Powerpole® & Multipole

CONNECTORS | 10 AMPS UP TO 700 AMPS

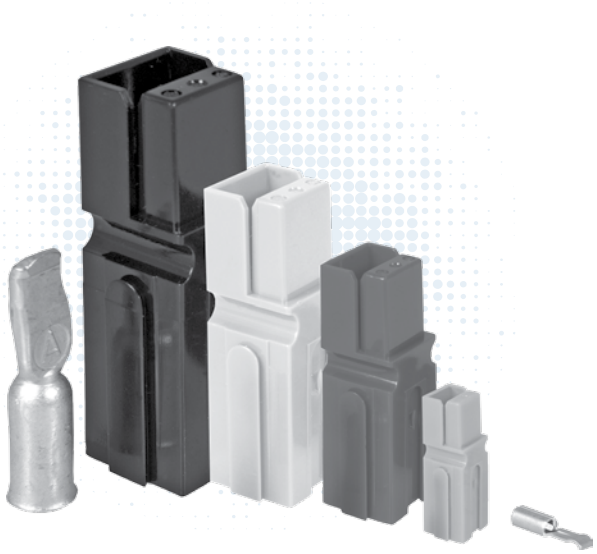
Alternate Energy | Power Electronics | Electric Vehicles | Telecommunications | Industrial | PCB

Anderson Power Products®

An IDEAL® Company

Powerpole® Family

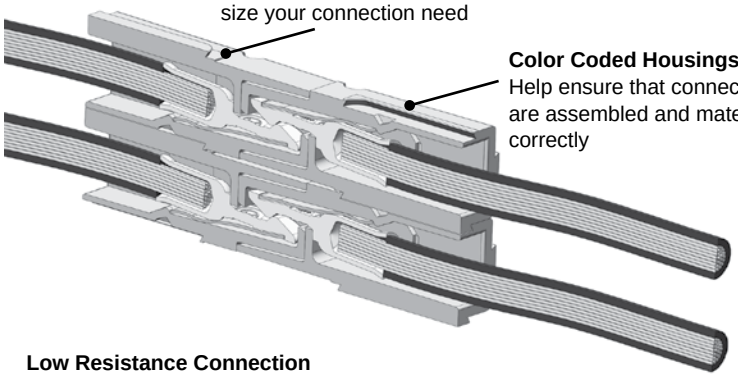
Powerpole® Connectors - PP15 to PP180



This versatile connector series invented by Anderson Power Products (APP®) meets a wide range of power connection needs. There are four basic housing sizes in the Powerpole® product family that allow specific amperage or wire size needs to be filled in the most compact footprint. Powerpole® can handle up to 350 amperes per pole and accommodate wire ranges of #20 AWG (0.75 mm²) to 3/0 (70 mm²). A wide range of colored housing options can be stacked together to create a proven reliable custom connector. These housings can be used with different contacts to create wire-to-wire, wire-to-board, or wire-to-busbar connections. The Powerpole® connector combines high quality materials and a cost effective innovative design to allow powerful versatility.

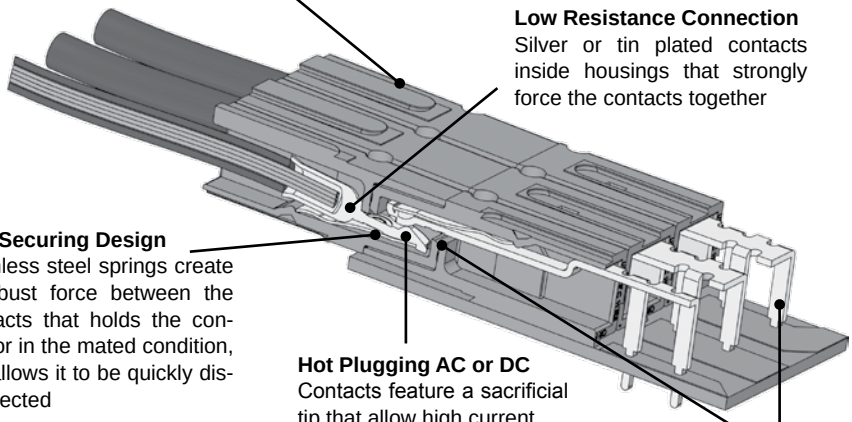
Stackable Modular Housings
Available in four sizes to right size your connection need

Color Coded Housings
Help ensure that connectors are assembled and mated correctly



Genderless Housings
Provide simplified assembly and minimize the number of components

Low Resistance Connection
Silver or tin plated contacts inside housings that strongly force the contacts together



Self Securing Design
Stainless steel springs create a robust force between the contacts that holds the connector in the mated condition, but allows it to be quickly disconnected

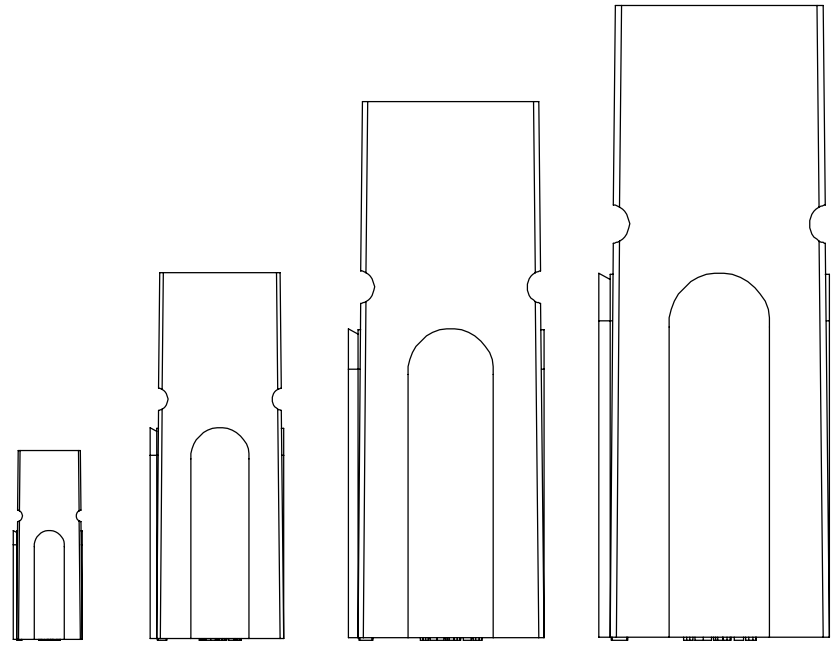
Hot Plugging AC or DC
Contacts feature a sacrificial tip that allow high current circuit interrupt

Connection Versatility
Contacts for wire, PCB, or busbar all fit into the same housings

| POWERPOLE® FAMILY SELECTION GUIDE |

Powerpole® Size	PP15 to 45	Page #	PP75	Page #	PP120	Page #	PP180	Page #
Connector Types	Standard	20	Standard	32	Standard	39	Standard	43
	Finger Proof	20	Locking	32			Busbar	44
	PCB	21	Busbar	33				
	Ground	20	PCB	33				
	Power Pak	23						
Amps (UL) Per Pole	0 to 55		120		240		350	
Volts (UL) Per Pole	600		600		600		600	
Wire Gauge (AWG)	20 - 10		16 - 6		6 - 1/0		10 - 3/0	
Wire Gauge (mm²)	0.75 - 6.0		1.3 - 13.3		13.3 - 53.5		5.3 - 85.0	
Number of Power Circuits	1 / Stackable		1 / Stackable		1 / Stackable		1 / Stackable	
Ground	•							
PCB Mount	•		•					
Busbar			•				•	
Panel Mount	•		•		•		•	
Blind Mate	Powerpole® Pak							
Hot Plug	•		•		•		•	
Touch Safe	•							
Polarized Housing	•		•		•		•	
Latching	Powerpole® Pak							
Strain Relief	Powerpole® Pak							

Actual Size - Connector Half



Powerpole® Housings

PP15/45 **PP75** **PP120** **PP180**

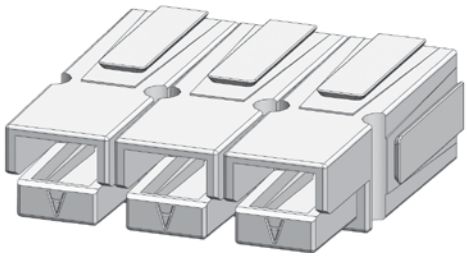
Powerful Versatility
- Create Your Own Custom Connector from Durable Proven Components

Powerpole® connectors can be easily customized to each power connection need. Choose from a wide range of colored housings and stack them together into a multiple position connection. Durable silver or tin plated contacts crimp and poke into housings and are available for a broad range of wire sizes. PCB and busbar contacts can also be simply snapped into place using the same housings. Pre-mate ground / power housings and contacts can be used for safety or sequencing and stack along with standard housings.

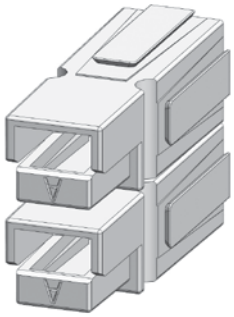
How to Create Mating Blocks of Stacked Powerpole® Connectors

A Single Row Assembly such as the 1x3 shown below will mate to itself. If an assembly has more than one row such as the Two Row Assembly 2x1 shown below, then a different mirror image mating assembly is required.

Single Row Assembly 1x3

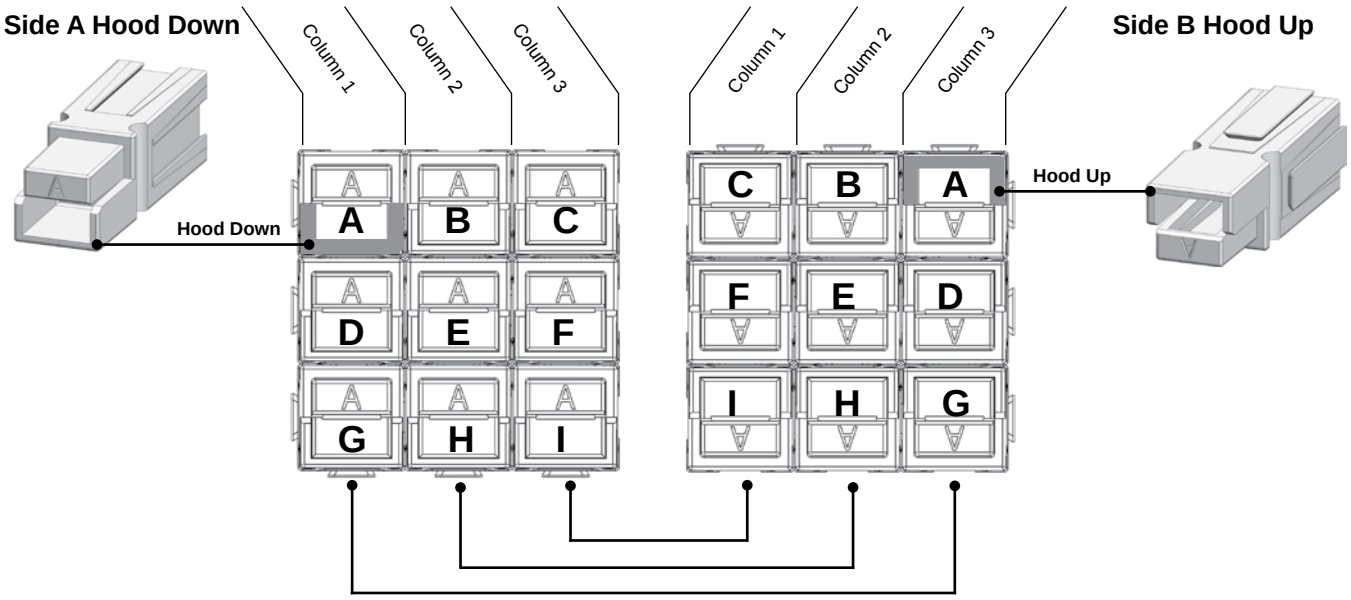


Two Row Assembly 2x1



To Create a Mirror Image Mating Assembly:

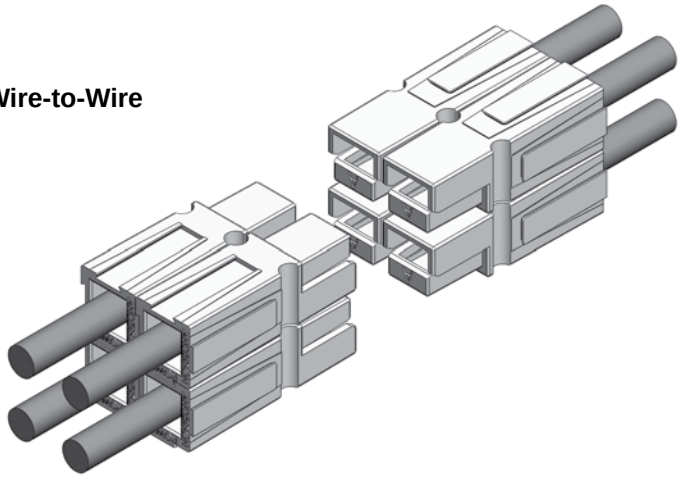
When mating blocks are viewed with their hoods in the respective orientation (down or up), the column position of connectors is unchanged. The rows themselves are mirror images of each other. So in the below example, what is column 1 on side A, is column 3 on side B.



