

## FASTON Receptacles

### Product Facts

- Full line of premier, budget, LIF, moldable and hermetic uninsulated receptacles
- Straight, right-angle and receptacle and tab combinations available
- Receptacles available in .312, .250, .205, .187, .125 and .110 sizes
- Available in 8-30 AWG wire ranges
- Receptacles mate with .032 and .020 thick tabs
- Available with or without secondary wire support
- Base materials brass, phosphor bronze and steel available
- Tin, silver and nickel plated products available
- Products designed and manufactured to meet UL 310 specifications
- Products designed and manufactured to meet CSA C22.2 specifications



TE offers a full line of uninsulated quick connects. We offer products for a wide variety of applications in almost every market and industry we serve. It is important to choose the correct terminal for each application. The following is a list of application specific characteristics that must be considered when determining the best terminal for each individual application.

#### Mating Tab

Size (312, 250, 205, 187, 110, etc.)

#### Wire Type

Magnet or stranded

#### Wire Orientation

Straight or flag

#### Temperature/Environment

Base metal plating requirements

#### Insulator required

Pre-insulated housing required

#### Agency Approvals (UL/CSA)

#### Application

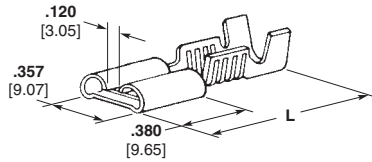
Continuous strip or loose piece

#### Special Applications

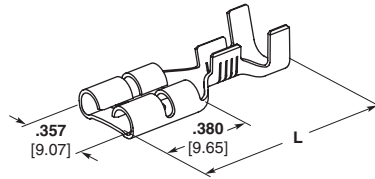
Moldable  
Hermetic  
Printed circuit board  
Piggyback (straight/flag)  
Reversible flags  
Center strip  
Positive locking

### 312 Series Receptacles

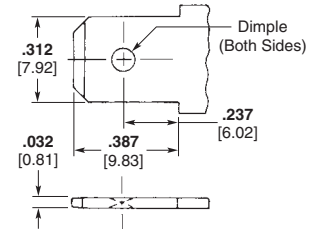
#### Straight Receptacles, Insulation Support



A — Premier Line



B — Low Insertion Force

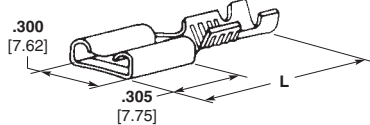


Mating 312 Series Tab Dimensions  
Dimple (Both Sides)

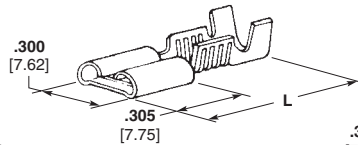
Wire Range AWG	Style	Tab Fit	Insulation Diameter	Material and Finish	Stock Thickness	L (Overall Length)	UL	RA	SP	Terminal Part Number
18-14	A	.032 0.81	.090-.130 2.29-3.30	Brass	.016 0.41	.900 22.86	—	X	X	62092-1
	A	.032 0.81	.110-.210 or (2) 2.79-5.33	Brass, Tin Plated	.016 0.41	.900 22.86	—	X	X	61399-1
16-12	B	.032 0.81	.110-.210 or (2) 2.79-5.33	Brass, Tin Plated	.016 0.41	.900 22.86	—	X	X	63677-1
	B	.032 0.81	.110-.210 or (2) 2.79-5.33	Brass	.016 0.41	.900 22.86	—	X	X	63677-2
14-10	A	.032 0.81	.150-.200 3.81-5.08	Brass, Silver Plated	.018 0.46	.900 22.86	—	X	X	63820-1

### 250 Series Receptacles

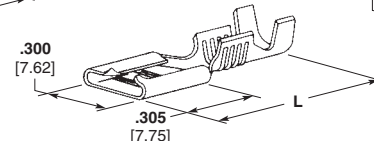
#### Straight Receptacles, Insulation Support



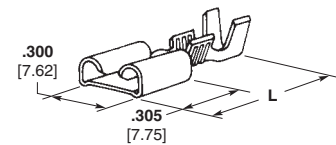
A — Premier Line



B — Budget Line



C — Economy Line



D — Moldable Line

Wire Range AWG	Style	Tab Fit	Insulation Diameter	Material and Finish	Stock Thickness	L (Overall Length)	UL	RA	SP	Terminal Part Number
26-22	C	.032 0.81	.040-.060 1.02-1.52	Brass	.016 0.41	.755 19.18	X <sup>1</sup>	—	X <sup>1</sup>	61202-1
24-20	A	.032 0.81	.030-.070 0.76-1.78	Brass, Tin Plated	.016 0.41	.755 19.18	X <sup>2</sup>	—	X <sup>2</sup>	61368-1
	A	.032 0.81	.060-.100 1.52-2.54	Brass	.016 0.41	.755 19.18	X	—	X	42640-1
	A	.032 0.81	.060-.100 1.52-2.54	Brass, Tin Plated	.016 0.41	.755 19.18	X	—	X	42640-2
	A	.032 0.81	.090-.130 2.29-3.30	Brass	.016 0.41	.755 19.18	X	—	X	41771
	A	.032 0.81	.090-.130 2.29-3.30	Brass, Tin Plated	.016 0.41	.755 19.18	X	—	X	41772
22-18	B	.032 0.81	.090-.130 2.29-3.30	Brass	.016 0.41	.755 19.18	X	—	X	42510-1
	B	.032 0.81	.090-.130 2.29-3.30	Brass, Tin Plated	.016 0.41	.755 19.18	X	—	X	42510-2
	C	.032 0.81	.090-.130 2.29-3.30	Brass	.016 0.41	.755 19.18	X	—	X	42743-1
	C	.032 0.81	.090-.130 2.29-3.30	Brass, Tin Plated	.016 0.41	.755 19.18	X	—	X	42743-2
	D	.032 0.81	.090-.130 2.29-3.30	Brass	.016 0.41	.755 19.18	—	—	—	63127-1

<sup>1</sup> UL listed and CSA certified for 22 AWG.

<sup>2</sup> UL listed and CSA certified for 22-20 AWG.

<sup>3</sup> Mates with a .020 [0.51] thick tab.

<sup>4</sup> 9,600 CMA max.

<sup>5</sup> UL/CSA - 10 AWG only.

<sup>6</sup> Stress relieved.

<sup>7</sup> Recommended for external use only.

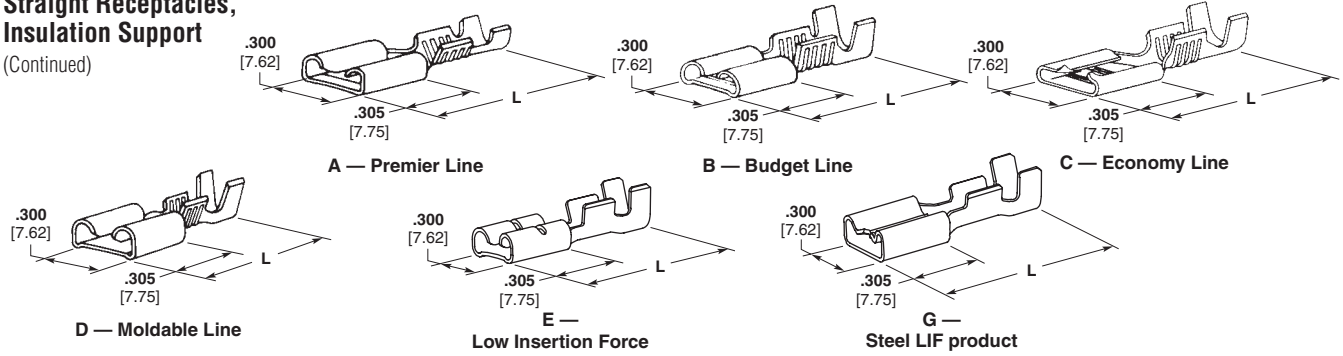
<sup>8</sup> Recommended for internal or external use.

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

**250 Series Receptacles** (Continued)

**Straight Receptacles, Insulation Support**

(Continued)



FASTON Receptacles

Wire Range AWG	Style	Tab Fit	Insulation Diameter	Material and Finish	Stock Thickness	L (Overall Length)	UL	RA	SP	Terminal Part Number		
22-18	E	.032 0.81	.090-.130 2.29-3.30	Brass	.016 0.41	.755 19.18	X	—	X	63693-1 <sup>6</sup>		
		.032 0.81	.090-.130 2.29-3.30	Brass	.016 0.41	.755 19.18	X	—	X	63609-1		
		.032 0.81	.090-.130 2.29-3.30	Brass, Tin Plated	.016 0.41	.755 19.18	X	—	X	63609-2		
	18-14	A	.020 0.51	.120-.170 3.05-4.32	Brass, Tin Plated	.018 0.46	.755 19.18	X	—	X	63655-1 <sup>3</sup>	
			.032 0.81	.060-.110 1.52-2.79	Brass, Tin Plated	.018 0.46	.755 19.18	X	—	X	61375-1	
			.032 0.81	.060-.110 1.52-2.79	Steel, Nickel Plated	.016 0.41	.755 19.18	—	—	—	63688-1	
18-14		B	.032 0.81	.120-.170 3.05-4.32	Steel, Nickel Plated	.016 0.41	.755 19.18	—	X	X	42219-1	
			.032 0.81	.120-.170 3.05-4.32	Brass	.018 0.46	.755 19.18	X	—	X	41202	
			.032 0.81	.120-.170 3.05-4.32	Brass, Tin Plated	.018 0.46	.755 19.18	X	—	X	41274	
		C	D	.032 0.81	.120-.170 3.05-4.32	Brass	.016 0.41	.750 19.05	X	—	X	42400-1
				.032 0.81	.120-.170 3.05-4.32	Brass, Tin Plated	.016 0.41	.750 19.05	X	—	X	42400-2
				.032 0.81	.120-.170 3.05-4.32	Brass, Silver Plated	.016 0.41	.755 19.18	X	—	X	61107-1 <sup>6</sup>
	E		G	.032 0.81	.120-.170 3.05-4.32	Brass	.016 0.41	.755 19.18	X	—	X	42660-1
				.032 0.81	.120-.170 3.05-4.32	Brass, Tin Plated	.016 0.41	.755 19.18	X	—	X	42660-2
				.032 0.81	.150-.210 3.81-5.33	Brass	.016 0.41	.780 19.81	X	—	X	42692-1
	18-14	D	.032 0.81	.150-.210 3.81-5.33	Brass, Tin Plated	.016 0.41	.780 19.81	X	—	X	42692-2	
			.032 0.81	.120-.170 3.05-4.32	Brass	.016 0.41	.750 19.05	X	—	X	60650-1	
			.032 0.81	.120-.170 3.05-4.32	Brass, Tin Plated	.016 0.41	.750 19.05	X	—	X	60650-2	
E		G	.020 0.51	.120-.170 3.05-4.32	Brass, Tin Plated	.018 0.46	.775 19.69	X	—	X	63993-1 <sup>3,6</sup>	
			.032 0.81	.120-.170 3.05-4.32	Brass	.018 0.46	.755 19.18	X	—	X	63537-1 <sup>6</sup>	
			.032 0.81	.120-.170 3.05-4.32	Brass, Tin Plated	.018 0.46	.755 19.18	X	—	X	63537-2 <sup>6</sup>	
18-14	G	.032 0.81	.120-.170 3.05-4.32	Steel, Nickel Plated	.016 0.41	.755 19.18	—	X	X	63674-1 <sup>6</sup>		
		.032 0.81	.120-.170 3.05-4.32	Brass	.016 0.41	.755 19.18	X	—	X	63306-1		
		.032 0.81	.120-.170 3.05-4.32	Brass, Tin Plated	.016 0.41	.755 19.18	X	—	X	63306-2		
18-14	G	.032 0.81	.120-.170 3.05-4.32	Steel, Nickel Plated	.016 0.41	.755 19.18	—	X	—	1742198-1		

<sup>1</sup> UL listed and CSA certified for 22 AWG.

