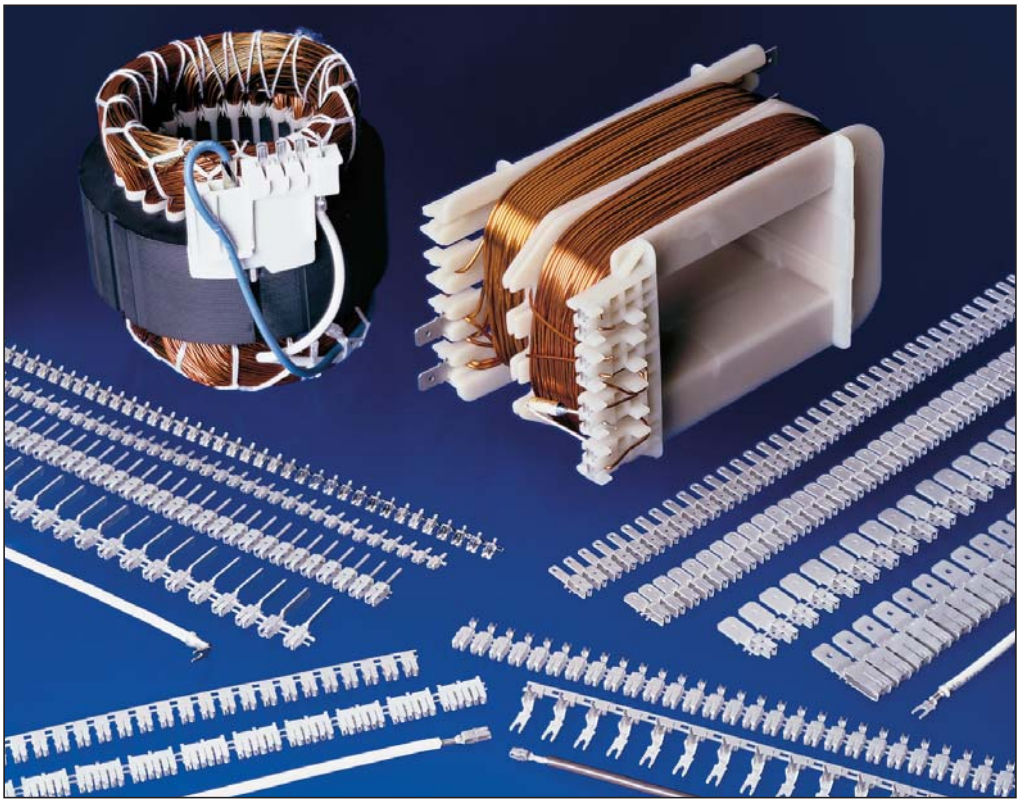
Standard MAG-MATE Terminals

Technical Features

- 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
- Recognised under the Component Recognition Program of Underwriters Laboratories Inc., File No. E13288



Tyco Electronics offers a full selection of 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 mm to 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 MAG-MATE Inserter may be used as a semi-automatic bench machine or integrated in production lines for fully-automatic applications.

Applications

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

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

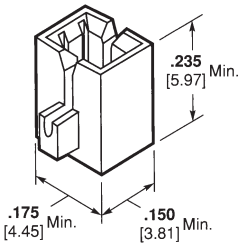
114-2069—Standard MAG-MATE .187 [4.75] Box Height Terminals

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

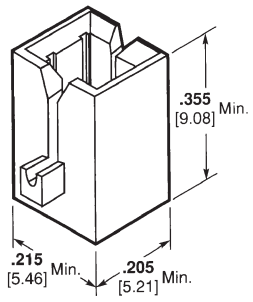
114-2066—Standard MAG-MATE .500 [12.7] Box Height Terminals

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

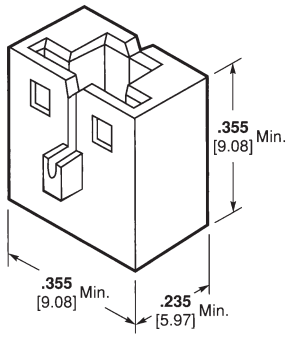
114-2094—Standard MAG-MATE .300 [7.62] Box Height Latch-In Terminals Wide Body



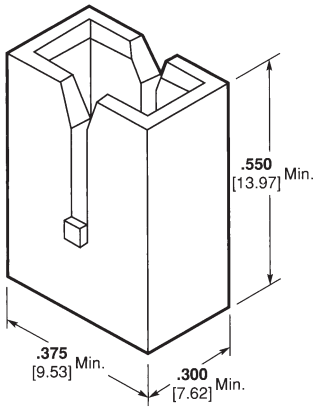
Cavity Size 1, .187 [4.75] Box Height MAG-MATE (Reference Application Spec. 114-2069)



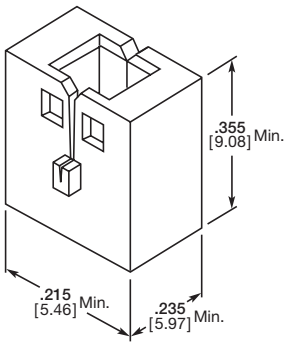
Cavity Size 2, .300 [7.62] Box Height MAG-MATE (Reference Application Spec. 114-2046)



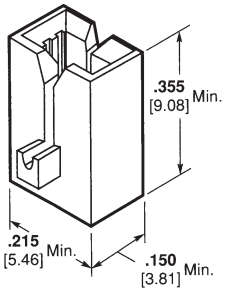
Cavity Size 3, .300 [7.62] Box Height Latch-In MAG-MATE, Wide Body (Reference Application Spec. 114-2094)



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 travelling 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 mould engineering resources to manufacture any specifically designed MAG-MATE cavity housing.

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 mm to 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.

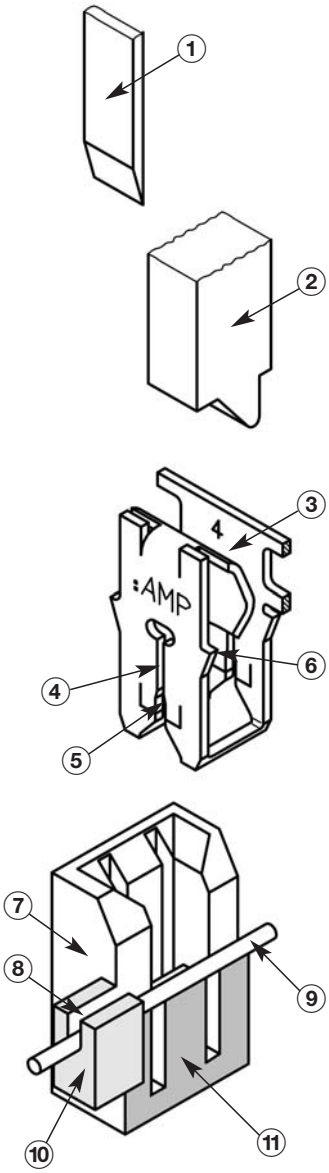
7 Plastic Cavity
Production must be in accordance with Tyco Electronics Application Specifications. Consulting Tyco Electronics is required for design in.

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.

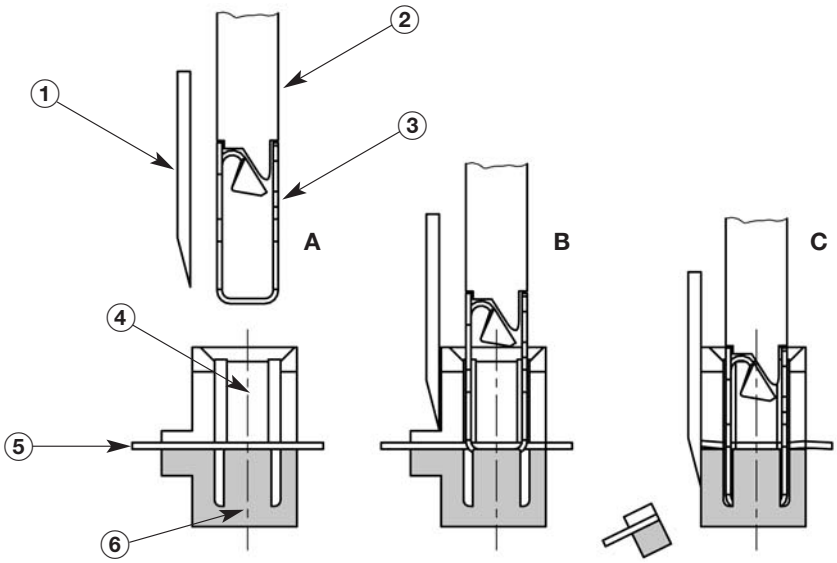
10 Wire Support Block
The block supports the magnet wire during the cutting process. The magnet wire is cut flush to the cavity front side.

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

Standard MAG-MATE Terminals (continued)

Test Results

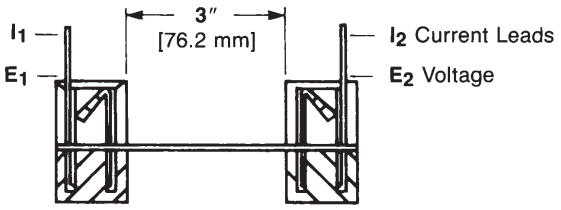
Standard and Slim Line MAG-MATE products have been submitted to the following tests without significant millivolt increase:

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

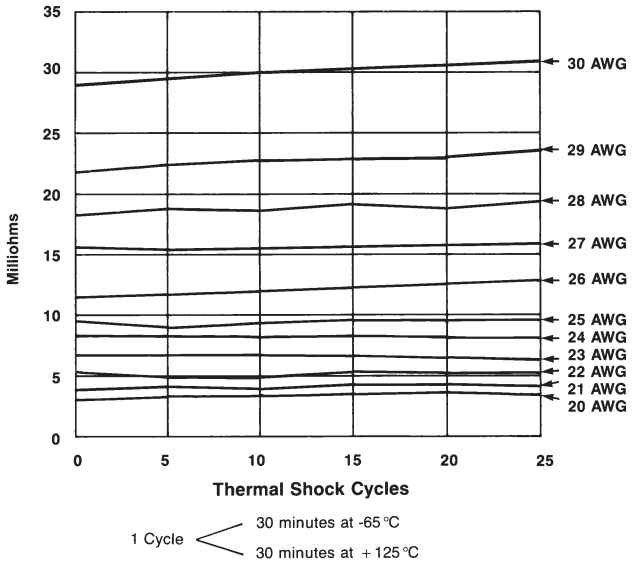


Mini MAG-MATE products have been submitted to the following tests in addition to those listed without significant millivolt increase:

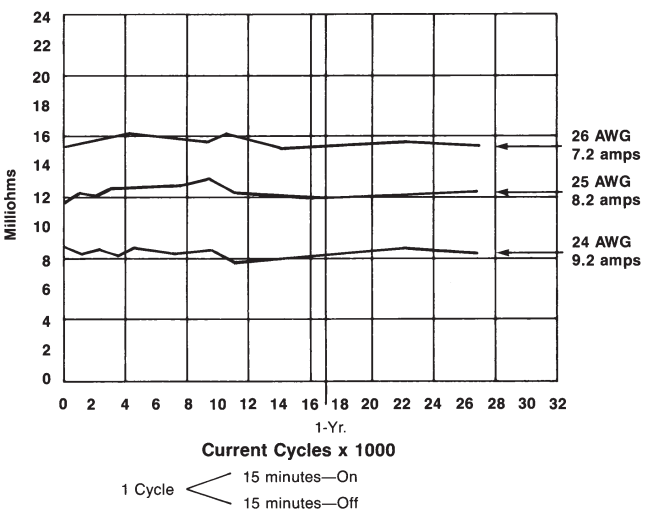
Vibration
10-55-01- Hz traversed in 1 minute at .06 inches total excursion; 2 hours in each of 3 mutually perpendicular directions.

