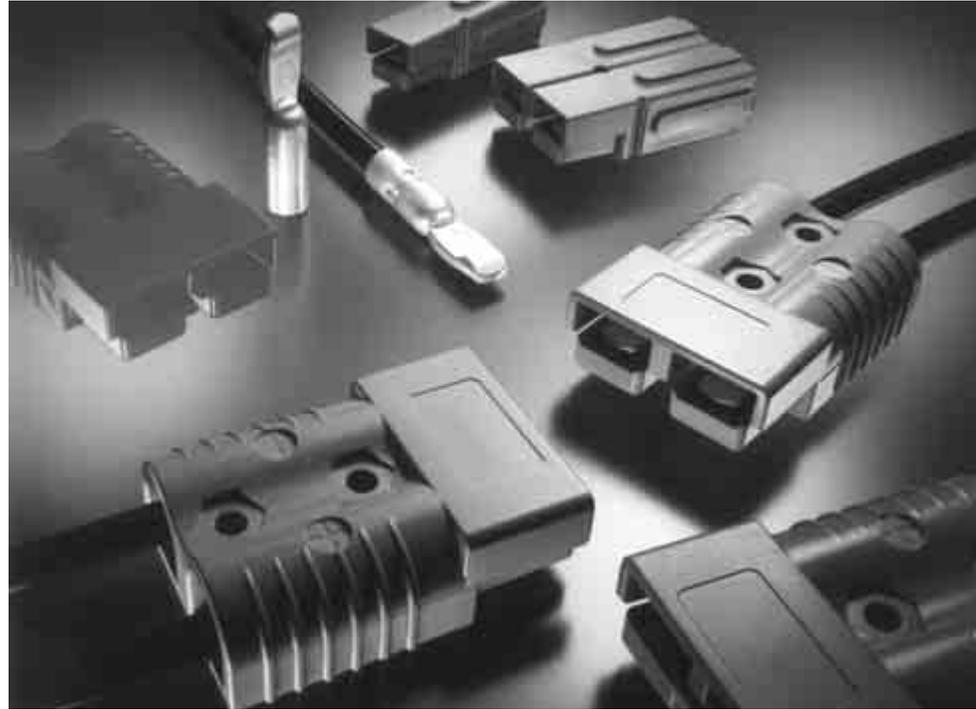


## AMP Power Series Connectors

### Product Facts

- Single-pole and 2-pole (battery) quick connect/disconnect connectors
- Eight Series, based on approximate current-carrying capability:
  - Series 15/30/45 (Single-Pole)
  - Series 50 (2-Pole Battery)
  - Series 50 Finger Probe Resistant (FPR)
  - Series 75 (Single-Pole)
  - Series 120 (Single- and 2-Pole)
  - Series 175 (2-Pole Battery)
  - Series 180 (Single-Pole)
  - Series 350 (2-Pole Battery)
- Voltage rating: 600 V AC/DC
- Color-coded housings, UL 94V-0
- Hermaphroditic (genderless) housings reduce inventory
- Modular, single-pole housings are stackable in four directions
- Polarity (+ and -) molded into 2-pole housings promotes proper wiring
- Mechanical keys help prevent two different color-coded housings from mating
- Stainless steel retaining springs secure contacts in housings
- Stamped and formed, open barrel contacts (6-20 AWG) on reels for automatic and semiautomatic machine termination
- Loose piece, cold-headed contacts (6 AWG – 300 MCM) for manual and hydraulic hand tools; reducing bushings accommodate smaller wire sizes
- Compatible with industry standard crimp tooling from Pico Corporation (<http://www.picotools.com>)
- Connectors intermateable with similar connectors from other manufacturers



- Series 15/30/45, single-pole connectors designed to meet Amateur Radio Emergency Service (ARES)/Radio Amateur Civil Emergency Service (RACES) Standard Power Connector requirements
- Accessories available for mounting, vibration protection, and strain relief
- Component Recognized by Underwriters Laboratories Inc. to US and Canadian Standards, File No. E28476



AMP power series connectors provide a durable, quick connect/disconnect means to transmit “power” levels of current and voltage (15-275 A, 600 V AC/DC).

This product family is primarily comprised of single-pole and 2-pole (battery) connector housings, crimp snap-in contacts, and accessories. Housings are offered in various colors. Two-pole housings have different polarization configurations; with the exception of black housings, each color identifies a different keying configuration. In general, only like color housings will mate. Contacts are either cold-headed or stamped and formed, depending upon the connector series.

AMP power series connectors are divided into eight series, based on approximate current-carrying capability.

### Applications

AC/DC power supplies and charging systems, rechargeable batteries, material handling equipment (e.g. forklift trucks), electric vehicles (e.g., golf carts, sweepers, wheelchairs), office furniture/panels, amateur emergency radios, and industrial equipment.

**AMP Power Series Connectors (Continued)**



**AMP Power Series 15/30/45**

Single-pole connector housings are stackable side-to-side and top-to-bottom. For example, Series 30 red and black housings joined side-to-side, are commonly used as standard power connectors for handheld, mobile, or base amateur radio equipment.

Modular housings can also be grouped into plug frames with or without latches, which mate with receptacle housings. Typically, these are used as quick disconnects for electrical power distribution in office furniture and panels.



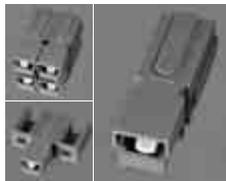
**AMP Power Series 50**

Two-pole (battery) housings are available in bulk quantities or in kit form (i.e., 1 housing and 2 contacts). These high durability connectors are designed for repeated mating and unmating.



**AMP Power Series 50  
Finger Probe Resistant (FPR)**

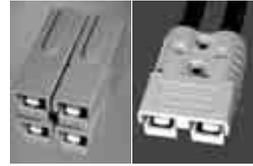
This new, 2-pole, FPR version helps prevent finger access, which allows it to be more safely used at elevated voltages and in user access areas.



**AMP Power Series 75**

Single-pole, stackable housings, in locking and non-locking versions, are available in a variety of colors. Housings accept stamped and formed or cold-headed contacts. Bulk quantities and connector kits (1 housing and

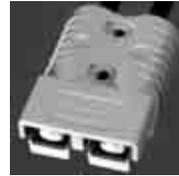
1 contact) can be ordered. Accessories include: mounting wings for through-panel or surface mounting and mounting clamp sets for ganging housings.



**AMP Power Series 120**

This Series includes both single- and 2-pole (battery) versions. Single-pole housings with molded-in dovetails allow stacking. Housing retaining pins provide more vibration

protection. Two-pole housing have slots designed to accept mounting clamp sets for easier panel mounting.



**AMP Power Series 175**

Two-pole (battery) housings accept cold-headed contacts (4-1/0 AWG). Basically, these connectors offer the same features as the two-pole Series 50 connectors.



**AMP Power Series 180**

These stackable, single-pole connectors accept cold-headed contacts (4-1/0 AWG). Most features are similar to the smaller, single-pole, Series 120 connectors.



**AMP Power Series 350**

Rugged, 2-pole housings accept only loose piece, cold-headed contacts (1/0-300 MCM). Rated at 275 A, these connectors have been tested up to 275 A, with 4/0 AWG wire.