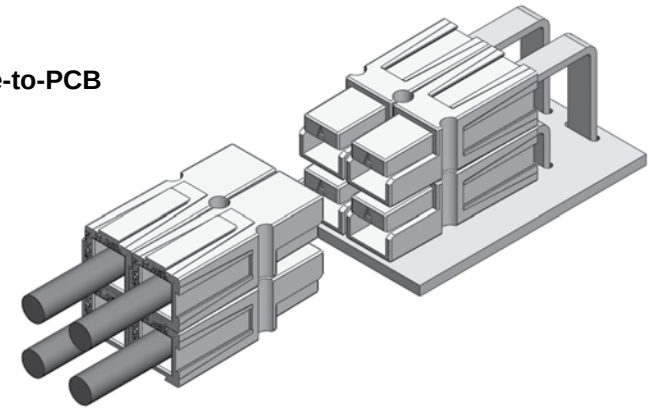
Use the Same Housings for Wire, PCB, or Busbar Connections

The Powerpole® connection system allows the same housings to hold different contacts for terminating to wire, printed circuit boards, or busbars. See some of the many ways Powerpole® components can be assembled to create a custom connection solution.

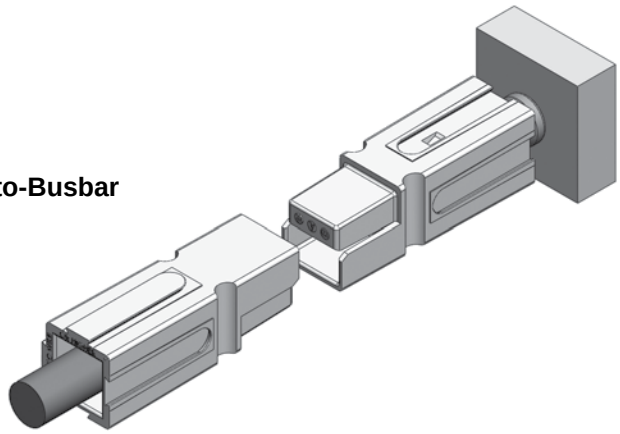
Wire-to-Wire



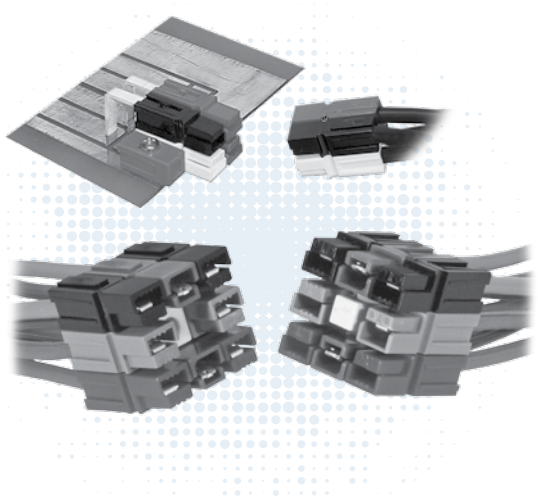
Wire-to-PCB



Wire-to-Busbar



Powerpole® Connectors - PP15 to PP45 : up to 55 Amps



PP15-45 series are the smallest Powerpole® housings. They can be used for wire-to-wire or wire-to-board applications. Wire sizes from #20 AWG (0.75 mm²) to #10 (6 mm²) offer power capabilities up to 55 amps per pole. Finger proof housings and the ability to incorporate first-mate last-break ground connectors enhance the capabilities of this Powerpole® series.

High Power Density
• Up to 55 amps in a compact footprint

Wire-to Wire & Wire-to-Board Configurations
• Wire & PCB contacts can be used in the same housings

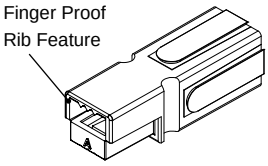
Finger Proof Housings Available
• Protects against accidental contact with live circuits

| PP15-45 ORDERING INFORMATION |

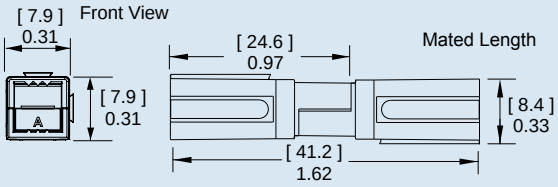
PP15-45 Finger Proof Housings

Improved on the original APP design by adding ribs to mating interface to protect against accidental contact with live circuits. Meets the requirements of UL1977 section 10.2 and is rated IP20. Will not mate with standard housings.

Description	---------- Part Numbers ----------	
Minimum Quantity ...	2,500	200 .....
Red	1327FP-BK	1327FP
Green	1327G5FP-BK	1327G5FP
Black	1327G6FP-BK	1327G6FP
White	1327G7FP-BK	1327G7FP
Blue	1327G8FP-BK	1327G8FP
Yellow	1327G16FP-BK	1327G16FP



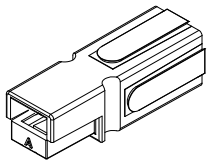
PP15-45 Finger Proof & Standard & Ground Housing Dimensions



PP15-45 Standard Housings

This original housing design has an open interface and is available in a wide array of colors. Will not mate with finger proof housings.

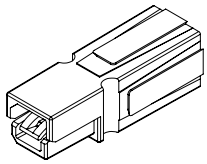
Description	------- Part Numbers ------	
Minimum Quantity ...	2,500	200 ...
Red	1327-BK	1327
Green	1327G5-BK	1327G5
Black	1327G6-BK	1327G6
White	1327G7-BK	1327G7
Blue	1327G8-BK	1327G8
Yellow	1327G16-BK	1327G16
Orange	1327G17-BK	1327G17
Gray	1327G18-BK	1327G18
Brown	1327G21-BK	1327G21
Pink	1327G22-BK	1327G22
Purple	1327G23-BK	1327G23



45A Premate Ground Housings - (for use with ground contacts only)

Green housings are keyed to prevent accidental mating with standard or finger proof Powerpole® housings.

Description	------ Part Numbers -----	
Minimum Quantity ...	2,500	200 ...
Green	1827G1-BK	1827G1



PP15-45 Tin Plated Power Contacts

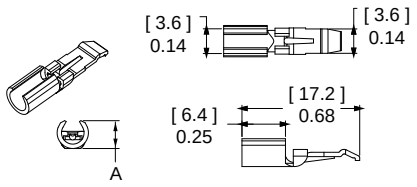
Offer cost effective performance up to 1,500 mating cycles. See specifications and temperature charts for amperage ratings by wire size.

Barrel	AWG	mm²	Mating Force	Loose Piece Part Numbers	Reeled Part Numbers	Dimensions - A - inches	Dimensions - A - mm
Minimum Quantity				200	5,000		
Open	14 to 10 K*	2.1 to 5.3	High	269G3-LPBK	269G3	0.21	5.33
Open	14 to 10 K*	2.1 to 5.3	Low	261G2-LPBK	261G2	0.20	5.08
Open	14 to 10 SF*	2.1 to 6.0	High	201G1H-LPBK	201G1H	0.24	6.10
Open	14 to 10 SF*	2.1 to 6.0	Low	200G1L-LPBK	200G1L	0.24	6.10
Open	16 to 12	1.3 to 3.3	High	269G1-LPBK	269G1	0.18	4.57
Open	16 to 12	1.3 to 3.3	Low	261G1-LPBK	261G1	0.18	4.57
Open	20 to 16	0.52 to 1.3	High	269G2-LPBK	269G2	0.16	4.06
Open	20 to 16	0.52 to 1.3	Low	262G1-LPBK	262G1	0.16	4.06

K* - For #10 AWG class K stranded wire or smaller. For larger wires use superflex contacts.

SF*- Indicates wires with high stranding such as Super Flex.

Open Barrel Contact



PP15-45 Silver Plated Power Contacts

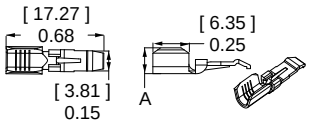
Maximize performance by offering up to 10,000 mating cycles and are recommended for circuit interrupt or hot plug applications. See specifications and temperature charts for amperage ratings by wire size. Only closed barrel contacts are suitable for soldering.

Barrel	AWG	mm²	Mating Force	Loose Piece Part Numbers		Reeled Part Numbers	Dimensions - A - inches	Dimensions - A - mm	Dimensions - B - inches	Dimensions - B - mm
Minimum Quantity				5,000	200	5,000				
Open	14 to 10 K*	2.1 to 5.3	Low	-	261G3-LPBK	261G3	0.20	5.08	-	-
Open	14 to 10 SF*	2.1 to 6.0	Low	-	200G3L-LPBK	200G3L	0.24	6.10	-	-
Open	20 to 16	0.52 to 1.3	Low	-	262G2-LPBK	262G2	0.16	4.06	-	-
Closed	16 to 12	1.3 to 3.3	Low	1331-BK	1331	-	0.15	3.81	0.10	2.54
Closed	20 to 16	0.52 to 1.3	Low	1332-BK	1332	-	0.12	3.05	0.07	1.78

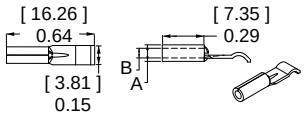
K* - For #10 AWG class K stranded wire or smaller. For larger wires use superflex contacts.

SF*- Indicates wires with high stranding such as Super Flex.

Open Barrel Contact



Closed Barrel Contact

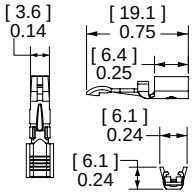


45A Premate Ground Wire Contacts - (for use with ground housing only)

Tin or silver plated contacts are rated for ground or power. Hand tools are available for loose piece contacts. Reeled contacts can be used with high volume press and applicator tooling. Tin contacts are rated for up to 1,500 mating cycles. Silver contacts are rated up to 10,000 mating cycles.

Type	AWG	mm²	Mating Force	Loose Piece Part Numbers	Reeled Part Numbers
Minimum Quantity				200	5,000
Open, Tin	14 to 10	2.1 to 6.0	Low	1830G1-LPBK	1830G1
Open, Silver	14 to 10	2.1 to 6.0	Low	1830G2-LPBK	1830G2

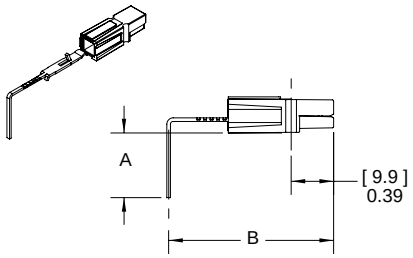
Open Barrel Premate Contact



25A Right Angle PCB Contacts Tin Plated

Suitable for right angle applications up to 25A per pole. Tin plating enhances solderability. Cannot be mixed with 45A PCB contacts. For mating with wire contacts only.

Row	Mating Force	Loose Piece Part Numbers		Dimensions - A - inches	Dimensions - A - mm	Dimensions - B - inches	Dimensions - B - mm
Minimum Quantity ...		1,000	100				
Top	Low	1377G1-BK	1377G1	0.59	14.80	1.52	38.60
	High	1317G1-BK	1317G1				
Bottom	Low	1377G2-BK	1377G2	0.29	7.20	1.36	34.50
	High	1317G2-BK	1317G2				
Top	Low	1377G11-BK	1377G11	0.59	14.80	1.21	30.70
	High	1317G11-BK	1317G11				
Bottom	Low	1377G12-BK	1377G12	0.29	7.20	1.01	25.70
	High	1317G12-BK	1317G12				



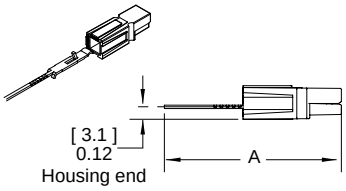
Use mounting staples with right angle contacts (see accessories).

See website for PCB layout drawing.

25A Vertical PCB Contacts Tin Plated

For mating with wire contacts only. Suitable for vertical applications up to 25A per pole, tin plating enhances solderability.

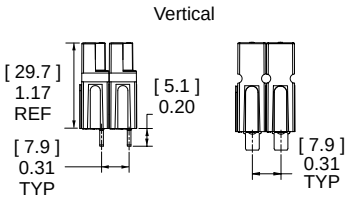
Mating Force	Loose Piece Part Numbers		Dimensions - A - inches	Dimensions - A - mm
Minimum Quantity	1,000	100		
Low	1377G3-BK	1377G3	2.22	56.40
High	1317G3-BK	1317G3	2.22	56.40
Low	1377G4-BK	1377G4	1.76	44.70
High	1317G4-BK	1317G4	1.76	44.70
Low	1377G13-BK	1377G13	1.17	29.70
High	1317G13-BK	1317G13	1.17	29.70



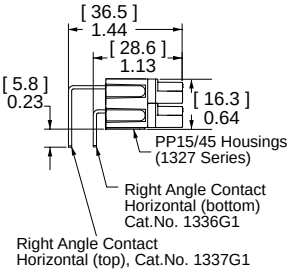
45A Right Angle and Vertical PCB Contacts Tin Plated

Suitable for right angle or vertical applications up to 45A per pole. Tin plating enhances solderability. Right angle contacts cannot be mixed with 25A PCB contacts. For mating with wire contacts only.

Description	Loose Piece Part Numbers	
Minimum Quantity	1,000	100 .....
Vertical	3-5911P1	1335G1
Right Angle Bottom Row	3-5912P1	1336G1
Right Angle Top Row	3-5913P1	1337G1



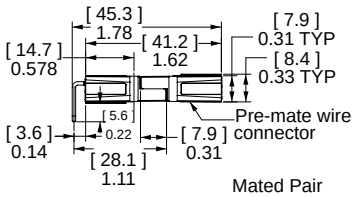
Use mounting staples with right angle contacts (see accessories).



45A Premate Ground PCB Contacts

Right angle contacts are suitable for power or ground. Use to mate with 45A ground wire contacts. Tin plated contacts are rated up to 1,500 mating cycles. Can be used with other 45A PCB connectors in the bottom row.

