | .0907 | 2.30 | 8,226 | .0927 | 2.35 | 8,593 | .0938 | 2.38 | 8,892 |
| 10 1/2 | .0963 | 2.35 | 9,274 | .0983 | 2.50 | 9,663 | .0994 | 2.52 | 9,880 |
| 10 | .1019 | 2.59 | 10,384 | .1040 | 2.64 | 10,820 | .1050 | 2.67 | 11,151 |
| 9 | .1144 | 2.91 | 13,087 | .1166 | 2.96 | 13,600 | .1177 | 2.99 | 13,971 |
| 8 | .1285 | 3.26 | 16,512 | .1307 | 3.32 | 17,080 | .1318 | 3.35 | 17,530 |





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## Technical Information (Continued)

### Circular Mil Area (CMA) and Diameter for Lead Wires (AWG Wire Size Range 30–8)

| Wire Size | Strands | | Wire Area in Circ. Mils |
|---|---|---|---|
| | No. | Dia. (Mils) | |
| 30 | 7 | 4.0 | 112 |
| 30 | 1 | 10.0 | 100 |
| 28 | 7 | 5.0 | 175 |
| 28 | 19 | 3.1 | 181 |
| 28 | 1 | 12.6 | 159 |
| 27 | 7 | 5.6 | 219 |
| 27 | 1 | 14.2 | 202 |
| 26 | 6 | 6.3 | 238 |
| 26 | 10 | 5.0 | 250 |
| 26 | 16 | 4.0 | 256 |
| 26 | 8 | 5.6 | 251 |
| 26 | 1 | 15.9 | 253 |
| 26 | 26 | 3.1 | 250 |
| 26 | 7 | 6.3 | 278 |
| 26 | 3 | 10.0 | 300 |
| 26 AN | 12 | 5.0 | 300 |
| 25 | 10 | 5.6 | 314 |
| 25 | 8 | 6.3 | 318 |
| 25 | 1 | 17.9 | 320 |
| 24 | 10 | 6.3 | 397 |
| 24 | 8 | 7.1 | 403 |
| 24 | 16 | 5.0 | 400 |
| 24 | 4 | 10.0 | 400 |
| 24 | 1 | 20.1 | 404 |
| 24 | 26 | 4.0 | 416 |
| 24 | 13 | 5.6 | 408 |
| 24 | 7 | 8.0 | 448 |
| 24 | 56 | 2.8 | 439 |
| 24 AN | 19 | 5.0 | 475 |
| 23 | 10 | 7.1 | 504 |
| 23 | 8 | 8.0 | 512 |
| 23 | 1 | 22.6 | 511 |
| — | 21 | 5.0 | 525 |
| 22 | 6 | 10.0 | 600 |
| 22 | 8 | 8.9 | 634 |
| 22 | 16 | 6.3 | 635 |
| 22 | 10 | 8.0 | 640 |
| 22 | 1 | 25.3 | 640 |
| 22 | 7 | 10.0 | 700 |
| 22 AN | 19 | 6.3 | 754 |
| 20 | 10 | 10.0 | 1,000 |
| 20 | 1 | 10.0 | 1,024 |
| 20 | 26 | 6.3 | 1,032 |
| 20 | 7 | 12.6 | 1,111 |
| 20 AN | 19 | 7.9 | 1,186 |
| 18 | 19 | 9.2 | 1,608 |
| — | 16 | 10.0 | 1,600 |
| 18 | 1 | 40.3 | 1,624 |
| 18 | 7 | 15.2 | 1,617 |
| 18 | 65 | 5.0 | 1,625 |
| 18 | 7 | 15.3 | 1,639 |
| — | 41 | 6.3 | 1,627 |
| — | 7 | 16.0 | 1,792 |
| 18 AN | 19 | 10.0 | 1,900 |
| 18 AN | 19 | 11.3 | 2,426 |
| 16 | 7 | 19.2 | 2,580 |
| 16 | 1 | 50.8 | 2,581 |
| 16 | 65 | 6.3 | 2,580 |
| 16 | 19 | 11.7 | 2,601 |
| 16 | 105 | 5.0 | 2,625 |
| — | 26 | 10.0 | 2,600 |
| 16 | 7 | 20.0 | 2,800 |
| 14 AN | 19 | 14.2 | 3,831 |
| 14 | 37 | 10.5 | 4,079 |
| 14 | 7 | 24.2 | 4,099 |
| 14 | 19 | 14.7 | 4,106 |
| 14 | 1 | 64.4 | 4,109 |
| — | 41 | 10.0 | 4,100 |
| 14 | 105 | 6.3 | 4,167 |
| 14 | 168 | 5.0 | 4,200 |
| 14 | 84 | 71 | 4,234 |
| — | 7 | 25.3 | 4,481 |
| 12 | 19 | 17.9 | 6,088 |
| 12 AN | 19 | 17.9 | 6,088 |
| 12 | 259 | 5.0 | 6,475 |
| 12 | 19 | 18.5 | 6,503 |
| 12 | 7 | 30.5 | 6,512 |
| 12 | 37 | 13.3 | 6,545 |
| 12 | 1 | 80.8 | 6,529 |
| 12 | 165 | 6.3 | 6,549 |
| 12 | 84 | 8.9 | 6,654 |
| 10 | 7 | 36.0 | 9,072 |
| — | 37 | 16.0 | 9,472 |
| 10 | 414 | 5.0 | 10,350 |
| 10 | 37 | 16.7 | 10,319 |
| 10 | 1 | 101.9 | 10,384 |
| 10 | 7 | 38.5 | 10,376 |
| 10 | 19 | 23.4 | 10,404 |
| — | 41 | 15.9 | 10,365 |
| 10 | 105 | 10.0 | 10,500 |
| 9 | 7 | 43.0 | 12,943 |
| 9 | 1 | 114.4 | 13,087 |
| 9 | 525 | 5.0 | 13,125 |
| 8 | 7 | 45.0 | 14,175 |
| 8 | 133 | 11.1 | 16,386 |
| 8 | 37 | 21.1 | 16,472 |
| 8 | 1 | 128.5 | 16,512 |
| 8 | 7 | 48.6 | 16,533 |
| 8 | 19 | 29.5 | 16,534 |
| 8 | 49 | 18.4 | 16,589 |
| 8 AN | 133 | 11.3 | 16,982 |



