

## Positive Lock Receptacles

### Product Facts

- Reduced insertion force
- Locks onto tabs containing holes
- Housing insulates and serves as a removal tool
- “Snap” action tells assembler receptacle is mated properly
- Terminated by automatic or semi-automatic equipment
- Single and multiple circuit housings available
- Recognized under the Component Program of Underwriters Laboratories Inc., File Nos. E66717 and E28476 
- Certified by Canadian Standards Association File No. LR7189A 



Positive Lock receptacles are specifically designed to provide ease of assembly and secure retention to mating tabs. These unique features are attainable by the reduced insertion force of the product and the locking dimple. The receptacle locks onto mating tabs containing holes and is removable only by deflecting an integrally designed depressor prior to withdrawal. The depressor can be deflected manually by thumb pressure, or automatically by a cam inside a specially designed nylon housing. If the housing is employed,

removal of the terminal from the tab is performed by simply applying withdrawal force to the housing. In addition to providing a means of disconnecting the terminal, the housing performs its traditional insulating function.

Aside from reduced insertion forces, Positive Lock receptacles give the assembler a definite mechanical “snap” when the terminal is correctly seated over the mating tab. This facilitates correct assembly in hard-to-reach areas such as under dashboards, recessed switch tabs, etc.

Safety is enhanced by the locking capability of the product. Unless the depressor is deliberately deflected, either manually or by withdrawal force applied directly to the optional housing, a terminal will not easily come off of the tab. Thus, the potential of exposed live parts or disruption of critical circuitry due to improperly seated or accidentally removed terminals is greatly reduced.

**Positive Lock Receptacles** (Continued)

**Mark I**

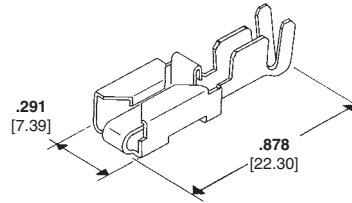
**250 Series Receptacles**

**Stock Thickness** — .016 [0.41]

**Fits Tab** — .032 [0.81]

Recognized under the Component Program of Underwriters Laboratories Inc.,

UL File No. E28476



Wire Range AWG	Insulation Diameter	Material and Finish	Part Numbers				
			Receptacle			Quick Change Applicator No. <sup>2</sup>	Hand Tool
20-16	.090-.130 2.29-3.30	Brass/Pre-Tin	1-160759-1	X	X	567181-2	654174-1
18-14	.135-.195 3.43-4.95	Brass/Tin	63812-1 <sup>1</sup>	X	X	680140-2	—
	.095-.155 2.41-3.94	Brass/Tin	154718-3	X	—	466542-3	525651
14-11	.140-.170 3.56-4.32	Brass/Tin	154717-3	X	—	466883-2	525651
12-10	.135-.200 3.43-5.08	Brass/Pre-Tin	790319-3	—	—	567417-2	—

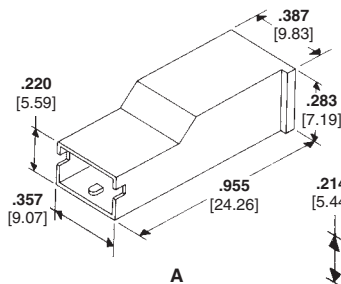
<sup>1</sup> "A" Style Housing only.

<sup>2</sup> Quick-Change Applicator for AMP-O-LECTRIC Machine 565435-5.  
For AMPOMATOR Machine and other machines not listed, contact TE.

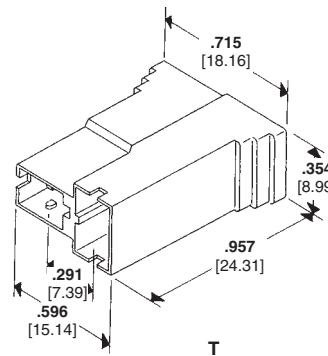
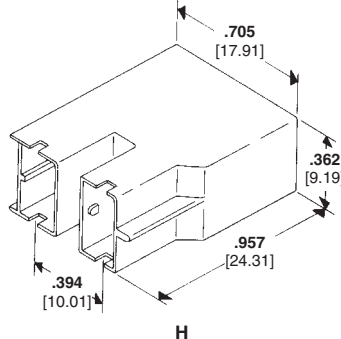
**Receptacle Housings**

**Material** — 94 V-2, 6/6 Nylon

**1 Position**



**2 Position**



Style	Color	Part No.
A	Black	154719-0
	Natural	154719-1
B	Black	520961-1 <sup>1</sup>
C	Black	520895-1 <sup>2</sup>
H	Black	926521-2
T	Black	926522-1
	Natural	926522-2

<sup>1</sup> Press-to-release with secondary lock.

