

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.



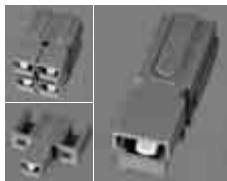
AMP Power Series 50

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

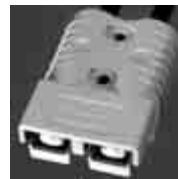
Single-pole, stackable housings, in locking and non-locking versions, are available in a variety of colors. Housings accept stamped and formed or cold-headed contacts. Bulk quantities and connector kits (1 housing and

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)

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]

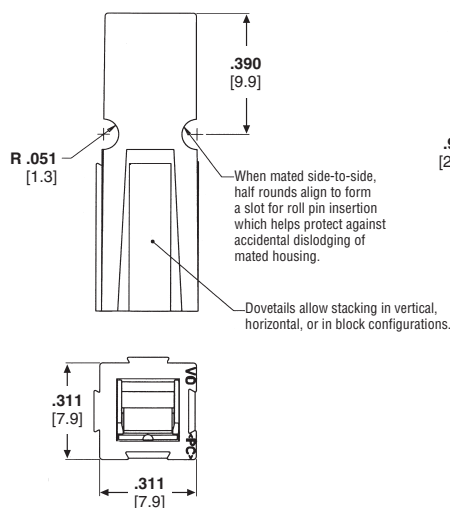
Max. Wire Insulation Diameter—175 [18.16]

Wire Size Range—10-20 AWG [5-0.5 mm²]

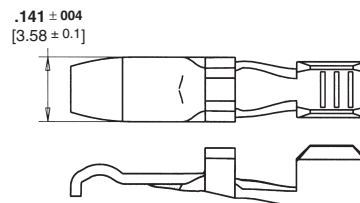
Related Product Data

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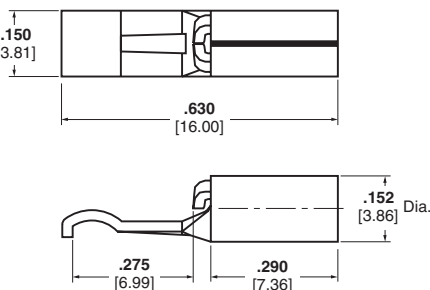
Single-Pole Housing



Stamped and Formed Contact (Strip)



Closed Barrel Contact (Loose Piece)



AMP Power Series 15

Housing ¹		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) ²	1744042-1
Red	1445957-5	1604113-2 (tin) ²	
Yellow	1445957-6		
Orange	1445957-7		
Gray	1445957-8		

AMP Power Series 30

Housing ¹		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) ³	1744041-1 Dimensions shown above.
Red	1445957-5	1604112-2 (tin) ³	
Yellow	1445957-6		
Orange	1445957-7		
Gray	1445957-8		

AMP Power Series 45

Housing ¹		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) ⁴	
Red	1445957-5	1445962-2 (tin) ⁴	
Yellow	1445957-6		
Orange	1445957-7		
Gray	1445957-8		

¹ Housings are bulk packaged.

² Use Applicator Part No. 1385450-3

³ Use Applicator Part No. 1385468-3

⁴ 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

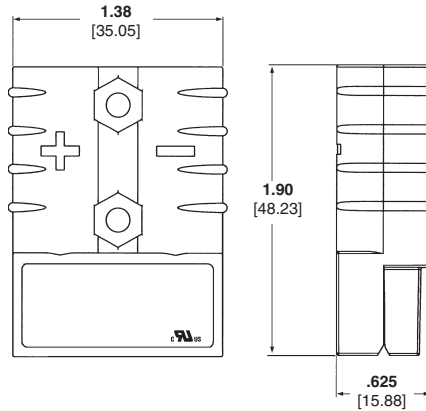
Mechanical Characteristics

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)

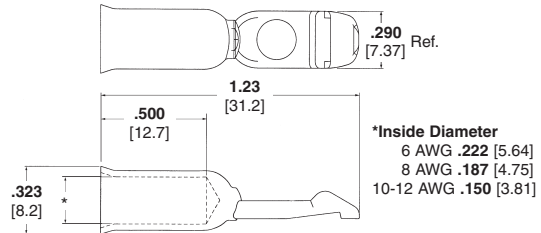
Related Product Data

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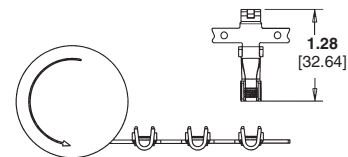
2-Pole Housing