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## Terminal Stud Hole Size

### Use to Select Proper Size Terminal

The chart shows sizes and dimensions of various studs and the corresponding terminal stud hole sizes used with AMP devices.

For example, with stud #5 (.125 [3.18] Diameter), use AMP device listed for #5 stud (.129 [3.28] Hole Diameter).

Terminal stud hole sizes may easily be checked by fitting sample terminal to black circle.

| Stud Size | | Stud Dia. | Minimum Terminal Hole Diameter |
|---|---|---|---|
| U.S. Cust. | Metric | | |
| #0 | | .060 | .064 |
| #1 | | .073 | .077 |
| #2 | M2 | .086 | .090 |
| #3 | | .099 | .103 |
| #4 | | .112 | .116 |
| #5 | M3 | .125 | .129 |
| #6 | M3.5 | .138 | .142 |
| #8 | M4 | .164 | .168 |
| #10 | | .190 | .194 |
| #12 | | .216 | .220 |
| #14 | | .242 | .247 |
| 1/4" | M6 | .250 | .260 |
| 5/16" | M8 | .312 | .323 |
| 3/8" | | .375 | .385 |
| 7/16" | | .437 | .448 |
| 1/2" | M12 | .500 | .510 |

| Stud Size | | Stud Dia. | Minimum Terminal Hole Diameter |
|---|---|---|---|
| U.S. Cust. | Metric | | |
| 5/8" | M16 | .625 | .651 |
| 3/4" | | .750 | .776 |
| 7/8" | M22 | .875 | .901 |
| 1" | | 1.000 | 1.026 |
| 1-1/8" | | 1.125 | 1.151 |
| 1-1/4" | | 1.250 | 1.276 |





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| 62609 | 10 |
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## Engineering Notes



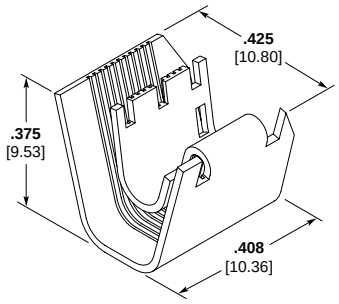
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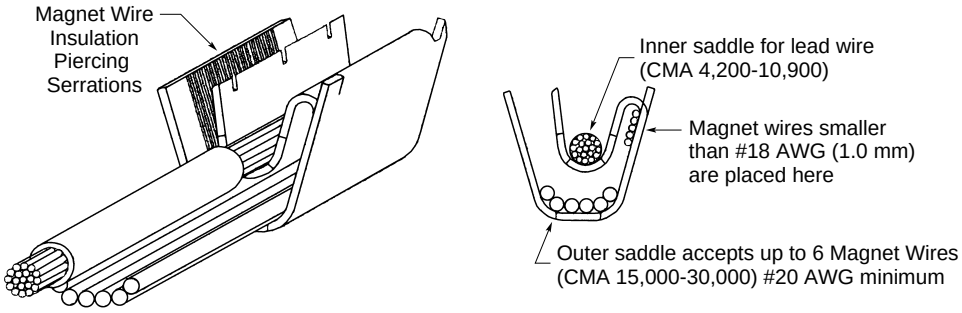
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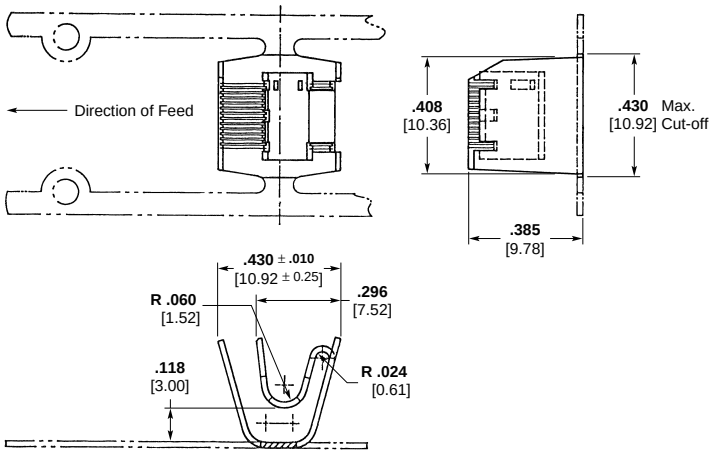
## Power Splice (Continued)