<sup>2</sup> UL listed and CSA certified for 22-20 AWG.

<sup>3</sup> Mates with a .020 [0.51] thick tab.

<sup>4</sup> 9,600 CMA max.

<sup>5</sup> UL/CSA - 10 AWG only.

<sup>6</sup> Stress relieved.

<sup>7</sup> Recommended for external use only.

<sup>8</sup> Recommended for internal or external use.

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

**250 Series Receptacles** (Continued)

**Straight Receptacles, Insulation Support** (Continued)



Wire Range AWG	Style	Tab Fit	Insulation Diameter	Material and Finish	Stock Thickness	L (Overall Length)	UL	RA	SP	Terminal Part Number		
18-14	F	.032	.120-.170	Brass	.018	.750	X	—	X	62500-1 <sup>7</sup>		
		0.81	3.05-4.32	Brass, Tin Plated	0.46	19.05	X	—	X	62500-2 <sup>7</sup>		
		.032	.120-.170	Phos Brz, Tin Plated	.018	.750	X	—	X	41774 <sup>8</sup>		
16-12 (2) 16	B	.032	.160-.210	Brass	.016	.750	X	—	X	63896-1		
		0.81	4.06-5.33 (2) .130 3.30									
16-12	A	.032	.210-.265	Steel, Nickel Plated	.018	.830	—	X	X	42579-1		
16-12 (2) 18	A	.032	.210-.265	Brass	.018	.820	X	—	X	41727		
				0.81	5.33-6.73 (2) .120 3.05 Max.	Brass, Tin Plated	0.46	20.93	X	—	X	41728
	E	.032	.210-.265	Brass	.018	.755	X	—	X	63757-1		
0.81				5.33-6.73 (2) .120 3.05 Max.	Steel, Nickel Plated	0.46	19.18	—	X	X	63757-2	
14-10	A	.032	.150-.200	Brass	.018	.770	X	—	X	41449 <sup>4</sup>		
				0.81	3.81-5.08	Brass, Tin Plated	0.46	19.56	X	—	X	41450 <sup>4</sup>
	B	.032	.150-.200	Brass, Silver Plated	.018	.750	X	—	X	61095-1 <sup>4</sup>		
				0.81	3.81-5.08	Brass, Silver Plated	0.46	19.05	X	—	X	63435-1 <sup>4,6</sup>
	E	.032	.150-.200	Brass	.018	.755	X	—	X	63365-1 <sup>4</sup>		
				0.81	3.81-5.08	Brass, Tin Plated	0.46	19.69	X	—	X	63365-2 <sup>4</sup>
F	.032	.150-.200	Brass, Tin Plated	.018	.775	X	—	X	42437-2 <sup>4,7</sup>			
			0.81	3.81-5.08	Phos Brz, Tin Plated	0.46	19.56	X	—	X	42437-5 <sup>4,8</sup>	
14-10 (2) 14	A	.032	.225-.275	Brass, Tin Plated	.018	.775	X	—	X	60635-1 <sup>4</sup>		
				0.81	5.72-6.99 (2) .140 3.56	Brass, Silver Plated	0.46	19.69	X	—	X	60635-2 <sup>4</sup>
						Brass	0.46	19.69	X	—	X	60635-3 <sup>4</sup>
	D	.032	.225-.275	Brass, Tin Plated	.018	.750	—	—	—	63419-1 <sup>4,6</sup>		
				0.81	5.72-6.99 (2) .140 3.56	Brass, Tin Plated	0.46	19.05	—	—	—	
						Brass	0.46	19.05	—	—	—	
E	.032	.225-.275	Brass, Tin Plated	.018	.755	X	—	X	63539-1 <sup>4,6</sup>			
			0.81	5.72-6.99 (2) .140 3.56	Brass	0.46	19.18	X	—	X	63539-2 <sup>4,6</sup>	

<sup>1</sup> UL listed and CSA certified for 22 AWG.  
<sup>2</sup> UL listed and CSA certified for 22-20 AWG.  
<sup>3</sup> Mates with a .020 [0.51] thick tab.

<sup>4</sup> 9,600 CMA max.  
<sup>5</sup> UL/CSA - 10 AWG only.  
<sup>6</sup> Stress relieved.

<sup>7</sup> Recommended for external use only.  
<sup>8</sup> Recommended for internal or external use.

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

**250 Series Receptacles** (Continued)

**Straight Receptacles, Insulation Support** (Continued)



A — Premier Line

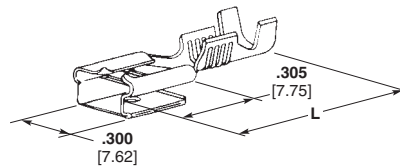
Wire Range AWG	Style	Tab Fit	Insulation Diameter	Material and Finish	Stock Thickness	L (Overall Length)	UL	RU	SP	Terminal Part Number
12-10	A	.032	.150-.200	Brass,	.018	.775	X	—	X	62428-2
		0.81	3.81-5.08	Tin Plated	0.46	19.69				
12-10	A	.032	.150-.200	Phos Brz,	.018	.775	X	—	X	62428-3
		0.81	3.81-5.08	Tin Plated	0.46	19.69				
10-8	A	.032	.230-.280 <sup>1</sup>	Brass,	.018	.775	X	—	X	62998-2 <sup>5</sup>
		0.81	5.84-7.11 <sup>1</sup> or (2) .160 4.06							

<sup>1</sup> UL listed and CSA certified for 22 AWG.  
<sup>2</sup> UL listed and CSA certified for 22-20 AWG.  
<sup>3</sup> Mates with a .020 [0.51] thick tab.

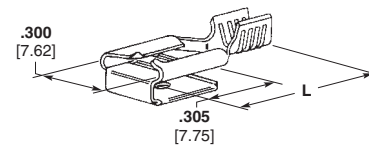
<sup>4</sup> 9,600 CMA max.  
<sup>5</sup> UL/CSA - 10 AWG only.  
<sup>6</sup> Stress relieved.

<sup>7</sup> Recommended for external use only.  
<sup>8</sup> Recommended for internal or external use.

**Receptacle and Tab Combinations**



A — Economy Line



B — Economy Line  
Non-Insulation Support

Wire Range AWG	Style	Tab Fit	Insulation Diameter	Material and Finish	Stock Thickness	L (Overall Length)	UL	RU	SP	Terminal Part Number
22-18	A	.032	.060-.100	Brass	.015	.770	X	—	X	61988-1
		0.81	1.52-2.79		0.38	19.56				
		.032	.060-.100	Brass,	.015	.770	X	—	X	61988-2
		0.81	1.52-2.79	Tin Plated	0.38	19.56				
22-18	A	.032	.060-.100	Brass,	.015	.770	X	—	X	61988-3 <sup>2</sup>
		0.81	1.52-2.79	Tin Plated	0.38	19.56				
		.032	.120-.170	Brass	.015	.770	X	—	X	61944-1
		0.81	3.05-4.32		0.38	19.56				
18-14	A	.032	.120-.170	Brass,	.015	.770	X	—	X	61944-2
		0.81	3.05-4.32	Tin Plated	0.38	19.56				
		.032	.120-.170	Brass	.032-.016	.770	X	—	X	62109-1 <sup>1</sup>
		0.81	3.05-4.32		0.81-0.41	19.56				
18-14	A	.032	.120-.170	Brass,	.032-.016	.770	X	—	X	62109-2 <sup>1</sup>
		0.81	3.05-4.32	Tin Plated	0.81-0.41	19.56				
		.032	.120-.170	Brass	.015	.770	X	—	X	62223-1 <sup>2</sup>
		0.81	3.05-4.32		0.38	19.56				
18-14	B	.032	—	Pre-Tin Brass	.015	.610	X	—	X	62276-1
		0.81			0.38	15.49				
14-10	A	.032	.150-.200	Brass	.015	.770	X	—	X	62253-1 <sup>3</sup>
		0.81	3.81-5.08		0.38	19.56				
		.032	.150-.200	Brass,	.015	.770	X	—	X	62253-2 <sup>3</sup>
		0.81	3.81-5.08	Tin Plated	0.38	19.56				
14-10	A	.032	.150-.200	Brass,	.032-.016	.770	X	—	X	1217043-1 <sup>1,3</sup>
		0.81	3.81-5.08	Tin Plated	0.81-0.41	19.56				
14-10	B	.032	—	Pre-Tin Brass	.015	.610	X	—	X	62068-1 <sup>3</sup>
		0.81			0.38	15.49				

<sup>1</sup> Dual Thickness.  
<sup>2</sup> Stress relieved.  
<sup>3</sup> 9600 CMA Max.

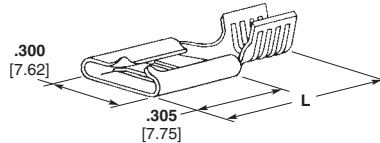
**Note:** All part numbers are RoHS compliant.

### 250 Series Receptacles (Continued)

#### Straight Receptacles, Non-Insulation Support



A — Premier Line



B — Economy Line



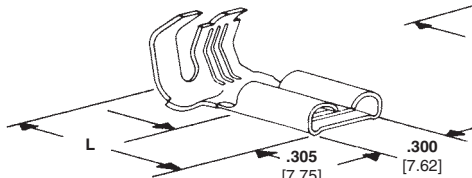
C — Moldable Line

Wire Range AWG	Style	Tab Fit	Insulation Diameter	Material and Finish	Stock Thickness	L (Overall Length)	UL	RU	SP	Terminal Part Number
18-14	A	.032 0.81	—	Brass, Tin Plated	.018 0.46	.655 16.64	X	—	X	41194
		.032 0.81	—	Steel, Nickel Plated	.018 0.46	.655 16.64	—	X	X	41143-1
	B	.032 0.81	—	Brass	.016 0.41	.595 15.11	X	—	X	42845-1
		.032 0.81	—	Brass, Tin Plated	.016 0.41	.595 15.11	X	—	X	42845-2
	C	.032 0.81	—	Brass	.016 0.41	.655 16.64	X	—	X	60938-1
		.032 0.81	—	Brass, Tin Plated	.016 0.41	.655 16.64	X	—	X	60938-2
		.032 0.81	—	Brass, Tin Plated	.016 0.41	.655 16.64	—	—	—	63981-1 <sup>1</sup>

<sup>1</sup> No dimple.