<sup>2</sup> Secondary lock.

**Note:** All part numbers are RoHS compliant.

**Positive Lock Receptacles** (Continued)

**Mark I**

**250 Series Flag Receptacle**

Stock Thickness — .016 [0.41]

Fits Tab — .032 [0.81]



Wire Range AWG	Insulation Diameter	Material and Finish	Part Number
20-15	.087-.130 2.21-3.30	Brass/Pre-Tin	926820-4
17-13	.130-.170 3.00-4.30	Brass/Pre-Tin	926790-4

**Mark I**

**250 Series  
Receptacle Housings**

Material — 94 V-2, 6/6 Nylon

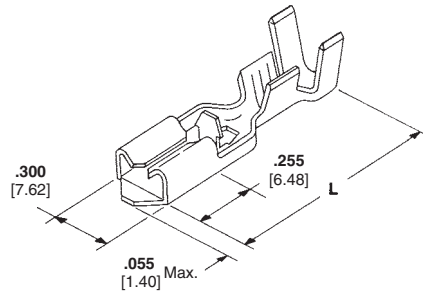


Color	Part Number
Black	926291-1

**Note:** All part numbers are RoHS compliant.

**Positive Lock Receptacles** (Continued)

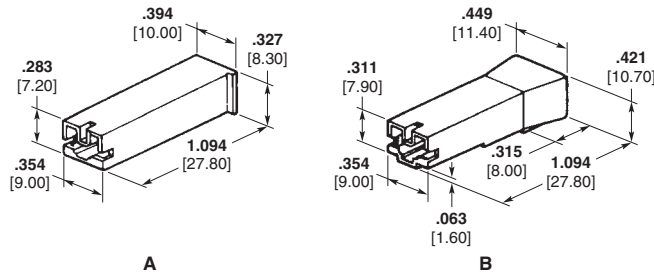
**Mark II**  
**250 Series**  
**Straight Receptacles**



Wire Range AWG	Tab Thickness	Insulation Diameter	Material and Finish	Stock Thickness	L (Overall Length)	UL	SP	Terminal Part No.
22-18	.032 0.81	.059-.122 1.50-3.10	Pre-Tin Brass	.016 0.41	.976 24.80	X	X	170327-1
18-16 (2) 18, (2) 20	.032 0.81	.105-.210 2.67-5.33 or (2) .105 2.67 Max.	Brass	.016 0.41	.886 22.50	—	—	1742354-1
18-14	.032 0.81	.090-.155 2.29-3.94	Brass	.016 0.41	.886 22.50	X	X	63097-2
	.025 0.64	.090-.155 2.29-3.94	Brass, Tin Plated	.016 0.41	.886 22.50	X	X	63809-1
	.020 0.51	.090-.155 2.29-3.94	Brass, Tin Plated	.016 0.41	.886 22.50	X	X	63442-1
15-10	.032 0.81	.090-.135 2.29-3.43	Pre-Tin Brass	.016 0.41	1.015 25.80	X	X	170328-1
	.032 0.81	.110-.200 2.79-5.08	Pre-Tin Brass	.016 0.41	1.015 25.80	X	X	170329-1
12-10	.032 0.81	.150-.200 3.81-5.08	Brass, Tin Plated	.018 0.46	.913 23.20	X	X	63239-1

Positive Lock Receptacles

**Mark II**  
**250 Series**  
**Receptacle Housings**  
**1 Circuit**

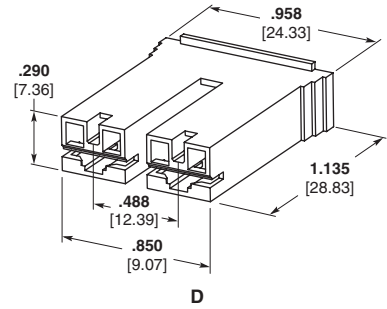


Style	Material	UL 94	Color	UL	SP	Part Number
A	6/6 Nylon	V2	Natural	—	—	172076-1
			Black	—	—	172076-2
			Yellow	—	—	172076-4
			Green	—	—	172076-5
			Blue	—	—	172076-6
		Red	—	—	172076-7	
		V0	Natural	—	—	2-172076-1
			Black	—	—	2-172076-2
			Yellow	—	—	2-172076-4
			Green	—	—	2-172076-5
Blue	—		—	2-172076-6		
B	6/6 Nylon	V0	Red	—	—	2-172076-7
			Natural	X	X	177627-1
			Yellow	X	X	177627-4
			Green	—	—	177627-5
			Blue	—	—	177627-6
			Red	—	—	177627-7
			Black	—	—	177627-9