	Mating Force	Loose Piece Part Numbers	
Minimum Quantity		1000	100 ....
PCB, Bottom Row	Low	3-5952P1	1836G1



| PP15-45 ULTRASONICALLY BONDED ASSEMBLIES |

Assemblies feature housings that are ultrasonically welded to create a one piece connector unit using an APP special process. After welding, retaining pins are no longer required to secure the stacked housings to each other. This allows Powerpole® 15-45 connectors to be used as a durable one piece connector header. Contact customer service for configurations not shown below.

Single Row 1x2 Assemblies

Circuit Description	Housings Only	Housings with 45A Vertical PCB Contacts	Housings with 45A Right Angle PCB Contacts	Color & Type Position Matrix	
Minimum Quantity	500	500	500	1	2
DC 2 Wire Standard Housings	ASMPP30-1X2-RK	ASMPV45-1X2-RK	ASMPR45-1X2-RK	RED / STD	BLK / STD
DC 2 Wire Reverse Standard Housings	ASMPP30-1X2-KR	ASMPV45-1X2-KR	ASMPR45-1X2-KR	BLK / STD	RED / STD
DC 2 Wire Finger Proof	ASMFP30-1X2-RK	ASMFV45-1X2-RK	ASMFR45-1X2-RK	RED / FP	BLK / FP
DC 2 Wire Finger Proof Reverse	ASMFP30-1X2-KR	ASMFV45-1X2-KR	ASMFR45-1X2-KR	BLK / FP	RED / FP

Single Row 1x3 Assemblies

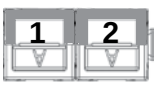
Circuit Description	Housings Only	Housings with 45A Right Angle PCB Contacts	Color & Type Position Matrix		
Minimum Quantity	500	500	1	2	3
DC 2 Wire Finger Proof with Ground	ASMFP30-1X3-KER	ASMFR45-1X3-KER	BLK / FP	GRN / GND	RED / FP
AC Single Phase Finger Proof	ASMFP30-1X3-KEW	ASMFR45-1X3-KEW	BLK / FP	GRN / GND	WHT / FP

Two Row 2x1 Assemblies

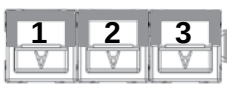
Circuit Description	Housings Only	Housings with 45A Vertical PCB Contacts	Housings with 45A Right Angle PCB Contacts	Color & Type Position Matrix	
Minimum Quantity	500	500	500	1	2
DC 2 Wire Finger Proof	ASMFP30-2X1-KR	ASMFV45-2X1-KR	ASMFR45-2X1-KR	BLK / FP	RED / FP
DC 2 Wire Finger Proof Mate	ASMFP30-2X1-RK	ASMFV45-2X1-RK	ASMFR45-2X1-RK	RED / FP	BLK / FP

Two Row 2x2 Assemblies

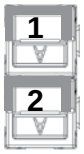
Circuit Description	Housings Only	Housings with 45A Vertical PCB Contacts	Housings with 45A Right Angle PCB Contacts	Color & Type Position Matrix			
Minimum Quantity	500	500	500	1	2	3	4
AC 3 Phase, 3 Wire Finger Proof	ASMFP30-2X2-KRWE	N/A	N/A	BLK / FP	RED / FP	WHT / FP	GRN / GND
AC 3 Phase, 3 Wire Finger Proof Mate	ASMFP30-2X2-WEKR	N/A	ASMFR45-2X2-WEKR	WHT / FP	GRN / GND	BLK / FP	RED / FP



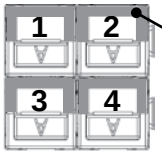
Single Row 1x2 Assembly



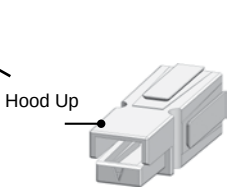
Single Row 1x3 Assembly



Two Row 2x1 Assembly



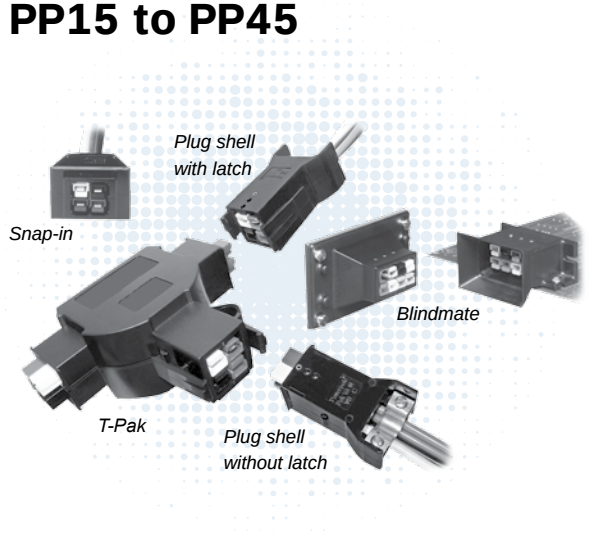
Two Row 2x2 Assembly



Type

STD = Standard Housing FP = Finger Proof Housing GND = Ground Housing

Powerpole® Pak Connectors - PP15 to PP45



Powerpole® Pak connector shells enclose stacked groupings of PP15-45 sized housings in a durable black shell for a finished connector appearance and additional features. Inline, panel mount, and blindmate configurations are available. Plug shells offer the option of integral latches and strain relief to help secure your connection.

- **Package Groupings of PP15-45 Connectors**
  Provides a finished appearance while protecting the individual connectors with an outer shell
- **Inline, Panel Mount, "T" or Blindmate Configurations**
  Allows one connection system to meet multiple needs
- **Optional Latching and Strain Relief**
  Secures your connection and wires

For environmentally sealed connector shells to hold Powerpole® 15-180 connectors, see SPEC Pak® product series on our website, www.andersonpower.com

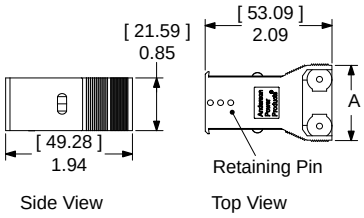
| POWERPOLE® PAK ORDERING INFORMATION |

Powerpole® housings and contacts are sold separately. See page 20 for ordering information.

Plug Shell without Latch

Can mate inline with other plug shells with or without latches, or mate to a panel mount receptacle. For use with Powerpole® wire connectors only. Cable Clamp and Hardware Pak or Retaining Pins must be ordered separately.

Description	Part Numbers			Dimensions - A - inches	Dimensions - A - mm
Minimum Quantity	1,000	500	25		
Black, 2-4 Poles	1461G1-BK	-	1461G1	1.24	31.50
Black, 5-6 Poles	-	1461G2-BK	1461G2	1.56	39.62
Black, 7-8 Poles	-	1461G3-BK	1461G3	1.87	47.50



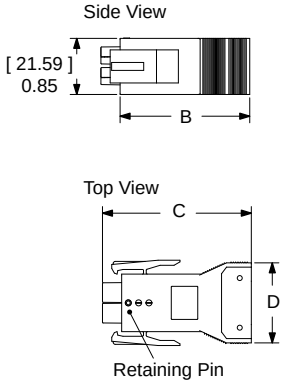
NOTE: Retaining pins are used to secure and position Powerpole® housings in one of three positions in plug shells.

Max wire O.D. for 2-4 pole plug shells is 0.60 inches [15.2mm²]. For all other plug shells is 0.63 inches [16.0 mm²].

Plug Shell with Latch

Can mate inline with other plug shells without latches, or mate to a panel mount receptacle. For use with Powerpole® wire connectors only. Cable Clamp and Hardware Pak or Retaining Pins must be ordered seperately.

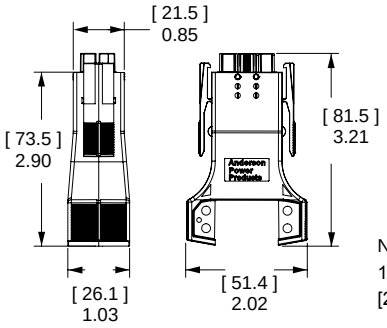
Description	Part Numbers			Dimensions - B - inches	Dimensions - B - mm	Dimensions - C - inches	Dimensions - C - mm	Dimensions - D - inches	Dimensions - D - mm
Minimum Quantity	1,000	500	25						
Black, 2-4 Poles	1460G1-BK	-	1460G1	1.94	49.28	2.25	57.15	1.24	31.50
Black, 5-6 Poles	-	1460G2-BK	1460G2	1.94	49.28	2.25	57.15	1.56	39.62
Black, 7-8 Poles	-	1460G3-BK	1460G3	1.94	49.28	2.25	57.15	1.87	47.50
Black, 9-10 Poles	-	1460G4-BK	1460G4	2.51	63.75	2.82	71.63	1.84	46.74



Plug Shell with Latch & Non-Conductive Strain Relief

New 2X3 Powerpole® Pak offers an improved ergonomic shell for easier latch operation as well as a plastic, non-conductive strain relief. The new strain relief can accommodate up to a 6 conductor #10 AWG cable. Can mate to a panel mount receptacle. For use with Powerpole® wire connectors only. Cable Clamp and Hardware Pak or Retaining Pins must be ordered separately. To be used with 115G23 cable clamp only.

Description	-------- Part Numbers -------	
Minimum Quantity ..	1,000	25 ...
Black, 5-6 Poles	1460G23-BK	1460G23



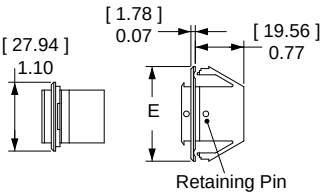
NOTE: Max wire O.D. for 1460G23 is 0.80 inches [20.3 mm²].

Snap-in Receptacle Shell

Mate to plug shells with or without latches, or mate to another panel mount receptacle to create a bulkhead to bulkhead connection. For use with Powerpole® wire or PCB connectors. Order the number of retaining pins for each receptacle as shown below separately.

Description	---------- Part Numbers ----------			Number of Retaining Pins to Order	Dimensions - E - inches	mm	Knock Out Size - Width - inches	mm
Minimum Quantity ...	1,000	500	25	.....				
Black, 2-4 Poles	1470G1-BK	-	1470G1	1	1.50	38.10	1.25	31.75
Black, 5-6 Poles	-	1470G2-BK	1470G2	2	1.88	47.75	1.62	41.15
Black, 7-8 Poles	-	1470G3-BK	1470G3	3	2.13	54.10	1.88	47.75
Black, 9-10 Poles	-	1470G4-BK	1470G4	4	2.44	61.98	2.19	55.63

* Height = [25.4 mm] 1.0 in.

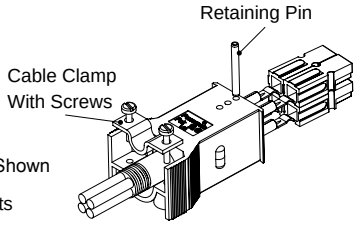


NOTE: Retaining pins are used to secure and position Powerpole® housings in one of two positions in receptacle shells.

Cable Clamp & Hardware Pak

Includes cable clamp, 2 screws, and required amount of retaining pins for each configuration.

Description	Screw Head Type	Cable Type	---------- Part Numbers ----------		
Minimum Quantity			1,000	500	25 ...
2-4 Poles	Straight Slot	Bundled	115G1-BK	-	115G1
5-6 Poles	Straight Slot	Bundled	115G2-BK	-	115G2
7-8 Poles	Straight Slot	Bundled	115G3-BK	-	115G3
9-10 Poles	Straight Slot	Bundled	-	115G4-BK	115G4
2-4 Poles	Philips	Bundled	115G7-BK	-	115G7
5-6 Poles	Philips	Bundled	115G8-BK	-	115G8



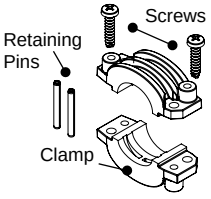
Plug Shell Without Latch Shown

Shell, housing and contacts are sold separately.

Cable Clamp & Hardware Pak

Includes 2 cable clamp halves, 2 screws and 2 retaining pins. To be used with 1460G23 Plug Shell only.

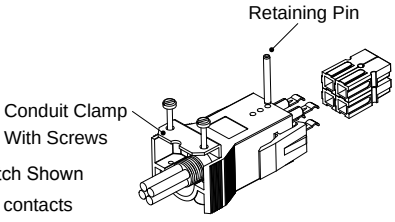
Description	Screw Head Type	Cable Type	------ Part Numbers ------	
Minimum Quantity			1,000	25
5-6 Poles	Philips	Bundled	115G23-BK	115G23



Flexible Conduit Clamp & Hardware Pak

Includes cable clamp, 2 screws, and need amount of retaining pins for each configuration.

Description	- Part Number -
Minimum Quantity	..... 100 .....
2-4 Poles	110G10



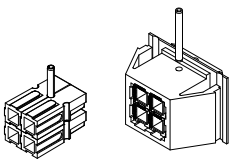
Plug Shell With Latch Shown

Shell, housing and contacts are sold separately.

Retaining Pin for Snap-in Receptacle

Order the number of retaining pins for each receptacle shown in the Snap-in Receptacle Shell ordering information. Pins are also required for the plug side when the Cable Clamp & Hardware Pak is not ordered.

Description	----- Part Number ------	
Minimum Quantity	 1,000	100 ...
Retaining Pin	110G9-BK	110G9

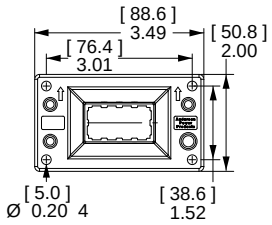


Shell and housing are sold separately.