### 250 Series Tab-Lok Flags

#### Flag Receptacles, Insulation Support



A — Premier Line



B — Budget Line



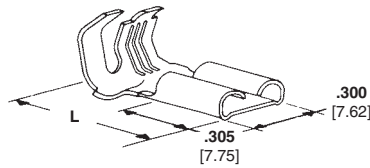
C — Economy Line

Wire Range AWG	Style	Tab Fit	Insulation Diameter	Material and Finish	Stock Thickness	L (Overall Length)	UL	RU	SP	Terminal Part Number
22-16	C	.032 0.81	.070 - .130 1.78-3.30	Brass	.016 0.41	.670 17.02	X	—	X	63577-1
		.032 0.81	.110-210 2.79-5.33	Brass	.018 0.46	.670 17.02	X	—	X	41531
18-12	A	.032 0.81	.110-210 2.79-5.33	Brass, Tin Plated	.018 0.46	.670 17.02	X	—	X	41532
		.032 0.81	.110-210 2.79-5.33	Brass, Silver Plated	.018 0.46	.670 17.02	X	—	X	61156-1
		.032 0.81	.110-210 2.79-5.33	Steel, Nickel Plated	.018 0.46	.670 17.02	—	X	X	41531-1
	B	.032 0.81	.110-210 2.79-5.33	Steel, Nickel Plated	.016 0.41	.670 17.02	—	X	X	42404-1
		.032 0.81	.110-210 2.79-5.33	Brass	.016 0.41	.670 17.02	X	—	X	42511-1
	C	.032 0.81	.110-210 2.79-5.33	Brass, Tin Plated	.016 0.41	.670 17.02	X	—	X	42511-2
.032 0.81		.110-210 2.79-5.33	Brass	.016 0.41	.670 17.02	X	—	X	42742-1	
		.032 0.81	.110-210 2.79-5.33	Brass, Tin Plated	.016 0.41	.670 17.02	X	—	X	42742-2

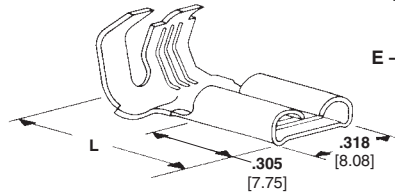
**Note:** All part numbers are RoHS compliant.

**250 Series Tab-Lok Flags** (Continued)

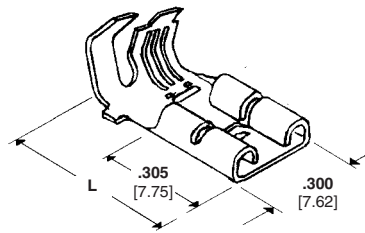
**Flag Receptacles, Insulation Support** (Continued)



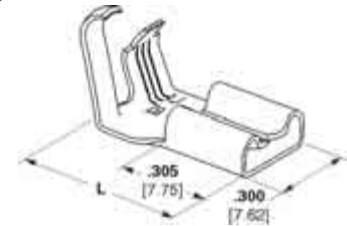
**D — Moldable Line**



**F — Premier Line for Hermetic Tabs**



**E — Low Insertion Force (LIF)**



**G — Low Insertion Force (LIF)**

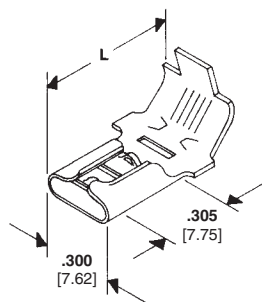
Wire Range AWG	Style	Tab Fit	Insulation Diameter	Material and Finish	Stock Thickness	L (Overall Length)	UL	SA	SP	Terminal Part Number	
18-12	D	.032	.110-.210	Brass	.018	.670	X	—	X	60645-1 <sup>2</sup>	
		0.81	2.79-5.33		0.46	17.02					
		.032	0.81	.110-.210	Brass	.016	.670	X	—	X	60641-1
		.032	0.81	.110-.210	Brass	.016	.670	X	—	X	63445-1
		.032	0.81	.110-.210	Brass, Tin Plated	.016	.670	X	—	X	63445-2
		.032	0.81	.110-.210	Brass, Tin Plated	.016	.670	X	—	X	63445-4 <sup>2</sup>
		.032	0.81	.110-.210	Steel, Nickel Plated	.016	.670	—	X <sup>1</sup>	X <sup>1</sup>	63604-1 <sup>2</sup>
		.032	0.81	.110-.210	Brass	.018	.670	X	—	X	63555-1 <sup>2</sup>
		.032	0.81	.110-.210	Brass, Tin Plated	.018	.670	X	—	X	63555-2 <sup>2</sup>
	.032	0.81	.110-.210	Phos Bronze, Tin Plated	.018	.670	X	—	X	41800 <sup>4</sup>	
											2.79-5.33
	.032	0.81	.110-.210	Brass	.018	.670	X	—	X	41801 <sup>3</sup>	
											2.79-5.33
	.032	0.81	.110-.210	Brass, Tin Plated	.018	.670	X	—	X	41802 <sup>3</sup>	
											2.79-5.33
	.032	0.81	.110-.210	Phos Bronze, Silver Plated	.018	.670	X	—	X	42041 <sup>4</sup>	
											2.79-5.33
	.032	0.81	.110-.210	Phos Bronze, Tin Plated	.018	.670	X	—	X	60274-2 <sup>4,5</sup>	
											2.79-5.33
	.032	0.81	.110-.210	Phos Bronze, Tin Plated	.018	.670	X	—	X	63651-1 <sup>4,6</sup>	
											2.79-5.33
	.032	0.81	.110-.210	Steel, Nickel Plated	.016	.670	—	X	—	1742543-1 <sup>7</sup>	
											2.79-5.33
	.032	0.81	.110-.210	Brass, Tin Plated	.018	.670	X	—	X	60851-1 <sup>3</sup>	
											2.79-5.33
	.032	0.81	.110-.210	Brass, Silver Plated	.018	.670	X	—	X	60851-2 <sup>3</sup>	
											2.79-5.33
	.032	0.81	.110-.210	Brass	.018	.670	X	—	X	60851-4 <sup>3</sup>	
											2.79-5.33
	.032	0.81	.110-.210	Phos Bronze, Silver Plated	.018	.670	X	—	X	42563-6 <sup>4</sup>	
											2.79-5.33
	.032	0.81	.110-.210	Steel, Nickel Plated	.018	.670	—	—	—	42563-9	
											2.79-5.33
	.032	0.81	.110-.210	Phos Bronze, Tin Plated	.018	.670	X	—	X	42563-8 <sup>4</sup>	
											2.79-5.33
	.032	0.81	.110-.265	Brass	.018	.670	X	—	X	63617-1 <sup>6</sup>	
											2.79-6.73

<sup>1</sup> 18 AWG only.  
<sup>2</sup> Stress relieved.  
<sup>3</sup> Recommended for external use only.  
<sup>4</sup> For internal or external use.  
<sup>5</sup> Left handed flag.  
<sup>6</sup> Non-stress relieved.  
<sup>7</sup> UL Recognized 14-18 AWG.

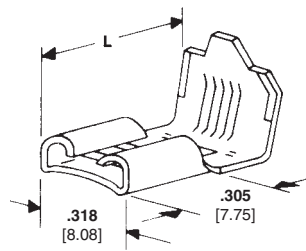
**Note:** All part numbers are RoHS compliant.

**250 Series Tab-Lok Flags** (Continued)

**Flag Receptacles,  
Non-Insulation Support**



**A — Economy Line**



**B — Premier Line  
for Hermetic Tabs**

Wire Range AWG	Style	Tab Fit	Insulation Diameter	Material and Finish	Stock Thickness	L (Overall Length)	UL	RoHS	SP	Terminal Part Number
18-12	A	.032 0.81	—	Brass, Pre-Tin Plated	.016 0.41	.600 15.24	X	—	X	61177-2 <sup>3</sup>
		.032 0.81	—	Brass, Pre-Tin Plated	.016 0.41	.600 15.24	X	—	X	61177-3 <sup>4</sup>
		.032 0.81	—	Brass	.016 0.41	.600 15.24	X	—	X	62091-1 <sup>5</sup>
		.032 0.81	—	Brass, Pre-Tin Plated	.016 0.41	.600 15.24	X	—	X	62091-2 <sup>5</sup>
	B	.032 0.81	—	Brass, Tin Plated	.018 0.46	.610 15.49	X	—	X	62021-3 <sup>5</sup>
		.032 0.81	—	Pho. Brz, Silver Plated	.018 0.46	.670 17.02	X	—	X	62056-11 <sup>3</sup>
		.032 0.81	—	Pho. Brz, Silver Plated	.018 0.46	.670 17.02	X	—	X	62056-21 <sup>2,4</sup>
		.032 0.81	—	Pho. Brz, Tin Plated	.018 0.46	.670 17.02	X	—	X	62056-6 <sup>2,3</sup>
		.032 0.81	—	Pho. Brz, Tin Plated	.018 0.46	.670 17.02	X	—	X	62056-71 <sup>2,4</sup>
		.032 0.81	—	Brass, Tin Plated	.018 0.46	.670 17.02	X	—	X	62056-3 <sup>2,3</sup>
12-10 or (2) 14	A	.032 0.81	—	Brass	.016 0.41	.670 17.02	X	—	X	62011-1 <sup>5</sup>
		.032 0.81	—	Brass, Pre-Tin Plated	.016 0.41	.670 17.02	X	—	X	62011-2 <sup>5</sup>
12-10	B	.032 0.81	—	Pho. Brz, Silver Plated	.018 0.46	.670 17.02	X	—	X	62057-11 <sup>3</sup>
		.032 0.81	—	Brass, Tin Plated	.018 0.46	.670 17.02	X	—	X	62057-3 <sup>3</sup>
		.032 0.81	—	Brass, Tin Plated	.018 0.46	.670 17.02	X	—	X	62057-4 <sup>4</sup>
		.032 0.81	—	Pho. Brz, Silver Plated	.018 0.46	.670 17.02	X	—	X	62057-7 <sup>4</sup>
		.032 0.81	—	Pho. Brz, Silver Plated	.018 0.46	.670 17.02	X	—	X	62022-1 <sup>5</sup>
		.032 0.81	—	Brass, Tin Plated	.018 0.46	.670 17.02	X	—	X	62022-2 <sup>5</sup>

<sup>1</sup> For internal or external use.

<sup>2</sup> Reverse reel.

<sup>3</sup> Right handed flag.

<sup>4</sup> Left handed flag.