**Note:** All part numbers are RoHS compliant.

**Positive Lock Receptacles (Continued)**

**Mark II  
250 Series  
Receptacle Housings  
2 Circuit**



Style	Material	UL 94	Color			Part Number
A	6/6 Nylon	V2	Natural	X	X	520935-1
			Red	X	X	520935-2
			Black	—	—	520935-3
			Green	—	—	520935-4
			Blue	—	—	520935-5
			Yellow	—	—	520935-6
			Brown	—	—	520935-7
B	6 Nylon	V0	Natural	—	—	1-520935-1
			Red	—	—	1-520935-2
			Blue	—	—	1-520935-5
C	6/6 Nylon	V2	Natural	—	—	1-521229-1 <sup>1</sup>
			Red	X	X	521229-1
D	6/6 Nylon	V0	Natural	—	—	521229-2
			Red	—	—	178833-1
D	6/6 Nylon	V0	Natural	X	X	1969332-2

<sup>1</sup> Housing material to IEC 60695-2-11 Glow Wire temps. 650°C, 750°C, & 850°C.

**Mark II  
250 Series  
Receptacle Housings  
4 Circuit**



Style	Material	UL 94	Color			Part Number
A	6/6 Nylon	V2	Natural	X	X	174429-1

**Note:** All part numbers are RoHS compliant.

**Positive Lock Receptacles** (Continued)

**Mark II**  
**250 Series**  
**Flag Receptacles**  
**Stock Thickness** — .016 [0.41]  
**Fits Tab** — .032 [0.81]



Wire Range AWG	Insulation Diameter	Material and Finish	UL	RU	SP	Terminal Part No.
22-18	0.59-.110 1.50-2.80	Pre-Tin Brass	X	—	X	172761-1
18-14	.110-.205 2.80-5.20	Pre-Tin Brass	X	—	X	172763-1
12-10	.110-.205 2.80-5.20	Pre-Tin Brass	X	—	X	172765-1

Positive Lock Receptacles

**Mark II**  
**250 Series**  
**Flag Style Receptacle Housing**  
**1 Circuit**



Style	Material	UL 94	Color	RU	SP	Part Number
		V2	Natural	X	X	172469-1
A	6/6 Nylon	V0	Natural	—	—	1-172469-1
			Blue	—	—	1-172469-2

**Note:** All part numbers are RoHS compliant.

**Positive Lock Receptacles** (Continued)

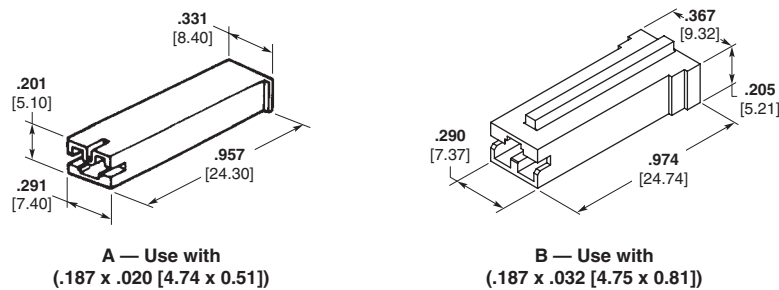
**Mark II**  
**187 Series**  
**Straight Receptacles**