Cold-headed Contact



Stamped and Formed Contact (on Reel)



AMP Power Series 50 (2-Pole)

Housing ^{2,3}		Contact ²		Connector Kit
Color	Part Number	Wire Size	Part Number	Part Number ¹
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 ⁴	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	—
⁵ Stamped and Formed contacts, on Reel		6-10 AWG	1604433-17	
⁶ 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-LECTRIC Model K Terminator)

⁶ Use Heavy Duty Mini-Applicator (HDM) for 10 to 12 AWG - Part Number 1385664-2 (Use with AMP-O-LECTRIC 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.

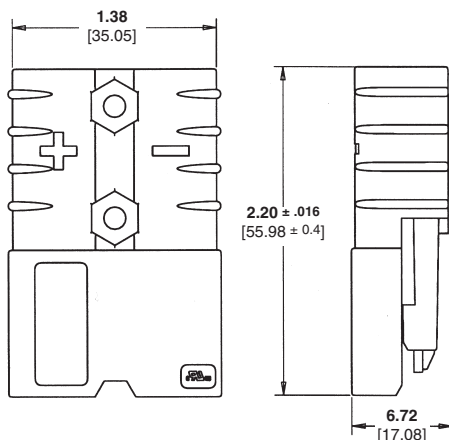
Note: All part numbers are RoHS compliant.

AMP Power Series 50 FPR (Finger Probe Resistant) Connectors

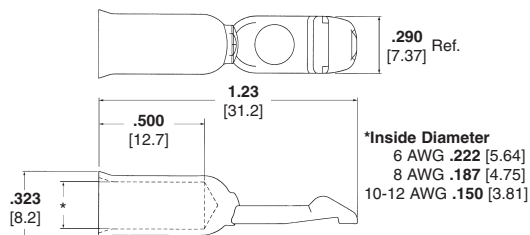
Product Facts

- 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 

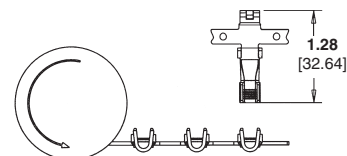
2-Pole Housing



Cold-headed Contact



Stamped and Formed Contact (on Reel)



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 mm²]
Max. Wire Insulation Diameter—.44 [11.18]

Related Product Data

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Applications

- Uninterruptible Power Supplies
- Power Supplies
- Battery Banks

AMP Power Series 50 FPR (2-Pole)

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

¹ Housings and contacts are bulk packaged.

² Mechanical keys molded in housings will engage only with housings of same color.

³ Use Heavy Duty Mini-Applicator (HDM) for 6 to 8 AWG - Part Number 1385663-2 (Use with AMP-O-LECTRIC Model K Terminator)

⁴ Use Heavy Duty Mini-Applicator (HDM) for 10 to 12 AWG - Part Number 1385664-2 (Use with AMP-O-LECTRIC Model K Terminator)

⁵ Hand Tool for Cold-headed Contact - Part Number 1526955-1

Taped version can be terminated using the AMP-TAPETRONIC Machine

⁶ 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]

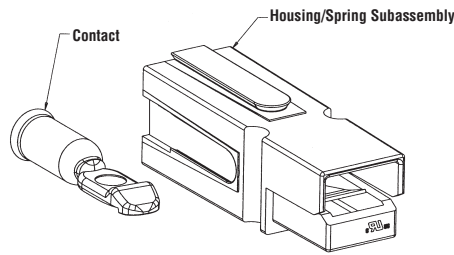
Wire Size Range—6-12 AWG [15-3 mm²]

Related Product Data

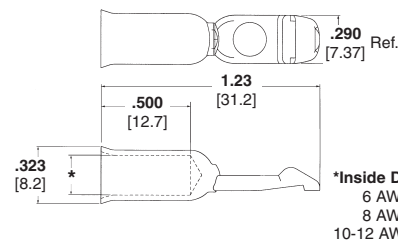
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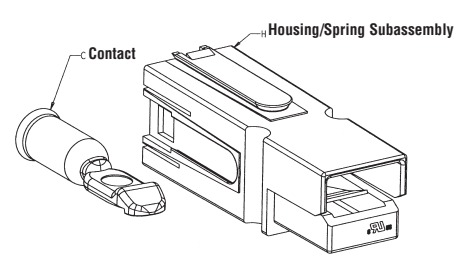
Housing without Locking Feature