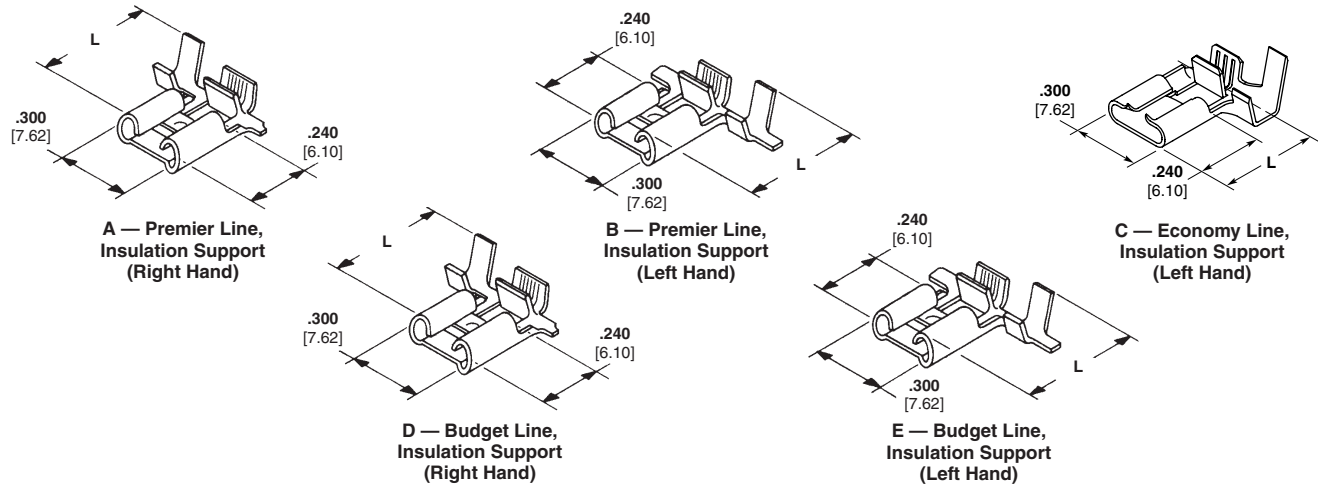
<sup>5</sup> Right or left handed. Carrier out front for through splicing.

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



## 250 Series F-Crimp Flags

### Flag Receptacles



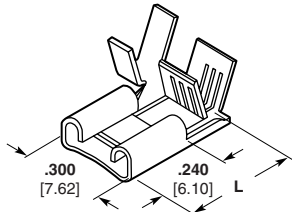
Wire Range AWG	Style	Tab Fit	Insulation Diameter	Material and Finish	Stock Thickness	L (Overall Length)	UL	RoHS	SR	Terminal Part Number
22-18	B	.032 0.81	.060 -.110 1.52-2.79	Brass	.016 0.41	.540 13.72	X	—	X	62813-1
		.032 0.81	.060 -.110 1.52-2.79	Brass, Tin Plated	.016 0.41	.540 13.72	X	—	X	62813-2
	A	.032 0.81	.060 -.110 1.52-2.79	Brass	.016 0.41	.540 13.72	X	—	X	62814-1
		.032 0.81	.060 -.110 1.52-2.79	Brass, Tin Plated	.016 0.41	.540 13.72	X	—	X	62814-2
	D	.032 0.81	.060 -.110 1.52-2.79	Brass	.016 0.41	.540 13.72	X	—	X	62718-1
		.032 0.81	.060 -.110 1.52-2.79	Brass, Tin Plated	.016 0.41	.540 13.72	X	—	X	62718-2
18-14 or (2)18	B	.032 0.81	.110-.200 2.79-5.08	Brass	.016 0.41	.540 13.72	X	—	X	63538-1 <sup>1</sup>
		.032 0.81	.110-.200 2.79-5.08	Steel, Nickel Plated	.016 0.41	.540 13.72	—	X	—	63963-1
18-14	A	.032 0.81	.110-.160 2.79-4.06	Brass, Tin Plated	.016 0.41	.540 13.72	X	—	X	63901-1 <sup>1</sup>
		.032 0.81	.110-.160 2.79-4.06	Brass	.016 0.41	.540 13.72	X	—	X	63901-2 <sup>1</sup>
	B	.032 0.81	.110 -.160 2.79-4.06	Brass	.016 0.41	.540 13.72	X	—	X	63011-1
		.032 0.81	.110 -.160 2.79-4.06	Brass, Tin Plated	.016 0.41	.540 13.72	X	—	X	63011-2
	A	.032 0.81	.110 -.160 2.79-4.06	Brass	.016 0.41	.540 13.72	X	—	X	63012-1
		.032 0.81	.110 -.160 2.79-4.06	Brass, Tin Plated	.016 0.41	.540 13.72	X	—	X	63012-2
	E	.032 0.81	.110 -.160 2.79-4.06	Brass	.016 0.41	.540 13.72	X	—	X	63009-1
		.032 0.81	.110 -.160 2.79-4.06	Brass, Tin Plated	.016 0.41	.540 13.72	X	—	X	63009-2
	D	.032 0.81	.110 -.160 2.79-4.06	Brass	.016 0.41	.540 13.72	X	—	X	63010-1
		.032 0.81	.110 -.160 2.79-4.06	Brass, Tin Plated	.016 0.41	.540 13.72	X	—	X	63010-2
	C	.032 0.81	—	Brass	.016 0.41	.430 10.92	X	—	X	63508-1 <sup>2</sup>
		.032 0.81	.110 -.160 2.79-4.06	Brass	.016 0.41	.540 13.72	X	—	X	63096-1
16-12	A	.032 0.81	.110 -.160 2.79-4.06	Brass, Tin Plated	.016 0.41	.540 13.72	X	—	X	63096-2
		.032 0.81	.120 -.170 3.05-4.32	Brass, Tin Plated	.018 0.45	.700 17.78	X	—	X	1742718-1

<sup>1</sup> Low Insertion Force.  
<sup>2</sup> No insulation support.

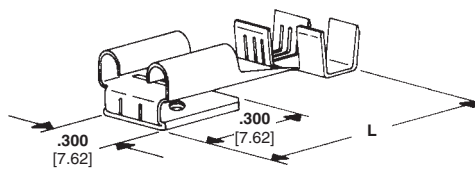
**Note:** All part numbers are RoHS compliant.

**250 Series F-Crimp Flags** (Continued)

**Flag Receptacles** (Continued)



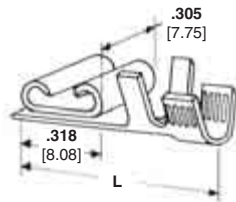
**A — Center Strip, F-Crimp**



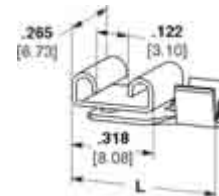
**B — Receptacle Tab Combination, F-Crimp**



**C — Reversible Flag, Straight End Feed**



**D — Reversible Flag for Hermetic Tabs, Side Feed**



**E — Reversible Flag for Hermetic Tabs, Side Feed**

FASTON Receptacles

Wire Range AWG	Style	Tab Fit	Insulation Diameter	Material and Finish	Stock Thickness	L (Overall Length)	UL	RU	SR	Terminal Part Number										
20-16	D	.032	.085-150	Phos Brz, Tin Plated	.018	.640	X	—	X	63137-1										
		0.81	2.16-3.81		0.46	16.26														
	A	.032	0.81	—	Brass	.016	.430	X	—	X	63315-1 <sup>3</sup>									
												.032	0.81	—	Brass, Tin Plated	.016	.430	X	—	X
		.032	0.81	.110-.160	Brass	.016	.540	X	—	X	63314-1									
												.032	0.81	2.79-4.06	Brass, Tin Plated	.016	.540	X	—	X
		B	.032	0.81	.120-.170	Brass, Tin Plated	.016	.630	X	—	X									
												.032	0.81	2.29-3.30	Brass	.016	.710	X	—	X
		C	.032	0.81	.090-.130	Brass, Tin Plated	.016	.710	X	—	X									
												.032	0.81	2.29-3.30	Brass, Tin Plated	.016	.710	X	—	X
E	.032	0.81	—	Brass	.018	.640	—	—	—	63647-11 <sup>3</sup>										
											.032	0.81	—	Phos Brz, Tin Plated	.018	.640	—	—	—	63647-21 <sup>3</sup>
16-12	D	.032	0.81	.130-.170	Phos Brz, Tin Plated	.018	.640	X	—	X	61188-1 <sup>2</sup>									
												12-10	D	.032	0.81	.130-.170	Phos Brz, Tin Plated	.018	.640	X

<sup>1</sup> No Dimple.

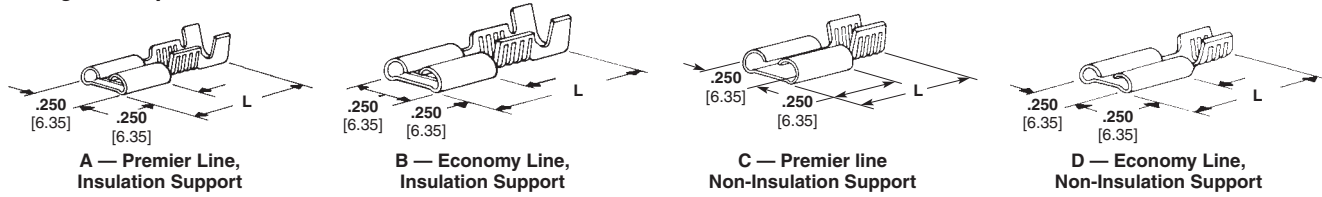
<sup>2</sup> Bends terminal 90°. For 180° bend use applicator 687616-2 with Press 694234-7.

<sup>3</sup> No insulation support.

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

## 205 Series Receptacles

### Straight Receptacles

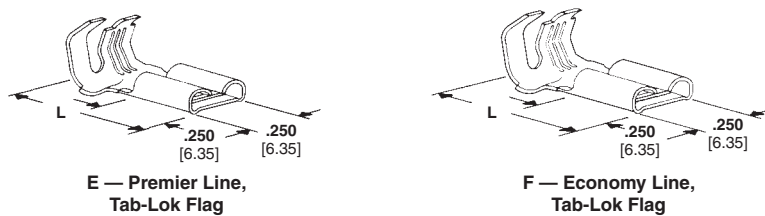


Wire Range AWG	Style	Tab Fit	Insulation Diameter	Material and Finish	Stock Thickness	L (Overall Length)	UL	RA	SP	Terminal Part Number
26-22	A	.020	.050-.070	Brass, Tin Plated	.012	.620	X	—	X	60674-1 <sup>1</sup>
		0.51	1.27-1.78	Brass	0.31	15.75	X	—	X	42198-1
	A	.020	.085-.125	Brass, Tin Plated	.012	.615	X	—	X	42198-2
		0.51	2.16-3.18	Brass, Tin Plated	0.31	15.62	X	—	X	42299-2
22-18	B	.020	.085-.125	Brass	.012	.615	X	—	X	42710-1
		0.51	2.16-3.18	Brass, Tin Plated	0.31	15.62	X	—	X	42710-2
	B	.032	.085-.125	Brass, Tin Plated	.012	.615	X	—	X	60904-2
		0.81	2.16-3.18	Brass, Tin Plated	0.31	15.62	X	—	X	42197-2 <sup>2</sup>
	C	.020	—	Brass, Tin Plated	.012	.470	X	—	X	42197-2 <sup>2</sup>
		0.51	—	Brass, Tin Plated	0.31	11.94	X	—	X	42233-2
18-14	A	.032	.130-.180	Brass, Tin Plated	.016	.615	X	—	X	42233-2
		0.81	3.30-4.57	Phos Brz, Tin Plated	0.41	15.62	X	—	X	42233-7
	B	.020	.130-.180	Brass, Tin Plated	.012	.615	X	—	X	42713-2
		0.51	3.30-4.57	Brass, Tin Plated	0.31	15.62	X	—	X	42781-2
	C	.020	.130-.180	Brass, Tin Plated	.016	.615	X	—	X	42781-2
		0.51	3.30-4.57	Brass, Tin Plated	0.41	15.62	X	—	X	42239-4
	C	.032	—	Phos Brz, Tin Plated	.016	.470	X	—	X	42239-4
		0.81	—	Phos Brz, Tin Plated	0.41	11.94	X	—	X	42712-2 <sup>2</sup>
D	.020	—	Brass, Tin Plated	.012	.470	X	—	X	42712-2 <sup>2</sup>	
	0.51	—	Brass, Tin Plated	0.31	11.94	X	—	X		

<sup>1</sup> UL listed and CSA certified for 22 AWG.