Wire Range AWG	Style	Tab Fit	Insulation Diameter	Material and Finish	Stock Thickness	L (Overall Length)	UL	SP	Terminal Part No.
24-20	B	.020 0.51	.060-.105 1.52-2.67	Pre-Tin Brass	.012 0.30	.850 21.60	X	X	170324-1
		.020 0.51	.060-.105 1.52-2.67	Phos. Bronze, Nickel Plated	.012 0.30	.850 21.60	X	X	170324-2
	A	.020 0.51	.060-.105 1.52-2.67	Pre-Tin Phos. Bronze	.012 0.30	.850 21.60	—	—	170324-5
20-16	B	.020 0.51	.060-.110 1.52-2.79	Pre-Tin Brass	.012 0.30	.755 19.17	X	X	63407-2 <sup>1</sup>
		.020 0.51	.074-.134 1.87-3.40	Pre-Tin Brass	.012 0.30	.850 21.60	X	X	170325-1
	A	.020 0.51	.074-.134 1.87-3.40	Pre-Tin Phos. Bronze	.012 0.30	.850 21.60	—	—	170325-3
		.020 0.51	.090-.130 2.29-3.30	Brass, Pre-Tin	.012 0.30	.755 19.17	X	X	63232-1 <sup>1</sup>
	B	.032 0.81	.060-.110 1.52-2.79	Brass, Tin Plated	.012 0.30	.740 18.80	X	X	63498-1 <sup>2</sup>
		.032 0.81	.090-.130 2.29-3.30	Brass, Tin Plated	.012 0.30	.755 19.17	X	X	63313-1 <sup>1</sup>
18-14 (2) 18	B	.020 0.51	.083-.142 2.11-3.61 (2) .216 5.49	Brass, Pre-Tin	.012 0.30	.850 21.60	—	—	170326-1

<sup>1</sup> Low profile — not for use in housing.  
<sup>2</sup> For use with housing 521125.

**Mark II**  
**187 Series**  
**Receptacle Housings**  
**1 Circuit**

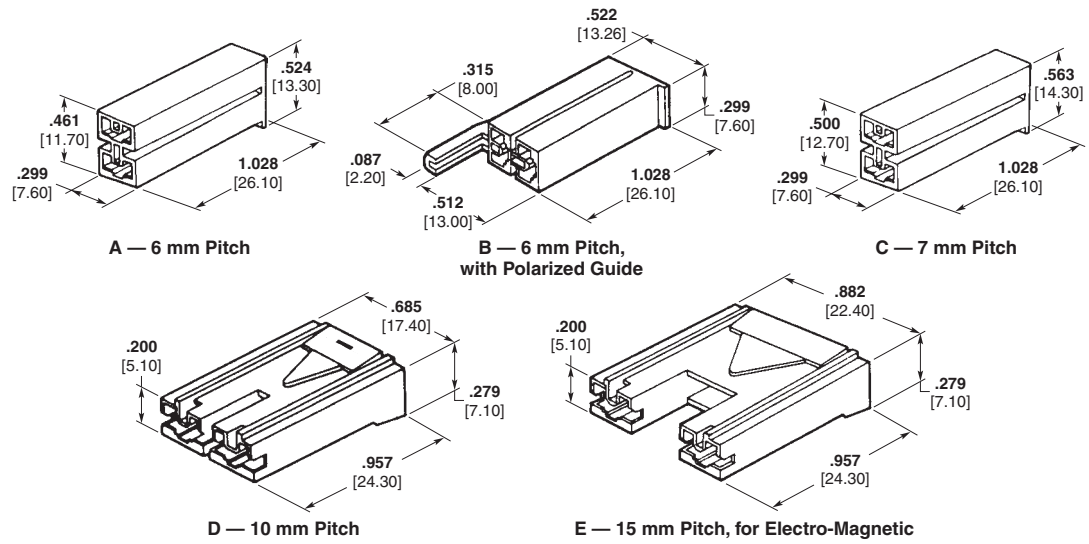


Style	Material	UL 94	Color	UL	SP	Part Number		
A	6/6 Nylon	V2	Natural	X	X	172074-1		
			Black	—	—	172074-2		
			Yellow	—	—	172074-4		
			Green	—	—	172074-5		
			Blue	—	—	172074-6		
			Red	—	—	172074-7		
			V0	Natural	X	X	173974-1	
		Black		—	—	173974-2		
		Yellow		—	—	173974-4		
		Green		—	—	173974-5		
		Blue		—	—	173974-6		
		Red		—	—	173974-7		
		B		6/6 Nylon	V2	Natural	—	—

**Note:** All part numbers are RoHS compliant.

**Positive Lock Receptacles (Continued)**

**Mark II  
187 Series  
Receptacle Housings  
2 Circuit**



Style	Material	UL 94	Color	UL	CS	Part Number
A	6/6 Nylon	V2	Natural	—	—	172210-1
			Black	—	—	172210-2
			Yellow	—	—	172210-4
			Blue	—	—	172210-6
		V0	Natural	X	X	1-172210-1
			Black	X	X	1-172210-2
			Yellow	—	—	1-172210-4
			Green	—	—	1-172210-5
			Blue	—	—	1-172210-6
			Red	—	—	1-172210-7
B	6/6 Nylon	V2	Natural	X	X	174587-1
			Natural	—	—	1-174587-1
		V0	Yellow	—	—	1-174587-4
			Green	—	—	1-174587-5
			Blue	—	—	1-174587-6
			Red	—	—	1-174587-7