**Selection Guide**

Series	Housing Type	Stackable Housing	Current Max. (A)	Voltage, Max. (V, AC or DC)	Cold-headed Contact (AWG)	Stamped & Formed Contact (AWG)	Housing Colors	Approvals
15	Single-Pole	Yes	15	600	—	16-20	Blue, Black, White, Red Green, Yellow, Orange, Gray	UL File No. E28476
30	Single-Pole	Yes	30	600	—	12-16	Blue, Black, White, Red Green, Yellow, Orange, Gray	UL File No. E28476
45	Single-Pole	Yes	40*	600	—	10-14	Blue, Black, White, Red Green, Yellow, Orange, Gray	UL File No. E28476
50	2-Pole	No	50	600	6, 8, 10-12	6-10,10-12	Red, Gray, Blue, Black, Yellow	UL File No. E28476
75	Single-Pole	Yes	75	600	6, 8,10-12	6-10,10-12	Blue, Black, White, Green, Red (Single-Pole)	UL File No. E28476
120	Single-Pole	Yes	120	600	2, 4, 6	—	Blue, Black, White, Green, Red (Single-Pole)	UL File No. E28476
120	2-Pole	No	120	600	2, 4, 6	—	Blue, Gray (2-Pole)	UL File No. E28476
175	2-Pole	No	175	600	1/0, 1, 2, 4	—	Blue, Gray, Orange, Yellow, Red	UL File No. E28476
180	Single-Pole	Yes	180	600	1/0, 1, 2, 4	—	Blue, Black, White, Green, Red	UL File No. E28476
350	2-Pole	No	275**	600	1/0, 2/0, 3/0, 4/0, 300 MCM	—	Blue, Green, Red, Yellow, Orange, Gray	UL File No. E28476

\*Performance equivalent to competition \*\*Tested to 275 Amps with 4/0 AWG wire

**AMP Power Series 15/30/45 Connectors (Single-Pole)**

Cable Mounted Products

**Product Facts**

- Color-coded UL 94V-0 housings: blue, black, white, green, red, yellow, orange and gray
- Genderless housings reduce inventory
- 3 contact offerings available: Series 15, 30 and 45
- Built-in interlocking features (dovetails) allow stacking
- Series 15/30/45, single-pole connectors designed to meet Amateur Radio Emergency Service (ARES)/Radio Amateur Civil Emergency Service (RACES) Standard Power Connector requirements
- Plug frames (with or without latches) and receptacle housings accept stacked single-pole housings (2 to 8 poles)
- File No. E28476 

**Material and Finish**

- Housing**—Polycarbonate, UL 94V-0
- Retaining Spring**—Stainless Steel
- Contacts**—Copper with silver or tin plating
- Mounting Wings & Spacers**—Polycarbonate, UL 94V-0
- Retaining Pins**—Stainless steel

**Electrical Characteristics**

- Current Carrying Capability**—40 A w/10 AWG wire (Series 45)  
30 A w/12 AWG wire (Series 30)  
20 A w/16 AWG wire (Series 15)
- Operating Voltage**—600 V, AC or DC
- Dielectric Withstanding Voltage**—2200 VDC
- Average Initial Contact Resistance**—525 micro-ohms

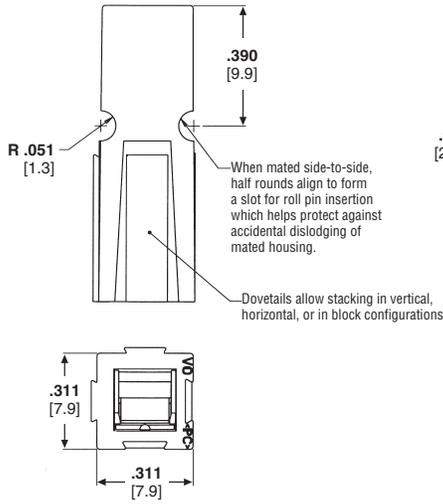
**Mechanical Characteristics**

- Contact Retention**—25 lbs. [111.2 N]
- Average Mating/Unmating Force**—4.7 [20.9 N]
- Max. Wire Insulation Diameter**—175 [18.16]
- Wire Size Range**—10-20 AWG [5-0.5 mm<sup>2</sup>]

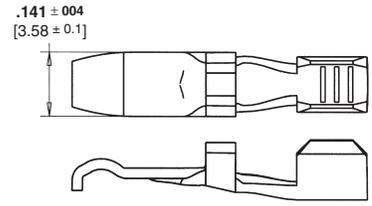
**Related Product Data**

**Accessories**—page 151

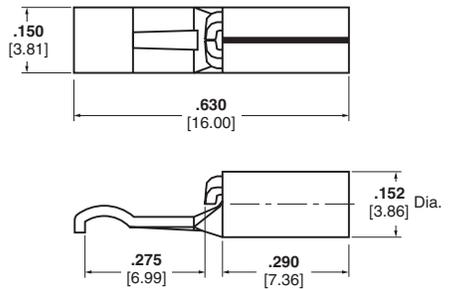
**Single-Pole Housing**



**Stamped and Formed Contact (Strip)**



**Closed Barrel Contact (Loose Piece)**



**AMP Power Series 15**

Housing <sup>1</sup>		Contact Part Number	
Color	Part Number	Strip Form (16, 18, 20 AWG)	Loose Piece (16-20 AWG)
Blue	1445957-1		
Black	1445957-2		
White	1445957-3		
Green	1445957-4	1604113-1 (silver) <sup>2</sup>	1744042-1
Red	1445957-5	1604113-2 (tin) <sup>2</sup>	
Yellow	1445957-6		
Orange	1445957-7		
Gray	1445957-8		

**AMP Power Series 30**

Housing <sup>1</sup>		Contact Part Number	
Color	Part Number	Strip Form (12, 14, 16 AWG)	Loose Piece (12-16 AWG)
Blue	1445957-1		
Black	1445957-2		
White	1445957-3		
Green	1445957-4	1604112-1 (silver) <sup>3</sup>	1744041-1 Dimensions shown above.
Red	1445957-5	1604112-2 (tin) <sup>3</sup>	
Yellow	1445957-6		
Orange	1445957-7		
Gray	1445957-8		

**AMP Power Series 45**

Housing <sup>1</sup>		Contact Part Number	
Color	Part Number	Strip Form (10, 12, 14 AWG)	
Blue	1445957-1		
Black	1445957-2		
White	1445957-3		
Green	1445957-4	1445962-1 (silver) <sup>4</sup>	
Red	1445957-5	1445962-2 (tin) <sup>4</sup>	
Yellow	1445957-6		
Orange	1445957-7		
Gray	1445957-8		

<sup>1</sup> Housings are bulk packaged.

<sup>2</sup> Use Applicator Part No. 1385450-3

<sup>3</sup> Use Applicator Part No. 1385468-3

<sup>4</sup> Use Applicator Part No. 1385469-3

**Note:** Tyco Electronics does NOT recommend intermating connectors with different contact platings.

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

## AMP Power Series 50 Connectors (2-Pole Battery)

### Product Facts

- **Color-coded UL 94V-0 housings: gray, red, blue, yellow and black; other colors available upon request**  
Note: Black color housing has the same mechanical key as the gray housing
- **Mechanical keys help prevent two different voltage color-coded housings from mating**
- **Polarity (+ and -) molded into housings**
- **Genderless housings reduce inventory**
- **Cold-headed contact wire range: 6, 8, 10-12 AWG (Taped version of the cold-headed contacts available.)**
- **File No. E28476 c **

### Material and Finish

**Housing**—Polycarbonate, UL 94V-0  
**Retaining Spring**—Stainless Steel  
**Contacts**—Copper with silver plating  
**Reducing Bushings**—Copper with silver plating

### Electrical Characteristics

**Current Carrying Capability**—50 Amps per circuit w/6 AWG wire  
**Max. Operating Voltage**—600 V, AC or DC  
**Dielectric Withstanding Voltage**—2200 VDC  
**Average Initial Contact Resistance**—200 micro-ohms