| Type | Magnet Wire Range CMA | Lead Wire Range CMA | Part Number Reeled |
|---|---|---|---|
| A | 15,000-30,000 | 4200-10,900 | 1601953-1[1] |

[1] Total combined CMA not to exceed 38000.



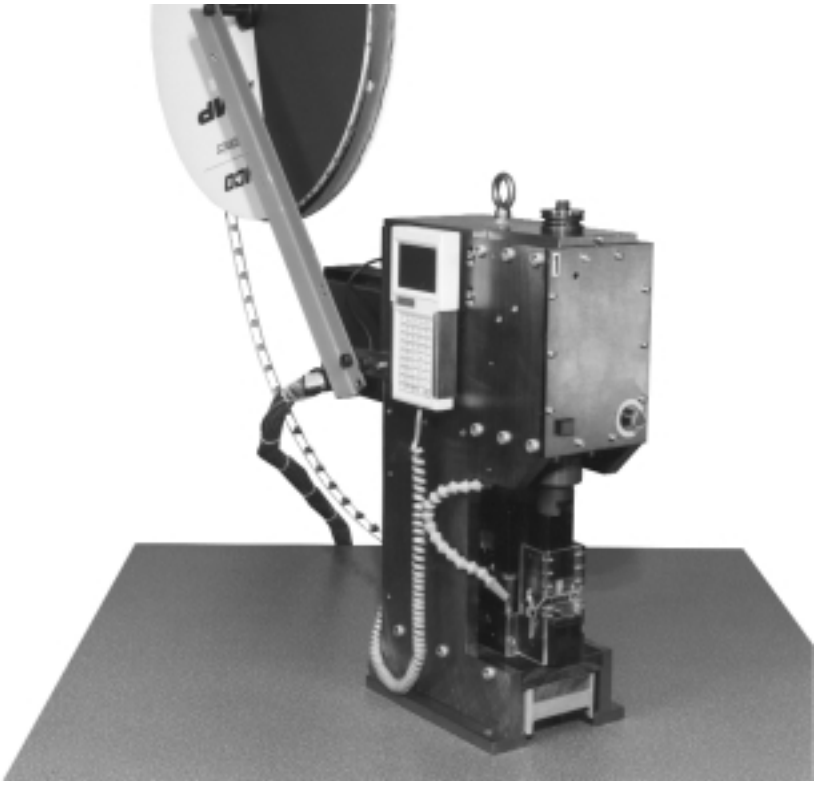

**Part Number 111-000-001**

## Application Tooling

### Power Splice Machine for Mag Wire/Lead Wire Pigtail Splice Termination

**Product Facts**

- **Terminate Mag Wire and Lead Wire Together**
- **Maximum 38,000 CMA Crimp**
- **Servo-Driven 5-Ton Terminator**
- **Heavy Duty Air-Feed Applicator**
- **One Control Cabinet Operates 2 Terminators**
- **Programmable Crimping Ram Stroke**
- **Hand Held Control Pendent**
- **Crimp Force Monitoring**
- **Crimp Height Sequencing**



For quick, easy and reliable pigtail splice termination of magnet wire and solid or stranded lead wire, Tyco Electronics offers the new Power Splice terminator and applicator.

The Power Splice terminator and applicator will terminate pigtail splices consisting up to two (2) solid or stranded copper lead wires in wire size from 10-14 AWG and having a Circular Mil Area (CMA) of 4,200-10,000. The splice will simultaneously accept combinations of multiple copper magnet wires in a range of 11-20 AWG. Total magnet wire CMA can fall in the range of 8,000-30,000. Total CMA capable of being crimped in the Power Splice terminal is between 8,000-38,000.

The Power Splice terminator incorporates a servo motor drive 5-ton terminator with an air feed applicator to create a high quality crimp. The application equipment is controlled through a handheld pendent and incorporates crimp force monitoring, crimp height sequencing, and a programmable ram stroke. A special machine guard to facilitate proper wire placement into the terminal is also provided to ease terminal loading and provide operator safety.

Solderless Pigtail Splice Terminations

- No need to pre-strip the magnet wire
- No wire embrittlement due to solder
- No Solder fumes
- Compact clean termination



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