Style	Material	UL 94	Color	UL	CS	Part Number		
C	6/6 Nylon	V2	Natural	X	X	175578-1		
			Black	—	—	175578-2		
		V0	Natural	—	—	1-175578-1		
			Black	—	—	1-175578-2		
D	6/6 Nylon	V0	Yellow	—	—	1-175578-4		
			Blue	—	—	1-175578-6		
			Red	—	—	1-175578-7		
			Natural	—	—	17920-1		
			Black	—	—	17920-2		
			Yellow	—	—	17920-4		
			Blue	—	—	17920-6		
E	6/6 Nylon	V0	Natural	X	X	176498-1		
			Black	—	—	176498-2		
			Yellow	—	—	176498-4		
			Blue	—	—	176498-6		
			6 Nylon	V2	Yellow	—	—	3-176498-4 <sup>1</sup>

<sup>1</sup> Housing material to IEC 60695-2-11 Glow Wire temps. 650°C, 750°C, & 850°C.



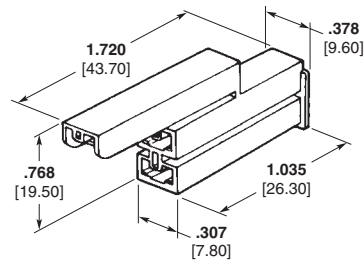
Style	Material	UL 94	Color	UL	CS	Part Number
F	6/6 Nylon	V0	Yellow	—	—	353148-4
			Green	—	—	353148-5
			Blue	—	—	353148-6
G	6/6 Nylon	V2	Natural	X	X	174712-1
			Natural	—	—	1-174712-1
		V0	Blue	—	—	1-174712-6
			Red	—	—	1-174712-7

**Note:** All part numbers are RoHS compliant.

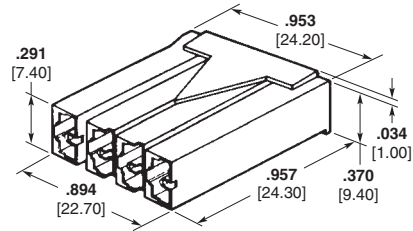


**Positive Lock Receptacles** (Continued)

**Mark II**  
**187 Series**  
**Receptacle Housings**  
**3 Circuit and**  
**4 Circuit**



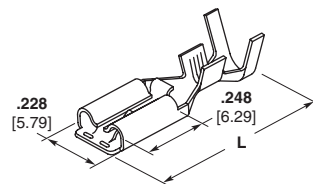
**A — 3 Circuit**  
**For Micro-Switch**



**B — 4 Circuit**  
**For Timer**

Style	Material	UL 94	Color	UL	SP	Part Number
A	6/6 Nylon	V2	Natural	X	X	172075-1
			Yellow	X	X	172075-4
			Blue	—	—	172075-6
		V0	Natural	—	—	1-172075-1
			Yellow	—	—	1-172075-4
B	6/6 Nylon	V0	Natural	X	X	174513-1

**Positive Lock EX**  
**187 Series**  
**Straight Receptacles**



Wire Range AWG	Tab Thickness	Insulation Diameter	Material	Stock Thickness	L (Overall Length)	UL	SP	Terminal Part No.
26-20 0.14-0.53	.020 0.50	.050-.140 1.3-3.6	Stainless Steel	.012 0.30	.675 17.2	—	—	175032-1
26-16 0.50-1.30	.020 0.50	.090-.140 2.3-3.6	Stainless Steel	.012 0.30	.675 17.2	X	—	1742669-1
20-14 0.50-2.20	.020 0.50	.075-.173 1.9-4.4	Stainless Steel	.012 0.30	.675 17.2	—	X	175034-1

**Positive Lock EX**  
**250 Series**  
**Straight Receptacles**



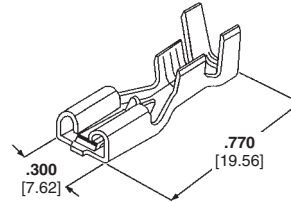
Wire Range AWG	Tab Thickness	Insulation Diameter	Material	Stock Thickness	L (Overall Length)	UL	SP	Terminal Part No.
18-14 0.76-2.09	.032 0.80	.085-.135 2.2-3.4	Stainless Steel	.016 0.41	.835 21.2	—	—	175164-1