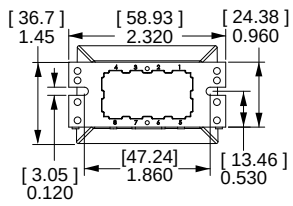
Blindmate Pak Connector

Ideal for panel to panel, bulkhead to bulkhead, or rack mount applications that require the power connector to compensate for up to 0.45 in. [11.43 mm] of misalignment in either axis. Eight positions can be filled with Powerpole® 10-45 connectors. The receptacle side can be used with wire or PCB contacts. Hardware bag includes retaining pins.

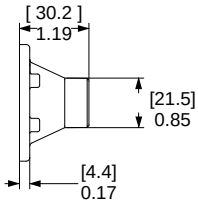
Description	--------- Part Numbers ---------	
Minimum Quantity	50	25 .....
2x4 Blindmate Plug Shell, Hardware & Pins	-	BMPP10-45P
2x4 Blindmate Receptacle Shell, Hardware & Pins	-	BMPP10-45R
2x4 Blindmate Plug Shell	BMHSG-P	-
2x4 Blindmate Receptacle Shell	BMHSG-R	-
Hardware Bag Plug Side	-	110G50
Hardware Bag Receptacle Side	-	110G51

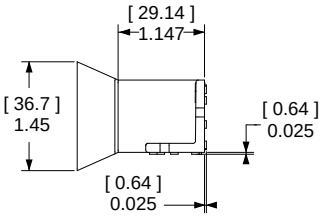


Plug Outline



Receptacle Outline





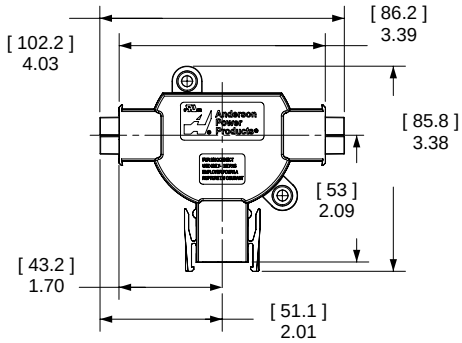
See our innovative MARC Connector that offers straight-on or rotational blindmate capability. MARC holds 6 PP15/45 power contacts and 2 PP15/45 premate ground contacts in a high temperature housing. Visit our website, www.andersonpower.com to learn more.

"T" Pak 2 Way Splitter

The Powerpole® "T" Pak connector is a 2 way electrical splitter that splits electrical current from one incoming circuit into two outgoing circuits. The standard configuration is pre-wired for AC 3 phase, 3 wire plus ground configurations. The "T" Pak can also be used for AC single phase plus ground or DC 2 wire plus ground applications by not using either the red or white power positions. "T" Pak is pre-wired from the factory allowing plug and play field installation of modular office and industrial equipment. UL recognition up to 20 amps and 600 volts is achieved when mating Powerpole® Pak plugs with #12 AWG wire.

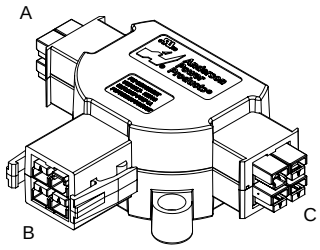
For OEM manufacturing scale applications, the "T" Pak can be loaded with custom configurations of any of our finger proof, standard, or ground housings and contacts in the PP15-45 series. Contact sales or customer service for additional information.

Description	- Part Numbers -
Minimum Quantity	80 .....
Assembled "T" Pak	20-01
Mating Plug Shell with Latch 2x2	26-01
Mating Plug Shell without Latch 2x2	27-01



Standard configuration for each side of the T includes (1) each Red, Black, and White Standard PP 15-45 Housings & 261G2-LPBK contacts with (1) 45A Green Premate Ground Housing and 1830G1-LPBK contact.

Mating plug shells include (1) each Red, Black, and White Standard PP 15-45 Housings & (3) 261G2-LPBK contacts with (1) 45A Green Premate Ground Housing and 1830G1-LPBK contact. Cable clamp & hardware pak also included.



27 - 01
Mates With B

26 - 01
Mates With A & C

| PP15-45 & POWERPOLE® PAK SPECIFICATIONS |

Electrical

Current Rating Amperes [1]	UL 1977	CSA/TUV
Singlepole Wire to Wire (10 AWG)	55	40
Singlepole Ground Wire to Wire or PCB (10 AWG)	45	35
3x3 Block Wire to Wire (10 AWG)	40	27
Singlepole 25A PCB to Wire (12 AWG)	25	-
2x3 Block 25A PCB to Wire (12 AWG)	25	22 *
Singlepole 45A PCB to Wire (10 AWG)	45	40 *
2x3 Block 45A PCB to Wire (10 AWG)	45	25 *
Voltage Rating AC/DC		
UL 1977	600	
Dielectric Withstanding Voltage		
Volts AC	2,200	
Avg. Mated Contact Resistance Milliohms [1]		
15A Wire Contact with 5/8" of #16 AWG	0.875	
30A Wire Contact with 5/8" of #12 AWG	0.600	
45A Wire Contact with 5/8" of #10 AWG	0.525	
45A PCB Contact to Contact	0.500	
25A PCB Contact to Contact	0.600	
UL Hot Plug Current Rating Amperes [5]		
250 cycles at 72V DC	45A	
250 cycles at 120V DC	30A	
UL Ground Short Time Current Test - 45A Premate Ground		
750 Amps, #10 AWG Wire	4 Seconds	
470 Amps, #12 AWG Wire	4 Seconds	

Materials

Housing	
Plastic Resin	Polycarbonate
Contact Retention Spring	Stainless Steel
Housing Flammability Rating	
UL94	V-0
Glow Wire	825°C (GWFI) / 800°C (GWIT)
Contact	
Base	Copper Alloy
Plating	Tin or Silver
Contact Termination Methods	
Crimp [3]	Wire Contacts
Hand Solder	1331, 1332 & PCB Contacts
Solder Dip	PCB Contacts
Wave Solder	PCB Contacts

Mechanical

Wire Size Range	AWG	mm²
	20 to 10	0.75 to 6.0
Max. Wire Insulation Diameter	**in.**	**mm**
	0.175	4.450
Operating Temperature [2]	**°F**	**°C**
Powerpole® Housings & Powerpole® Pak Shells	-4° to 221°	-20° to 105°
Mating Cycles No Load by Plating	**Silver (Ag)**	**Tin (Sn)**
PCB to Wire	-	1,500
Wire to Wire	10,000	1,500
Avg. Mating / Unmating Force	**Lbf.**	**N**
Low Force Wire, High Force PCB, & Ground	3	13
High Force Wire	5	22
Low Force PCB	2	9
Min. Contact / Spring Retention Force	**Lbf.**	**N**
	20	90
Powerpole® Pak Latch Avg. Defeat Force	**Lbf.**	**N**
	150	667
PCB Specifications		
Mounting Style	Plated Through Hole	
PCB Thickness- in. [mm]	0.090 - 0.150	(2.3-3.8)
25A PCB Recommended Traces	#12 AWG Cross Section	
45A PCB Recommended Traces	#10 AWG Cross Section	
Mechanical Shock [4]		
MIL-STD-202	213 Condition A	50g's
Vibration High Frequency [4]		
MIL-STD-202	204 Condition A	10g's

NOTE 1: See IEC 60664-1 for working voltage.
NOTE 2: Amp ratings are stated per position and based on all positions being fully loaded.
* No TUV Recognition
[1] Based on: 105°C rated or better cable of the largest size, Properly calibrated APP recommended tooling, and a 25°C ambient temperature. UL rating not to exceed the maximum operating temperature. CSA rating below a 30°C temperature rise.
[2] Limited by the thermal properties of the connector plastic housing.
[3] Use APP recommended tooling only. Alternate tools may adversely affect the performance of our connectors along with UL and CSA recognition.
[4] Tested with contact part number 261G2.
[5] Based on 2 housings blocked together.

c UL us File No. E26226 © CSA Certified File No. LR25154 RoHS COMPLIANT APP REACH COMPLIANCE APP

| IEC INFORMATION |

Connector Series	Configurations		Creepage / Clearance per IEC 60950-1	Material Group
PP15/45 Standard	Single Pole	Unmated	1.64 mm	IIIa
		Mated	1.64 mm	
	Stacked Powerpole®	Unmated	1.64 mm	
		Mated	1.64 mm	
	PCB - 25A	Unmated	1.64 mm	
		Mated	1.64 mm	
	PCB - 45A	Unmated	1.39 mm	
		Mated	1.39 mm	

Connector Series	Configurations		Creepage / Clearance per IEC 60950-1	Material Group
PP15/45 Finger Proof	Single Pole	Unmated	1.64 mm	IIIa
		Mated	4.20 mm	
	Stacked Powerpole®	Unmated	1.64 mm	
		Mated	4.20 mm	
	PCB - 25A	Unmated	1.64 mm	
		Mated	2.90 mm	
	PCB - 45A	Unmated	1.39 mm	
		Mated	1.39 mm	

Attributes *	PP45	PP45 FP
AMP Rating AC/DC	45	45 Amp
Voltage Rating AC/DC (Steady State)	160 V AC/DC (Operational)	400 V AC/DC (Operational)
Breaking Capacity -AMP Rating /Cycles	30 Amp / 10 Cycles	30 Amp / 10 Cycles
Voltage Rating (Breaking Capacity)	220 VDC	220 VDC
FINGER Safety - Mated only	IEC 60529 - IP20	IEC 60529 - IP20 *
Wire Size tested	6 mm²	6 mm² (10AWG)
Contact Series Tested	200G3L	200G3L
Climatic Testing (Cold,Heat & MFG)	IEC 60512 Test -11j, 11i & 11g,	IEC 60512 Test -11j, 11i & 11g
Cycle Life	IEC 60512 Test 9a - 5000 Cycles	IEC 60512 Test 9a - 5000 Cycles
Mechanical Strength Impact	IEC 60512-5 @ 29.5 Inches - dropped 8 times	IEC 60512-5 @ 29.5 Inches - dropped 8 times
Temperature Range	-20 °C to 105 °C -4 °F to 221 °F	-20 °C to 105 °C -4 °F to 221 °F

* In mated and unmated condition

Protection

Touch Safety with Finger Proof Housings & Wire Contacts or PCB Mating Interface

UL1977 Sec. 10.2	Pass
IEC 60950	Pass
IEC 60529	IP20

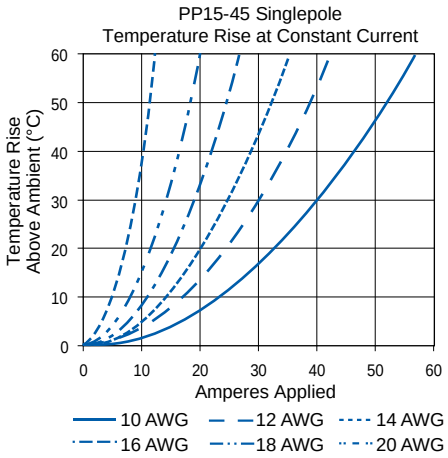
Touch Safety With Standard Housings

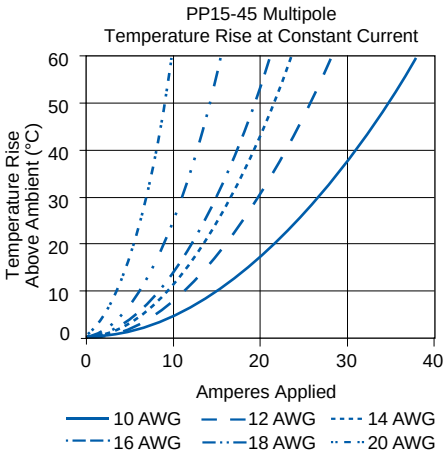
IEC 60529	IP10

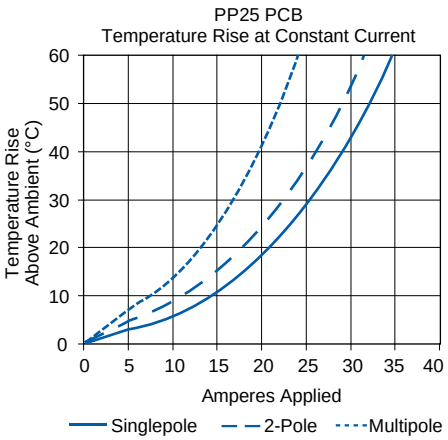
NOTE 3: Refer to the Constructional Data form for additional information on our website., www.andersonpower.com

| PP15-45 TEMPERATURE CHARTS | Temperature rise charts are based on a 25°C ambient temperature.

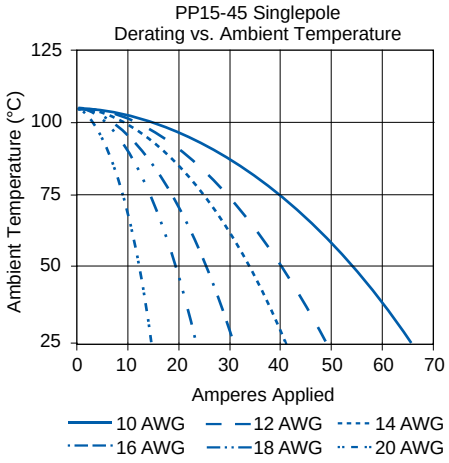
For Temperature Rise Above 60°C, Consult the Extended Temperature Rise Charts in the Appropriate Product Section on the Website.