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

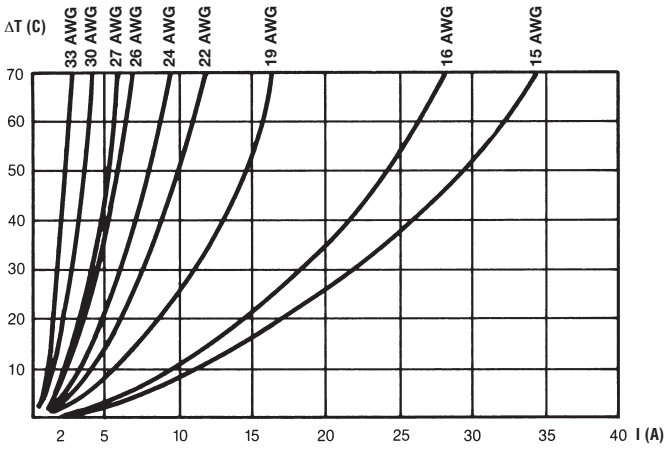
Resistance vs Thermal Shock (Copper Wire)



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 .187 and .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

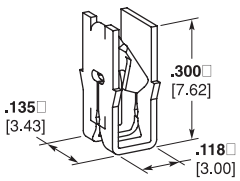
Note: For all applications, Tyco Electronics recommends that samples of the magnet wire to be used be submitted for engineering evaluation.

Standard MAG-MATE Terminals (continued)

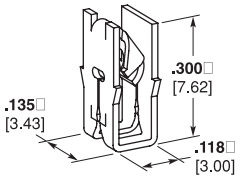
300 Box Poke-In Terminals

Material:
Tin Plated Brass

Typical Cavity Size 2
(See page 36-2)



A



B

Type	Copper Magnet Wire Range[1]		Lead Wire Range		Stock Thickness	Part Numbers	
	AWG	mm	AWG	mm²		Strip	Loose-Piece
A 300 Box Standard IDC **Locking** Poke-In	34-33	0.16-0.18	20-18	0.5-0.9	0.25	63662-1	—
	33-31	0.18-0.23	20-18	0.5-0.9	0.25	**62431-1**	62527-1
	30-27	0.25-0.36	20-18	0.5-0.9	0.30	**62429-1**	62526-1
	27-23	0.36-0.57	20-18	0.5-0.9	0.41	62935-1	63044-1
	22-20[2]	0.64-0.81	20-18	0.5-0.9	0.41	**62420-1**	62524-1
	19-17[2]	0.91-1.15	20-18	0.5-0.9	0.41	**62833-1**	62912-1
B 300 Box Standard IDC Non-Locking Poke-In	30-27	0.25-0.36	—	—	0.30	63590-1[5] 63590-2 63590-3[4]	— — —
	27-23	0.36-0.57	—	—	0.41	63551-1[5] 63551-3[4]	— —

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.

4 Finish is tin plated phosphor bronze.
5 Finish is tin over nickel plated brass.

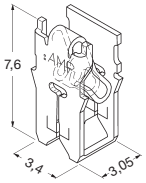
Preferred part numbers are printed in bold.

Standard MAG-MATE Terminals (continued)

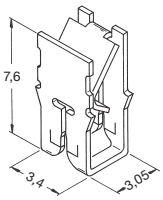
300 Leaf Terminals

Material:
Type A: CuNiSi
Type B: Brass, except note (*)

Cavity Drawing:
77-9597



A



B

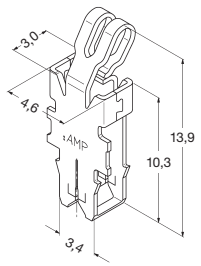
	Copper Magnet Wire Range		Diameter	Code No.	Finish	Part Number
	AWG	mm		(Stamped-in)		Strip
A 300 Leaf Mark II	33-31	0.18-0.23	0.180-0.265	4	plain	964337-1
					pre-tin plated	964337-2
	30-27	0.25-0.36	0.265-0.400	6	plain	964338-1
					pre-tin plated	964338-2
	26-23	0.40-0.57	0.400-0.630	10	plain	964339-1
					pre-tin plated	964339-2
	22-20	0.64-0.81	0.630-0.850	12	plain	964340-1
					pre-tin plated	964340-2
	19-17	0.91-1.15	0	24	plain	964341-1
					pre-tin plated	964341-2
B	33-31	0.18-0.23	0.180-0.265	4	pre-tin plated	926850-1[2]
					plain	926850-2[2]
	30-27	0.25-0.36	0.265-0.400	6	pre-tin plated	926851-1
					plain	926851-2
					pre-tin plated	926851-4[1]
	26-23	0.40-0.57	0.400-0.630	10	tin plated	926852-2[3]
	22-20	0.64-0.81	0.630-0.850	15	tin plated	928770-2[3]
	19-17	0.91-1.15	0.850-1.130	24	pre-tin plated	928771-4[1,3]

1 Material: CuNiSi
2 Stock thickness 0.25 mm
3 Stock thickness 0.40 mm

Standard MAG-MATE Terminals (continued)

Slide Spring Contact

Material:
CuNiSi
Stock Thickness:
0.32mm
Cavity Drawing:
96-52884-70



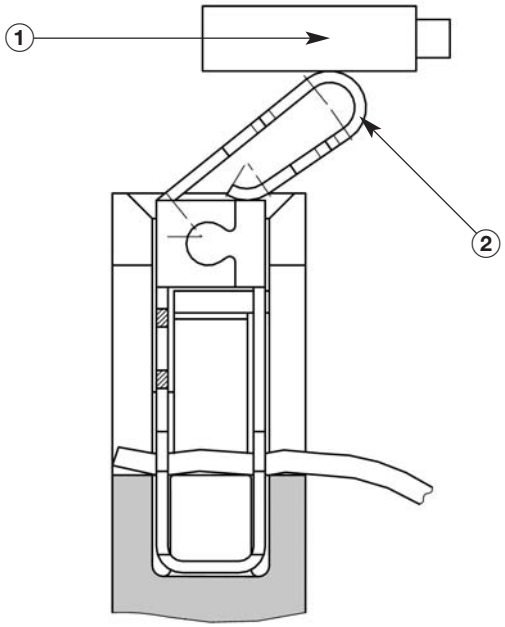
Copper Magnet Wire Range		Diameter	Code No.	Finish	Part Number
AWG	mm		(Stamped-in)		Strip
22-20[1]	0.630-0.850	0.630-0.850	12	pre-tin plated	969125-1

1 Single magnet wire only.

Principle of Function

1 Brushholder or similar Components

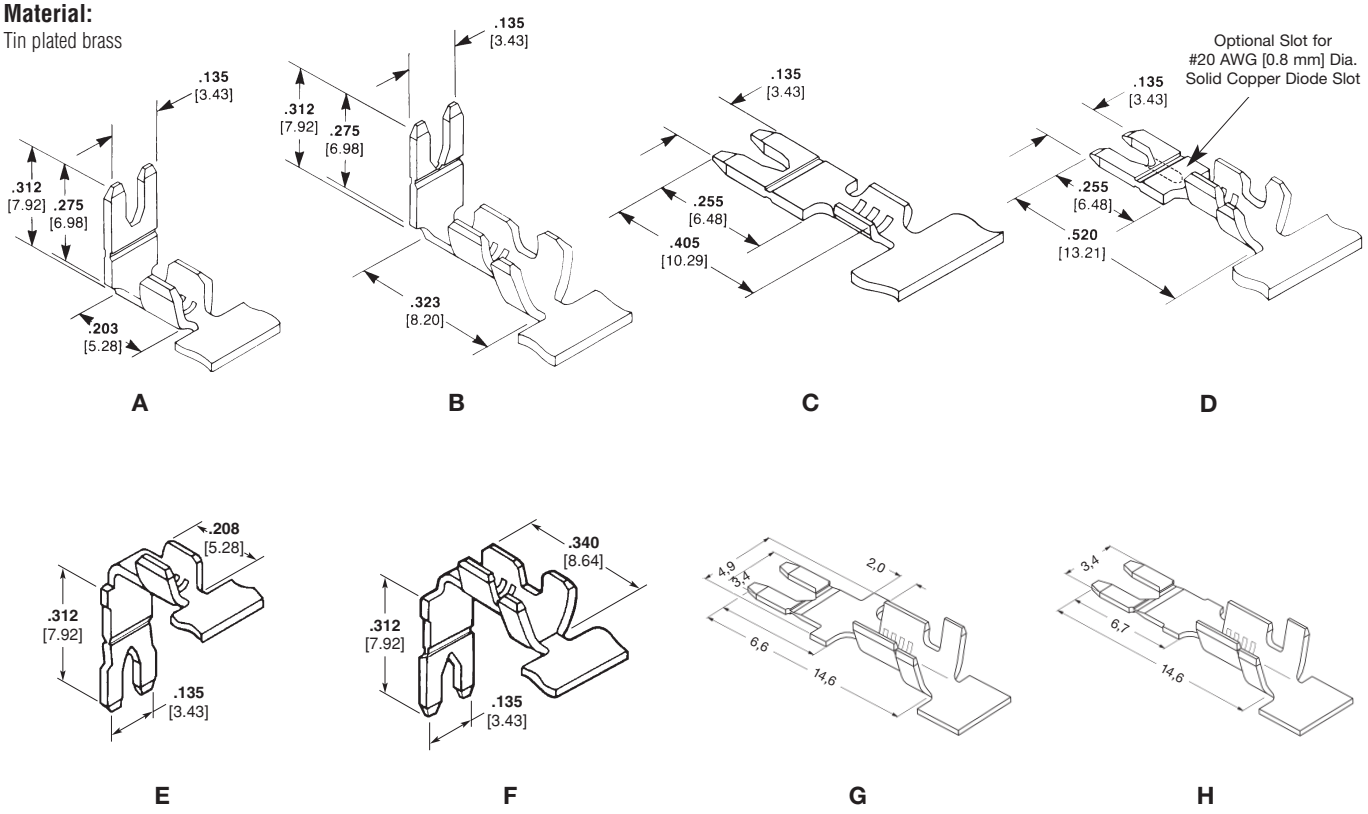
2 Slide Spring

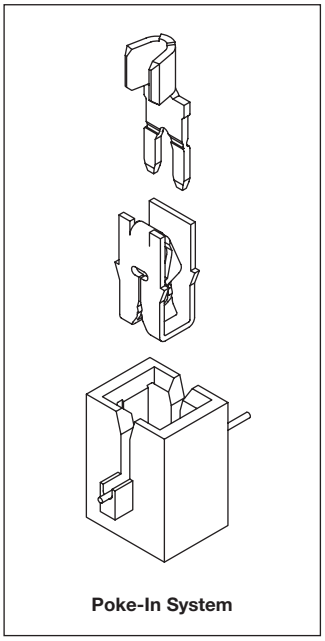


Standard MAG-MATE Terminals (continued)

Poke-In Tab Terminals

Material:
Tin plated brass





Poke-In System

Type	Lead Wire Size AWG	Lead Wire Size mm	Insulation Outer Diameter	Stock Thickness	Part Number Strip
A 90° Up	22-18	0.3-0.9	—	0.46	62895-1
				0.51	63410-1
B 90° Up w/Ins. Sup.	22-18	0.3-0.9	1.52-2.54	0.46	62896-1
					1217132-1[1]
	18-14	0.8-2.0	2.29-3.56	0.51	63218-1
C Straight	22-18	0.3-0.9	—	0.51	62897-1
	18-14	0.8-2.0	—	0.51	63775-1
D Straight w/Ins. Sup.	22-18	0.3-0.9	1.52-2.54	0.46	62898-1
	18-14	0.8-2.0	2.29-3.56	0.51	63397-1
E 90° Down	22-18	0.3-0.9	—	0.46	63364-1
F 90° Down w/Ins. Sup.	18-14	0.8-2.0	2.29-3.56	0.51	63458-1
G Straight w/Ins. Sup.[2]	22-18	0.3-1.0	3.00 max	0.45	281622-2[2]
H Straight w/Ins. Sup.	22-18	0.3-1.0	3.00 max	0.45	281623-2[3]

1 Shallow tab serrations.
2 With support flanges.
To be used in combination with modified cavity IA-84-5157.
3 This part number can be bent by applicator.