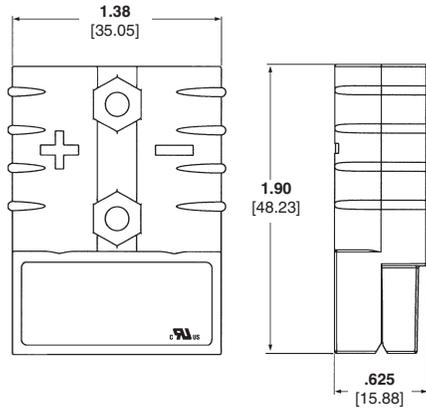
### Mechanical Characteristics

**Contact Retention**—50 lbs. [222.4 N]  
**Average Mating/Unmating Force**—15 lbs. [66.7 N]  
**Max. Wire Insulation Diameter**—.44 [11.18]  
**Wire Size Range**—6-12 AWG (also 6-16 AWG w/Reducing Bushings)

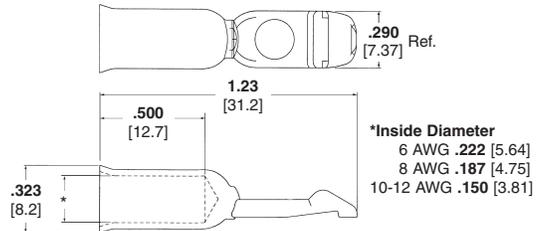
### Related Product Data

**Accessories**—page 151

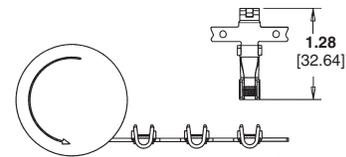
### 2-Pole Housing



### Cold-headed Contact



### Stamped and Formed Contact (on Reel)



### AMP Power Series 50 (2-Pole)

Housing <sup>2,3</sup>		Contact <sup>2</sup>		Connector Kit Part Number <sup>1</sup>
Color	Part Number	Wire Size	Part Number	
Red	647845-3	6 AWG	647877-1	647892-3
		10-12 AWG	647879-1	647893-3
Gray	647845-4	6 AWG	647877-1	647892-4
		10-12 AWG	647879-1	647893-4
Blue	647845-5	6 AWG	647877-1	647892-5
		10-12 AWG	647879-1	647893-5
Black <sup>4</sup>	647845-7	6 AWG	647877-1	647892-7
		10-12 AWG	647879-1	647893-7
Yellow	647845-8	6 AWG	647877-1	647892-8
		10-12 AWG	647879-1	647893-8
Cold-headed Contact		8 AWG	647878-1	—
<sup>5</sup> Stamped and Formed contacts, on Reel		6-10 AWG	1604433-17	
<sup>6</sup> Stamped and Formed contacts, on Reel		10-12 AWG	1604433-27	

- 1 1 Housing and 2 contacts.
- 2 Housings and contacts are bulk packaged.
- 3 Mechanical keys molded in housings generally will engage only with housings of same color.
- 4 Black color housing has the same mechanical key as the gray housing.
- 5 Use Heavy Duty Mini-Applicator (HDM) for 6 to 8 AWG - Part Number 1385663-2 (Use with AMP-O-ELECTRIC Model K Terminator)
- 6 Use Heavy Duty Mini-Applicator (HDM) for 10 to 12 AWG - Part Number 1385664-2 (Use with AMP-O-ELECTRIC Model K Terminator)
- 7 Use Power Lock Machine Part Number 68296-1

### Voltage Key Color Chart

Housing Color	Voltage
Yellow	12V
Red	24V
Gray	36V
Blue	48V
Black	80V

Color code given for various voltages is only a suggestion, other codes and keys available upon request.

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

**AMP Power Series 50 FPR (Finger Probe Resistant) Connectors**

Cable Mounted Products

**Product Facts**

- Complies with UL 60950 finger probe requirements
- Utilizes AMP Power Series 50 contacts
- Brown and white housing colors available (other colors possible)
- Two keying configurations available (up to 6 keying configurations possible)
- File No. E28476 

**Material and Finish**

**Housing**—Polycarbonate, UL 94V-0  
**Retaining Spring**—Stainless Steel  
**Contacts**—Copper  
**Reducing Bushings**—Copper with silver plating

**Electrical Characteristics**

**Current Capability**—50 A max.  
**Voltage Rating**—600 V, AC or DC  
**Dielectric Withstanding Voltage**—2200 VDC

**Mechanical Characteristics**

Meets UL finger probe as outlined in UL 60950  
**Contact Retention**—50 lbs. [222.4 N]  
**Wire Size**—6-12 AWG [15-3 mm<sup>2</sup>]  
**Max. Wire Insulation Diameter**—.44 [11.18]

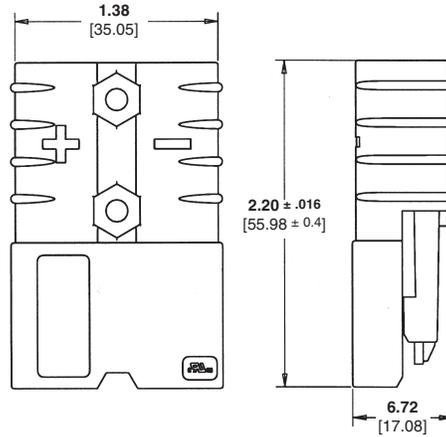
**Related Product Data**

**Accessories**—page 151

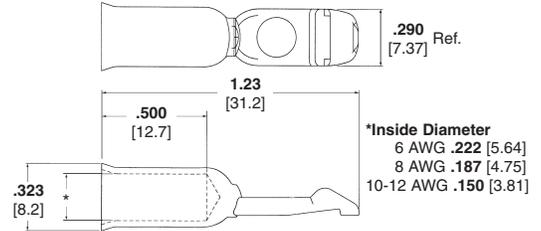
**Applications**

- Uninterruptible Power Supplies
- Power Supplies
- Battery Banks

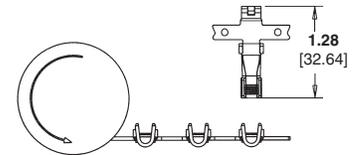
**2-Pole Housing**



**Cold-headed Contact**



**Stamped and Formed Contact (on Reel)**



**AMP Power Series 50 FPR (2-Pole)**

Housing <sup>1,2</sup>		Wire Size	Contact Part Number <sup>1</sup>			
Color	Part Number		Cold-headed <sup>5</sup>		Stamped and Formed/Strip <sup>3,4,6</sup>	
			Loose Piece	On Tape	On Reel	
Brown	1604342-1	6 AWG	647877-1	647754-1	6-10 AWG	1604433-1 <sup>6</sup>
		8 AWG	647878-1	647755-1		
White	1604342-2	10-12 AWG	647879-1	647756-1	10-12 AWG	1604433-2 <sup>6</sup>

<sup>1</sup> Housings and contacts are bulk packaged.  
<sup>2</sup> Mechanical keys molded in housings will engage only with housings of same color.  
<sup>3</sup> Use Heavy Duty Mini-Applicator (HDM) for 6 to 8 AWG - Part Number 1385663-2 (Use with AMP-O-LECTRIC Model K Terminator)  
<sup>4</sup> Use Heavy Duty Mini-Applicator (HDM) for 10 to 12 AWG - Part Number 1385664-2 (Use with AMP-O-LECTRIC Model K Terminator)  
<sup>5</sup> Hand Tool for Cold-headed Contact - Part Number 1526955-1  
 Taped version can be terminated using the AMP-TAPETRONIC Machine  
<sup>6</sup> Use Power Lock Machine Part Number 68296-1