**Note:** All part numbers are RoHS compliant.

**Positive Lock Receptacles** (Continued)

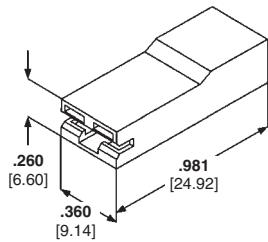
**Mark III  
250 Series  
Receptacles**

Stock Thickness — .016  
Accepts .032 Tab

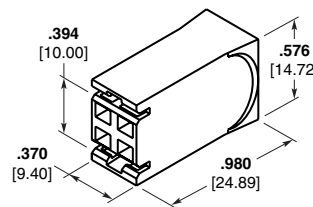


Wire Range AWG	Insulation Diameter	Material and Finish	UL	SP	Part Number
22-18	.060-.110 1.52-2.79	Brass	X	X	63933-1
		Brass/Tin	X	X	63933-2
18-14	.090-.155 2.28-3.93	Brass	X	X	63854-1
		Brass/Tin	X	X	63854-2
16-12 or (2) 18 or (2) 16 or (1) 18 and (1) 16	.120-.170 3.04-4.31	Brass	X	X	1217092-1
		Brass/Tin	X	X	1217092-2

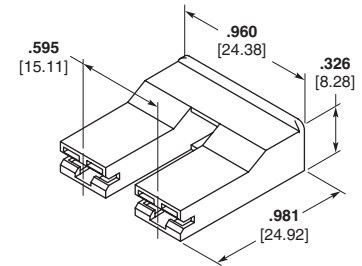
**Mark III  
Receptacle Housings**



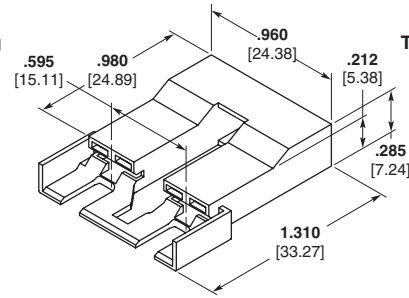
**One Circuit Housing**  
A



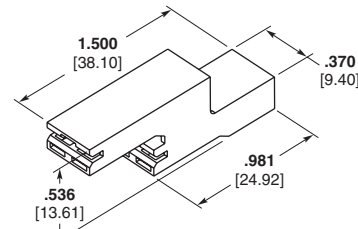
**Two Circuit Wax Motor Housing**  
B



**Two Circuit Water Valve Housing**  
C



**Two Circuit Water Valve Housing with Latch**  
D



**Two Circuit Housing**  
E

Style	Material	UL 94 <sup>1</sup>	Color <sup>2</sup>	Part Number	Accepts	UL	SP
A	Nylon	V2	Natural	521120-1	250 Series Positive Lock Mark III Terminals.	X	X
B	Nylon	V0	Natural	521766-1	250 Series FASTON and Positive Lock Mark III Terminals. Examples include 63306 and 63854.	X	X
			Natural	2-521253-1 <sup>1</sup>			
			Natural	521253-1			
			Natural	521253-2			
D	Nylon	V2	Red	521253-2	250 Series FASTON and Positive Lock Mark III Terminals. Examples Include 63306 and 63854	X	X
			Red	1-521253-2			
			Green	1-521253-3			
			Blue	1-521253-7			
			Blue	1-521253-7			
C	Nylon	V2	Natural	521119-1		X	X
E	Nylon	V0	Natural	521955-1	250 Series MK III Positive Lock Receptacles 63993, 63854, 1217092	X	X

**Note:** All part numbers are RoHS compliant.

<sup>1</sup> Housing material to IEC 60695-2-11 Glow Wire temps. 650°C, 750°C, & 850°C.