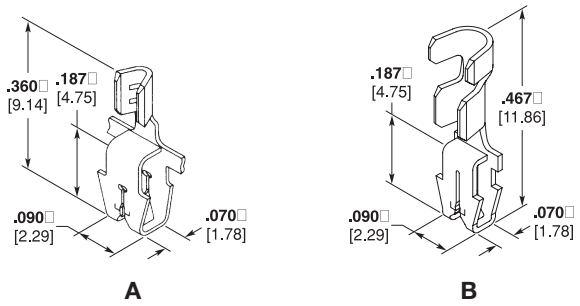
All terminals accept stranded wire.
Solid wire upon request.

Standard MAG-MATE Terminals (continued)

187 Box F-Crimp Terminals

Material:
Tin plated brass

187 Series Box
Typical Cavity Size 1
(See page 36-2)



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

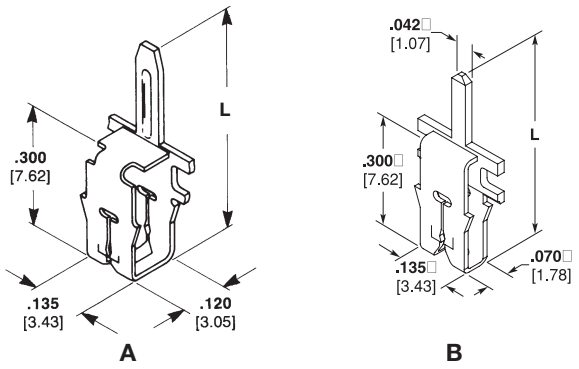
1 Two magnet wires may be terminated in the same terminal slot if diameters are equal.
2 Single magnet wire only.
3 Stranded, fused stranded or solid lead wire.
4 Strip rereeled to feed through mini-applicator to crimp lead wire first, magnet wire termination is secondary operation.

300 Box Posted PCB Terminals

Solder Terminals

Material:
Tin over copper plated brass

Typical Cavity Size
(See page 36-2)
Type A—Cavity Size 2
Type B—Cavity Size 6



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

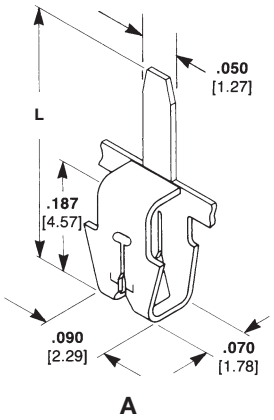
1 Two magnet wires may be terminated in the same terminal slot if diameters are equal.
2 Single magnet wire only.
Note: PC Board hole size .050 [1.27 mm].

Standard MAG-MATE Terminals (continued)

187 Box Posted PCB Terminals

Material:
Tin plated brass, except where noted

Typical Cavity Size 1
(See page 36-2)



A

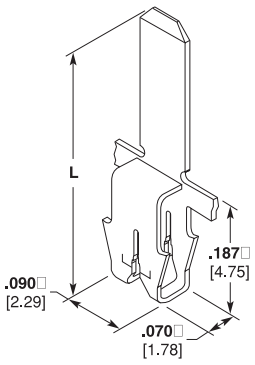
Type	Copper Magnet Wire Range[1] AWG	Copper Magnet Wire Range[1] mm	Dim. L	Stock Thickness	Part Number Strip	Part Number L.P.
A 300 Box Standard IDC PCB Post[4]	33-31	0.18-0.23	6.78	0.25	63565-1	—
			8.38	0.25	62938-1	62934-1
					62938-2[3]	—
	30-28	0.25-0.32	6.78	0.30	63160-1	—
			7.29	0.30	63818-1	—
			8.38	0.30	62430-1	62874-1
					62430-2[3]	—
	27-25	0.36-0.46	8.38	0.30	62438-1	—
					62438-2	—
	24-22[2]	0.51-0.64	7.29	0.30	63819-1	—
			8.38	0.30	62439-1	—
					62439-2[4]	—
					62439-3[3]	—

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.

187 Box Tab Terminals

Material:
Tin plated brass, except when noted

Typical Cavity Size 1
(See page 36-2)



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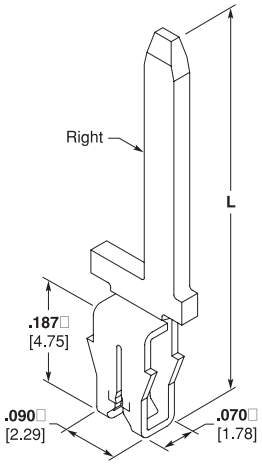

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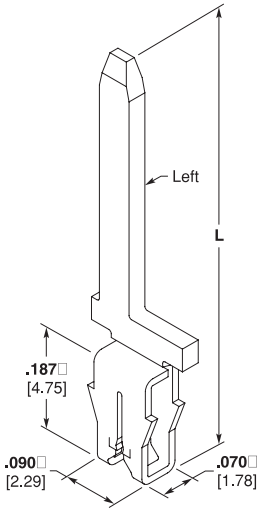


C

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	Part Number Strip
A 187 Box Standard IDC Straight Tab	30-28	0.25-0.32	10.97	2.8 x 0.5	0.51	0.30	63702-1
	29-27	0.29-0.36	10.97	2.8 x 0.5	0.51	0.30	1217196-1[3]
	30	0.25	14.00	1.8 x 0.6	0.63	0.30	1217405-1
	25-22[2]	0.46-0.64	17.78	1.5 x 0.8	0.81	0.30	1217013-1
B 187 Box Standard IDC Offset Tab-R.H	27-25	0.36-0.45	14.36	1.5 x 0.8	0.81	0.30	1217641-1
			17.78	1.5 x 0.8	0.81	0.30	1217459-1
C 187 Box Standard IDC Offset Tab-L.H	27-25	0.36-0.45	14.36	1.5 x 0.8	0.81	0.30	1217642-1
			17.78	1.5 x 0.8	0.81	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.

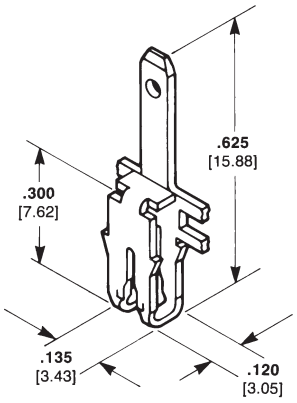
Standard MAG-MATE Terminals (continued)

2.8 mm Series FASTON Tab Terminals

Material:
Tin plated brass

Typical Cavity Size 2
(See page 36-2)

Note:
2.8 mm Tab Terminals mate with compatible FASTON receptacles.



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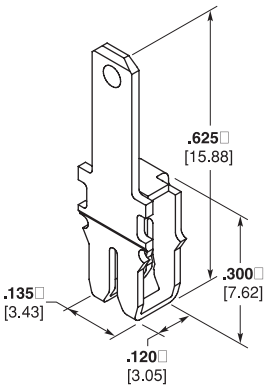

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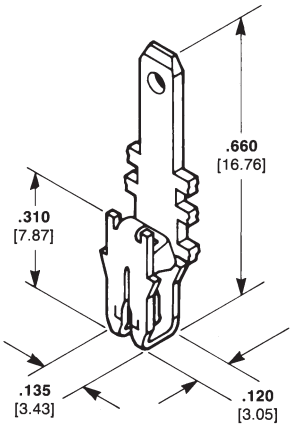


C

Type	Copper Magnet Wire Range[1]		Tab Size	Stock Thickness		Part Number	
	AWG	mm		Tab	Mag Wire	Strip	L.P.
A[5] 300 Box Standard IDC .110 [2.79] Faston Tab	30-27	0.25-0.36	2.8 x 0.5	0.51	0.30	63777-1	—
	27-23	0.36-0.57	2.8 x 0.5	0.51	0.41	63746-1	—
	23-20[2]	0.45-0.64	2.8 x 0.5	0.51	0.41	63486-1	—
	19-17	0.91-1.15	2.8 x 0.5	0.51	0.51	—	—
B[5,6] 300 Box Single IDC Strain w/ Relief Slot	27-23	0.36-0.57	2.8 x 0.5	0.51	0.41	63827-1	—
	23.5-20[2]	0.54-0.81	2.8 x 0.5	0.51	0.41	—	—
C[4,5] Poke-In Combination Tab	28-24	0.32-0.51	2.8 x 0.5	0.51	0.30	63062-1[3]	1217430-1[3]
	25-22[2]	0.45-0.64	2.8 x 0.5	0.51	0.30	63063-1[3]	—
						63063-2	—

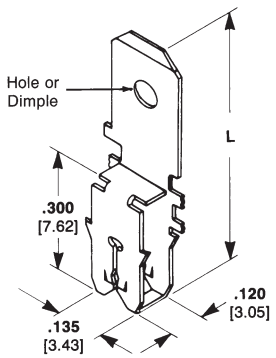
1 Two magnet wires may be terminated in the same terminal slot if diameters are equal.
2 Single magnet wire only; 22 AWG [0.64 mm] or larger.
3 Varnish resist coating.
4 Poke-In feature accepts 20-18 AWG [0.5-0.8 mm 2] Solid or overcoated stranded lead wire or 90° Poke-In tab.
5 After insertion into 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.

Standard MAG-MATE Terminals (continued)

4.8 mm Series
FASTON Tab Terminals

Material:
Tin plated brass

Typical Cavity Sizes
(See page 36-2)
Type A—Cavity Size 2



A

Type	Copper Magnet Wire Range[1] AWG	Copper Magnet Wire Range[1] mm	Dim. L	Tab Feature	Tab Size	Stock Thickness Tab Sect.	Stock Thickness Mag. Wire Sect.	Part Number Strip	Part Number L.P.
A[4] 300 Box Standard IDC 4.8 mm Faston Tab	33-31	0.18-0.23	16.00	Dimple	4.8 x 0.5	0.51	0.25	62513-1	62663-1
			16.76	Hole	4.8 x 0.5	0.51	0.30	63584-1	—
	30-27	0.25-0.36	16.00	Dimple	4.8 x 0.5	0.51	0.30	62512-1	—
								—	—
				Dimple	4.8 x 0.8	0.81	0.30	—	—
	27-23	0.36-0.57	16.00	Dimple	4.8 x 0.5	0.51	0.41	62514-1	63852-1
								62514-2[5]	—
				Hole	4.8 x 0.5	0.51	0.41	63664-1[5]	—
								63664-2	—
				—	4.8 x 0.5	0.51	0.41	63461-1	—
								1217243-1[6]	—
			16.76	Hole	4.8 x 0.5	0.51	0.41	63585-1	—
	23	0.57	16.00	—	4.8 x 0.5	0.51	0.41	63776-1	—
	22-20[2]	0.64-0.81	16.00	Dimple	4.8 x 0.5	0.51	0.41	62511-1	62661-1
								62511-2[5]	—
				Hole	4.8 x 0.5	0.51	0.41	63663-1[5]	—
								63663-2	—
				Dimple	4.8 x 0.8	0.81	0.41	1217065-1	—
				Hole	4.8 x 0.8	0.81	0.41	1217128-1	—
	21-19[3] Aluminum	0.72-0.91	16.00	Dimple	4.8 x 0.5	0.51	0.41	—	—
				Hole	4.8 x 0.5	0.51	0.41	63669-1	—
	20-18[2]	0.81-1.02	16.00	Dimple	4.8 x 0.5	0.51	0.51	62904-1[7]	—
				Hole	4.8 x 0.5	0.51	0.51	63670-1	—
	19-17[2]	0.91-1.15	16.00	Dimple	4.8 x 0.5	0.51	0.51	63273-1	63829-1
								63511-1[5]	—
				Hole	4.8 x 0.5	0.51	0.51	63665-1[5]	—
	18.5-16.5[3] Aluminum	0.97-1.22	16.00	Dimple	4.8 x 0.5	0.51	0.41	—	—
				Hole	4.8 x 0.5	0.51	0.41	63668-1	—

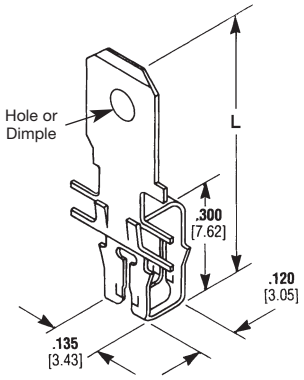
1 Two magnet wires may be terminated in the same terminal slot if diameters are equal.
2 Single magnet wire only.
3 Single aluminum magnet wire only.
4 After insertion into plastic cavity, tab portion must be bent over 45°-90° or potted in to prevent pullout when mating receptacle is disconnected.
5 Varnish resist coating.
6 Special wide body cut off for added stability.
7 Single bare copper wire only.