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

## AMP Power Series 75 Connectors (Single-Pole)

### Product Facts

- Color-coded UL 94V-0 housings: blue, black, white, green and red
- Genderless housings reduce inventory
- Cold-headed contact wire range: 6, 8, 10-12 AWG
- Stamped and formed contacts available:  
6-8 AWG Part Number 1604433-1 (strip);  
10-12 AWG Part Number 1604433-2 (strip)
- File No. E28476 

### Material and Finish

**Housing**—Polycarbonate, UL 94V-0  
**Retaining Spring**—Stainless Steel  
**Contacts**—Copper with silver plating  
**Reducing Bushings**—Copper with silver plating  
**Mounting Wings**—Polycarbonate, UL 94V-0  
**Retaining Pins**—Stainless steel

### Electrical Characteristics

**Current Carrying Capability (with 6 AWG)**—Configuration:

Single-Pole 75 A  
 1x2 Stacked 62 A  
 2x2 Stacked 60 A  
 1x3 Stacked 58 A  
 2x3 Stacked 52 A

**Operating Voltage**—600 V, AC or DC

**Dielectric Withstanding Voltage**—2200 VDC

**Average Initial Contact Resistance**—200 micro-ohms

### Mechanical Characteristics

**Contact Retention**—50 lbs. [222.4 N]

**Average Mating/Unmating Force**—15 lbs. [66.7 N]

**Max. Wire Insulation Diameter**—.44 [11.18]

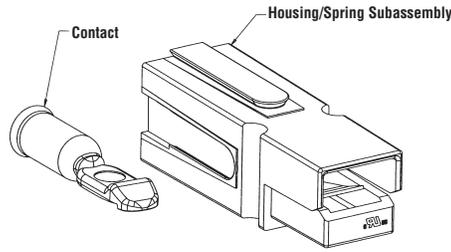
**Wire Size Range**—6-12 AWG [1.5-3 mm<sup>2</sup>]

### Related Product Data

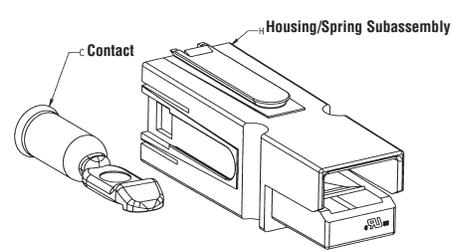
**Accessories**—page 151

**Application Tooling**—page 153

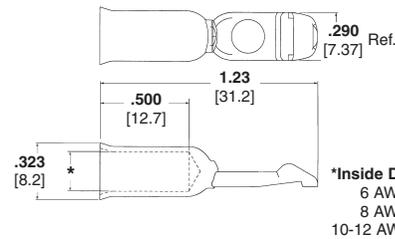
### Housing without Locking Feature



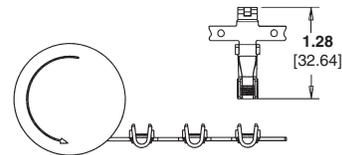
### Housing with Locking Feature



### Cold-headed Contact



### Stamped and Formed Contact (on Reel)



### AMP Power Series 75 (Single-Pole)

Housing <sup>2</sup>		Cold-headed Contact <sup>2</sup>		Connector Kit Part Number <sup>1</sup>
Color	Part Number	Wire Size	Part Number	
<b>Non-Locking Version</b>				
Blue	1445715-1	6 AWG	647877-1	1445716-1
Black	1445715-2	6 AWG	647877-1	1445716-2
White	1445715-3	6 AWG	647877-1	1445716-3
Green	1445715-4	6 AWG	647877-1	1445716-4
Red	1445715-5	6 AWG	647877-1	1445716-5
<b>Locking Version</b>				
Blue	1445715-6	6 AWG	647877-1	1445716-6
Black	1445715-7	6 AWG	647877-1	1445716-7
White	1445715-8	6 AWG	647877-1	1445716-8
Green	1445715-9	6 AWG	647877-1	1445716-9
Red	1-1445715-0	6 AWG	647877-1	1-1445716-0

\*Samples available on loose housing and contacts only.

### Contacts

Description	Wire Size	Part Number	Die Set Part Number <sup>3</sup>	Applicator Part No. for AMP-O-ELECTRIC Model K-Terminator
Cold-headed (Loose Piece) <sup>4</sup>	6 AWG	647877-1	—	—
	8 AWG	647878-1	—	—
	10-12 AWG	647879-1	—	—
Cold-headed (Tape) <sup>3, 4</sup>	6 AWG	647754-1	68344-1	—
	8 AWG	647755-1	68344-1	—
	10-12 AWG	647756-1	68313-1	—
Stamped and Formed (Strip)	6-8 AWG	1604433-1	—	1385664-2
	10-12 AWG	1604433-2	—	1385663-2

<sup>1</sup> 1 housing and 1 contact

<sup>2</sup> Housings and contacts are bulk packaged.

<sup>3</sup> Taped version can be terminated using the AMP-TAPETRONIC machine Part Number 68250-1.

<sup>4</sup> Use hand tool Part Number 1526955-1 for Cold-headed contacts

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

**AMP Power Series 120 Connectors (Single-Pole)**



**Product Facts**

- Color-coded modular housings: blue, black, white, green and red
- Genderless housings reduce inventory
- Cold-headed contact wire range: 2, 4, and 6 AWG
- Built-in interlocking features (dovetails) allow stacking and wire routing
- Self-wiping contacts increase product life and improve conductivity
- Integral stainless steel locking spring in housing for contact retention
- Rugged design
- File No. E28476

**Material and Finish**

**Housing**—Polycarbonate, UL 94V-0  
**Retaining Spring**—Stainless Steel  
**Contacts**—Copper with silver plating  
**Reducing Bushings**—Copper with silver plating  
**Mounting Clamp Sets**—Aluminum

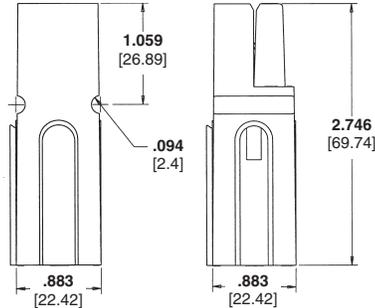
**Electrical Characteristics**

**Current Carrying Capability**—  
 Single-Pole—120 A  
 2x1 Stacked Array—115 A  
 2x2 Stacked Array—115 A  
**Voltage Rating**—600 V  
 (both AC and DC)  
**Dielectric Withstanding Voltage**—  
 2200 VDC  
**Average Initial Contact Resistance**—136 micro-ohms

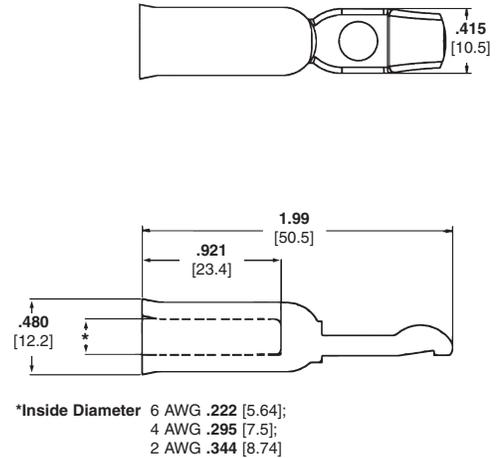
**Mechanical Characteristics**

**Contact Retention**—100 lbs.  
 [444.8 N]  
**Average Mating/Unmating Force**—8 lbs. [35.6 N]  
**Temperature Rating**—-4°F to  
 221°F [-20°C to 105°C]  
**Max. Wire Insulation Diameter**—  
 .6 [15.24]  
**Wire Size Range**—2-6 AWG

**Single-Pole Housing**



**Cold-headed Contact**



**AMP Power Series 120 (Single-Pole)**

Housing		Contact		Connector Kit Part Number <sup>1</sup>
Color	Part Number	Wire Size	Part Number	
Blue	1604001-1	2 AWG	1445995-1	1604002-1
Black	1604001-2	2 AWG	1445995-1	1604002-2
White	1604001-3	2 AWG	1445995-1	1604002-3
Green	1604001-4	2 AWG	1445995-1	1604002-4
Red	1604001-5	2 AWG	1445995-1	1604002-5
—	—	4 AWG	1445996-1	—
—	—	6 AWG	1445997-1	—

<sup>1</sup> 1 Housing and 1 contact.