**Positive Lock Receptacles** (Continued)

**Mark III  
187 Series Receptacles**

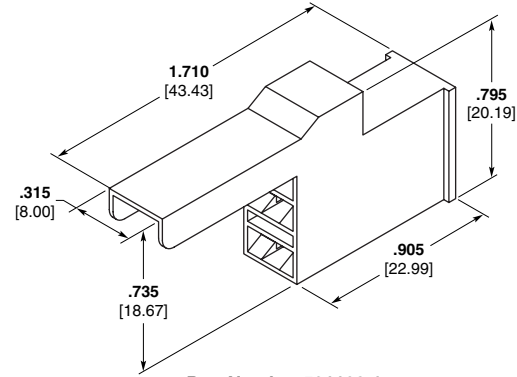


Wire Range AWG	Insulation Dia.	Mating Tab Thickness	Material and Finish	Terminal Part No.	UL	CS	Applicator
22-18	.090-.130 2.29-3.30	.020 0.51	Tin Plated Brass	1217113-2	—	—	680645-2
		.032 0.81	Tin Plated Brass	1217097-2	—	—	680645-2
18-14	.150-.200 3.81-5.08	.020 0.51	Brass	1217114-1	—	—	680652-2
		.020 0.51	Tin Plated Brass	1217114-2	—	—	680652-2
18-14 (2) 18	.150-.200 3.81-5.08	.032 0.81	Brass	1217096-1	X	X	680652-2

**Mark III  
187 Series  
Receptacle Housings**



Part Number 521187-1



Part Number 521198-1

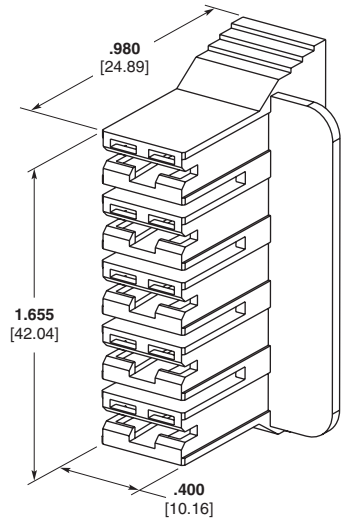
Material	UL 94	Color	UL	CS	Part Number
Nylon	V2	Natural	X	X	521187-1
Nylon	V2	Natural	X	—	521198-1

**Mark III  
HVAC Motor  
Receptacle Housings**

Material	Color	UL	CS	Part Number
Nylon	Natural	X	X	521780-1
Nylon	Natural	X	X	521781-1



Part Number 521781-1  
4-Position



Part Number 521780-1  
5-Position

**Note:** All part numbers are RoHS compliant.

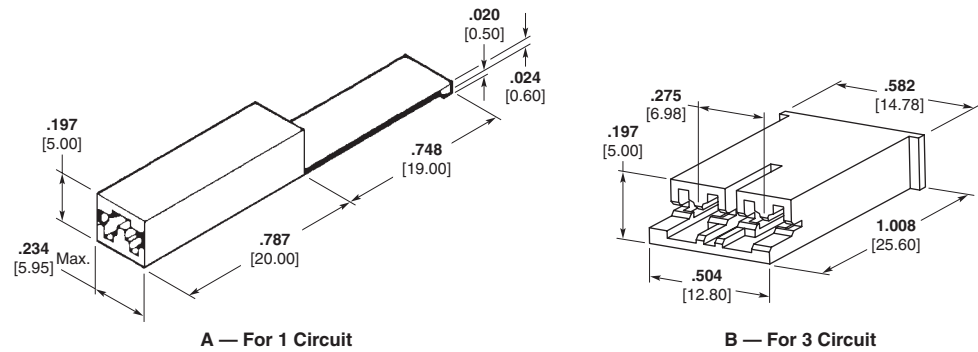
**Positive Lock Receptacles** (Continued)

**110 Series  
Straight Receptacles**



Wire Range AWG	Tab Fit	Insulation Diameter	Material and Finish	Stock Thickness	UL	CS	Terminal Part No.
24-20	.020 0.51	.040-.070 1.02-1.78	Pre-Tin Brass	.010 0.25	—	—	175411-1
20-16	.020 0.51	.080-.122 2.03-3.10	Pre-Tin Brass	.010 0.25	—	—	174777-1

**Receptacle Housing  
Applicable Contact  
Part Number 175411, 174777**



Style	Material	UL 94	Color	UL	CS	Part Number
A	6/6 Nylon	V2	Natural	X	X	174779-1
B	4/6 Nylon	V2	Black	—	—	1969227-1

Positive Lock Receptacles

**Tab Dimension  
For Signal Circuit**

**For 1 Circuit**

**Top View**



**Side View**



**Type A**

(When using tab shoulder for butting)

**Top View**



**Side View**



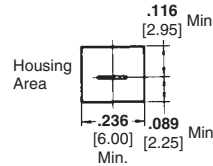
**Type B**

(When using resin, etc., for butting)

Sagging of the tab's hole must not exceed 0.08 mm.