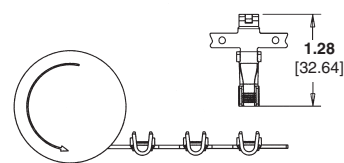
Cold-headed Contact



Housing with Locking Feature



Stamped and Formed Contact (on Reel)



AMP Power Series 75 (Single-Pole)

Housing ²		Cold-headed Contact ²		Connector Kit Part Number ¹
Color	Part Number	Wire Size	Part Number	
Non-Locking Version				
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
Locking Version				
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 ³	Applicator Part No. for AMP-O-ELECTRIC Model K Terminator
Cold-headed (Loose Piece) ⁴	6 AWG	647877-1	—	—
	8 AWG	647878-1	—	—
	10-12 AWG	647879-1	—	—
Cold-headed (Tape) ^{3, 4}	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

¹ 1 housing and 1 contact

² Housings and contacts are bulk packaged.

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

⁴ 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 c  us

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]

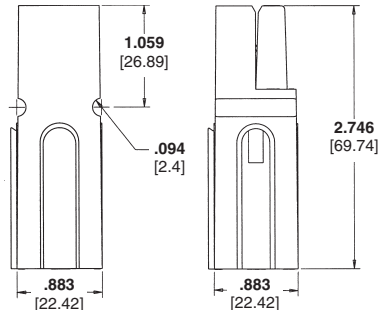
Average Mating/Unmating Force—8 lbs. [35.6 N]

Temperature Rating—-4°F to
 221°F [-20°C to 105°C]

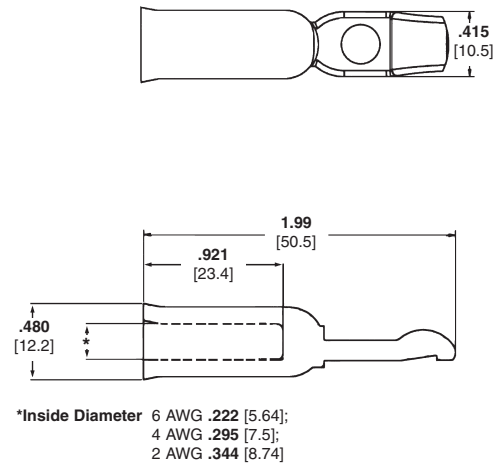
Max. Wire Insulation Diameter—
 .6 [15.24]

Wire Size Range—2-6 AWG

Single-Pole Housing



Cold-headed Contact



AMP Power Series 120 (Single-Pole)

Housing		Contact		Connector Kit
Color	Part Number	Wire Size	Part Number	Part Number ¹
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	—

¹ 1 Housing and 1 contact.

Related Product Data

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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 

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

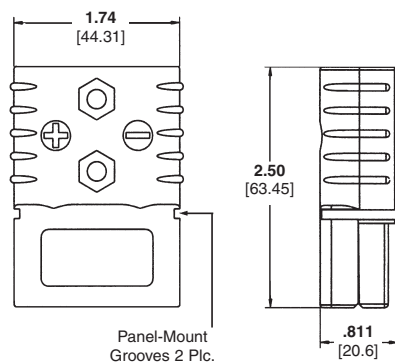
Related Product Data

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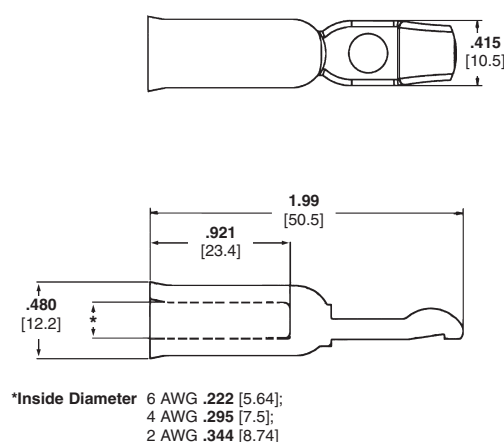
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2-Pole Housing



Cold-headed Contact



AMP Power Series 120 (2-Pole)

Housing ^{2,3}		Contact ²		Connector Kit Part Number ¹
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

¹ 1 Housing and 2 contacts.