Standard MAG-MATE Terminals (continued)

4.8 mm Series FASTON Tab Terminals (continued)

Material:
Tin plated brass

Typical Cavity Sizes
(See page 36-2)
Type B—Cavity Size 5
Type C—Cavity Size 5
Type D—Cavity Size 3



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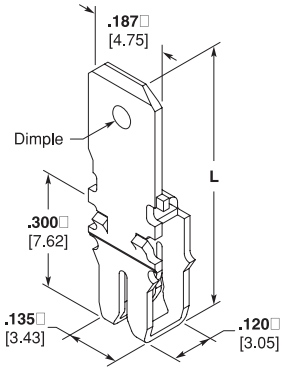

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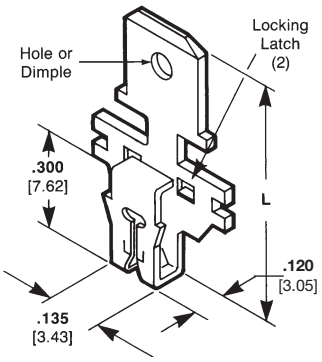
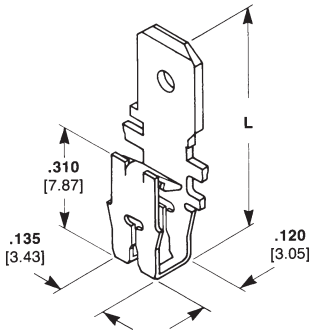


D

4.8 mm Series Combination Poke-In FASTON Terminals

Material:
Tin plated brass

Typical Cavity Sizes
(See page 36-2)
Type E—Cavity Size 2
Type F—Cavity Size 3



E

Material	Copper Magnet Wire Range[1] AWG	Copper Magnet Wire Range[1] mm	Dim. L	Tab Feature	Tab Size	Stock Thickness Tab Section	Stock Thickness Mag. Wire Section	Part Number Strip
B 300 Box Standard IDC Narrow Body Latch Type	27-23	0.36-0.57	16.00	Hole	4.8 x 0.5	0.51	0.41	63107-1
				—	4.8 x 0.5	0.51	0.41	1217493-1
	23-20[2]	0.57-0.81	16.00	Hole	4.8 x 0.5	0.51	0.41	63340-1
				—	4.8 x 0.5	0.51	0.41	1217493-1
	22-20[2]	0.64-0.81	16.00	Hole	4.8 x 0.5	0.51	0.41	63429-1 63429-2[6]
	19-17[2]	0.91-1.15	16.00	Dimple	4.8 x 0.5	0.51	0.41	62888-1 62888-2[6]
				Hole	4.8 x 0.5	0.51	0.41	63782-1
C Narrow Body Latch Type w/ Strain Relief Slot	23.5-20[2]	0.54-0.81	16.00	Dimple	4.8 x 0.5	0.51	0.41	1217004-1
D 300 Box Standard IDC Wide Body Latch Type	33-31	0.18-0.23	16.00	Dimple	4.8 x 0.5	0.51	0.25	63255-1
			18.54	Hole	4.8 x 0.5	0.51	0.25	63505-1
	31-28	0.23-0.32	16.00	Hole	4.8 x 0.5	0.51	0.30	63760-1
	30-27	0.25-0.36	18.54	Hole	4.8 x 0.5	0.51	0.30	63447-1
	27-23	0.36-0.57	16.00	Dimple	4.8 x 0.5	0.51	0.41	63256-2
E[4,5] Poke-In Combination Tab	33-31	0.81-0.23	16.00	Hole	4.8 x 0.5	0.51	0.25	63018-1

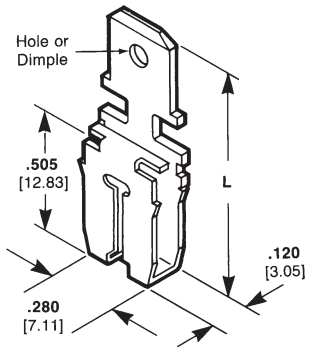
1 Two magnet wires may be terminated in the same terminal slot if diameters are equal.
2 Single magnet wire only; 22 AWG [0.64 mm] or larger.
3 Strain relief slot for high vibration applications.
4 Poke-In feature accepts 20-18 AWG [0.5-0.8 mm^2] solid, fused stranded lead wire or 90° poke-in tab terminal.
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.

Standard MAG-MATE Terminals (continued)

4.8 mm Series FASTON Tab Terminals (continued)

Material:
Tin plated brass

Typical Cavity Size 4
(See page 36-2)



F

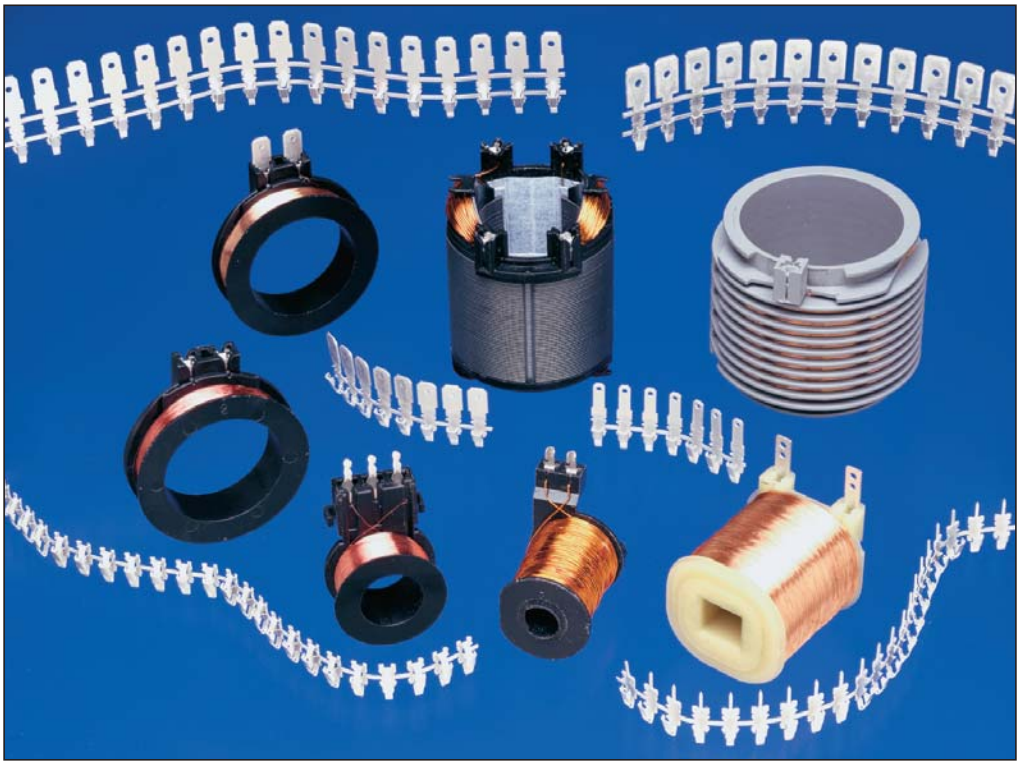
Type	Copper Magnet Wire Range[1]		Dim. L	Tab Feature	Tab Size	Stock Thickness		Part Number[3]	
	AWG	mm				Tab Section	Mag. Wire Section	Strip	L.P.
F[3] 500 Box Standard IDC	22-20	0.64-0.81	21.08	Dimple	4.8 x 0.5	0.51	0.51	—	63708-1[4]
	19-17	0.91-1.15	21.08	Hole	4.8 x 0.5	0.51	0.51	63643-1	—
	17.5-16	1.09-1.29	21.08	Hole	4.8 x 0.5	0.51	0.51	63667-1[4]	63599-1[4]
				Hole	4.8 x 0.8	0.81	0.51	1217075-1	—
	16-15	1.29-1.45	21.08	Hole	4.8 x 0.5	0.51	0.51	63666-1[4]	—
				Hole	4.8 x 0.5	0.51	0.51	63762-1	—
				Dimple	4.8 x 0.5	0.51	0.51	63353-1	—
	14.5-13[2]	1.54-1.83	21.08	Dimple	4.8 x 0.5	0.51	0.41	63428-1	—

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.

Mini MAG-MATE Terminals

Technical Features

- 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
- Recognised 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 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.

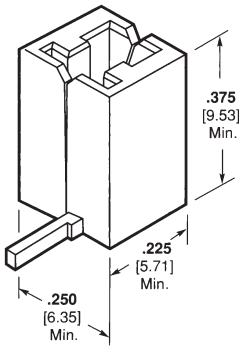
The Mini MAG-MATE Inserter shears the terminal from the carrier strip and insert the terminal into the cavity by a dual ram insertion mechanism.

As the unexpanded terminal approaches the bottom of the cavity the upper ram stops. The lower ram continues to push to a pre-scribed 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

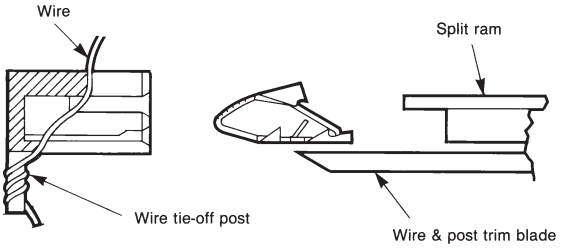
Technical Documents

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.

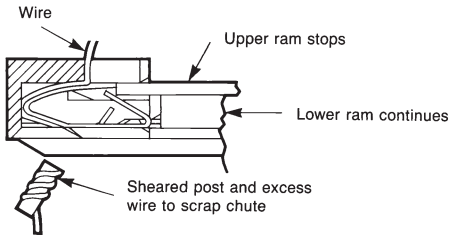
114-2047 Mini MAG-MATE Terminals

Mini MAG-MATE Terminals (continued)

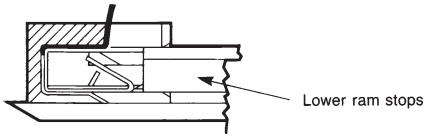
Termination Sequence



Terminal Removed from Carrier



Terminal Inserted

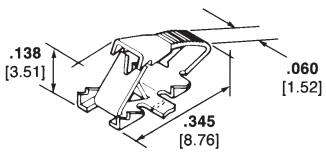


Termination Complete

Poke-In Tab Terminal

Material

.010 [0.25] tin plated brass



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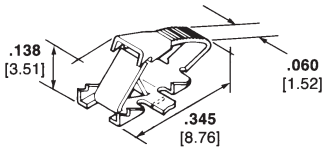


B

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]

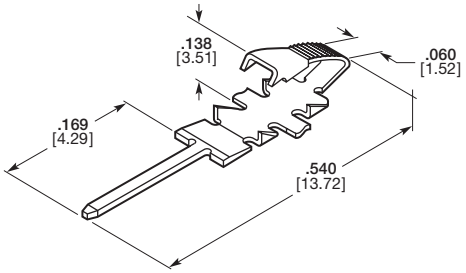
[1] Solid or overcoated stranded lead wire only.
[2] Radius on beam leaf tip.
[3] Finish is select gold plated on lead tip.