**Related Product Data**

**Accessories**—page 152  
**Application Tooling**—page 153  
**Technical Documents**—page 154

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

## AMP Power Series 120 Connectors (2-Pole Battery)



### Product Facts

- Color-coded UL 94V-0 housings: gray and blue
- Keying feature helps prevent two different voltage color-coded housings from mating
- Genderless housings reduce inventory
- Contact wire range: 2, 4, 6 AWG
- Molded-in panel-mount grooves
- Integral stainless steel locking spring in housing for contact retention
- Rugged design
- File No. E28476 **us**

### Material and Finish

**Housing**—Polycarbonate, UL 94V-0  
**Retaining Spring**—Stainless Steel  
**Contacts**—Copper with silver plating  
**Reducing Bushings**—Copper with silver plating

### Electrical Characteristics

**Current Carrying Capability**—115 A with 2 AWG  
**Voltage Rating**—600 V (both AC and DC)  
**Dielectric Withstanding Voltage**—2200 VDC  
**Avg. Initial Contact Resistance**—136 micro-ohms

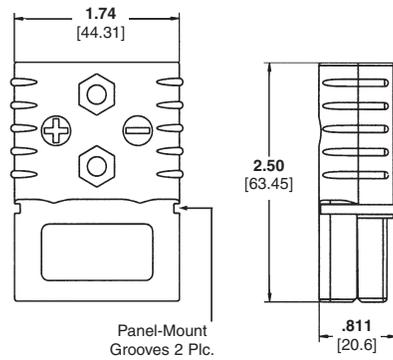
### Mechanical Characteristics

**Contact Retention**—100 lbs. [444.8 N]  
**Average Mating/Unmating Force**—18 lbs. [80.1 N]  
**Temperature Rating**—-4°F to 221°F [-20°C to 105°C]  
**Max. Wire Insulation Diameter**—.6 [15.24]  
**Wire Size Range**—2-6 AWG

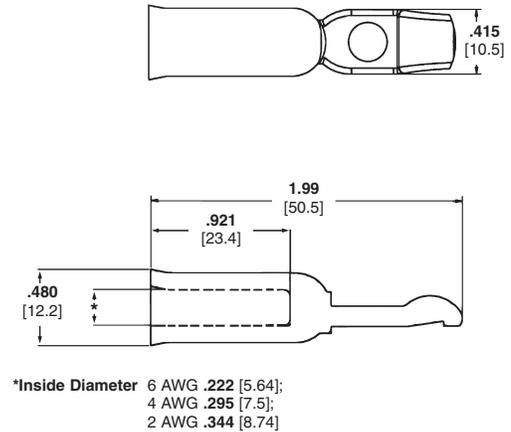
### Related Product Data

**Accessories**—page 152  
**Application Tooling**—page 153  
**Technical Documents**—page 154

### 2-Pole Housing



### Cold-headed Contact



### AMP Power Series 120 (2-Pole)

Housing <sup>2,3</sup>		Contact <sup>2</sup>		Connector Kit Part Number <sup>1</sup>
Color	Part Number	Wire Size	Part Number	
Gray	1445994-1	2 AWG	1445995-1	1445998-1
Blue	1445994-2	2 AWG	1445995-1	1445998-2
Gray	1445994-1	4 AWG	1445996-1	1445999-1
Blue	1445994-2	4 AWG	1445996-1	1445999-2
Gray	1445994-1	6 AWG	1445997-1	1446000-1
Blue	1445994-2	6 AWG	1445997-1	1446000-2

<sup>1</sup> 1 Housing and 2 contacts.  
<sup>2</sup> Housings and contacts are bulk packaged.  
<sup>3</sup> Mechanical keys molded in connectors will engage only with connectors of same color.

### Voltage Key Color Chart

Housing <sup>2,3</sup> Color	Voltage
Gray	36 V
Blue	48 V

Color code given for various voltages is only a suggestion, other codes and keys available upon request.

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

**AMP Power Series 175 Connectors (2-Pole Battery)**

Cable Mounted Products

**Product Facts**

- Color-coded UL 94V-0 housings: yellow, orange, red, gray, blue, and black
- Keying feature helps prevent two different voltage color-coded housings from mating
- Genderless housings reduce inventory
- Contact wire range: 1/0, 1, 2, 4 AWG
- Integral stainless steel locking spring in housing for contact retention
- Reducing bushings down to 10 gauge
- File No. E28476 

**Material and Finish**

**Housing**—Polycarbonate, UL 94V-0  
**Retaining Spring**—Stainless Steel  
**Contacts**—Copper with silver plating  
**Reducing Bushings**—Copper with silver plating

**Electrical Characteristics**

**Current Carrying Capability**—175 Amp @ 80.42°F [26.9°C] T-Rise with 1/0 AWG wire  
**Voltage Rating**—600 V (both AC and DC)  
**Dielectric Withstanding Voltage**—2200 VDC  
**Avg. Initial Contact Resistance**—100 micro-ohms

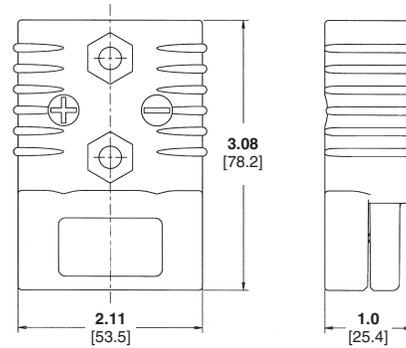
**Mechanical Characteristics**

**Average Mating/Unmating Force**—25 lbs. [111.21 N]  
**Max. Wire Insulation Diameter**—.750 [19.05]  
**Wire Size Range**—1/0, 1, 2, 4 AWG [53, 40, 35, 21 mm<sup>2</sup>]  
**Contact Retention**—300 lbs. [1,334.47 N]  
**Temperature Rating**—-4°F to 221°F [-20°C to 105°C]

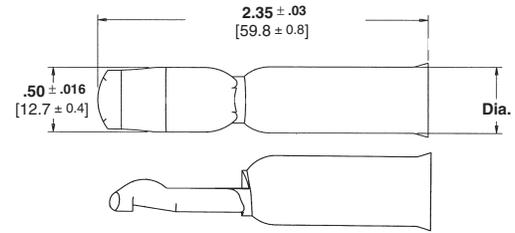
**Related Product Data**

**Accessories**—page 152  
**Application Tooling**—page 153  
**Technical Documents**—page 154

**2-Pole Housing**



**Cold-headed Contact**



Inside Diameter .516±.005 [13.1±0.13] for 1/0 AWG  
 .512±.005 [13.0±0.13] for 1 AWG, 2 AWG, and 4 AWG

**AMP Power Series 175 (2-Pole)**

Housing		Connector Kit Part Numbers <sup>1,2</sup>			
Color	Part Number	4 AWG	2 AWG	1 AWG	1/0 AWG
Yellow	1604037-1	1604044-1	1604043-1	1604045-1	1604042-1
Orange	1604037-2	1604044-2	1604043-2	1604045-2	1604042-2
Red	1604037-3	1604044-3	1604043-3	1604045-3	1604042-3
Gray	1604037-4	1604044-4	1604043-4	1604045-4	1604042-4
Blue	1604037-5	1604044-5	1604043-5	1604045-5	1604042-5
Black <sup>3</sup>	1604037-6	1604044-6	1604043-6	1604045-6	1604042-6

<sup>1</sup> 1 Housing and 2 contacts.  
<sup>2</sup> Housings and contacts are bulk packaged.  
<sup>3</sup> Black housing mates with any other housing.