<sup>2</sup> Moldable.

### Flag Receptacles



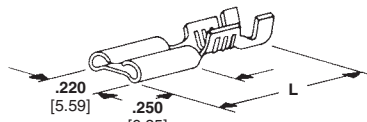
Wire Range AWG	Style	Tab Fit	Insulation Diameter	Material and Finish	Stock Thickness	L (Overall Length)	UL	RA	SP	Terminal Part Number
20-16	E	.020	.110-.170	Brass	.012	.530	X	—	X	42199-1
		0.51	2.79-4.32	Brass, Tin Plated	0.31	13.46	X	—	X	42199-2
20-14	E	.020	.110-.170	Brass, Tin Plated	.016	.530	X	—	X	62354-1
		0.51	2.79-4.32	Brass, Tin Plated	0.41	13.46	X	—	X	42234-2
	F	.032	.110-.170	Brass, Tin Plated	.016	.530	X	—	X	60195-1 <sup>1</sup>
		0.81	2.79-4.32	Brass, Tin Plated	0.41	13.46	X	—	X	60195-2 <sup>1</sup>

<sup>1</sup> Moldable.

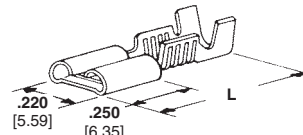
**Note:** All part numbers are RoHS compliant.

## 187 Series Receptacles

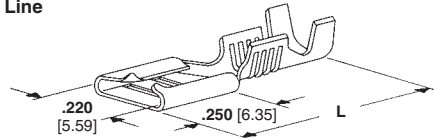
### Straight Receptacles



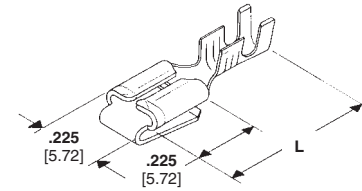
A — Premier Line



B — Budget Line



C — Economy Line



F — Commercial Line Receptacle & Tab Combination

Wire Range AWG	Style	Tab Fit	Insulation Diameter	Material and Finish	Stock Thickness	L (Overall Length)	UL	CSA	Terminal Part Number		
24-20	A	.020	.040-.070	Brass, Tin Plated	.012	.590	UL	CSA	60573-1		
		0.51	1.02-1.78	Brass	0.31	14.99			X <sup>2</sup>	X <sup>2</sup>	60573-2
		.020	.040-.070	Phos Brz, Tin Plated	.012	.590			X	X	62187-2
		0.51	1.02-1.78	Brass, Tin Plated	.012	.585			X <sup>2</sup>	X <sup>2</sup>	62138-1
		0.51	1.52-2.79	Brass	0.31	14.86			X <sup>2</sup>	X <sup>2</sup>	62138-2
	B	.021	.060-.110	Brass, Tin Plated	.012	.590	—	—	1217129-1		
		0.53	1.52-2.79	Brass, Tin Plated	0.31	14.99	—	—	—		
		.032	.040-.070	Brass, Tin Plated	.012	.590	X <sup>2</sup>	X <sup>2</sup>	62181-1		
		0.81	1.02-1.78	Brass, Tin Plated	0.31	14.99	X	X	63931-1		
		0.81	2.29-3.81	Brass, Tin Plated	0.31	14.86	X	X	63347-1		
22-18	C	.020	.090-.130	Brass	.012	.590	X	X	63347-1		
	F	0.51	2.29-3.30	Brass, Tin Plated	.014	.615	X	X	63873-1 <sup>5</sup>		
		0.51	1.52-2.54	Brass, Tin Plated	0.36	15.62	X	X	1217084-1 <sup>5</sup>		
	0.51	2.29-3.30	Brass, Tin Plated	0.36	15.62	X	X	1217084-1 <sup>5</sup>			
20-16	A	.015	—	Brass, Tin Plated	.012	.470	—	—	42374-2 <sup>1</sup>		
		0.38	—	Brass, Tin Plated	0.31	11.94	—	—	—		
		.015	.090-.130	Brass, Tin Plated	.012	.590	—	—	42453-2		
		0.38	2.29-3.30	Brass, Tin Plated	0.31	14.99	—	—	—		
		.020	—	Brass, Tin Plated	.012	.470	X	X	42373-2 <sup>1</sup>		
		0.51	—	Brass, Tin Plated	0.31	11.94	X	X	42373-2 <sup>1</sup>		
		.020	.060-.110	Brass	.012	.585	X	X	62137-1		
		0.51	1.52-2.79	Brass	0.31	14.86	X	X	62137-2		
		.020	.060-.110	Brass, Tin Plated	.012	.585	X	X	62137-2		
		0.51	1.52-2.79	Brass, Tin Plated	0.31	14.86	X	X	62137-2		
		.020	.090-.130	Brass	.012	.590	X	X	42452-1		
		0.51	2.29-3.30	Brass	0.31	14.99	X	X	42452-1		
		.020	.090-.130	Brass, Tin Plated	.012	.590	X	X	42452-2		
		0.51	2.29-3.30	Brass, Tin Plated	0.31	14.99	X	X	42452-2		
.020	.090-.130	Phos Brz, Tin Plated	.012	.590	X	X	42452-5				
0.51	2.29-3.30	Phos Brz, Tin Plated	0.31	14.99	X	X	42452-5				
.020	.090-.130	Steel, Nickel Plated	.012	.590	—	X	X	60621-1			
0.51	2.29-3.30	Steel, Nickel Plated	0.31	14.99	—	X	X	60621-1			
.032	.090-.130	Steel, Nickel Plated	.012	.590	—	X	X	63850-1			
0.81	2.29-3.30	Steel, Nickel Plated	0.31	14.99	—	X	X	63850-1			
.032	.090-.130	Brass	.012	.585	X	X	61758-1				
0.81	2.29-3.30	Brass	0.31	14.86	X	X	61758-1				
.032	.090-.130	Brass, Tin Plated	.012	.585	X	X	61758-2				
0.81	2.29-3.30	Brass, Tin Plated	0.31	14.86	X	X	61758-2				

<sup>1</sup> No Insulation support.

<sup>2</sup> UL listed and CSA certified for 22- 20 AWG.

<sup>3</sup> Also capable of accepting (2) 20 AWG wires.

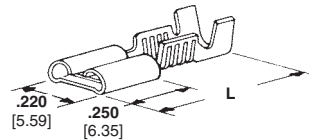
<sup>4</sup> Stress relieved.

<sup>5</sup> Tab stock thickness .020 [0.51].

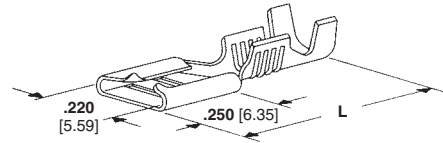
**Note:** All part numbers are RoHS compliant.

**187 Series Receptacles** (Continued)

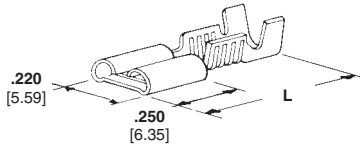
**Straight Receptacles** (Continued)



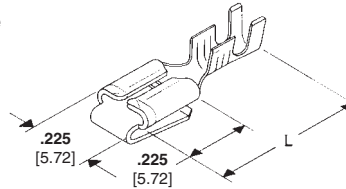
**B — Budget Line**



**C — Economy Line**



**E — Moldable Line**



**F — Commercial Line Receptacle & Tab Combination**

FASTON Receptacles

Wire Range AWG	Style	Tab Fit	Insulation Diameter	Material and Finish	Stock Thickness	L (Overall Length)	UL	RA	SP	Terminal Part Number
20-16	B	.020 0.51	.090-.130 2.29-3.30	Brass	.012 0.31	.585 14.86	X	—	X	42617-1
		.020 0.51	.090-.130 2.29-3.30	Steel, Nickel Plated	.012 0.31	.585 14.86	—	X	X	63959-1
		.020 0.51	.090-.130 2.29-3.30	Brass, Tin Plated	.012 0.31	.585 14.86	X	—	X	42617-2
		.032 0.81	—	Brass	.012 0.31	.475 12.07	X	—	X	63785-1 <sup>1</sup>
		.032 0.81	.090-.130 2.29-3.30	Brass	.012 0.31	.585 14.86	X	—	X	63477-1
		.032 0.81	.090-.130 2.29-3.30	Brass, Tin Plated	.012 0.31	.585 14.86	X	—	X	63477-2
	C	.020 0.51	—	Brass	.012 0.31	.475 12.07	X	—	X	42799-1 <sup>1</sup>
		.020 0.51	—	Brass, Tin Plated	.012 0.31	.475 12.07	X	—	X	42799-2 <sup>1</sup>
		.020 0.51	.090-.130 2.29-3.30	Brass	.012 0.31	.590 14.99	X	—	X	42801-1
		.020 0.51	.090-.130 2.29-3.30	Brass, Tin Plated	.012 0.31	.590 14.99	X	—	X	42801-2
		.020 0.51	.090-.130 2.29-3.30 or (2) 2.29	Brass	.012 0.31	.590 14.99	X	—	X	61892-1 <sup>3</sup>
		.032 0.81	—	Brass, Tin Plated	.012 0.31	.475 12.07	X	—	X	61969-1 <sup>1</sup>
		.032 0.81	.090-.130 2.29-3.30	Brass	.012 0.31	.590 14.99	X	—	X	60196-1
		.032 0.81	.090-.130 2.29-3.30	Brass, Tin Plated	.012 0.31	.590 14.99	X	—	X	60196-2
	E	.039 0.99	.090-.130 2.29-3.30	Brass, Tin Plated	.012 0.31	.590 14.99	—	—	—	63751-1
		.020 0.51	.090-.130 2.29-3.30	Brass	.012 0.31	.585 14.86	X	—	X	60214-1
	F	.020 0.51	.090-.130 2.29-3.30	Brass, Tin Plated	.012 0.31	.585 14.86	X	—	X	60214-2
		.020 0.51	.060-.110 1.52-2.79	Brass, Tin Plated	.014 0.36	.615 15.62	X	—	X	62139-1 <sup>5</sup>
		.020 0.51	.090-.130 2.29-3.30	Brass, Tin Plated	.014 0.36	.615 15.62	X	—	X	62026-1 <sup>5</sup>
		.020 0.51	.090-.130 2.29-3.30	Brass	.014 0.36	.615 15.62	X	—	X	62026-2 <sup>5</sup>
.032 0.81		.090-.130 2.29-3.30	Brass	.014 0.36	.615 15.62	X	—	X	63646-1 <sup>5</sup>	
.032 0.81		.090-.130 2.29-3.30	Brass, Tin Plated	.014 0.36	.615 15.62	X	—	X	63646-2 <sup>5</sup>	

<sup>1</sup> No Insulation support.