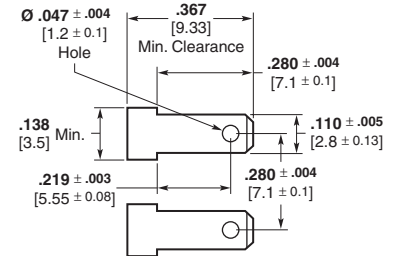


**Section X-X**



**Housing Outline**

**For 2 Circuit**



**Note:** All part numbers are RoHS compliant.

## Positive Lock RAST 5 Connector System

### Product Facts

- Mates with .250 x .032 [6.35 x 0.81] tabs built on 5 mm centerlines
- Keying and polarization features
- Utilizes Positive Lock Mark III Receptacles
- Terminals available for 22-18 AWG, 18-14 AWG single wire or 18-16 AWG double wire applications
- Plain brass and tin plated terminals available
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476 
- Certified by Canadian Standards Association File No. LR7189 



The Positive Lock RAST 5 connector system has been designed to mate with a control, switch or printed circuit board that has .250 x .032 [6.35 x 0.81] thick tabs built on 5 mm centerlines. This system utilizes our popular Positive Lock Mark III Receptacles and a series of housings to provide customers with a reliable solution to their wire management needs. This line of connectors offers keying and polarization features built into the housings that eliminate mismatching and crossed wires. Two through eight circuit housings facilitate improved assembly

operations and the Positive Lock Terminal provides excellent retention of the connector.

The acronym RAST 5 in the title is a reference to the European design standard for appliance wiring and component design, "Raster Anschluss Steck Technik 5 mm". This standard outlines a system of keying, polarization and latching that is popular in Europe and other parts of the world. The Positive Lock RAST 5 system has been designed to mate with many of the components built with a RAST 5 standard interface. This system is an excellent way for OEMs or their

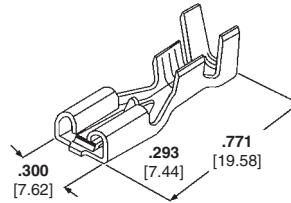
subcontractors to use existing lead makers and termination equipment to produce connectors that mate to controls with RAST interfaces.

While the origins of this product are in the appliance industry, many other industries are embracing this style of connector. Marine, exercise equipment and hand tool manufacturers are recent examples of customers beginning to use this system. Any application where .250 x .032 [6.35 x 0.81] tabs are built on 5 mm centerlines is a potential candidate for this popular connector system.

See TE catalog 296599 for additional RAST products.

**Positive Lock RAST 5 Connector System** (Continued)

**Mark III**  
**250 Series Receptacles**  
**Stock Thickness** — .013 [0.33]  
**Tab size** — .032 [0.81]



Wire Range AWG	ID	Material and Finish	Part Number			Applicator No.
22-18	.060-.110 1.52-2.79	Brass	1217378-1	X	X	1852165-2
		Tin Plated Brass	1217378-2	X	X	1852165-2
(2) 18	.090-.155 2.29-3.94	Brass	1217094-1	X	X	680653-2
		Tin Plated Brass	1217094-2	X	X	680653-2
(2) 18	.120-.170 3.04-4.32	Brass	1217095-1	X	X	680654-2
		Tin Plated Brass	1217095-2	X	X	680654-2
(2) 16	(2) .120 Max. 3.05	Tin Plated Brass	1217095-2	X	X	680654-2

**Receptacle Housings**  
**Material** — 94 V-0, 6/6 Nylon



Standard Version



Blocked Circuit Version

Description			Part Number	
			Standard Version <sup>4</sup>	Blocked Circuit Version <sup>5</sup>
2 Position	X	X	521204	—
3 Position	X	X	521205	521782
4 Position	X	X	521206	521295
5 Position	X	X	521207	521267
6 Position	X	X	521208	521435
7 Position	X	X	521209	521935
8 Position	X	X	521210	—
9 Position	X	X	521746	521936
10 Position	X	X	521792	521836
11 Position	X	X	521699	1969335

- Notes:**
1. All part numbers are RoHS compliant.
  2. Housing base part number provided.
  3. Standard colors are natural and blue.
  4. Keying patterns determined by part dash number. Refer to the customer drawing for pattern options.
  5. Blocking patterns determined by part dash number. Refer to the customer drawing for pattern options.

**Note:** All part numbers are RoHS compliant.