**Contacts (Cold-headed)**

Wire Size	Part Number
4 AWG	1604040-1
2 AWG	1604039-1
1 AWG	1604041-1
1/0 AWG	1604038-1

**Voltage Key Color Chart**

Housing Color	Voltage
Yellow	12 V
Orange	18 V
Red	24 V
Gray	36 V
Blue	48 V
Black	80 V

Color code given for various voltages is only a suggestion, other codes and keys available upon request.

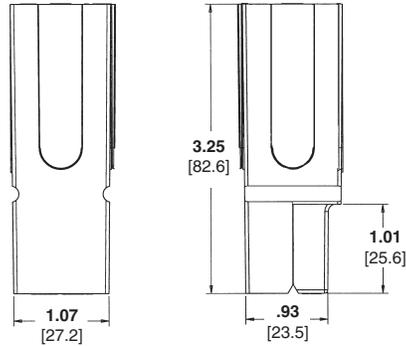
**Note:** All part numbers are RoHS compliant.

## AMP Power Series 180 Connectors (Single-Pole)

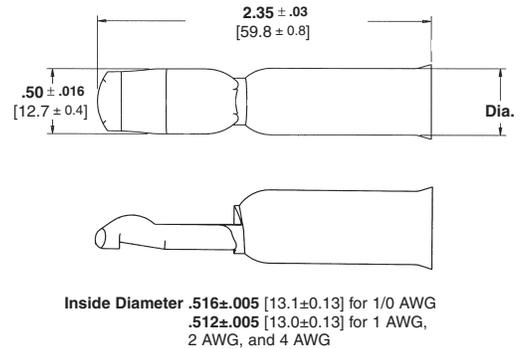
### Product Facts

- Color-coded modular housings: blue, black, white, red and green
- Genderless housings reduce inventory
- Contact wire range: 1/0, 1, 2, 4 AWG
- Integral stainless steel locking spring in housing for contact retention
- Built-in interlocking features (dovetails) allow stacking and wire routing
- Reducing bushings down to 10 gauge
- File No. E28476 c  us

### Single-Pole Housing



### Cold-headed Contact



### Material and Finish

**Housing**—Polycarbonate, UL 94V-0  
**Retaining Spring**—Stainless Steel  
**Contacts**—Copper with silver plating  
**Mounting Clamp Sets**—Aluminum  
**Reducing Bushings**—Copper with silver plating

### Electrical Characteristics

**Current Carrying Capability**—  
 (1/0 AWG Wire)  
 1 x 1 — 180 A, 84.9°F [29.4°C] T-Rise  
 2 x 1 — 165 A, 78.3°F [25.7°C] T-Rise  
 2 x 2 — 150 A, 76.6°F [24.8°C] T-Rise  
**Voltage Rating**—600 V (both AC and DC)  
**Dielectric Withstanding Voltage**—  
 2200 VDC  
**Avg. Initial Contact Resistance**—  
 100 micro-ohms

### Mechanical Characteristics

**Average Mating/Unmating Force**—20 lb. [89 N]  
**Max. Wire Insulation Diameter**—  
 .900 [22.86]  
**Wire Size Range**—1/0, 1, 2, 4 AWG  
 [53, 40, 35, 21 mm<sup>2</sup>]  
**Contact Retention**—170 lb. [756 N]  
**Temperature Rating**—-4°F to  
 221°F [-20°C to 105°C]

### Related Product Data

**Accessories**—page 152  
**Application Tooling**—page 153  
**Technical Documents**—page 154

### AMP Power Series 180 (Single-Pole)

Housing		Connector Kit Part Numbers <sup>1,2</sup>			
Color	Part Number	4 AWG	2 AWG	1 AWG	1/0 AWG
Blue	1604062-1	1604395-1	1604396-1	1604397-1	1604398-1
Black	1604062-2	1604395-2	1604396-2	1604397-2	1604398-2
White	1604062-3	1604395-3	1604396-3	1604397-3	1604398-3
Red	1604062-4	1604395-4	1604396-4	1604397-4	1604398-4
Green	1604062-5	1604395-5	1604396-5	1604397-5	1604398-5

<sup>1</sup> 1 Housing and 1 contact.  
<sup>2</sup> Housings and contacts are bulk packaged.

### Contacts (Cold-headed)

Wire Size	Part Number
4 AWG	1604040-1
2 AWG	1604039-1
1 AWG	1604041-1
1/0 AWG	1604038-1

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

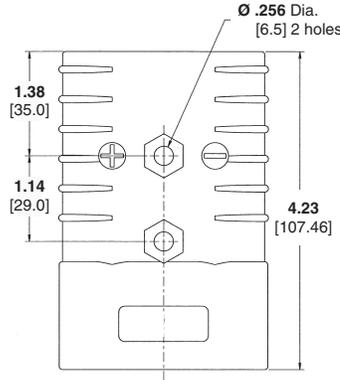
**AMP Power Series 350 Connectors (2-Pole Battery)**

Cable Mounted Products

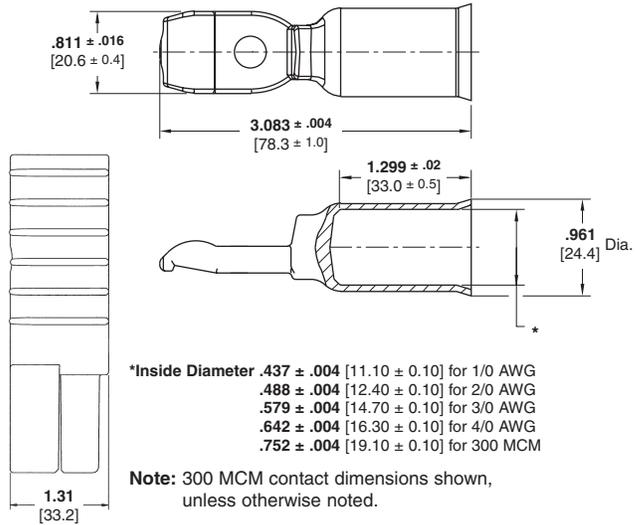
**Product Facts**

- Color-coded UL 94V-0 housings: yellow, orange, red, gray, blue, and green
- Keying feature helps prevent two different voltage color-coded housings from mating
- Genderless housings reduce inventory
- Contact wire range: 1/0, 2/0, 3/0, 4/0, 300 MCM
- Replaceable contacts
- Integral stainless steel locking spring in housing for contact retention
- File No. E28476 

**2-Pole Housing**



**Cold-headed Contact**



**Material and Finish**

**Housing**—Polycarbonate, UL 94V-0  
**Retaining Spring**—Stainless Steel  
**Contacts**—Copper with silver plating  
**Reducing Bushings**—Copper with silver plating