² Housings and contacts are bulk packaged.

³ Mechanical keys molded in connectors will engage only with connectors of same color.

Voltage Key Color Chart

Housing ^{2,3} 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.

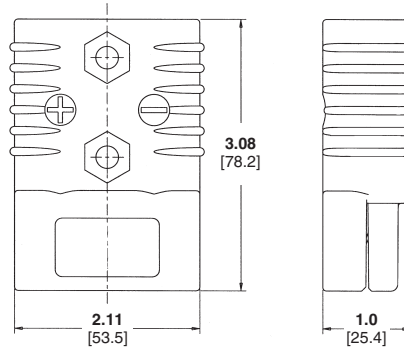
Note: All part numbers are RoHS compliant.

AMP Power Series 175 Connectors (2-Pole Battery)

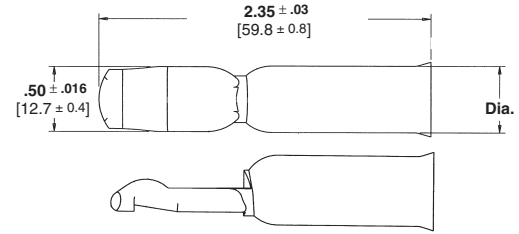
Product Facts

- 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 

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

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 mm²]

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

AMP Power Series 175 (2-Pole)

Housing		Connector Kit Part Numbers ^{1,2}			
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 ³	1604037-6	1604044-6	1604043-6	1604045-6	1604042-6

¹ 1 Housing and 2 contacts.

² Housings and contacts are bulk packaged.

³ 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.

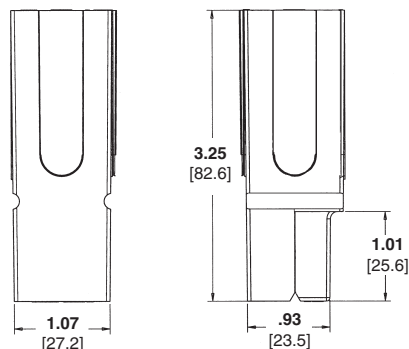
Note: All part numbers are RoHS compliant.

AMP Power Series 180 Connectors (Single-Pole)

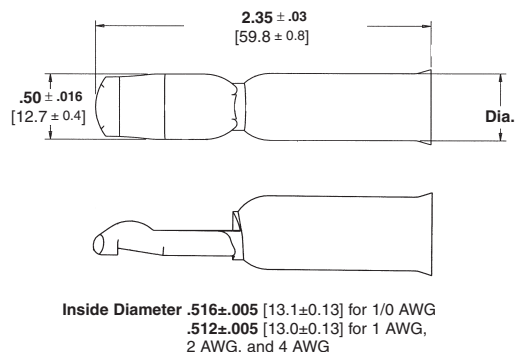
Product Facts

- 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 mm²]

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 ^{1,2}			
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

¹ 1 Housing and 1 contact.

² 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

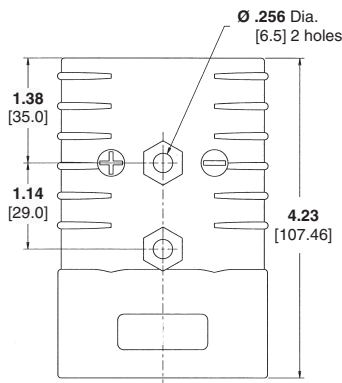
Note: All part numbers are RoHS compliant.

AMP Power Series 350 Connectors (2-Pole Battery)

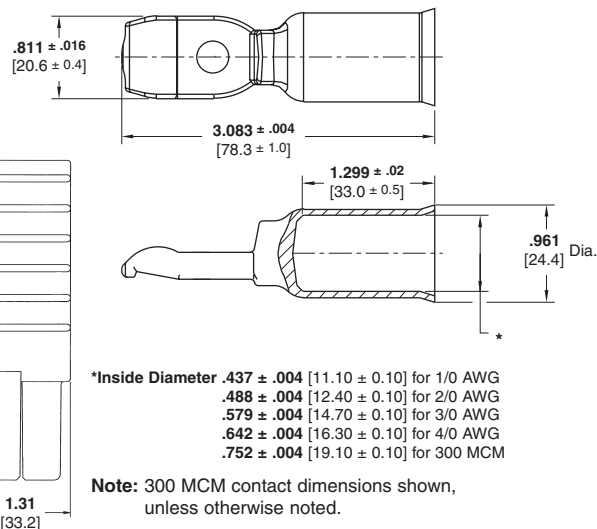
Product Facts

- 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  us

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 mm²]

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 ^{1,2}				
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

¹ 1 Housing and 2 contacts.