Mini MAG-MATE Terminals (continued)

Posted Terminal

Material

Tin over premilled brass



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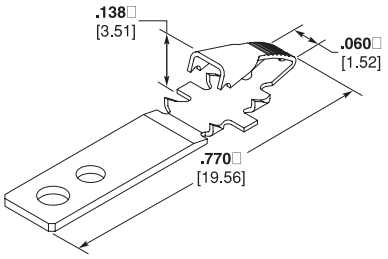

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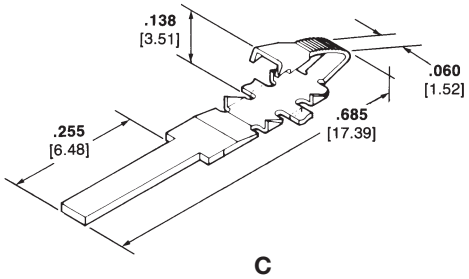


C

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

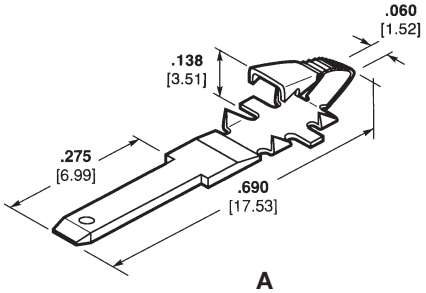
† These part numbers are available upon special request; contact Tyco Electronics Engineering for details.

Mini MAG-MATE Terminals (continued)

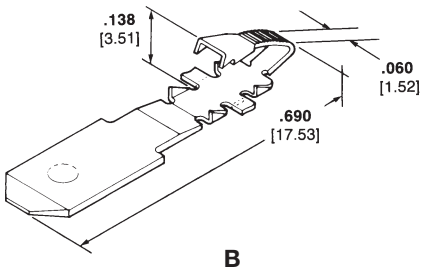
FASTON Tab Terminals

Material

Tin over premilled brass



A



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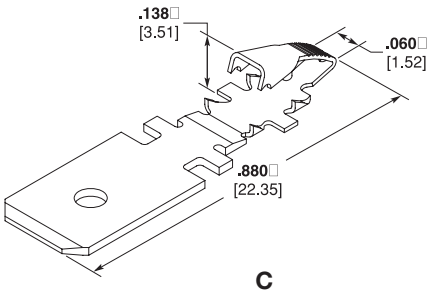


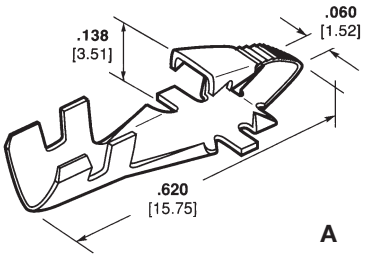
C

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



A

Type	Copper Magnet Wire Range		Lead Wire Range		Stock Thickness		Strip Part Number
	AWG	mm	AWG	mm^2	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.

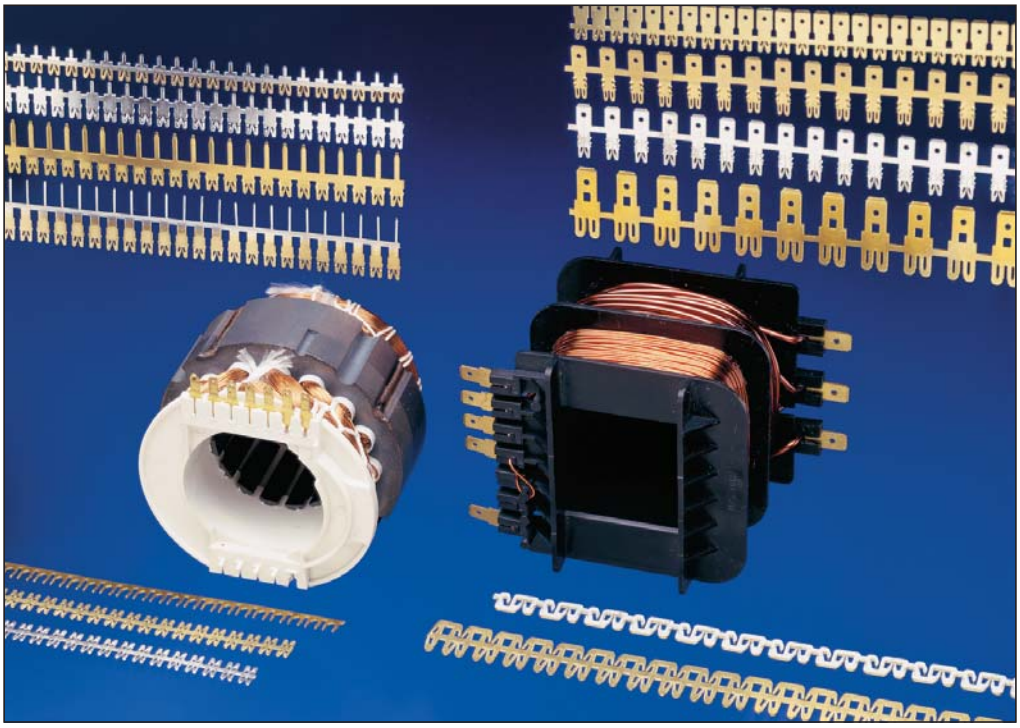
SIAMEZE Terminals

Technical Features

- 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
- Recognised under the Component Program of Underwriters Laboratories Inc., File No. E13288

Applications

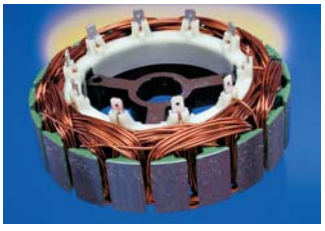
- Motor windings and connections
- Coil connections
- Transformer windings and connections
- Ballasts
- Power supplies
- Solenoids
- Actuators



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.

SIAMEZE Terminals (continued)

Typical Plastic Cavity – Pockets

Note: SIAMEZE plastic cavity dimensions shown on these pages are a general indication only. The actual design is to comply with the Tyco Electronics cavity specification listed on the terminal drawing.

Technical Documents

Product Specifications:

108-2085—Standard Range SIAMEZE
108-2244—Fine Range SIAMEZE
108-2239—Medium Range SIAMEZE
108-2316—Heavy Range SIAMEZE
108-2293—High Temperature Standard Range SIAMEZE

Application Specifications:

114-13166—Standard & Fine Range SIAMEZE
114-13210—Medium & Heavy Range SIAMEZE

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.

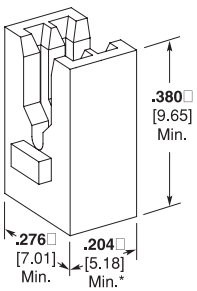
Unraveling is prevented by a slight friction fit, suitable bend or by wrapping the magnet wire around the tie off post.

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

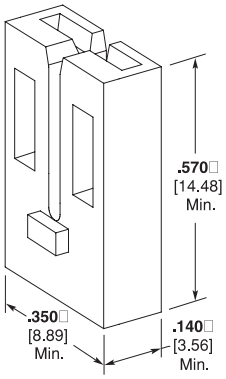
Terminal retention is retained in the plastic cavities by single or multiple locking barbs or locking latches for large quick disconnect FASTON tab terminals.

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

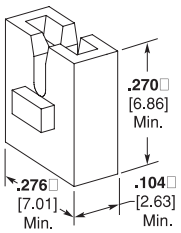
Tyco Electronics can provide design and mold engineering resources to manufacture most specifically designed SIAMEZE cavity housings.



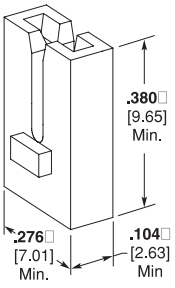
Cavity Specification 1601421



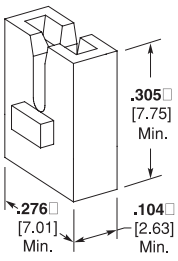
Cavity Specification 1601423



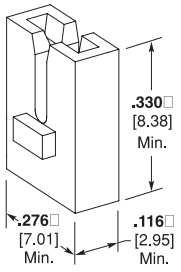
Cavity Specification 1601424



Cavity Specification 1601425



Cavity Specification 1601427

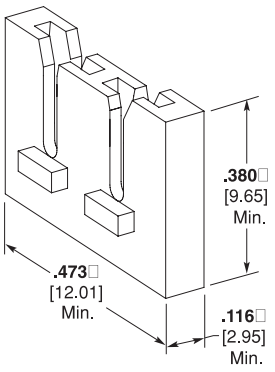


Cavity Specification 1601431

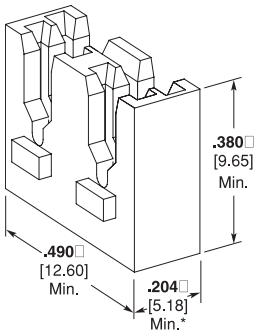
* Minimum dimension with Lead Lok slot.

SIAMEZE Terminals (continued)

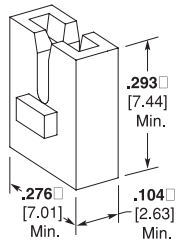
Typical Plastic Cavity – Pockets (continued)



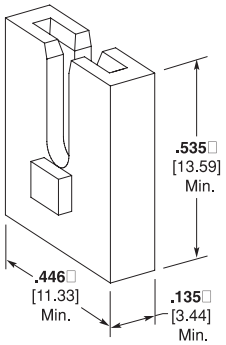
Cavity Specification 1601432



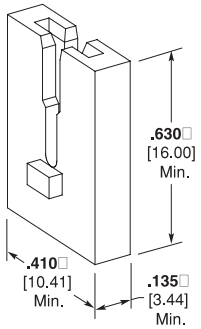
Cavity Specification 1601433



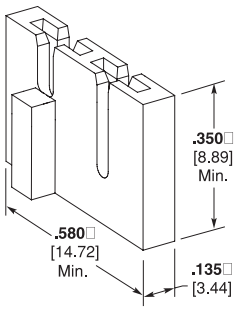
Cavity Specification 1601434



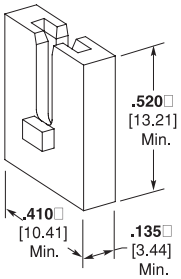
Cavity Specification 1601435



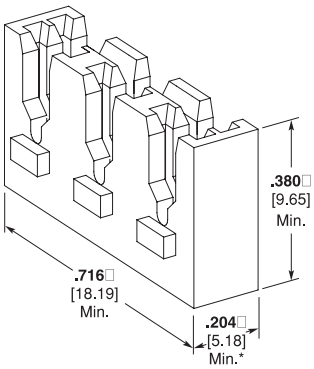
Cavity Specification 1601436



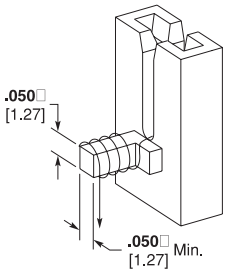
Cavity Specification 1601437



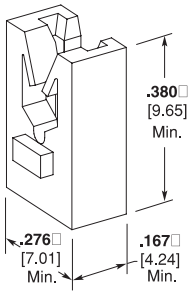
Cavity Specification 1601438



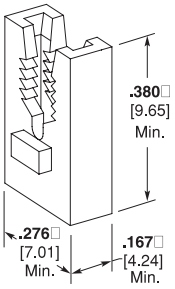
Cavity Specification 1601440



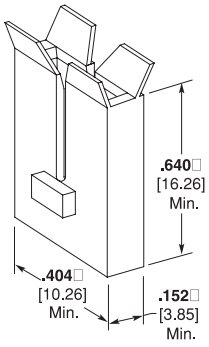
Cavity Specification 1601447



Cavity Specification 1601462



Cavity Specification 1601463



Cavity Specification 1601470

* Minimum dimension with Lead Lok slot.