**Electrical Characteristics**

**Current Carrying Capability**—275 Amp @ 83.3°F [28.5°C] T-Rise with 4/0 AWG wire  
**Voltage Rating**—600 V, AC or DC  
**Dielectric Withstanding Voltage**—2200 VDC  
**Average Initial Contact Resistance**—50 micro-ohms

**Mechanical Characteristics**

**Contact Retention**—500 lbs. [2224.1 N]  
**Average Mating/Unmating Force**—30 lbs. [133.5 N]  
**Max. Wire Insulation Diameter**—1.10 [27.94]  
**Temperature Rating**—-4°F to 221°F [-20°C to 105°C]  
**Wire Size Range**—1/0, 2/0, 3/0, 4/0, 300 MCM [53, 67, 85, 107, 152 mm<sup>2</sup>]

**Related Product Data**

**Accessories**—page 152  
**Application Tooling**—page 153  
**Technical Documents**—page 154  
**Reducing Bushing**—(1/0 to 2/0 AWG)  
**Part No.** 1604121-6  
**Cable Clamp**—Part No. 647688-1

**AMP Power Series 350 (2-Pole)**

Housing		Connector Kit Part Numbers <sup>1,2</sup>				
Color	Part Number	1/0 AWG	2/0 AWG	3/0 AWG	4/0 AWG	300 MCM
Yellow	1604050-1	1604060-1	1604059-1	1604058-1	1604057-1	1604056-1
Orange	1604050-2	1604060-2	1604059-2	1604058-2	1604057-2	1604056-2
Red	1604050-3	1604060-3	1604059-3	1604058-3	1604057-3	1604056-3
Gray	1604050-4	1604060-4	1604059-4	1604058-4	1604057-4	1604056-4
Blue	1604050-5	1604060-5	1604059-5	1604058-5	1604057-5	1604056-5
Green	1604050-6	1604060-6	1604059-6	1604058-6	1604057-6	1604056-6

<sup>1</sup> 1 Housing and 2 contacts.  
<sup>2</sup> Housings and contacts are bulk packaged.

**Contacts (Cold-headed)**

Wire Size	Part Number
1/0 AWG	1604055-1
2/0 AWG	1604054-1
3/0 AWG	1604053-1
4/0 AWG	1604052-1
300 MCM	1604051-1

**Voltage Key Color Chart**

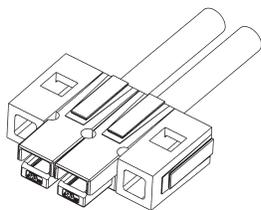
Housing Color	Voltage
Yellow	12V
Orange	18V
Red	24V
Gray	36V
Blue	48V
Green	72V

Color code given for various voltages is only a suggestion, other codes and keys available upon request.

Note: All part numbers are RoHS compliant.

## AMP Power Series Accessories

### AMP Power Series 15/30/45 Mounting Wings

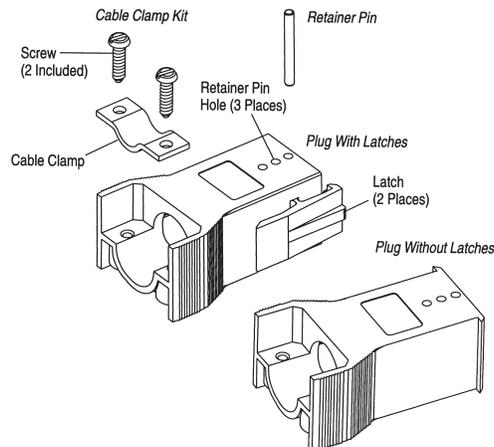


### AMP Power Series 15/30/45 Accessories

Part Number	Description
<b>Mounting Wings</b>	
1445960-1	Red, UL 94V-0
<b>Spacers</b>	
1445959-1	Red, UL 94V-0, Short
1445959-2	Red, UL 94V-0, Long
<b>Retaining Pins for use with 15 A/30 A/45 A</b>	
1445886-4	.25 [6.35] length
1445886-5	.44 [11.18] length

Part Number	Description
<b>Hardware Kits</b> (Cable clamp, screws & retaining pins)	
647747-3	4 pole
647747-2	6 pole
647747-1	8 pole

### AMP Power Series 15/30/45 Hardware Kits



### AMP Power Series 50 Accessories

Part Number	Description
1744077-1	Dust Cover, Black
1445762-1	Reducing Bushing — 6 to 8 AWG
647840-1	Reducing Bushing — 6 to 10-12 AWG
1445763-1	Reducing Bushing — 6 to 14-16 AWG

Please contact Product Engineering or Product Management for availability. (permits use of smaller wires with 6 AWG contact Part Number 647877-1)

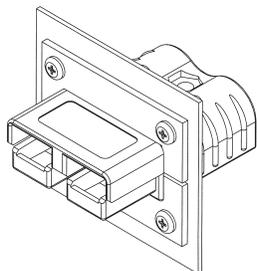
### AMP Power Series 75 Accessories

Part Number	Description
<b>Mounting Wings</b>	
1445729-1	Blue, oval mounting hole
1445729-2	Blue, round mounting hole
<b>Retaining Pins for use with 75 A/120 A/180 A</b>	
1445886-1	75 A/120 A/180 A hsgs, 1 high block
1445886-2	75 A/120 A/180 A hsgs, 2 high block
<b>Reducing Bushings for Series 50 A and 75 A</b>	
1445762-1	6 to 8 AWG
647840-1	6 to 10-12 AWG
1445763-1	6 to 14-16 AWG

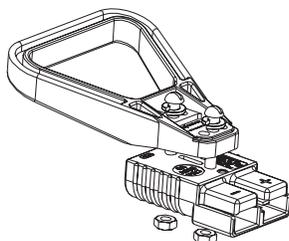
Mounting clamp set part numbers available.

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

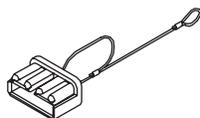
**AMP Power Series Accessories** (Continued)

**AMP Power Series 120  
Panel Mounting Clamp**

**AMP Power Series 120 Accessories**

Part Number	Type	Description
<b>Retaining Pins for use with 75A/120A/180A</b>		
1445886-1	Single-Pole	1 high block
1445886-2	Single-Pole	2 high block
<b>Reducing Bushings</b>		
1604072-3	Single/2-Pole	2 to 4 AWG
1604072-2	Single/2-Pole	2 to 6 AWG
1604072-1	Single/2-Pole	2 to 8 AWG
<b>Mounting Clamp Sets</b>		
647721-1	Single-Pole	2- & 4- pole configuration
647722-1	Single-Pole	3-pole configuration
<b>Panel Mounting Clamp</b>		
1744090-1	2-Pole	—

**AMP Power Series 175 & 350  
Handle Kit**

**AMP Power Series 175, 180 & 350 Accessories**

Part Number	Type	Description
<b>Reducing Bushings</b>		
1604121-1	175/180	10 to 1/0 AWG
1604121-2	175/180	6 to 1/0 AWG
1604121-5	175/180	4 to 1/0 AWG
1604121-4	175/180	2 to 1/0 AWG
1604121-3	175/180	1 to 1/0 AWG
1604121-6	350	1/0 to 2/0 AWG
<b>Handle Kit</b>		
647737-1	175 2-Pole	Red
647737-2	175 2-Pole	Gray
1-647737-1	350 2-Pole	Red
1-647737-2	350 2-Pole	Gray

**AMP Power Series 175  
Dust Cover Assembly**

**AMP Power Series 175 & 180 Accessories**

Part Number	Type	Description
<b>Cable Clamps</b>		
647720-1	180	2 pole version
647719-1	180	3 pole version
<b>Dust Cover</b>		
647691-1	175	Dust Cover Assembly (Shown)
647692-1	175	Dust Cover Housing

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

**AMP Power Series Tooling**

**Power Applicator  
Part Number 68296-1  
(Customer Manual 409-2661)**



The semiautomatic power applicator is designed to produce a carefully controlled uniform pressure crimp while providing a high rate of production. The applicator features matching dies that fully bottom at the completion of the crimp to provide proper crimp height. The one die set is fully adjustable to provide the full range of crimp heights for all wire sizes.