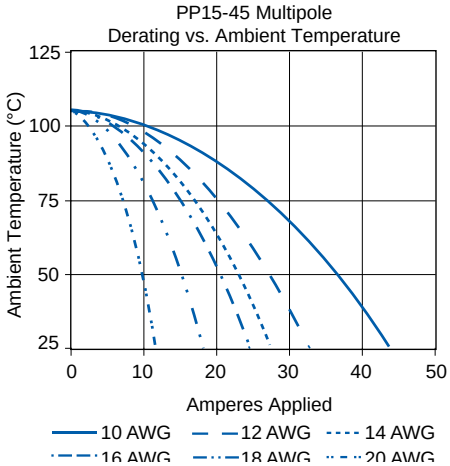


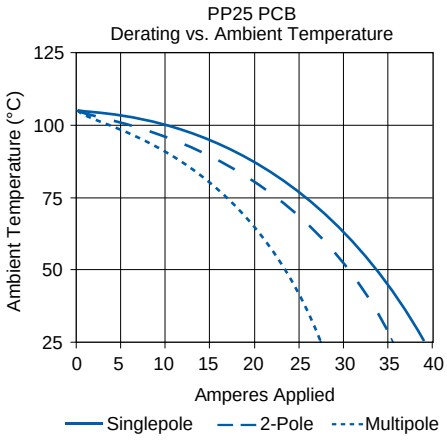




Current - Temperature Derating per IEC 60512-5-2 Test 5B

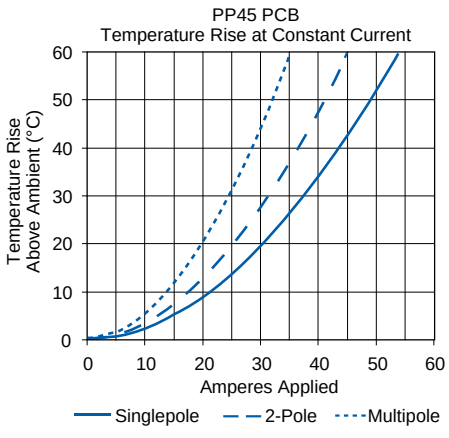


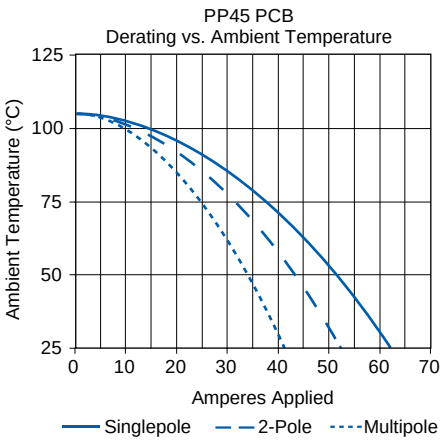




For Temperature Rise Above 60°C, Consult the Extended Temperature Rise Charts in the Appropriate Product Section on the Website.

Current - Temperature Derating per IEC 60512-5-2 Test 5B



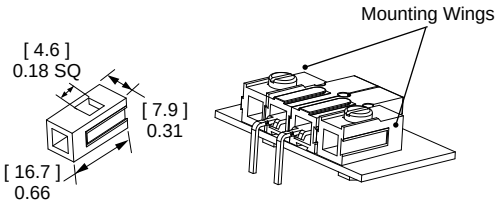


NOTE: PP25 PCB charts based on 0.002 in² foil on board side, mated to #12 AWG conductor on wire side. PP45 PCB charts based on #10 AWG equivalent copper foil on board side, mated to #10 AWG conductor on wire side.

Mounting Wing

Secure dovetailed Powerpole® 15-45 series housings by passing fasteners through the wings in either a horizontal or vertical orientation. Useful for sheet metal panels, printed circuit boards, and many other mounting surfaces. Fasteners not included.

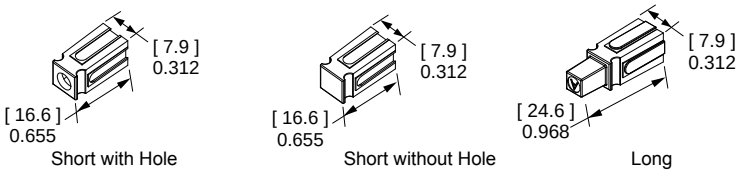
Description	------- Part Numbers -------	
Minimum Quantity ...	2,500	100 ....
Red	1399G9-BK	1399G9
Blue	1399G8-BK	1399G8



Spacer

Used to separate housings under high power to minimize derating. They are recommended for squaring off a block of Powerpole® 15-45 housings for use in connector shells and mounting clamps. Use a combination of long and short spacers opposite each other in a mated block to add keying features or use two short spacers to avoid interference. Spacers with holes can also be used to fasten the blocked housings to a surface with a fastener.

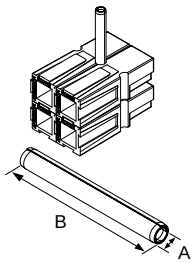
Description	------ Part Numbers -------	
Minimum Quantity	2,500	100 .....
Red, Short w/ Hole	1399G1-BK	1399G1
Red, Long	1399G2-BK	1399G2
Red, Short	1399G6-BK	1399G6
Black, Long	1399G10-BK	1399G10
Blue, Short	1399G13-BK	1399G13
White, Short w/ Hole	1399G14-BK	1399G14
White, Long	1399G17-BK	1399G17



Retaining Pins

Keep stacked Powerpole® 15-45 series housings from separating. Retaining pins are inserted in the circular opening between two housings stacked side by side.

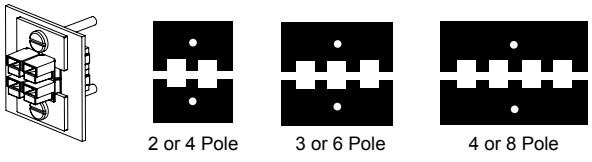
			Dimensions			
			- A -		- B -	
Description	----- Part Numbers -----		inches	mm	inches	mm
Minimum Quantity ...	1,000	100	.....			
1 Block High	H1507P38	110G16	0.093 / 0.103	2.360 / 2.62	0.250	6.350
2 Block High	111812P5	110G17	0.093 / 0.103	2.360 / 2.62	0.440	11.180



Mounting Clamp

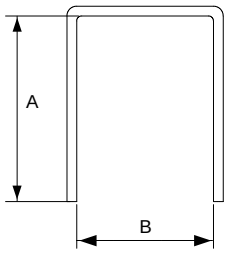
Mounting clamps can be used for fastening a block of Powerpole® 15-45 series housings to a panel. Connector blocks must be a complete square for the clamps to work properly. Fastening hardware not included.

Description	-- Part Numbers --
Minimum Quantity ...	100 sets of 2 .....
2 or 4 Pole	1462G1
3 or 6 Pole	1462G2
4 or 8 Pole	1462G3



PCB Mounting Staples

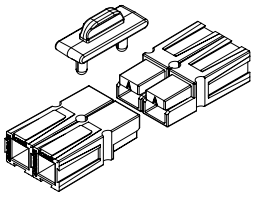
PCB staples are soldered into place to secure Powerpole® 15-45 series housings in a horizontal configuration to the board. Reduce strain on soldering joints during mating and unmating.



Part Numbers	Dimensions H x W	Length	- A - inches	mm	- B - inches	mm
Minimum Quantity 100						
114555P1	1 x 1	Short	0.47	12.0	0.28	7.0
114555P2	1 x 2	Short	0.47	12.0	0.57	14.5
114555P3	1 x 3	Short	0.47	12.0	0.89	22.5
114555P7	1 x 4	Short	0.47	12.0	1.20	30.5
114555P10	2 x 1	Short	0.79	20.0	0.28	7.0
114555P6	2 x 2	Short	0.79	20.0	0.57	14.5
114555P9	2 x 2	Long	0.91	23.0	0.57	14.5

Retention Clip

Retention clips prevent Powerpole® 15-45 blocks from unintended disconnects. They feature a tab for easy insertion and removal.

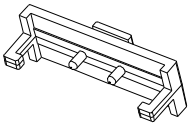


Description	-- Part Number --
Minimum Quantity	100 .....
1 Block High	110G68

Block Lok

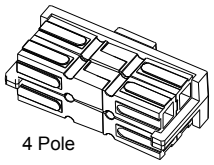
Block locks secure mated Powerpole® 15-45 series housings together. For use in high vibration or shock applications where connectors are unmated infrequently.

Description	- Part Numbers -
Minimum Quantity	100 .....
2 Pole, Black	110G21
4 Pole, Black	110G12



2 Pole

Shown without Powerpoles

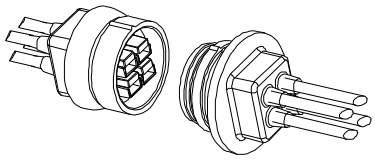


4 Pole

Shown with Powerpoles

Splash Boot

Splash boots protect a 2x2 block of any combination of Powerpole® 15-45 series housings and feature snip off sealed ends for flexibility in wire O.D. Designed for through panel or inline applications. Not a hermetic seal.

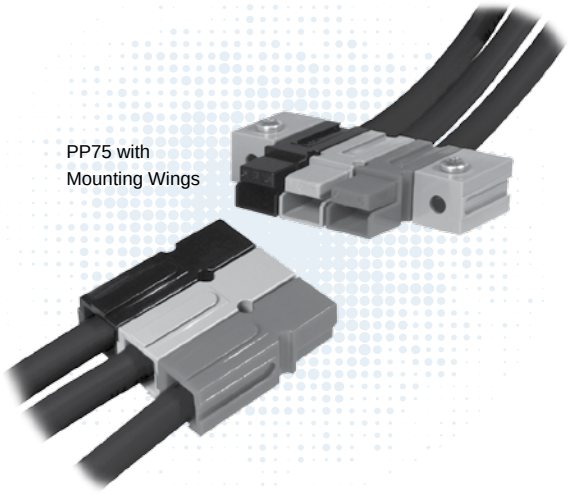


Description	- Part Numbers -
Minimum Quantity	25 .....
Female, Black	1441G1
Male, Black	1442G1

For environmentally sealed connector shells to hold Powerpole® 15-180 connectors, see SPEC Pak® product series on our website, www.andersonpower.com

| NOTES |

Powerpole® Connectors - PP75: up to 120 Amps



PP75 series Powerpole® housings can be used for wire-to-wire, wire-to-board, and wire-to-busbar applications. Wire sizes from #16 AWG (1.3 mm²) to #6 (13.3 mm²) offer power capabilities up to 120 amps per pole. Locking housings offer the capability to secure Powerpole® housings to each other and to mounting pads. Housings made from chemical resistant (CR) resin withstand industrial solvents better than standard housings.

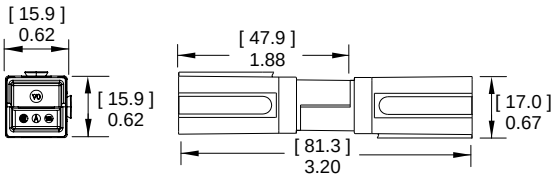
- **Large Wire Range Accommodates up to #6 (10mm²) Wire**
  Reducing bushings allow as small as #16 (1.5 mm²) wire to be used
- **Wire, PCB, and Busbar Contacts**
  Allows one connection system to meet multiple needs
- **Mini-Powerclaw PCB Contacts Minimize PCB Footprint**
  Removes the PP75 housing from the board side

| PP75 ORDERING INFORMATION |

PP75 Standard Housings

The second smallest Powerpole® housing can be used with wire contacts up to 6 AWG [10mm²] as well as PCB and busbar contacts.

Description	------- Part Numbers --------	
Minimum Quantity ...	1,000	100 .....
Red	5916G7-BK	5916G7
Green	5916G6-BK	5916G6
Black	5916G4-BK	5916G4
White	5916G5-BK	5916G5
Blue	5916-BK	5916
Yellow	5916G15-BK	5916G15
Orange	5916G14-BK	5916G14
Gray	5916G16-BK	5916G16



Front View Mated Length

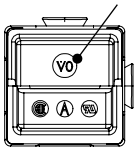
PP75 Chemical Resistant (CR) Housings

Has the same form and dimensions of the standard PP75 housing in a chemical resistant PBT/ PC blend housing. Suitable for use to -40°C.

Description	- Part Numbers -
Minimum Quantity ...	1,000 .....
Red	P5916G7-BK
Black	P5916G4-BK
White	P5916G5-BK
Blue	P5916-BK

Material ID Located Here

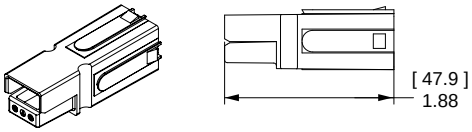
V0 = Standard
P = Chemical Resistant



PP75 Locking Dovetail Housings

Offers dovetails for stacking housings that have a locking feature to prevent housings separating. Can mate to standard and chemical resistant housings, but cannot be stacked with them.

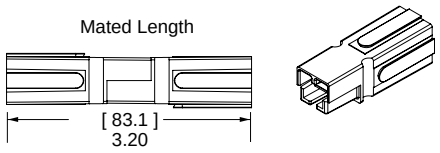
Description	---------- Part Numbers ----------	
Minimum Quantity	1,000	100 .....
Red	75LOKRED-BK	75LOKRED
Green	75LOKGRN-BK	75LOKGRN
Black	75LOKBLK-BK	75LOKBLK
White	75LOKWHT-BK	75LOKWHT
Blue	75LOKBLU-BK	75LOKBLU
Gray	75LOKGRA-BK	75LOKGRA



PP75 Premate Ground Housings

Offers a first-mate, last-break connection when stacked together with PP75 housings. Stacks together with PP75 standard and chemical resistant housings. Housings are mechanically keyed to prevent cross mating with power positions.

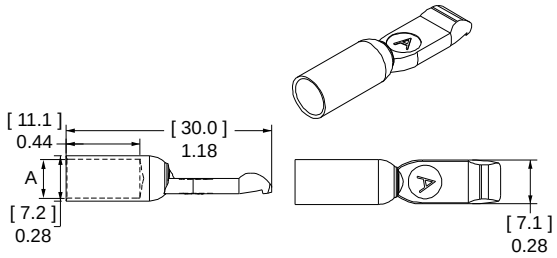
Description	------- Part Numbers -------	
Minimum Quantity....	1,000	100 ...
Green	5927G6-BK	5927G6



PP75 Silver Plated Wire Contacts

Silver plated contacts offer the best electrical performance and durability up to 10,000 mating cycles. See reducing bushings in accessory section for smaller wires.