² 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

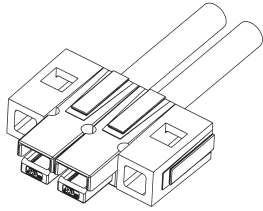
Housing Color	Voltage
Yellow	12V
Orange	18V
Red	24V
Gray	36V
Blue	48V
Green	72V

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

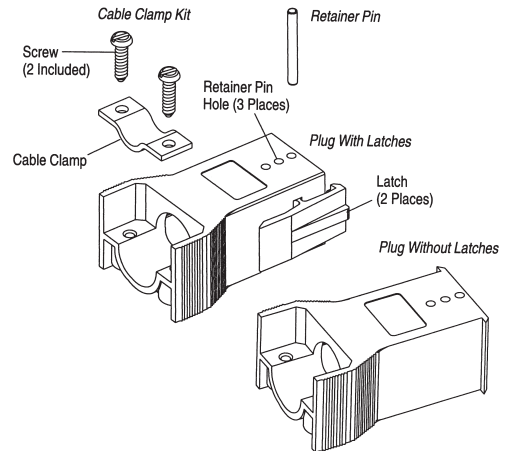


AMP Power Series 15/30/45 Accessories

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

Part Number	Description
Hardware Kits (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

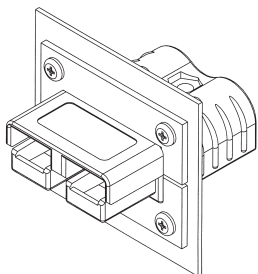
Part Number	Description
Mounting Wings	
1445729-1	Blue, oval mounting hole
1445729-2	Blue, round mounting hole
Retaining Pins for use with 75 A/120 A/180 A	
1445886-1	75 A/120 A/180 A hsgs, 1 high block
1445886-2	75 A/120 A/180 A hsgs, 2 high block
Reducing Bushings for Series 50 A and 75 A	
1445762-1	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)

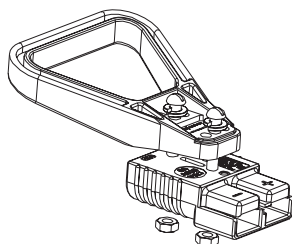
AMP Power Series 120 Panel Mounting Clamp



AMP Power Series 120 Accessories

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

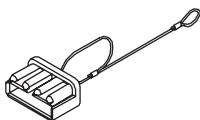
AMP Power Series 175 & 350 Handle Kit



AMP Power Series 175, 180 & 350 Accessories

Part Number	Type	Description
Reducing Bushings		
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
Handle Kit		
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
Cable Clamps		
647720-1	180	2 pole version
647719-1	180	3 pole version
Dust Cover		
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

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



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



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	.475-.525 [12.06-13.33]	647877-1	1527508-1	A		5992	A	6	7/16 [11.11]
8		647878-1						4	1/2 [12.70]
10-12		647879-1						1/0	11/16 [17.46]
—	—	—						2/0	11/16 [17.46]
			1527507-1	B		5991	B	2	9/16 [14.29]
			1527505-1	C		5989	C	1	5/8 [15.87]
			No Adapter	—		No Adapter	—	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						
500 Series Power Unit								
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.

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

114-6044	AMPINNERGY WTB Connectors
114-6051	AMPINNERGY WTW Connectors
114-13071	AMP Power Series 50 (Double-Pole) and 75 (Single Pole) Connector Assemblies
114-13107	AMP Power Series 120 (Single- and Double-Pole) Connector Assemblies
114-13118	AMP Power Series 175 (Double-Pole) and 180 (Single-Pole) Connector Assemblies
114-13119	AMP Power Series 350 (Double-Pole) Connector Assemblies
114-13127	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.

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

Test Summary

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

Customer Manual

409-5128	AMP-O-ELECTRIC Model K Terminator Machine 1-471273-2
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Note: All part numbers are RoHS compliant.