<sup>2</sup> UL listed and CSA certified for 22- 20 AWG.

<sup>3</sup> Also capable of accepting (2) 20 AWG wires.

<sup>4</sup> Stress relieved.

<sup>5</sup> Tab stock thickness .020 [0.51].

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

**187 Series Receptacles** (Continued)

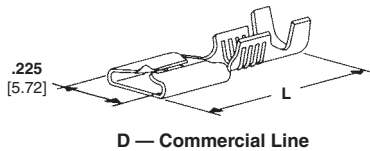
**Straight Receptacles** (Continued)



A — Premier Line



B — Budget Line



D — Commercial Line



E — Moldable Line



F — Commercial Line Receptacle & Tab Combination

Wire Range AWG	Style	Tab Fit	Insulation Diameter	Material and Finish	Stock Thickness	L (Overall Length)	UL	RA	SP	Terminal Part Number
18-16 or (2) 18	A	.020 0.51	.105-.210 2.67-5.33 (2) .105 Max.	Brass, Tin Plated	.012 0.31	.590 14.99	X	—	X	60487-2
			.105-.210 2.67-5.33 (2) .105 Max.	Brass	.012 0.31	.590 14.99	X	—	X	60487-1
		.032 0.81	.105-.210 2.67-5.33 (2) .105 Max.	Brass, Tin Plated	.012 0.31	.590 14.99	X	—	X	61945-1
	B	.032 0.81	.105-.210 2.67-5.33 (2) .105 Max.	Brass	.012 0.31	.590 14.99	X	—	X	63769-1
			.105-.210 2.67-5.33 (2) .105 Max.	Steel, Nickel Plated	.012 0.31	.590 14.99	—	X	X	61945-2
			.105-.210 2.67-5.33 (2) .105 Max.	Brass	.012 0.31	.590 14.99	X	—	X	63470-1
18-14 or (2) 16	D	.020 0.51	.180-.230 4.57-5.84 (2) .110 Max.	Brass	.014 0.36	.640 16.26	X	—	X	60742-1
			.180-.230 4.57-5.84 (2) .110 Max.	Brass, Tin Plated	.014 0.36	.640 16.26	X	—	X	60742-2
		.025 0.64	.180-.230 4.57-5.84 (2) .110 Max.	Brass, Tin Plated	.014 0.36	.640 16.26	X	—	X	63749-2 <sup>4</sup>
	A	.020 0.51	.180-.230 4.57-5.84 (2) .110 Max.	Brass	.014 0.36	.640 16.26	—	—	—	63832-1
			.180-.230 4.57-5.84 (2) .110 Max.	Brass	.014 0.36	.640 16.26	X	—	X	63596-1
			.180-.230 4.57-5.84 (2) .110 Max.	Brass, Pre-Tin	.014 0.36	.640 16.26	X	—	X	63596-2
18-14	A	.020 0.51	.110-.160 2.79-4.06	Brass, Tin Plated	.012 0.31	.590 14.99	X	—	X	1217149-1
			.150-.190 3.81-4.83	Brass	.014 0.36	.640 16.26	X	—	X	62016-1
	D	.020 0.51	.150-.190 3.81-4.83	Brass, Tin Plated	.014 0.36	.640 16.26	X	—	X	62016-2
			.150-.190 3.81-4.83	Brass, Pre-Tin	.014 0.36	.640 16.26	X	—	X	63697-1
F	.020 0.51	.110-.160 2.79-4.06	Brass, Tin Plated	.014 0.36	.615 15.62	—	—	—	1217151-1 <sup>5</sup>	

<sup>1</sup> No Insulation support.

<sup>2</sup> UL listed and CSA certified for 22- 20 AWG.

<sup>3</sup> Also capable of accepting (2) 20 AWG wires.

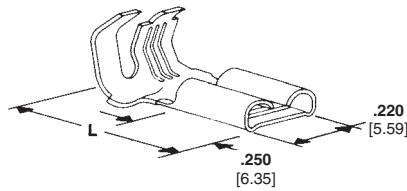
<sup>4</sup> Stress relieved.

<sup>5</sup> Tab stock thickness .020 [0.51].

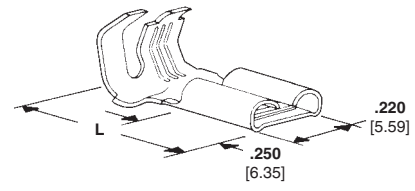
**Note:** All part numbers are RoHS compliant.

### 187 Series Tab-Lok Flags

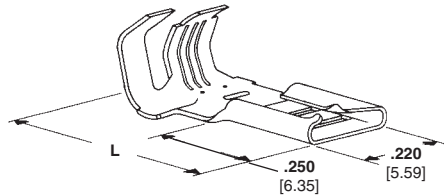
Flag Receptacles,  
Insulation Support



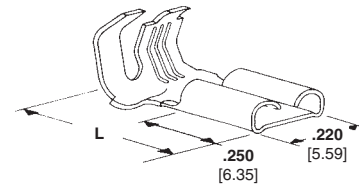
A — Premier Line



B — Budget Line



C — Economy Line



D — Moldable Line

Wire Range AWG	Style	Tab Fit	Insulation Diameter	Material and Finish	Stock Thickness	L (Overall Length)	UL	SAE	CSA	Terminal Part Number
20-16	A	.020 0.51	.110-.170 2.79-4.32	Brass	.012 0.31	.530 13.46	X	—	X	42486-1
		.020 0.51	.110-.170 2.79-4.32	Brass, Tin Plated	.012 0.31	.530 13.46	X	—	X	42486-2
		.020 0.51	.110-.170 2.79-4.32	Steel, Nickel Plated	.012 0.31	.530 13.46	—	X	X	42486-3
		.020 0.51	.110-.170 2.79-4.32	Brass, Silver Plated	.012 0.31	.530 13.46	X	—	X	42486-4
		.032 0.81	.110-.170 2.79-4.32	Brass, Tin Plated	.012 0.31	.530 13.46	X	—	X	62591-1
		.032 0.81	.110-.170 2.79-4.32	Steel, Nickel Plated	.012 0.31	.530 13.46	—	X	X	63696-1
	B	.020 0.51	.110-.170 2.79-4.32	Brass	.012 0.31	.530 13.46	X	—	X	42618-1
		.020 0.51	.110-.170 2.79-4.32	Brass, Tin Plated	.012 0.31	.530 13.46	X	—	X	42618-2
		.020 0.51	.170-.225 4.32-5.72	Brass	.012 0.31	.575 14.61	X	—	X	62817-1
		.032 0.81	.110-.170 2.79-4.32	Brass	.012 0.31	.530 13.46	X	—	X	63748-1
	C	.020 0.51	.110-.170 2.79-4.32	Brass	.012 0.31	.530 13.46	X	—	X	42800-1
		.020 0.51	.110-.170 2.79-4.32	Brass, Tin Plated	.012 0.31	.530 13.46	X	—	X	42800-2
		.032 0.81	.110-.170 2.79-4.32	Brass	.012 0.31	.530 13.46	X	—	X	60529-1
		.032 0.81	.110-.170 2.79-4.32	Brass, Tin Plated	.012 0.31	.530 13.46	X	—	X	60529-2
	D	.020 0.51	.110-.170 2.79-4.32	Brass	.012 0.31	.530 13.46	X	—	X	61029-1
		.020 0.51	.110-.170 2.79-4.32	Brass, Tin Plated	.012 0.31	.530 13.46	X	—	X	61029-2
18-14 or (2) 18	A	.032 0.81	.110-.190 2.79-4.83 (2) .105 Max. 2.67	Brass, Tin Plated	.014 0.36	.530 14.36	X	—	X	1742422-1
		.032 0.81	.110-.190 2.79-4.83 (2) .105 Max. 2.67	Brass, Tin Plated	.014 0.36	.530 14.36	X	—	X	1217027-1

Note: All part numbers are RoHS compliant.

## 187 Series C-Crimp Flag Receptacles

### C-Crimp Line

A — 187 Series C-Crimp Flag Receptacles

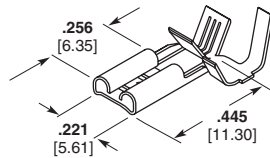


Wire Range AWG	Style	Tab Fit	Insulation Diameter	Material and Finish	Stock Thickness	L (Overall Length)	UL	RA	SP	Terminal Part Number
20-16	A	.020 0.51	.090-.130 2.29-3.30	Brass	.014 0.36	.522 13.26	X	—	X	1217009-1
		.020 0.51	.090-.130 2.29-3.30	Brass, Tin Plated	.014 0.36	.522 13.26	X	—	X	1217009-2
		.032 0.81	.090-.130 2.29-3.30	Brass	.014 0.36	.522 13.26	X	—	X	1217010-1
		.032 0.81	.090-.130 2.29-3.30	Brass, Tin Plated	.014 0.36	.522 13.26	X	—	X	1217010-2
18-14	A	.032 0.81	.100-.155 2.54-3.94	Brass	.016 0.41	.535 13.59	X <sup>1</sup>	—	X <sup>1</sup>	1217244-1
		.032 0.81	.100-.155 2.54-3.94	Brass, Tin Plated	.016 0.41	.535 13.59	X	—	X	1217244-2

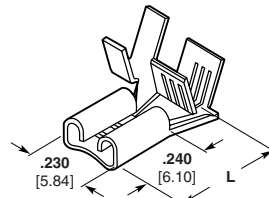
<sup>1</sup> 16 & 18 AWG only.