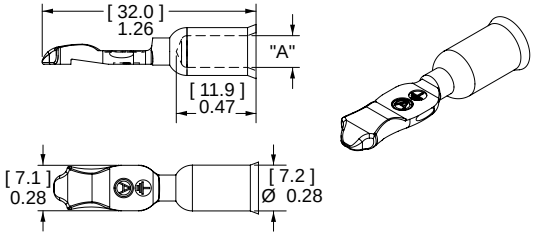
AWG	mm²	Mating Force	Loose Piece -- Part Numbers --		Dimensions - A - inches	mm
Minimum Quantity			1,000	100	.....	
6	13.3	Low	1307-BK	1307	0.22	5.59
6	13.3	High	5900-BK	5900	0.22	5.59
8	8.4	High	5952-BK	5952	0.19	4.83
12 to 10	3.3 to 5.3	Low	5953-BK	5953	0.14	3.56
12 to 10	3.3 to 5.3	High	5915-BK	5915	0.14	3.56



PP75 Premate Ground Wire Contacts

Silver plated contacts for use with the PP75 Premate Ground Housing. Rated to 10,000 mating cycles.

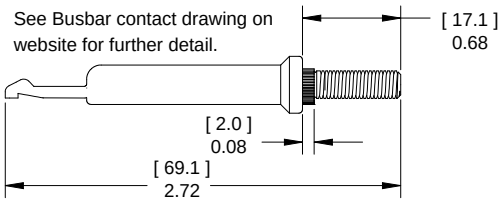
Type	AWG	mm²	Loose Piece ----- Part Numbers -----		Dimensions - A - inches	mm
Minimum Quantity			1,000	100	.....	
Individual	6	13.3	1875G1-BK	1875G1	0.22	5.59
Individual	8	8.4	1875G2-BK	1875G2	0.19	4.83
Individual	12 to 10	3.3 to 5.3	1875G3-BK	1875G3	0.14	3.56



PP75 Silver Plated Busbar Contacts

Provide a quick disconnect input or output busbar connection. Busbar contacts are for mating with wire contacts only. Part number 75BBS includes lock nuts. Locknuts must be ordered separately for B01915P1.

Type	Thread	Mating Force	---------- Part Numbers ----------		
Minimum Quantity			1,000	20	10 ...
Busbar	#10-24	High	B01915P1	-	75BBS
Lock Nut	#10-24	-	H1216P8	110G54	-

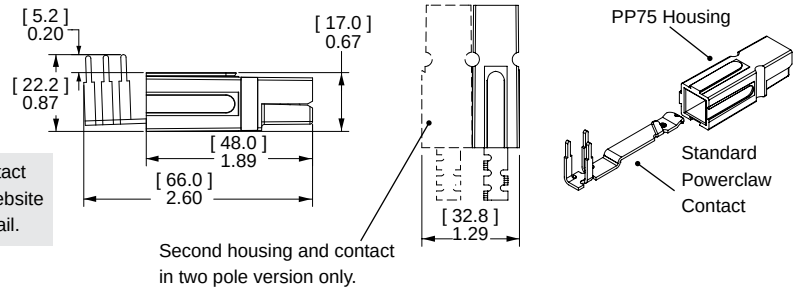


55A Right Angle Standard Powerclaw PCB Contacts

Standard Powerclaw contacts are for use inside a PP75 housing and provide a color coded right angle connection to the PCB.

Description	--- Loose Piece Part Numbers --	
Minimum Quantity	.. 500	100 .....
Tin Plated	PC5930T-BK	PC5930T
Silver Plated	PC5930S-BK	PC5930S

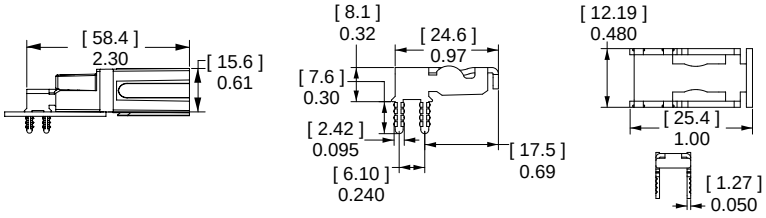
See PCB contact drawing on website for further detail.



55A Right Angle Mini Powerclaw PCB Contacts

Right angle Mini Powerclaw contacts can be used on the PCB edge without a PP75 housing on the PCB side. A self polarizing design only allow PP75 wire housings to mate to PCB contacts one way.

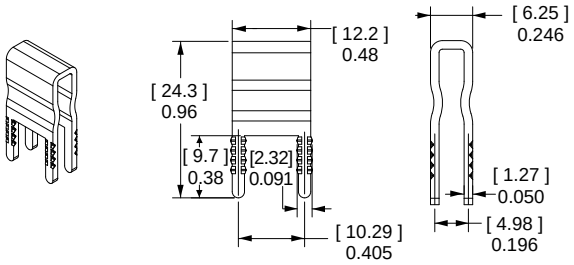
Description	Loose Piece -------- Part Numbers --------	
Minimum Quantity ...	1,000	100 .....
Tin Plated	PC5934T-BK	PC5934T
Silver Plated	PC5934S-BK	PC5934S



55A Vertical Mini Powerclaw PCB Contacts

Vertical Mini Powerclaw contacts save space by not requiring a PP75 housing on the PCB side. The guide housing is required for 2 pole applications to provide a polarized connection. (See PP75 accessories).

Description	Loose Piece -------- Part Numbers -------	
Minimum Quantity ...	1,500	100 .....
Tin Plated	PC5933T-BK	PC5933T
Silver Plated	PC5933S-BK	PC5933S

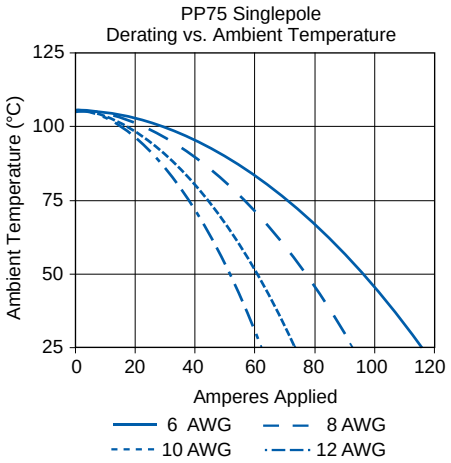


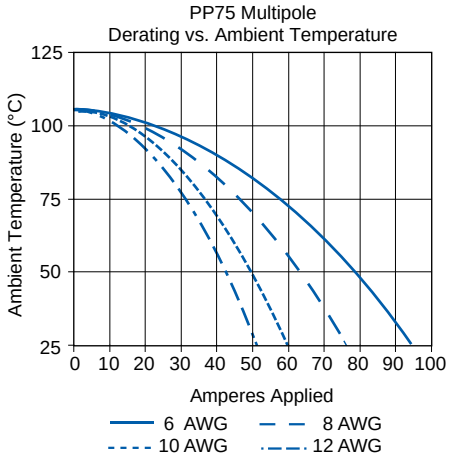
See PCB contact drawing on website for further detail.

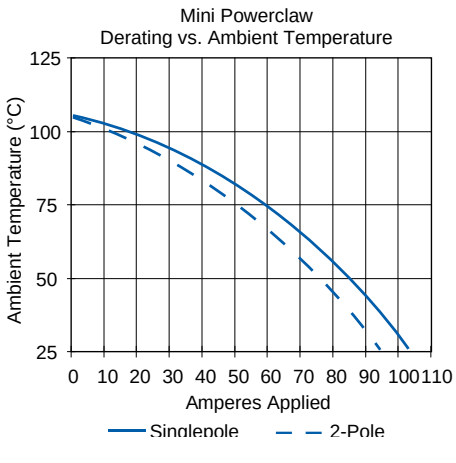
| PP75 TEMPERATURE CHARTS |

Temperature rise charts are based on a 25°C ambient temperature.

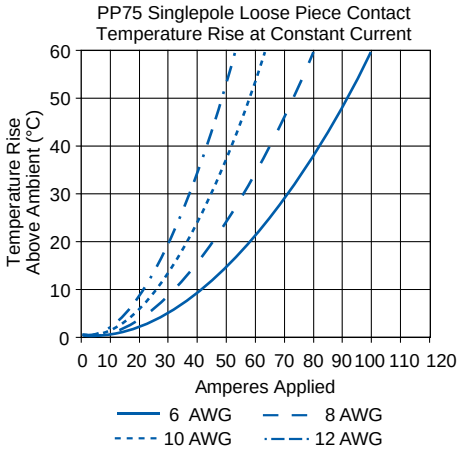
Current - Temperature Derating per IEC 60512-5-2 Test 5B

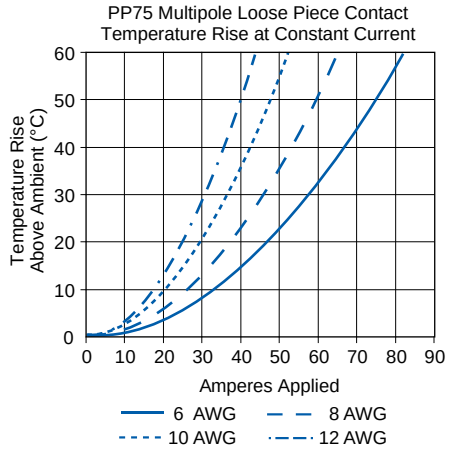


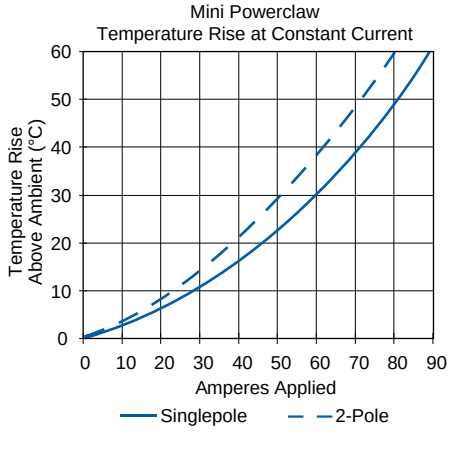




For Temperature Rise Above 60°C, Consult the Extended Temperature Rise Charts in the Appropriate Product Section on the Website.







NOTE: Powerclaw charts are based on #8 AWG equivalent copper foil on board side, mated to #6 AWG conductor on wire side.

| PP75 SPECIFICATIONS |

Electrical

Current Rating Amperes [1]	UL 1977	CSA
Wire to Wire (6 AWG)	120	70
Wire to PCB (6-AWG)	55	50
Wire to Busbar (6 AWG)	75	

Voltage Rating AC/DC	
UL 1977	600

PCB Connector Recommended Voltage [3] per IEC 60950-1 Table 2L Pollution Degree [2]	
Mini Vert. Contact Adjacent Poles	220
Mini Horiz. Contact Adjacent Poles	200
Standard Contact Adjacent Poles	635

Dielectric Withstanding Voltage	
Volts AC	2,200

Avg. Mated Contact Resistance Milliohms [1]	
Wire Contact with 1 1/4" of #6 AWG	0.200
PCB Contact to Contact	0.500

UL Hot Plug Current Rating Amperes - 250 cycles at 120V DC [6]	
Wire- wire	50A
PCB- wire (Vertical Mini Powerclaw)	40A

UL Ground Short Time Current Test - 75A Premate Ground	
1530 Amps, #6 AWG Wire	6 Seconds

Materials

Housing	
Standard Plastic Resin	Polycarbonate
Chem. Resistant Resin	Polycarbonate / PBT blend
Contact Retention Spring	Stainless Steel

Housing Flammability Rating	
UL94	V-0
Glow Wire	960°C (GWFI) / 800°C (GWIT)

Contact	
Base	Copper Alloy
Wire Plating	Silver
PCB Plating	Sn or Ag over Ni

Contact Termination Methods	
Crimp [4]	Wire Contacts
Hand Solder	Wire and PCB Contacts
Solder Dip*	PCB Contacts
Wave Solder*	PCB Contacts
Wrench / Socket	Busbar Contacts

Mechanical

Wire Size Range	AWG	mm²
Wire Contacts with Bushings	16 to 6	1.3 to 13.3

Max. Wire Insulation Diameter	in.	mm
	0.437	11.100

Operating Temperature [2]	°F	°C
Standard & Ground	-4° to 221°	-20° to 105°
Chemical Resistant*	-40 to 221°	-40° to 105°

*Chemical resistant material not available for PCB guide housings

Mating Cycles No Load by Plating	Silver (Ag)	Tin (Sn)
Wire and PCB Contacts	10,000	1,500

Avg. Mating / Unmating Force	Lbf.	N
Wire to Wire Low Force Contacts	5	22
Wire to Wire High Force Contacts	7	31
Standard Powerclaw to Wire	7	31
Mini Powerclaw to Wire	4	17

PCB Specifications	
Mounting Style	Plated Through Hole
Max PCB Thickness- in. [mm]	Standard: 0.15 [0.381]
	Mini: 0.25 [0.635]
Recommended Traces	#8 AWG Cross Section

Min. Contact / Spring Retention Force	Lbf.	N
Wire Housing	50	222

Min. Creepage / Clearance Distance PCB	in.	mm
Standard Powerclaw Adjacent Poles	0.260	6.6
Mini Vert. Powerclaw Adjacent Poles	0.087	2.2
Mini Horz. Powerclaw Adjacent Poles	0.079	2.0