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

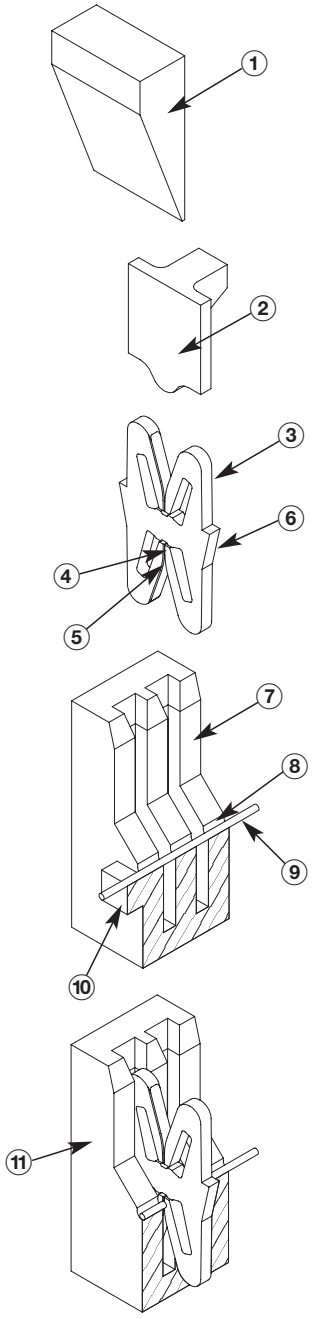
The magnet wire is positioned in "U" slot manually or automatically by coil winding equipment.

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"

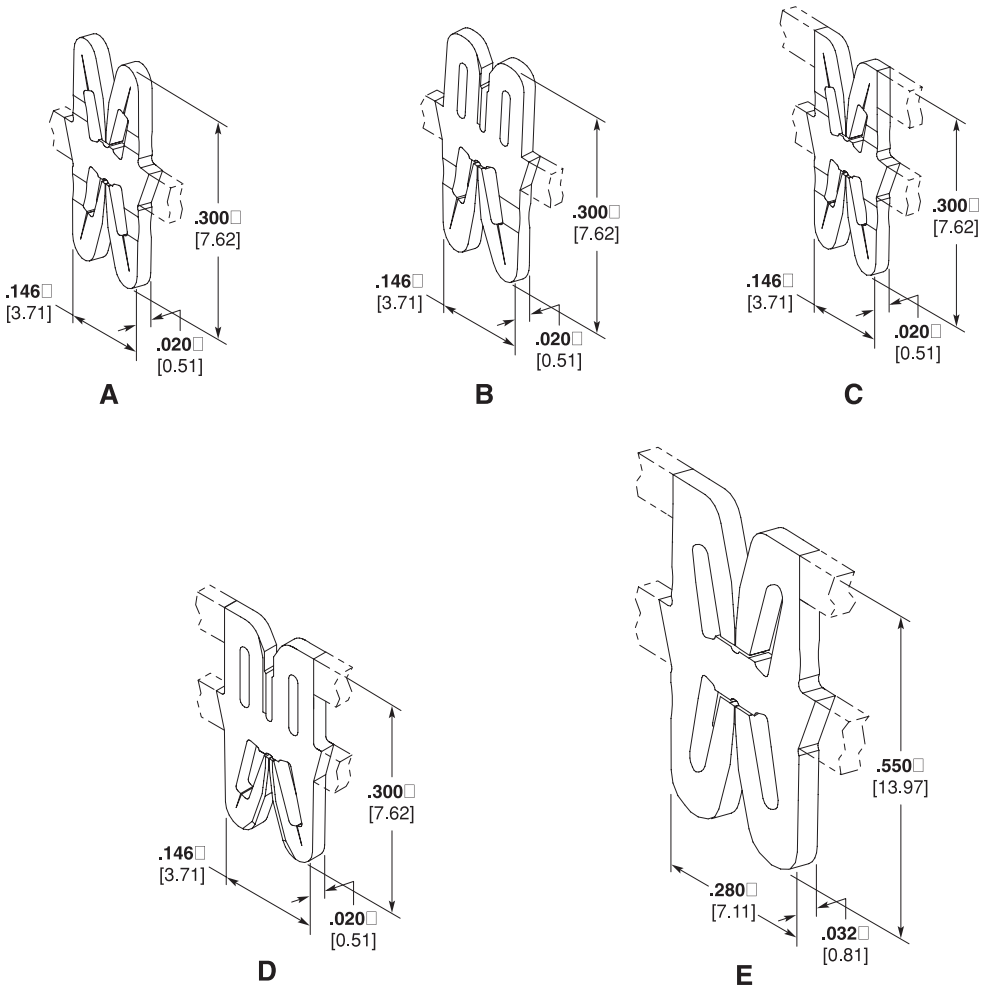
Thermal Shock
10 cycles with each cycle consisting of 30 minutes at 125°C followed by 30 minutes at –65°C

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

SIAMEZE Terminals (continued)

Wire-to-Wire Terminals

Material:
Brass



Type	Recommended Pocket[7]	Copper Magnet Wire Range		Lead Wire Range		Part Number	
		AWG	mm	AWG	mm²	Reeled	Loose
A Moving Beam	1601421 1601462 1601463	27-36	0.36–0.13	18-22[6]	0.8-0.3	1601117-1 / 2-1601117-1[1]	4-1601117-1[2]
		18-34	1.02-0.16	18-22[6]	0.8-0.3	1601000-1 / 1601000-2[5]	4-1601000-1[2] / 4-1601000-2[2,5]
B Wire Specific	1601421	18-34	1.02–0.16	20	0.5	1601056-1 / 2-1601056-1[1]	4-1601056-1[2]
		18-34	1.02-0.16	18	0.8	1601074-1 / 2-1601074-1[1]	4-1601074-1[2]
C High Carry	1601433 1601440	18-34	1.02-0.16	18-22[6]	0.8-0.3	1601046-1 / 2-1601046-1[1]	4-1601046-1[2] / 6-1601046-1[3] / 8-1601046-1[4]
D High Carry Specific	1601433	27-36	0.36-0.13	20	0.5	1601237-1 / 2-1601237-1[1]	4-1601237-1[2] / 6-1601237-1[3]
E Medium Range	1601436	12-23	2.06-0.56	16-20	1.3-0.5	1601136-1 / 2-1601136-1[1]	4-1601136-1[2] / 6-1601136-1[3]

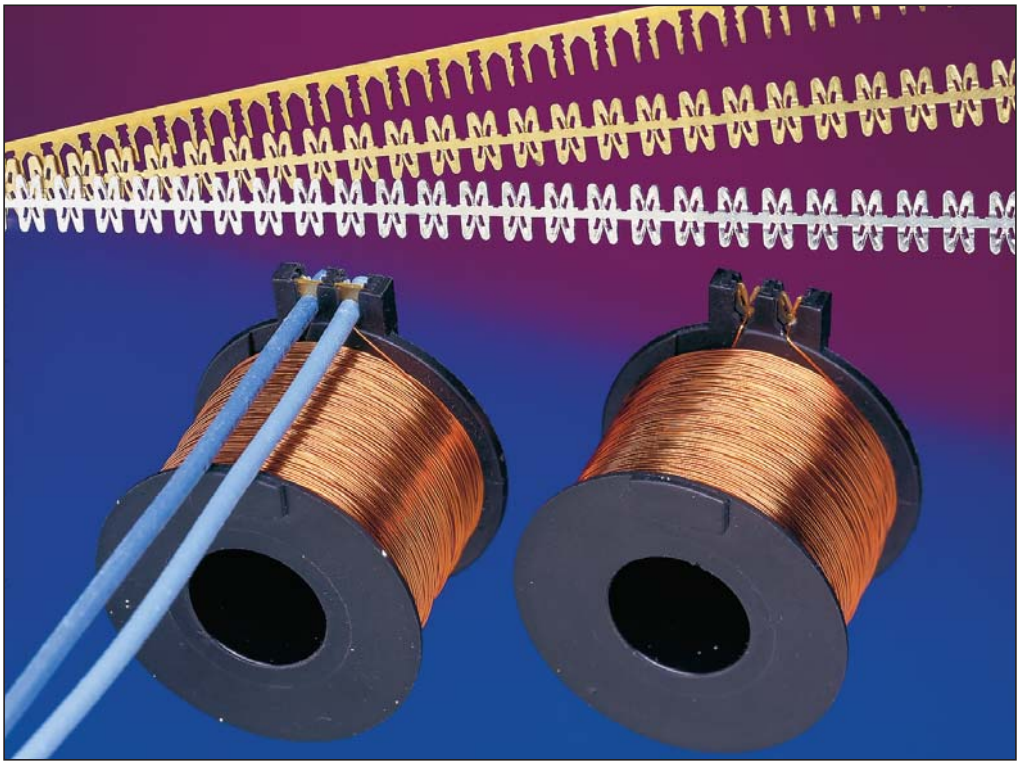
1 Reversed Reeled—Consult Tyco Electronics drawing for orientation.
2 Loose Single.
3 Loose Bussed Pair.
4 Loose Bussed Triple.
5 Finish is Post Plated Tin over Copper (Consult Tyco Electronics drawing for specifics).
6 Lead wire may be stranded, solid or bonded with 105°C PVC insulation.
Contact Tyco 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.

Engineering Notes

Lead Lok Terminals

Technical Features

- **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 AWG [0.3 mm² – 0.8 mm²] solid or stranded lead wire with .115 [2.92 mm] 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.

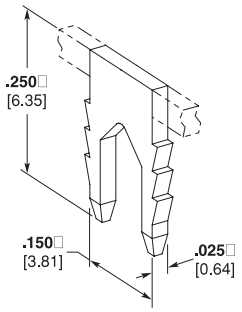
Perpendicular and parallel lead wire strain relief retention forces in excess of 20 lbs are achieved.

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.

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 1601433 1601440	18-22[2]	0.8-0.3	2-1601140-1 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

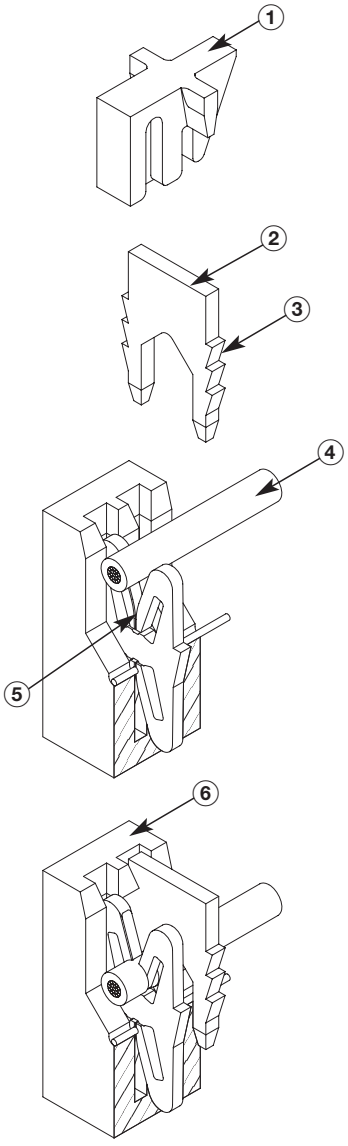
Stranded, solid and bonded lead wire with 105 °C PVC insulation can be used. Contact Tyco Electronics Engineering for other lead wires and insulation under consideration.