## 187 Series F-Crimp Flags

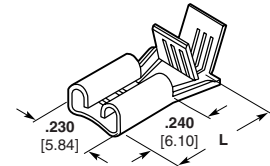
### F-Crimp Line



A — End of Wire with Insulation Support



B — Center Strip with Insulation Support



C — Center Strip with No Insulation Support

Wire Range AWG	Style	Tab Fit	Insulation Diameter	Material and Finish	Stock Thickness	L (Overall Length)	UL	RA	SP	Terminal Part Number
22-18	A	.020 0.51	.060-.110 1.52-2.79	Brass	0.012 0.31	0.445 11.30	X	—	X	1742086-1
		.020 0.51	.060-.110 1.52-2.79	Brass, Tin Plated	0.012 0.31	0.445 11.30	X	—	X	1742086-2
		.032 0.81	.060-.110 1.52-2.79	Brass	0.012 0.31	0.445 11.30	X	—	X	1742087-1
		.032 0.81	.060-.110 1.52-2.79	Brass, Tin Plated	0.012 0.31	0.445 11.30	X	—	X	1742087-2
20-16	B	.020 0.51	.090-.130 2.29-3.30	Brass	.012 0.31	.596 15.14	—	—	—	626412-1
		.020 0.51	.060-.150 1.52-3.81	Brass	.016 0.41	.430 10.92	X	—	X	63512-1
18-14	B	.032 0.81	.060-.150 1.52-3.81	Brass	.016 0.41	.430 10.92	X	—	X	63316-1
		.032 0.81	.060-.150 1.52-3.81	Brass, Tin Plated	.016 0.41	.430 10.92	X	—	X	63316-2
	C	.032 0.81	—	Steel, Nickel Plated	.016 0.41	.430 10.92	—	X	X	63316-3
		.032 0.81	—	Brass	.016 0.41	.430 10.92	X	—	X	63317-1
18-14 or (2) 18	A	.020 0.51	.110-.150 or 2-110 2.79-3.81 or 2-2.79 max	Brass	0.012 0.31	0.445 11.30	X <sup>1</sup>	—	X <sup>1</sup>	1742088-1
		.020 0.51	.110-.150 or 2-110 2.79-3.81 or 2-2.79 max	Brass, Tin Plated	0.012 0.31	0.445 11.30	X <sup>1</sup>	—	X <sup>1</sup>	1742088-2
		.032 0.81	.110-.150 or 2-110 2.79-3.81 or 2-2.79 max	Brass	0.012 0.31	0.445 11.30	X <sup>1</sup>	—	X <sup>1</sup>	1742089-1
		.032 0.81	.110-.150 or 2-110 2.79-3.81 or 2-2.79 max	Brass, Tin Plated	0.012 0.31	0.445 11.30	X <sup>1</sup>	—	X <sup>1</sup>	1742089-2
18 or (2) 18	A	.020 0.51	.110-.150 or 2-110 2.79-3.81 or 2-2.79 max	Steel, Nickel Plated	0.012 0.31	0.445 11.30	—	X <sup>1</sup>	—	1742312-1
		.032 0.81	.110-.150 or 2-110 2.79-3.81 or 2-2.79 max	Steel, Nickel Plated	0.012 0.31	0.445 11.30	—	X <sup>1</sup>	—	1742049-1

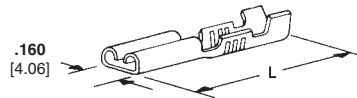
<sup>1</sup> UL/CSA Approved for 18 & 16 AWG only

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



## 125 Series Receptacles

### Insulation Support

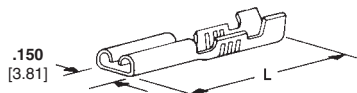


A - Receptacle with Insulation Support

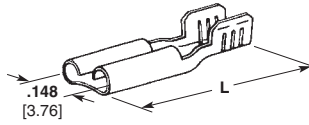
Wire Range AWG	Style	Tab Fit	Insulation Diameter	Material and Finish	Stock Thickness	L (Overall Length)	UL	RA	SP	Terminal Part Number
22-18	A	.020 0.51	.090-.110 2.29-2.79	Brass	.010 0.25	.635 16.13	—	—	—	63705-1

## 110 Series Receptacles

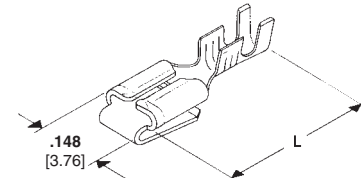
### Straight Receptacles



A — FASTON Receptacles with Insulation Support



B — FASTON Receptacles with No Insulation Support



C — Commercial Line Receptacle and Tab Combination

Wire Range AWG	Style	Fits Tab Type <sup>7</sup>	Tab Fit	Insulation Diameter	Material and Finish	Stock Thickness	L (Overall Length)	UL	RA	SP	Terminal Part Number
26-22	B	—	.020 0.51	—	Brass, Tin Plated	.010 0.25	.327 8.31	—	—	—	63837-1
		—	.016 0.41	—	Brass	.010 0.25	.327 8.31	—	—	—	61818-1
24-22	A	1	.016 0.41	.040-.060 1.02-1.52	Brass, Pre-Tin	.010 0.25	.635 16.13	—	—	—	42415-1
		1	.020 0.51	.040-.060 1.02-1.52	Brass, Pre-Tin	.010 0.25	.635 16.13	X <sup>1</sup>	—	X	42067-1
		1	.020 0.51	.040-.060 1.02-1.52	Brass, Pre-Tin	.010 0.25	.510 12.95	X	—	X	60089-2
		1	.032 0.81	.040-.060 1.02-1.52	Brass, Pre-Tin	.010 0.25	.635 16.13	X <sup>1</sup>	—	X	63634-1
22-20	A	2	.020 0.51	.060-.100 1.52-2.54	Brass, Pre-Tin	.010 0.25	.635 16.13	X	—	X	42236-1
		1	.012 0.31	.060-.100 1.52-2.54	Brass, Pre-Tin	.010 0.25	.635 16.13	—	—	—	60415-1
		1	.016 0.41	.060-.100 1.52-2.54	Brass, Pre-Tin	.010 0.25	.635 16.13	—	—	—	60118-1
		2	.016 0.41	.090-.130 1.52-2.54	Brass, Pre-Tin	.010 0.25	.635 16.13	—	—	—	62523-1
22-18	A	1	.020 0.51	.060-.100 1.52-2.54	Brass	.010 0.25	.635 16.13	X	—	X	42068
		1	.020 0.51	.060-.100 1.52-2.54	Brass, Pre-Tin	.010 0.25	.635 16.13	X	—	X	42068-1
		1	.020 0.51	.090-.130 1.52-2.54	Brass, Pre-Tin	.010 0.25	.635 16.13	X	—	X	62094-1
		1	.020 0.51	.090-.130 1.52-2.54	Brass	.010 0.25	.635 16.13	X	—	X	62094-2
		2	.020 0.51	.120-.140 3.05-3.56	Brass, Pre-Tin	.010 0.25	.635 16.13	X	—	X	60729-1
		1	.025 0.51	.120-.140 3.05-3.56	Brass, Pre-Tin	.010 0.25	.635 16.13	—	—	—	61158-1
		1	.032 0.81	.060-.100 1.52-2.54	Brass, Pre-Tin	.010 0.25	.635 16.13	X	—	X	60197-1
		3	.032 0.81	.060-.100 1.52-2.54	Brass, Pre-Tin	.010 0.25	.635 16.13	X	—	X	60577-1
		1	.032 0.81	.120-.140 3.05-3.56	Brass, Pre-Tin	.010 0.25	.635 16.13	X	—	X	63954-1

<sup>1</sup> UL listed 22 AWG wire only.

<sup>2</sup> No Dimple.

<sup>4</sup> Side feed.

<sup>3</sup> Dimple at special location.

<sup>5</sup> Tab Thickness .020 [0.51].

<sup>6</sup> Tab Thickness .032 [0.81].

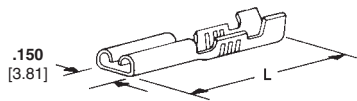
<sup>7</sup> Stress relieved.

<sup>8</sup> See page 28 for Mating Tab Designs.

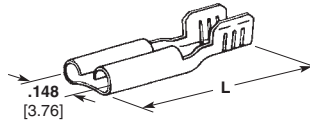
**Note:** All part numbers are RoHS compliant.

**110 Series Receptacles** (Continued)

**Straight Receptacles** (Continued)



**A — FASTON Receptacles with Insulation Support**



**B — FASTON Receptacles with No Insulation Support**



**C — Commercial Line Receptacle and Tab Combination**

Wire Range AWG	Style	Fits Tab Type <sup>a</sup>	Tab Fit	Insulation Diameter	Material and Finish	Stock Thickness	L (Overall Length)	UL	RA	SP	Terminal Part Number
22-18	C	1	.018 0.46	.080-.120 2.03-3.05	Brass	.010 0.25	.630 16.00	—	—	—	63242-1 <sup>5</sup>
		1	.020 0.51	.060-.100 1.52-2.54	Brass	.010 0.25	.630 16.00	X	—	X	62003-1 <sup>5</sup>
		1	.020 0.51	.060-.100 1.52-2.54	Brass, Tin Plated	.010 0.25	.630 16.00	X	—	X	62003-2 <sup>5</sup>
		1	.032 0.81	.080-.120 2.03-3.05	Brass, Tin Plated	.010 0.25	.630 16.00	X	—	X	63961-1 <sup>5</sup>
		1	.032 0.81	.080-.120 2.03-3.05	Brass, Tin Plated	.010 0.25	.630 16.00	—	—	—	1217145-1 <sup>6</sup>
20-18 or (2) 20	B	1	.016 0.41	—	Brass, Pre-Tin	.010 0.25	.475 12.07	—	—	—	42398-1
		1	.020 0.51	—	Brass, Pre-Tin	.010 0.25	.475 12.07	X	—	X	42399-1
		1	.032 0.81	—	Brass, Pre-Tin	.010 0.25	.475 12.07	X	—	X	60601-1
20-18	B	—	.020 0.51	—	Brass, Pre-Tin	.010 0.25	.380 9.65	X	—	X	62850-1 <sup>2</sup>
		—	.020 0.51	—	Brass, Tin Plated	.010 0.25	.380 9.65	X	—	X	62850-2 <sup>2</sup>
20-16	A	1	.010 0.25	.060-.100 1.52-2.54	Brass, Pre-Tin	.010 0.25	.625 15.88	—	—	—	62968-1
		1	.020 0.51	.060-.100 1.52-2.54	Brass, Pre-Tin	.010 0.25	.635 16.13	X	—	X	61408-1
		1	.020 0.51	.060-.100 1.52-2.54	Steel, Nickel Plated	.010 0.25	.635 16.13	—	X	X	1217102-1
		1	.020 0.51	.120-.140 3.05-3.56	Brass, Pre-Tin	.010 0.25	.635 16.13	X	—	X	61400-1
		1	.020 0.51	.150-.170 3.81-4.32	Brass, Tin Plated	.010 0.25	.635 16.13	X	—	X	62191-1
		1	.032 0.81	.120-.140 3.05-3.56	Brass, Pre-Tin	.010 0.25	.635 16.13	X	—	X	62050-1
		1	.032 0.81	.120-.140 3.05-3.56	Steel, Nickel Plated	.010 0.25	.635 16.13	—	X	X	62050-2
		2	.032 0.81	.120-.140 3.05-3.56	Brass, Pre-Tin	.010 0.25	.635 16.13	X	—	X	63703-1
		1	.016 0.41	—	Brass, Pre-Tin	.010 0.25	.537 13.64	—	—	—	61457-1
		1	.032 0.81	—	Brass, Pre-Tin	.010 0.25	.415 10.54	X	—	X	63560-1
18-14	A	—	.032 0.81	.110-.190 2.79-4.83	Brass, Tin Plated	.012 0.30	.625 15.88	—	—	—	63093-1 <sup>2,7</sup>
		—	.020 0.51	—	Brass, Tin Plated	.010 0.25	.475 12.07	X	—	X	62474-1 <sup>3,4</sup>
		1	.020 0.51	—	Brass, Pre-Tin	.010 0.25	.475 12.07	X	—	X	62852-1 <sup>4</sup>

<sup>1</sup> UL listed 22 AWG wire only.  
<sup>2</sup> No Dimple.