Mechanical Shock [5]		
MIL-STD-202	213 Condition A	50g's

Vibration High Frequency [5]		
MIL-STD-202	204 Condition A	10g's

NOTE 1: See IEC 60664-1 for working voltage.
NOTE 2: Amp ratings are stated per position and based on all positions being fully loaded.
[1] Based on: 105°C rated or better cable of the largest size, Properly calibrated APP recommended tooling, and a 25°C ambient temperature. UL rating not to exceed the maximum operating temperature. CSA rating below a 30°C temperature rise.
[2] Limited by the thermal properties of the connector plastic housing.
[3] Without use of spacers to increase creepage and clearance distances.
[4] Use APP recommended tooling only. Alternate tools may adversely affect the performance of our connectors along with UL and CSA recognition.
[5] Tested with contact part number 5900.
[6] Based on 2 housings blocked together.

c UL us File No. E26226 © CSA Certified File No. LR25154

| IEC INFORMATION |

Connector Series	Configurations		Creepage / Clearance per IEC 60950-1	Material Group
PP75	Single Pole	Unmated	2.97 mm	IIIa
		Mated	2.97 mm	
	Stacked Powerpole®	Unmated	2.97 mm	
		Mated	2.97 mm	

Attributes	PP75
AMP Rating AC/DC	75
Voltage Rating AC/DC (Steady State)	250 V AC/DC (Operational)
Breaking Capacity -AMP Rating /Cycles	75 Amp / 10 Cycles
Voltage Rating (Breaking Capacity)	220 VDC
FINGER Safety - Mated only	IEC 60529 - IP20
Wire Size tested	16 mm²
Contact Series Tested	5900
Climatic Testing (Cold,Heat & MFG)	IEC 60512 Test -11j, 11i & 11g,
Cycle Life	IEC 60512 Test 9a - 5000 Cycles
Mechanical Strength Impact	IEC 60512-5 @ 29.5 Inches - dropped 8 times
Temperature Range	-20 °C to 105 °C -4 °F to 221 °F

Protection	
Touch Safety with Wire Contacts	
IEC 60529	IP10

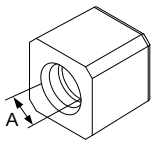
NOTE 3: Refer to the Constructional Data form for additional information on our website., www.andersonpower.com

| POWERPOLE® PP75 ACCESSORIES |

Strain Relief Grommets

Use for strain relief in the back side of a PP75 housing. Wire gauge given for reference only, use grommet ID and wire OD to determine suitability in the end application.

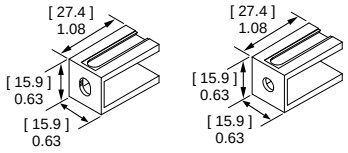
Description	- Part Numbers -	Dimensions - A - inches	mm
Minimum Quantity ...	100	.....	
#6 AWG, Black	114411P2	0.35	8.89
#8 AWG, Black	114411P1	0.25	6.35
#10 - 12 AWG, Black	114411P3	0.17	4.32



Mounting Wing for Standard or CR Housings

Mounting wings can be used to secure dovetailed Powerpole® 75 series housings by passing fasteners through the wings in either a horizontal or vertical orientation. Useful for sheet metal panels, printed circuit boards, and many other mounting surfaces. Fasteners not included.

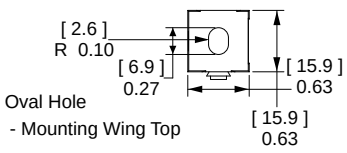
Description	------- Part Numbers -------	
Minimum Quantity ...	1,000	100 ...
Blue, Round Hole	1399G20-BK	1399G20
Blue, Oval Hole	1399G7-BK	1399G7

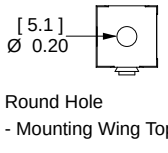


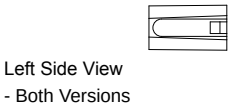
Mounting Wing for Locking Housings

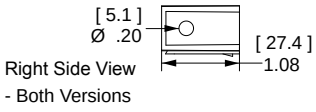
Mounting wings can be used to secure Powerpole® 75 series housings with locking dovetails by passing fasteners through the wings in either a horizontal or vertical orientation. Useful for sheet metal panels, printed circuit boards, and many other mounting surfaces. Fasteners not included.

Description	---------- Part Numbers ----------	
Minimum Quantity ...	1,000	100 ...
Blue, Oval Hole	75LOKWNGBLU-BK	75LOKWNGBLU
Blue, Round Hole	75LOKWNGBLU-R-BK	75LOKWNGBLU-R





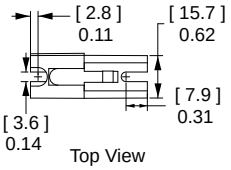


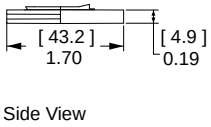


Surface Mount for Locking Housings

Use to secure Powerpole® 75 series housings with locking dovetails to a flat surface. Useful for sheet metal panels, printed circuit boards, and many other mounting surfaces. Fasteners not included.

Description	---------- Part Numbers ----------	
Minimum Quantity ...	1,000	100 ...
Blue	75LOKSMTBLU-BK	75LOKSMTBLU

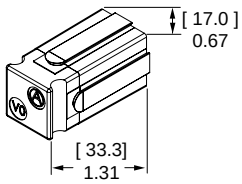


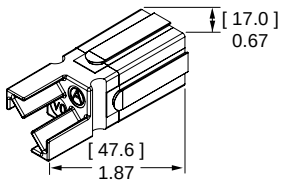


Spacer

Use to separate housings under high power to minimize power capability derating due to heat rise. They are recommended for squaring off a block of Powerpole® 75 housings to enable mounting accessories or retaining pins to be used. Combining long and short spacers opposite each other in a mated block adds keying features, or use two short spacers to avoid interference.

Description	---------- Part Numbers ----------	
Minimum Quantity...	1000	100 ....
Red, Short	1399G23-BK	1399G23
Red, Long	1399G21-BK	1399G21

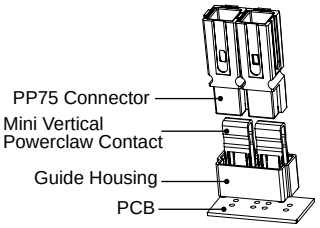




Guide Housings for Vertical Mini Powerclaw Contacts

Prevents polarity being reversed when a two pole PP75 block is mated to vertical mini Powerclaw contacts. Fastening hardware not included.

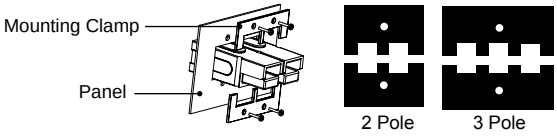
Description	---------- Part Numbers ----------	
Minimum Quantity ...	1,000	100 ...
Black Guide Housing	PC-HSG-PP-BK	PC-HSG-PP



Mounting Clamp

Mounting clamps can be used for fastening a block of Powerpole® 75 series housings to a panel. Connector blocks must be a complete square for the clamps to work properly. Fastening hardware not included.

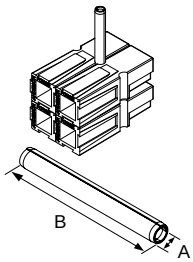
Description	- Part Numbers -
Minimum Quantity ...	50 sets of 2 ...
2 or 4 Pole	1463G1
3 or 6 Pole	1463G2



Retaining Pins

Retaining pins are used to keep stacked Powerpole® 75 series housings from separating. Retaining pins are inserted in the circular opening between two housings stacked side by side. Dimension B is +/- 0.015 in or 0.38 mm.

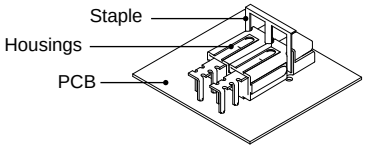
			Dimensions			
			- A -		- B -	
Description	------ Part Numbers ------		inches	mm	inches	mm
Minimum Quantity ...	1,000	100	.....			
1 Block High	111812P7	110G19	0.196 / 0.207	4.98 / 5.26	0.560	14.220
2 Block High	111812P6	110G18	0.196 / 0.207	4.98 / 5.26	1.000	25.400



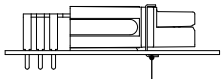
PCB Mounting Staples

Reduce strain on solder joints during mating and unmating. Staples bend over the underside of the PCB board to lock the housings in place. Staples are an interference fit with housings.

---- Part Numbers ----	Number of Stacked Powerpoles® H x W
Minimum Quantity	100 .....
PCSTAPLE-2	1 x 2



Slide staple over housings and into the holes in the board.

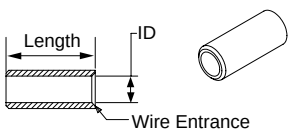


Fasten the staple by bending the leads on the bottom of the board.

Reducing Bushings

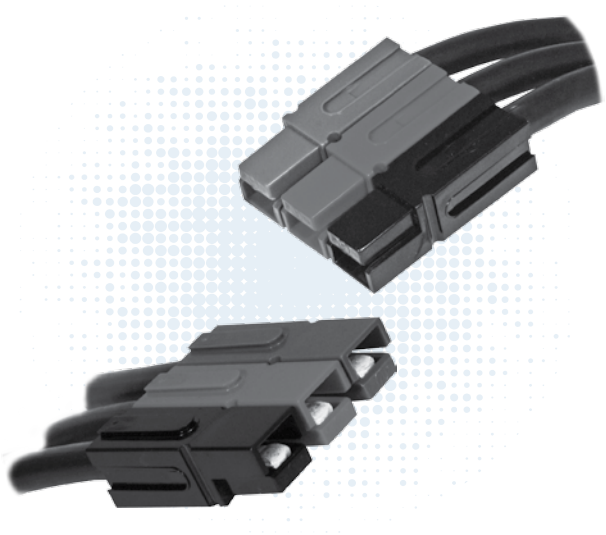
Use with contact part number 5900-BK or 1307-BK to allow a smaller wire to be used with the connector. Electrical capability is derated with smaller wire.

					Dimensions			
					- ID -		- Length -	
Contact Barrel Size	Wire Size	---------- Part Numbers ----------			inches	mm	Inches	mm
Minimum Quantity		3,000	1,000	100				
#6 AWG [13.3 mm²]	#8 AWG [8.4 mm²]	-	5912-BK	5912	0.18	4.57	0.45	11.43
#6 AWG [13.3 mm²]	#12- 10 AWG [3.3- 5.3 mm²]	5910-BK	-	5910	0.14	3.56	0.47	11.94
#6 AWG [13.3 mm²]	#16- 14 AWG [1.3- 2.1 mm²]	5913-BK	-	5913	0.09	2.29	0.47	11.94



For environmentally sealed connector shells to hold Powerpole® 15-180 connectors, see SPEC Pak® product series on our website, www.andersonpower.com

Powerpole® Connectors - PP120: up to 240 Amps



PP120 series Powerpole® housings are designed to accommodate up to 1/0 (50 mm²) wires and handle high currents up to 240 amps. Reducing bushings allow PP120 to accept down to #8 (10 mm²) wires. Multiple colors of stackable housings combine with low resistance flat wiping technology to offer powerful connection capability.

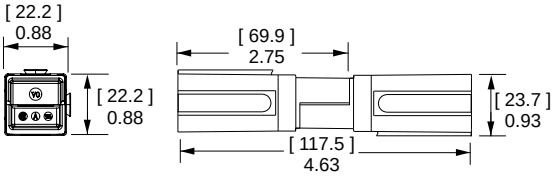
- **Large Wire Range Accommodates up to 1/0 (50mm²) Wire**
  Reducing bushings allow as small as #8 (10 mm²) wire to be used
- **Low Resistance Silver Plated Copper Contacts**
  Allows currents up to 240 amps
- **UL Rated for Hot Plugging up to 60 Amps**
  Great for battery or other applications where the ability to interrupt circuits is required

| PP120 ORDERING INFORMATION |

PP120 Housings

The second to largest Powerpole® housing can be used with wire contacts for up to 1/0 AWG [50mm²] or busbar contacts.

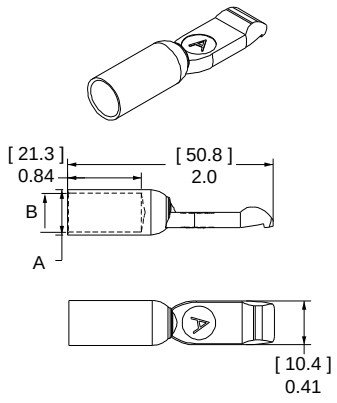
Description	-------- Part Numbers --------	
Minimum Quantity ...	500	50 .....
Red	1321G3-BK	1321G3
Green	1321G4-BK	1321G4
Black	1321G1-BK	1321G1
White	1321G2-BK	1321G2
Blue	1321-BK	1321
Gray	1321G8-BK	1321G8



PP120 Silver Plated Wire Contacts

Silver plated contacts offer superior electrical performance and durability up to 10,000 mating cycles. New contacts for #1 to 1/0 AWG (35 to 50 mm²) offer extended capability in the same housings. See reducing bushings in accessory section for smaller wires.