5 IDC Slot

The IDC slot will pierce the lead wire during insertion.

6 Lead Wire Insertion Complete

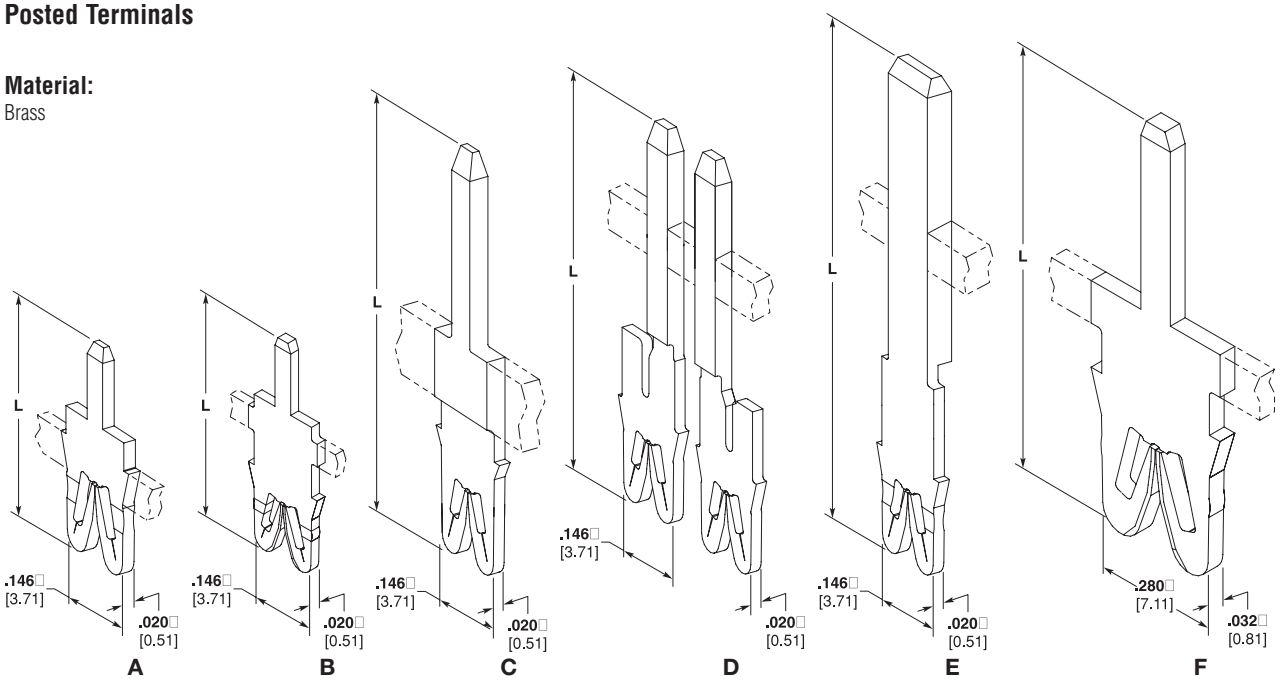
The lead wire termination is complete when the Lead Lok is fully seated in the cavity.



SIAMEZE Terminals (continued)

Posted Terminals

Material:
Brass



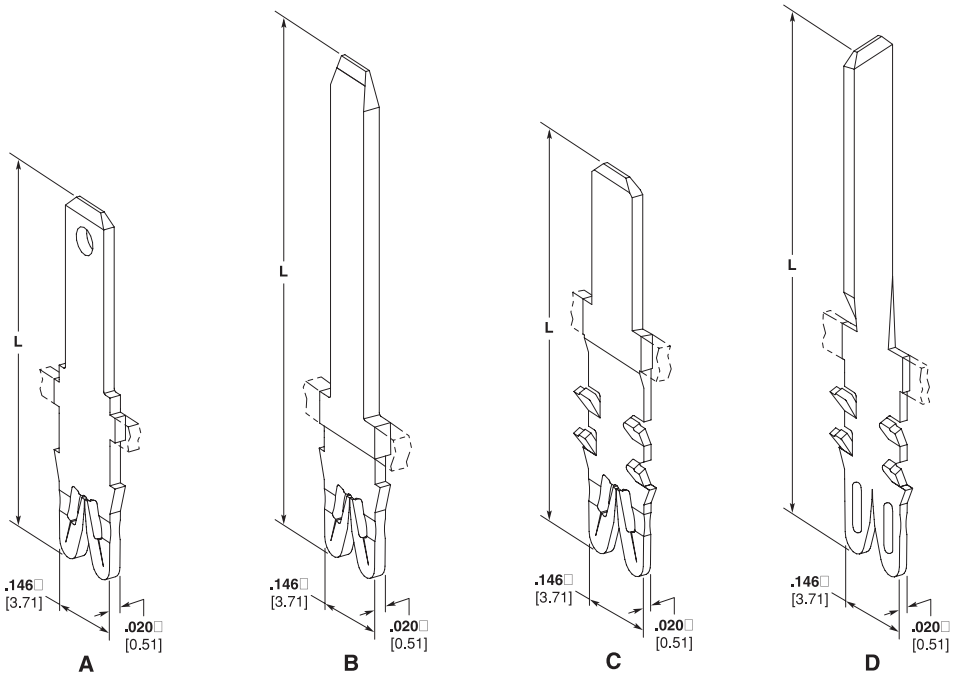
Type	Recommended Pocket	Copper Magnet Wire Range AWG	Copper Magnet Wire Range mm	Dim. L	Tab Size	Part Number Reeled	Part Number Loose
A PC Tab	1601424	27-36	0.36-0.13	8.76	1.0 x 0.5	1601120-4[3] / 2-1601120-4[1,3]	4-1601120-4[3]
		18-34	1.02-0.16	8.76	1.0 x 0.5	1601009-4[2] / 2-1601009-4[1,2]	4-1601004-2[2]
		16-17[6]	1.27-1.15	8.76	1.0 x 0.5	1601147-3[3] / 2-1601147-3[1,3]	4-1601147-3[3]
		29[6]	0.29	8.76	1.0 x 0.5	1601155-2[2] / 2-1601155-2[1,2]	4-1601155-2[2]
B Extended PC Tab	1601425	27-36	0.36-0.13	12.32	1.0 x 0.5	1601128-2[3] / 2-1601128-2[1,3]	4-1601128-2[3]
		18-34	1.02-0.16	12.32	1.0 x 0.5	1601041-2[2] / 2-1601041-2[1,2]	4-1601041-2[2]
				11.57	1.0 x 0.5	1601095-2[4] / 2-1601095-2[1,4]	4-1601095-2[4]
C Long Narrow Width Blade	1601431	18-34	1.02-0.16	19.16	1.2 x 0.8	1601110-2[4] / 2-1601110-2[1,4]	4-1601110-2[4]
				17.00	1.5 x 0.8	1601099-1 / 2-1601099-1[1]	4-1601099-1
				19.21	1.5 x 0.8	1601063-2[5] / 2-1601063-2[1,5]	4-1601063-2[5]
				22.96	1.5 x 0.8	1601037-2[5] / 2-1601037-2[1,5]	4-1601037-2[5]
				25.53	1.5 x 0.8	1601066-2[4] / 2-1601066-2[1,4]	4-1601066-2[4]
				24.74	1.8 x 0.6	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	18.03	1.5 x 0.8	1601121-2[4] / 2-1601121-2[1,4]	–
		18-34	1.02-0.16	18.03	1.5 x 0.8	1601065-2[4] / 2-1601065-2[1,4]	–
E Long Medium Width Blade	1601425	18-34	1.02-0.16	21.26	3.0 x 0.6	1601008-2[4] / 2-1601008-2[4]	4-1601008-2[4]
				21.26	3.0 x 0.8	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	22.15	3.3 x 0.8	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)

2.8 mm Series FASTON Tab Terminals

Material:
Brass



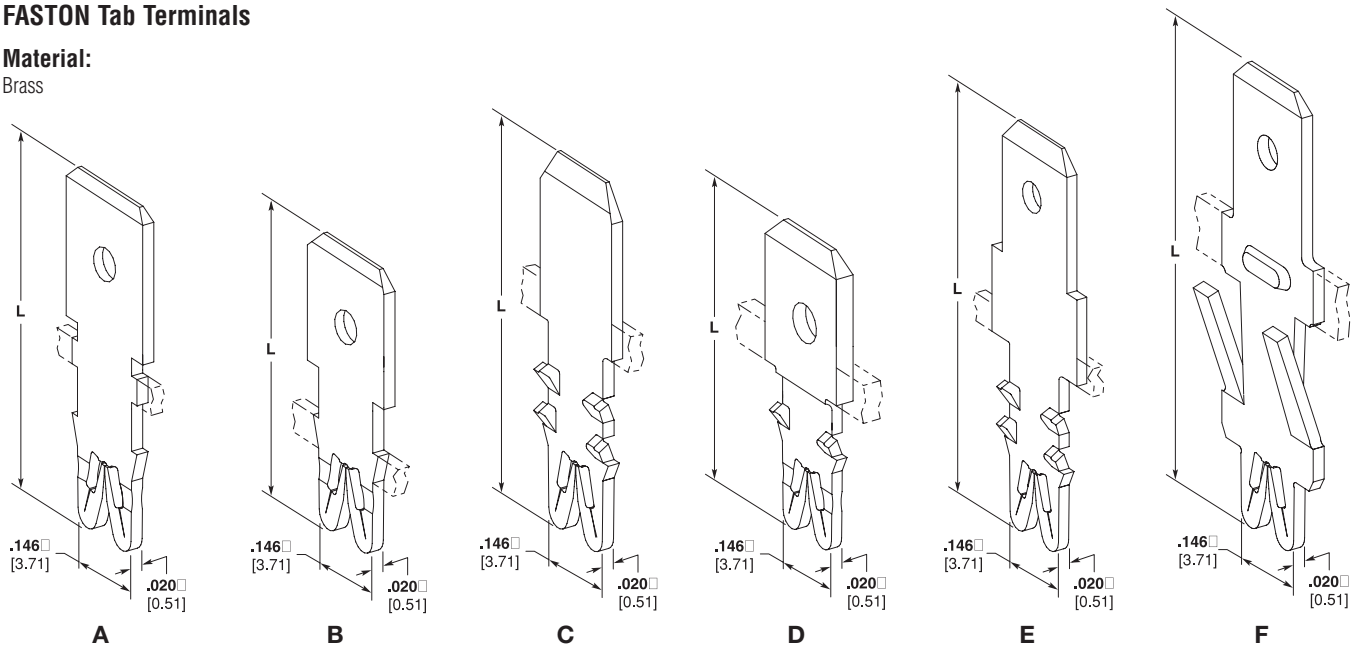
Type	Recommended Pocket[7]	Copper Magnet Wire Range AWG	Copper Magnet Wire Range mm	Dim. L	Tab Feature	Tab Size	Part Number Reeled	Part Number Loose
A Single Barb	1601425	27-36	0.36-0.13	16.26	1601116-1	2.8 x 0.5	2-1601116-1[1]	4-1601116-1
		18-34	1.02-0.16	16.26	Hole	2.8 x 0.5	1601005-1 2-1601005-1[1]	4-1601005-1
							1601005-2[3] 2-1601005-2[1,3]	4-1601005-2[3]
					—	2.8 x 0.5	1601204-2[3] 2-1601204-2[1,3]	4-1601204-1[3]
		18-34	1.02-0.16	21.49	Hole	2.8 x 0.5	1601045-1 2-1601045-1[1]	4-1601045-1
					—	2.8 x 0.5	1601059-1 2-1601059-1[1]	4-1601059-1
							1601059-2[4] 2-1601059-2[1,4]	4-1601059-2[4]
		18-34	1.02-0.16	23.50	Hole	2.8 x 0.5	1601073-1 2-1601073-1[1]	4-1601073-1
B Single Barb Low Transition	1601431	18-34	1.02-0.16	24.00	—	2.8 x 0.5	1601097-2[3] 2-1601097-2[1,3]	4-1601097-2[3]
C Multi-Barb	1601425	27-36	0.36-0.13	31.50	—	2.8 x 0.8	1601133-2[2,5] 2-1601133-2[1,2,5]	4-1601133-2[2]
		18-34	1.02-0.16	16.63	Hole	2.8 x 0.5	1601039-1 2-1601039-1[1]	4-1601039-1
							1601039-2[3] 2-1601039-2[1,3]	4-1601039-2[3]
		18-34	1.02-0.16	15.99	—	2.8 x 0.8	1601064-1 2-1601064-1[1]	4-1601064-1
		18-34	1.02-0.16	31.50	—	2.8 x 0.5	1601112-2[2,5] 2-1601112-2[1,2,5]	4-1601112-2[2]
D Multi-Barb w/ 90° Twist	1601425	21-24[6]	.51-.72	23.24	—	2.8 x 0.5	1601151-2[3] 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.