<sup>3</sup> Side feed.  
<sup>4</sup> Dimple at special location.

<sup>5</sup> Tab Thickness .020 [0.51].  
<sup>6</sup> Tab Thickness .032 [0.81].

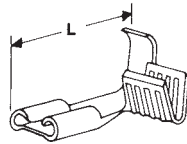
<sup>7</sup> Stress relieved.  
<sup>8</sup> See page 28 for Mating Tab Designs.

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

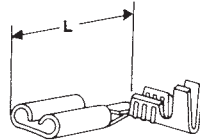
## 110 Series F-Crimp Flags

### Flag Receptacles

FASTON Receptacles



A — FASTON Flag Receptacle with Insulation Support



B — FASTON Flag Receptacle with Insulation Support



C — FASTON Flag Receptacle with No Insulation Support

Wire Range AWG	Style	Fits Tab Type <sup>2</sup>	Tab Fit	Insulation Diameter	Material and Finish	Stock Thickness	L (Overall Length)	UL	RU	SR	Terminal Part Number	
26-22	B	*	.020 0.51	.040-.080 1.02-2.03	Brass, Pre-Tin	.010 0.25	.430 10.92	X <sup>3</sup>	—	X <sup>3</sup>	1742219-1	
		*	.016 0.41	.065-.100 1.65-2.54	Brass, Pre-Tin	.010 0.25	.460 11.68	—	—	—	61459-1	
		*	.020 0.51	.065-.100 1.65-2.54	Brass, Pre-Tin	.010 0.25	.460 11.68	X	—	X	61372-1	
	A	*	.020 0.51	.065-.100 1.65-2.54	Brass, Tin Plated	.012 0.30	.460 11.68	X	—	X	60605-1	
		*	.025 0.64	.065-.100 1.65-2.54	Brass, Pre-Tin	.010 0.25	.460 11.68	—	—	—	61530-1	
		*	.032 0.81	.065-.100 1.65-2.54	Brass, Pre-Tin	.010 0.25	.460 11.68	X	—	X	61971-1	
		*	.020 0.51	.060-.100 1.52-2.54	Brass, Pre-Tin	.010 0.25	.430 10.92	X	—	X	61481-1	
	22-18	B	*	.020 0.51	.060-.100 1.52-2.54	Brass, Tin Plated	.012 0.30	.430 10.92	X	—	X	61070-1
			*	.020 0.51	.060-.100 1.52-2.54	Brass	.012 0.30	.430 10.92	X	—	X	61070-2
			*	.025 0.64	.060-.100 1.52-2.54	Brass, Pre-Tin	.010 0.25	.430 10.92	—	—	—	1217138-1
C		*	.032 0.81	.060-.100 1.52-2.54	Brass, Pre-Tin	.010 0.25	.430 10.92	X	—	X	62336-1	
		*	.032 0.81	.060-.100 1.52-2.54	Steel, Nickel Plated	.010 0.25	.430 10.92	—	—	—	62336-2	
		—	.015 0.38	—	Brass, Pre-Tin	.010 0.25	.295 7.49	—	—	—	63990-1	
22-16	C	—	.020 0.51	—	Brass	.012 0.30	.295 7.49	X <sup>1</sup>	—	X	60991-1	
		—	.020 0.51	—	Brass, Pre-Tin	.010 0.25	.295 7.49	X <sup>1</sup>	—	X	61549-1	
		1	.020 0.51	—	Brass, Pre-Tin	.010 0.25	.295 7.49	X <sup>1</sup>	—	X	62321-1	

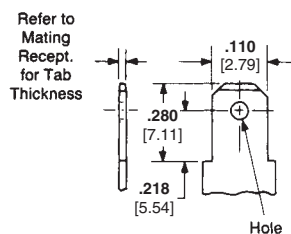
\* No Tab Type

<sup>1</sup> UL listed and CSA certified for 22-18 AWG.

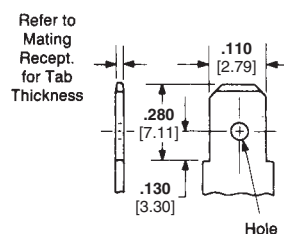
<sup>2</sup> See below for Mating Tab Designs.

<sup>3</sup> UL listed and CSA certified for 22 AWG wire only.

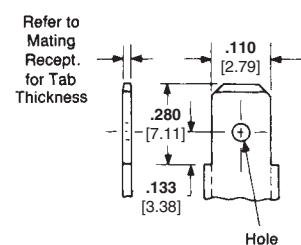
### Mating 110 Series Tab Designs



Mating 110 Series Tab Dimension Type 1



Mating 110 Series Tab Dimensions Type 2



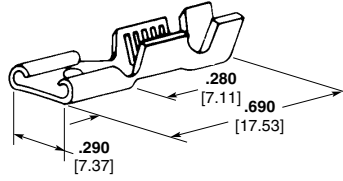
Mating 110 Series Tab Dimensions Type 3

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

## AMPLIVAR Receptacles

### 250 Series FASTON Receptacles

Stock Thickness — .016 [0.41]



Magnet Wire Range		Insulation Diameter	Mating Tab Thk.	Material	Material Thickness	Part Number
AWG	mm <sup>2</sup>					
24-19	0.23-0.70	.050-.080 1.30-2.00	.020 0.51	Brass Tin Plated Brass	.016 0.41	63623-1 <sup>1</sup> 63623-2 <sup>1</sup>
23-19 or (2) 24 or (2) 26	0.29-0.70 or (2) 0.23 or (2) 0.15	.050-.100 1.30-2.55	.025 0.64	Brass	.016 0.41	62069-1 <sup>3</sup>
20-16 or (2) 23 or (2) 20	0.57-1.39 or (2) 0.29 or (2) 0.57	.100-.140 2.55-3.55 or .060 (2) 1.52 Max.	.032 [0.81]	Brass Tin Plated Brass	.016 0.41	60384-1 60384-2
20-16	0.57-1.39	.100-.140 2.55-3.55	.020 0.51	Brass	.016 0.41	62080-1
18-14 or (2) 17	0.88-2.19 or (2) 1.11	.120-.170 3.05-4.30 or .060 (2) 1.52 Max.	.032 [0.81]	Tin Plated Brass	.016 0.41	60385-2
18-14 or (2) 19	0.88-2.19 or (2) 0.70	.120-.170 3.05-4.30	.020 0.51	Brass	.016 0.41	63622-1 <sup>1</sup>
18-14 or (2) 19	0.88-2.19 or (2) 0.70	.120-.170 3.05-4.30	.032 0.81	Brass	.016 0.41	1217835-1

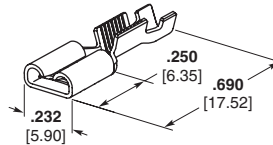
<sup>1</sup> Low insertion force

<sup>2</sup> Quick-Change Applicator for AMP-O-LECTRIC Machine 565435-5.

<sup>3</sup> Mates to .025 [0.64] thick tab.

### 187 Series FASTON Receptacle

Stock Thickness — .016 [0.41]



Magnet Wire Range		Insulation Diameter	Mating Tab Thk.	Material	Material Thickness	Part Number
AWG	mm <sup>2</sup>					
20-16	0.57-1.39	.050-.090 1.27-2.29	.032 0.81	Tin Plated Phosphor Bronze	.016 0.41	1742678-2

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

**AMPLIVAR Receptacles** (Continued)

**187 Series FASTON Flag Receptacles**

Stock Thickness — .016 [0.41]



Magnet Wire Range		Insulation Diameter	Mating Tab Thk.	Material	Material Thickness	Part Number
CMA	mm <sup>2</sup>					
500-1200	0.25-0.61	.020-.040 0.51-1.02	.020 0.51	Tin Plated Brass	.016 0.41	63942-1
24-20 AWG	0.2-0.5	.020-.040 0.51-1.02	.032 0.81	Tin Plated Brass	.016 0.41	1217624-1
20-16 AWG	0.57-1.39	.050-.090 1.27-2.29	.032 0.81	Tin Plated Phosphor Bronze	.016 0.41	1742679-2
1200-2350	0.61-1.19	.020-.040 0.51-1.02	.020 0.51	Tin Plated Brass	.016 0.41	63941-1
2000-4000	1.01-2.03	.020-.040 0.51-1.02	.032 0.81	Tin Plated Brass	.016 0.41	1217955-1
2000-4050	1.01-2.05	.020-.040 0.51-1.02	.020 0.51	Tin Plated Brass	.016 0.41	63940-1
2000-4050	1.01-2.05	.020-.040 0.51-1.02	.032 0.81	Tin Plated Brass	.016 0.41	1217417-1
3000-6000	1.52-3.04	.020-.040 0.51-1.02	.020 0.51	Tin Plated Brass	.016 0.41	1217899-1

**250 Series FASTON Flag Receptacles**

Stock Thickness — .018 [0.45]



Magnet Wire Range		Insulation Diameter	Mating Tab Thk.	Material	Material Thickness	Part Number
CMA	mm <sup>2</sup>					
16-12	1.39-3.47	.120-.170 3.05-4.32	.032 0.81	Tin Plated Phos Bronze	.018 0.45	63944-1

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

## Miscellaneous Tab Receptacles

### Tab Receptacles



Wire Range		Type	Insul. Dia. Range	Stock Thk.	Material and Finish	Fits Tab	Dimensions			Part No.
AWG	mm <sup>2</sup>						E	L	W	
26-22	0.12-0.4	A	.035-.065 0.89-1.65	.010 .025	Pre-Tin Brass	.031 x .093 0.79 x 2.36	.190 4.83	.475 12.06	.120 3.05	61813-1 <sup>5</sup>
24-20	0.2-0.6	A	.040-.080 1.02-2.03	.010 0.25	Tin Plated Brass	.031 x .062 0.79 x 1.57	.187 4.75	.462 11.73	.090 2.29	60900-1 <sup>1</sup>
		B								—
22-18	0.3-0.9	A	.050-.085 1.27-2.16	.010 0.25	Pre-Tin Brass	.010 x .093 0.25 x 2.36	.190 4.83	.480 12.19	.120 3.05	63391-1 <sup>3,4</sup> 63391-2 <sup>4</sup>
20-18	0.5-0.9	A	.080-.120 2.03-3.05	.010 0.25	Pre-Tin Brass	.032 x .103 0.81 x 2.62	.200 5.08	.480 12.19	.126 3.2	60252-1 <sup>6</sup>
					Pre-Tin Brass	.020 x .103 0.51 x 2.62	.200 5.08	.480 12.19	.126 3.2	60432-1 <sup>6</sup>

<sup>1</sup> Available in loose piece form, order Part Number 61454-1.

<sup>2</sup> Reverse reel of 60900-1.

<sup>3</sup> Loose piece form of Part Number 63391-2.

<sup>4</sup> Mechanically compliant base.

<sup>5</sup> No dimple.

<sup>6</sup> Dimple.

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