**500 MCM Heavy Duty  
Cable Cutter  
Part No. 605742-1 (408-4557)**



- Designed to cut aluminum or copper cable up to 500 MCM.
- Light weight tubular steel handles with hand grips
- 21" overall length

**Cable Insulation  
Stripper/Slitter  
Part No. 606700-1 (408-9688)**



- Used on single or multiple conductor cable up to 1.75" in diameter

**Hand Tools for Cold-Headed  
Contacts and Heavy-Duty Lug  
Terminals (Single-Indent Crimp)**



**Contact Extraction Tool  
Part No. 68265-1 or standard  
insulated screwdriver**

For AMP Power Series 50 and 75 Contacts			Tyco Electronics Crimp Tool Part No. 1526955-1 Includes Adapter		OR	American Electrical Terminal (AET) Crimp Tool Part No. T-406 Includes Adapter		Also For Heavy-Duty Lug Terminals	
Wire Size (AWG)	Strip Length	Part No.	Part Number	Marking	Part Number	Marking	Wire Size (AWG)	Strip Length	
6		647877-1	1527508-1	A	5992	A	6	7/16 [11.11]	
8	.475-.525 [12.06-13.33]	647878-1					4	1/2 [12.70]	
10-12		647879-1					1/0	11/16 [17.46]	
—	—	—	1527507-1	B	5991	B	2/0	11/16 [17.46]	
—	—	—	1527505-1	C	5989	C	2	9/16 [14.29]	
—	—	—	No Adapter	—	No Adapter	—	1	5/8 [15.87]	
—	—	—	—	—	—	—	3/0	3/4 [19.05]	
—	—	—	—	—	—	—	4/0	13/16 [20.64]	

**Pneumatic Tools for Cold-Headed Contacts  
(Dual-Indent Crimp) and Heavy-Duty Lug Terminals**



AMP Power Series Contacts			PICO* Pneumatic Tools**					
Series	Wire Size (AWG)	Part No.	400 Series Power Unit		Die	Locator		Closure Dim.
			Preferred	Alternate		Preferred	Alternate	
50/50 FPR/75	6	647877-1	400-BEC	400-BHD	414DA-4583	4582-1	9616-1	.152 [3.86]
	8	647878-1			414DA-4583			.152 [3.86]
	10-12	647879-1			414DA-4582			.134 [3.40]
120	2	1445995-1	400-BEC	400-BHD	414DA-4580	4580-1	None	.200 [5.08]
	4	1445996-1						
	6	1445997-1						
50/50 FPR/75	6	647877-1	500-DEC	500-D	514DA-7033	7033-1	7034-1	.152 [3.86]
	8	647878-1			514DA-7033			.152 [3.86]
	10-12	647879-1			514DA-7034			.134 [3.40]
120	2	1445995-1	500-DEC	500-D	514DA-7035	7035-1	None	.200 [5.08]
	4	1445996-1						
	6	1445997-1						
175/180	1/0	1604038-1	500-DEC	500-D	514DA-10023	10034-1	None	.225 [5.72]
	2	1604039-1						
	4	1604040-1						
	1	1604041-1						
350	300 MCM	1604051-1	500-DEC	500-D	514DA-10027	10023-2	None	.475 [12.07]
	4/0	1604052-1			514DA-10026	10023-2		.400 [10.16]
	3/0	1604053-1			514DA-10025	10023-2		.360 [9.14]
	2/0	1604054-1			514DA-10024	10023-1		.325 [8.26]
	1/0	1604055-1			514DA-10023	10023-1		.225 [5.72]

\* Pico Corporation, 444 Constitution Ave., Camarillo, CA 93012-8505; Tel: (805) 388-5510

\*\* Pneumatic Tool consists of a power unit, die, and locator; it can be used as a portable hand tool, bench-mounted hand tool, or foot-controlled unit.

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

## AMP Power Series Connectors (Continued)

### Technical Documents

Various technical documents are available for your use:

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

<b>108-1349</b>	AMPINNERGY WTB Connectors
<b>108-1373</b>	AMPINNERGY WTW Connectors
<b>108-2104</b>	AMP Power Series 50 Connectors
<b>108-2149</b>	AMP Power Series 15 Connectors
<b>108-2150</b>	AMP Power Series 30 Connectors
<b>108-2151</b>	AMP Power Series 45 Connectors
<b>108-2152</b>	AMP Power Series 75 Connectors
<b>108-2153</b>	AMP Power Series 120 Connectors
<b>108-2154</b>	AMP Power Series 175 Connectors
<b>108-2155</b>	AMP Power Series 180 Connectors
<b>108-2156</b>	AMP Power Series 350 Connectors

**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.

<b>114-6044</b>	AMPINNERGY WTB Connectors
<b>114-6051</b>	AMPINNERGY WTW Connectors
<b>114-13071</b>	AMP Power Series 50 (Double-Pole) and 75 (Single Pole) Connector Assemblies
<b>114-13107</b>	AMP Power Series 120 (Single- and Double-Pole) Connector Assemblies
<b>114-13118</b>	AMP Power Series 175 (Double-Pole) and 180 (Single-Pole) Connector Assemblies
<b>114-13119</b>	AMP Power Series 350 (Double-Pole) Connector Assemblies
<b>114-13127</b>	AMP Power Series 15, 30 and 45 (Single-Pole) Connector Assemblies

**Instruction Sheets** provide instructions for assembling or applying the product. They are intended for the Manufacturing Assembler or Operator.

<b>408-3198</b>	Inspection of AMPINNERGY System Power Contacts
<b>408-3236</b>	Installation of AMPINNERGY WTB Connectors
<b>408-3277</b>	AMPINNERGY Wire-To-Wire Stackable Connectors
<b>408-8636</b>	AMP Power Series 50 Connector Assemblies
<b>408-8868</b>	AMP Power Series 175 and 350 Connector Assemblies with Cable Clamp Kits
<b>408-4557</b>	Heavy Duty Cable Cutter Hand Tool 605743-1
<b>408-4559</b>	Heavy Duty Cable Cutter Hand Tool 605744-1
<b>408-4561</b>	Heavy Duty Cable Cutter Hand Tool 6057469-1
<b>408-8540</b>	Crimp Tool 1526955-1
<b>408-9688</b>	Cable Stripper/Slitter Tool 606700-1
<b>408-9816</b>	Handling of Reeled Products

### Test Summary

<b>502-1136</b>	50/75 Product Evaluation
<b>502-1160</b>	15/30/45 Product Evaluation
<b>502-1166</b>	120 Product Evaluation
<b>502-1167</b>	120 Competitive Evaluation
<b>502-1172</b>	AMP Power Series 175/180 Product Evaluation
<b>502-1173</b>	AMP Power Series 350 Product Evaluation
<b>502-1189</b>	15/30/45 Intermate
<b>502-1206</b>	15/30/45 Stamped and Formed Contact Evaluation

### Customer Manual

<b>409-5128</b>	AMP-O-LECTRIC Model K Terminator Machine 1-471273-2
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**Note:** All part numbers are RoHS compliant.



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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