SIAMEZE Terminals (continued)

4.8 mm Series
FASTON Tab Terminals

Material:
Brass



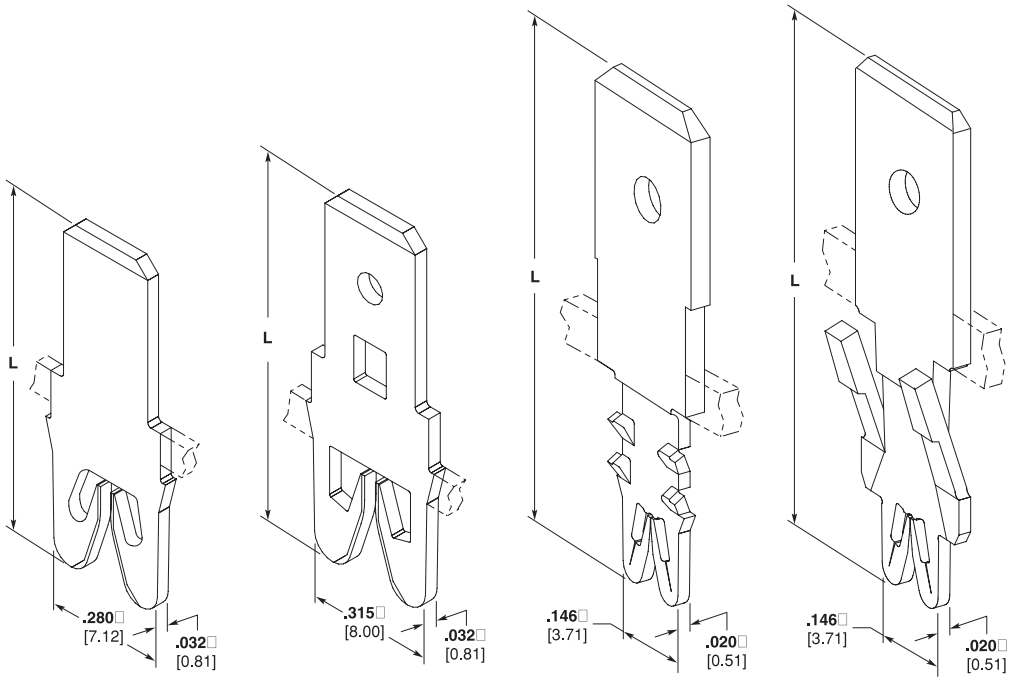
Type	Recommended Pocket[7]	Copper Magnet Wire Range AWG	Copper Magnet Wire Range mm	Dim. L	Tab Feature	Tab Size	Part Number Reeled	Part Number Loose
A Single Barb	1601425	18-34	1.02-0.16	15.37	Hole	4.8 x 0.5	1601006-2[3] 2-1601006-2[1,3]	4-1601006-2[3]
B Single Barb Short Pocket	1601427	18-34	1.02-0.16	12.83	Hole	4.8 x 0.5	1601011-1 2-1601011-1[1]	4-1601011-1
				14.99	—	4.8 x 0.5	1601018-2[2,5] 2-1601018-2[1,2,5]	4-1601018-2[2]
				25.02	—	4.8 x 0.5	1601033-2[2,5] 2-1601033-2[1,2,5]	4-1601033-2[2]
C Multi-Barb	1601425	18-34	1.02-0.16	15.70	—	4.8 x 0.5	1601021-2[2] 2-1601021-2[1,2]	4-1601021-2[2]
				16.64	Hole	4.8 x 0.5	1601013-1 2-1601013-1[1]	4-1601013-1
				20.09	—	4.8 x 0.5	1601072-2[2] 2-1601072-2[1,2]	4-1601072-2[2]
				24.31	—	4.8 x 0.5	1601068-2[2] 2-1601068-2[1,2]	4-1601068-2[2]
				16.64	Hole	4.8 x 0.8	1601035-1 2-1601035-1[1]	4-1601035-1
							1601035-2[3] 2-1601035-2[1,3]	4-1601035-2[3]
				18.92	Hole	4.8 x 0.8	1601040-1 2-1601040-1[1]	4-1601040-1
		20-23[7]	0.58-0.81	16.64	Hole	4.8 x 0.5	1601142-1 2-1601142-1[1]	4-1601142-1
D Multi-Barb Short Profile	1601434	18-34	1.02-0.16	12.50	Hole	4.8 x 0.8	1601058-2[2,4] 2-1601058-2[1,2,4]	4-1601058-2[2,4]
E Multi-Barb 4.8/6.3 Profile	1601425	18-34	1.02-0.16	18.92	Hole	4.8 x 0.5	1601020-1 2-1601020-1[1]	4-1601020-1
							1601020-2[3] 2-1601020-2[1,3]	4-1601020-2[3]
				20.45	Hole	4.8 x 0.5	1601049-2[3] 2-1601049-2[1,3]	4-1601049-2[3]
F Latch	1601423	18-34	1.02-0.16	19.68	Hole	4.8 x 0.5	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.
7 Two magnet wires may be terminated in the same terminal slot if diameters are equal.

SIAMEZE Terminals (continued)

6.3 mm Series
FASTON Tab Terminals

Material:
Brass



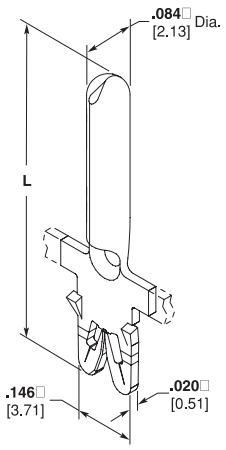
Type	Recommended Pocket[6]	Copper Magnet Wire Range AWG	Copper Magnet Wire Range mm	Dim. L	Tab Feature	Tab Size	Part Number Reeled	Part Number Loose
A Single Barb Medium Range	1601438	12-23	2.03-0.56	19.76	—	6.3 x 0.8	1601139-2[3] 2-1601139-2[1,3]	4-1601139-2[3]
B Single Barb Heavy Range	1601435	12-20	2.03-0.8	22.48	Hole	6.3 x 0.8	1601115-1 2-1601115-1[1]	4-1601115-1
		16-17[5]	1.27-1.15	22.48	Hole	6.3 x 0.8	1601159-1 2-1601159-1[1]	4-1601159-1
		14-15[5]	1.60-1.40	22.48	Hole	6.3 x 0.8	1601161-1 2-1601161-1[1]	4-1601161-1
C Multi-Barb	1601425	27-36	0.36-0.13	18.92	Hole	6.3 x 0.8	1601118-2[3] 2-1601118-2[1,3]	4-1601118-2[3]
		18-34	1.02-0.16	18.92	Hole	6.3 x 0.8	1601002-2[3] 2-1601002-2[1,3]	4-1601002-2[3]
				20.45	Hole	6.3 x 0.8	1601028-2[3] 2-1601028-2[1,3]	4-1601028-2[3]
							284937-1 **2-284937-1[1]**	**—**
							1601028-1 2-1601028-1[1]	4-1601028-1
					Dimple	6.3 x 0.8	1601061-2[3] 2-1601061-2[1,3]	4-1601061-2[3]
				25.40	Hole	6.3 x 0.8	1601044-1 2-1601044-1[1]	4-1601044-1
				32.53	Hole	6.3 x 0.8	1601052-2[2,4] 2-1601052-2[1,2,4]	4-1601052-2[2]
D Latch	1601423	18-34	1.02-0.16	21.59	Hole	6.3 x 0.8	1601003-1 2-1601003-1[1]	4-1601003-1

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 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.

Preferred part numbers are printed in bold.

SIAMEZE Terminals (continued)

Pin Terminals

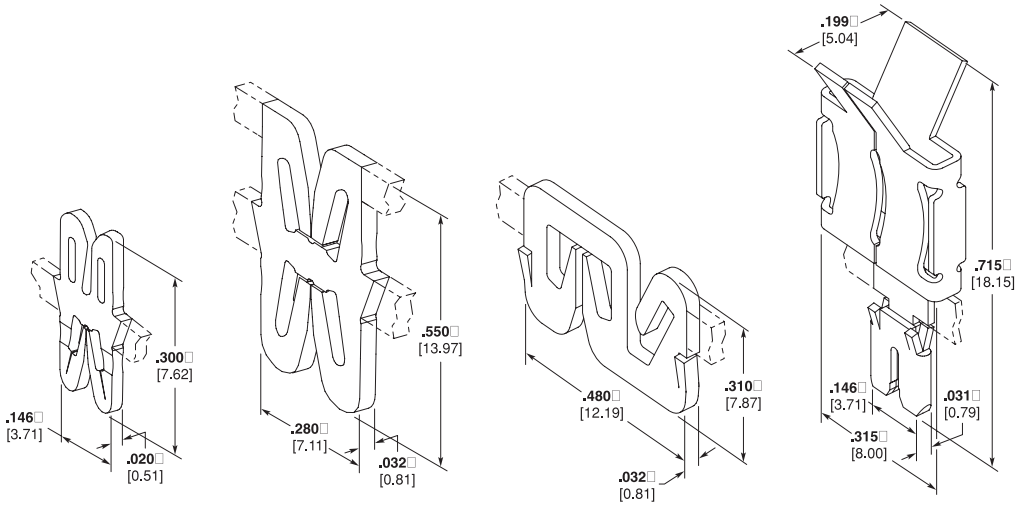


A

Type	Recommended Pocket[2]	Copper Magnet Wire Range		Dim. L	Pin Dia.	Part Number	
		AWG	mm			Reeled	Loose
A Round Pin	1601424	18-34	1.02-0.16	18.24	2.13	1601077-1 2-1601077-1[1]	4-1601077-1

1 Reverse Reeled – Consult Tyco Electronics drawing for orientation.
2 Magnet wire 30 AWG [0.25 mm] and smaller also requires a wrap post per drawing 1601447.

Receptacle Terminals



A B C D

Type	Recommended Pocket[3]	Copper Magnet Wire Range		Dim. L	Mating Tab Size	Part Number	
		AWG	mm			Reeled	Loose
A Wire-to-Blade In Line	1601425	18-34	1.02-0.16	7.62	0.5	1601075-2[2] 2-1601075-2[1,2]	4-1601075-2[2]
B Wire-to-Blade Medium Range	1601436	12-23	2.06-0.56	13.97	0.8	1601232-2[4] 2-1601232-2[4]	4-1601232-2[4]
C Wire-to-Blade Off Line	1601437	15-23	1.47-0.56	7.87	0.8	1601137-2[2] 2-1601137-2[1,2]	4-1601137-2[2]
D Blind Mate Full Surround	1601470	21.5	0.71	18.15	6.3 x 0.5	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.
4 Finish is Post-Plated Tin over Nickel.

Engineering Notes