AWG	mm²	Mating Force	-------- Loose Piece Part Numbers --------			- A - inches	- A - mm	- B - inches	- B - mm
Minimum Quantity			600	500	50	.....			
1/0	53.5	Low	1323G2-BK	-	1323G2	0.52	13.21	0.44	11.18
1	42.4	Low	1323G1-BK	-	1323G1	0.47	11.94	0.39	9.91
2	33.6	High	-	1319-BK	1319	0.44	11.18	0.34	8.64
4	21.1	High	-	1319G4-BK	1319G4	0.44	11.18	0.29	7.37
6	13.3	High	-	1319G6-BK	1319G6	0.44	11.18	0.22	5.59



| PP120 SPECIFICATIONS |

Electrical

Current Rating Amperes [1]	UL 1977	CSA
Singlepole UL 1977 (1/0 AWG)	240	155
2x2 Block UL 1977 (1/0 AWG)	200	110
Voltage Rating AC/DC		
UL 1977	600	
Dielectric Withstanding Voltage		
Volts AC	2,200	
Avg. Mated Contact Resistance Milliohms [1]		
5 1/2" of #2 AWG wire	0.136	
UL Hot Plug Current Rating Amperes [4]		
250 cycles at 120V DC	60A	

Mechanical

Wire Size Range	AWG	mm²
Wire Contacts with Bushings	10 to 1/0	5.3 to 53.5
Max. Wire Insulation Diameter	**in.**	**mm**
	0.600	15.240
Operating Temperature [2]	**°F**	**°C**
	-4° to 221°	-20° to 105°
Mating Cycles No Load by Plating	**Silver (Ag)**	
Wire Contacts	10,000	
Avg. Mating / Unmating Force	**Lbf.**	**N**
	8	36
Min. Contact / Spring Retention Force	**Lbf.**	**N**
	60	267

Materials

Housing	
Plastic Resin	Polycarbonate
Contact Retention Spring	Stainless Steel
Housing Flammability Rating	
UL94	V-0
Glow Wire	960°C (GWFI) / 850°C (GWIT)
Contact	
Base	Copper Alloy
Plating	Silver
Contact Termination Methods	
Crimp [3]	Wire Contacts
Hand Solder	Wire Contacts

NOTE 1: See IEC 60664-1 for working voltage.
NOTE 2: Amp ratings are stated per position and based on all positions being fully loaded.
[1] Based on: 105°C rated or better cable of the largest size, Properly calibrated APP recommended tooling, and a 25°C ambient temperature. UL rating not to exceed the maximum operating temperature. CSA rating below a 30°C temperature rise.
[2] Limited by the thermal properties of the connector plastic housing.
[3] Use APP recommended tooling only. Alternate tools may adversely affect the performance of our connectors along with UL and CSA recognition.
[4] Based on 2 housings blocked together.

c UL us File No. E26226 | © CSA Certified File No. LR25154 | RoHS COMPLIANT APP | REACH COMPLIANCE APP

| IEC INFORMATION |

Connector Series	Configurations		Creepage / Clearance per IEC 60950-1	Material Group
PP120	Single Pole	Unmated	4.36 mm	IIIa
		Mated	4.36 mm	
	Stacked Powerpole®	Unmated	4.36 mm	
		Mated	4.36 mm	

Attributes	PP120
AMP Rating AC/DC	120
Voltage Rating AC/DC (Steady State)	400 V AC/DC (Operational)
Breaking Capacity -AMP Rating /Cycles	120 Amp / 10 Cycles
Voltage Rating (Breaking Capacity)	220 VDC
FINGER Safety - Mated only	IEC 60529 - IP20
Wire Size tested	50 mm²
Contact Series Tested	1323G2
Climatic Testing (Cold,Heat & MFG)	IEC 60512 Test -11j, 11i & 11g,
Cycle Life	IEC 60512 Test 9a - 5000 Cycles
Mechanical Strength Impact	IEC 60512-5 @ 29.5 Inches - dropped 8 times
Temperature Range	-20 °C to 105 °C
	-4 °F to 221 °F

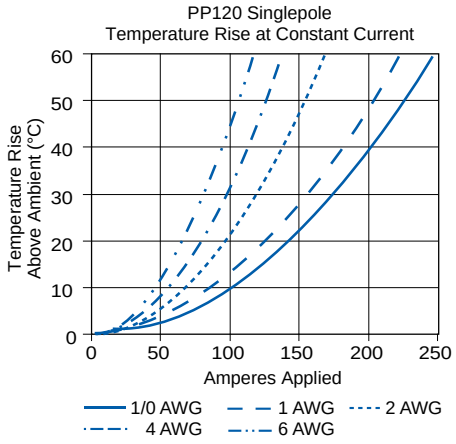
Protection

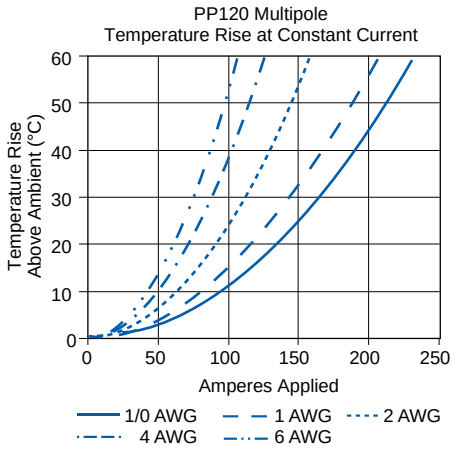
Touch Safety with Wire Contacts	
IEC 60529	IP10

NOTE 3: Refer to the Constructional Data form for additional information on our website., www.andersonpower.com

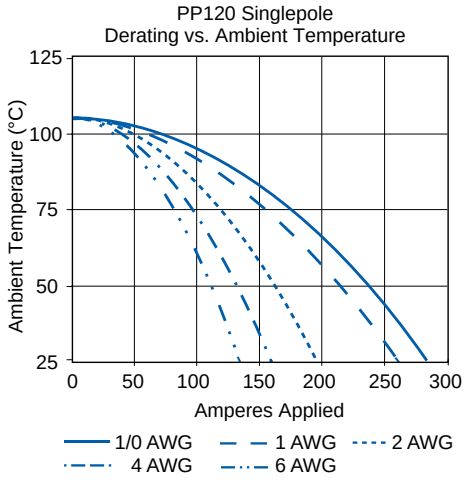
| PP120 TEMPERATURE CHARTS | Temperature rise charts are based on a 25°C ambient temperature.

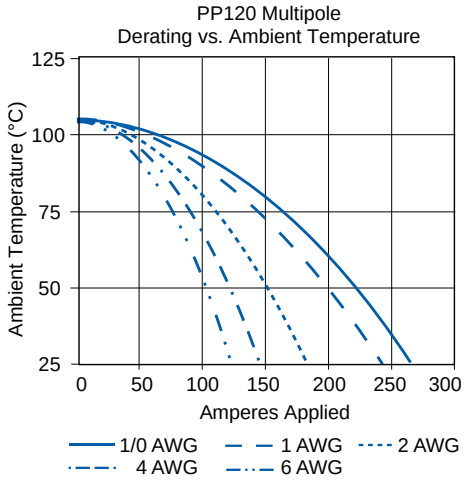
For Temperature Rise Above 60°C, Consult the Extended Temperature Rise Charts in the Appropriate Product Section on the Website.





Current - Temperature Derating per IEC 60512-5-2 Test 5B



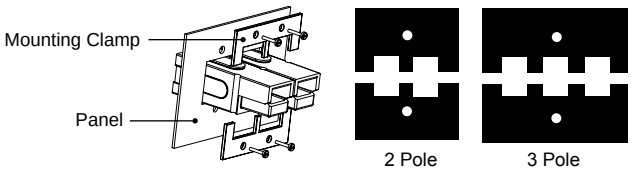


| POWERPOLE® PP120 ACCESSORIES |

Mounting Clamp

Mounting clamps can be used for fastening a block of Powerpole® 120 series housings to a panel. Connector blocks must be a complete square for the clamps to work properly. Fastening hardware not included.

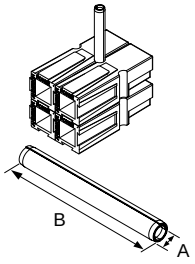
Description	- Part Numbers -
Minimum Quantity ...	20 sets of 2 .....
2 Pole	1464G1
3 Pole	1464G2



Retaining Pins

Retaining pins are used to keep stacked Powerpole® 120 series housings from separating. Retaining pins are inserted in the circular opening between two housings stacked side by side. Dimension B is +/- 0.015 in or 0.38 mm.

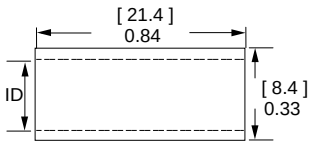
			Dimensions			
			- A -		- B -	
Description	----- Part Numbers -----		inches	mm	inches	mm
Minimum Quantity ...	1,000	100	.....			
1 Block High	111812P7	110G19	0.196 / 0.207	4.98 / 5.26	0.560	14.220
2 Block High	111812P8	110G20	0.196 / 0.207	4.98 / 5.26	1.500	38.100



Reducing Bushings

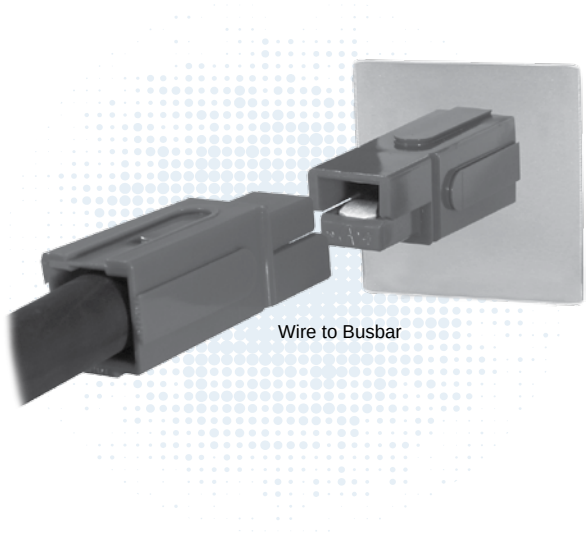
Use with contact part number 1319-BK to allow a smaller wire to be used with the connector. Electrical capability is derated with smaller wire.

					Dimensions - ID -	
Contact Barrel Size	Wire Size	--------- Part Numbers ---------			inches	mm
Minimum Quantity		2,000	1,000	100	.....	
#2 AWG [33.6 mm²]	#4 AWG [21.2 mm²]	5919-BK	-	5919	0.28	7.11
#2 AWG [33.6 mm²]	#6 AWG [16 mm²]	-	5920-BK	5920	0.23	5.84
#2 AWG [33.6 mm²]	#10 - 8 AWG [5.3 - 8.4 mm²]	5921-BK		5921	0.18	4.57



For environmentally sealed connector shells to hold Powerpole® 15-180 connectors, see SPEC Pak® product series on our website, www.andersonpower.com

Powerpole® Connectors - PP180: up to 350 Amps



PP180 are the largest of the Powerpole® series housings. They are designed to accommodate up to 3/0 (70 mm²) wires and handle high currents up to 350 amps. Busbar contacts are also available for power inputs and takeoffs. Color-coded housings minimize user confusion and the potential of cross mating circuits.

Low Resistance Silver Plated Copper Contacts
• *Allows currents up to 350 amps*

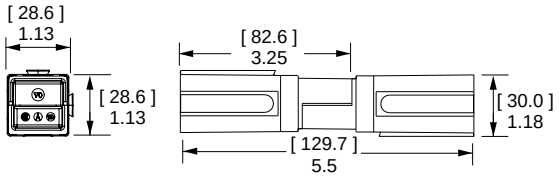
UL Rated for Hot Plugging up to 75 Amps
• *Great for battery or other applications where the ability to interrupt circuits is required*

Busbar Contacts Work with Standard Housings
• *Provides a hot swappable quick disconnect system for busbar power distribution*

| PP180 ORDERING INFORMATION |

PP180 Housings
The largest Powerpole® housing can be used with wire contacts for up to 3/0 AWG [85mm²] or busbar contacts.

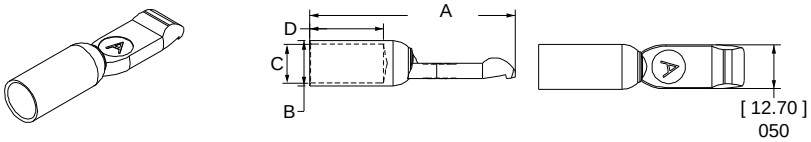
Description	-------- Part Numbers --------	
Minimum Quantity ...	250	50 .....
Red	1381G3-BK	1381G3
Green	1381G4-BK	1381G4
Black	1381G1-BK	1381G1
White	1381G2-BK	1381G2
Blue	1381-BK	1381



Front View Mated Length

PP180 Silver Plated Wire Contacts
Silver plated contacts offer superior electrical performance and durability up to 10,000 mating cycles. New contacts for 2/0 to 3/0 AWG (70 to 85 mm²) offer extended capability in the same housings. See Reducing bushings in accessory section for smaller wires.

AWG	mm²	Mating Force	---------- Loose Piece Part Numbers ----------				Dimensions - A - inches	mm	- B - inches	mm	- C - inches	mm	- D - inches	mm
Minimum Quantity			500	300	250	50								
3/0	85	Low	-	-	1328G2-BK	1328G2	2.35	59.69	0.70	17.78	0.58	14.73	1.04	26.42
2/0	67.4	Low	-	1328G1-BK	-	1328G1	2.35	59.69	0.64	16.26	0.49	12.45	1.04	26.42
1/0	53.5	High	1382-BK	-	-	1382	2.35	59.69	0.52	13.21	0.44	11.18	1.04	26.42
1	42.4	High	1347-BK	-	-	1347	2.35	59.69	0.52	13.21	0.39	9.91	1.04	26.42
2	33.6	High	1383-BK	-	-	1383	2.35	59.69	0.52	13.21	0.35	8.89	1.04	26.42
4	21.1	High	1384-BK	-	-	1384	2.35	59.69	0.52	13.21	0.30	7.62	1.04	26.42
6	13.3	High	1348-BK	-	-	1348	2.10	53.34	0.37	9.40	0.22	5.59	0.80	20.32

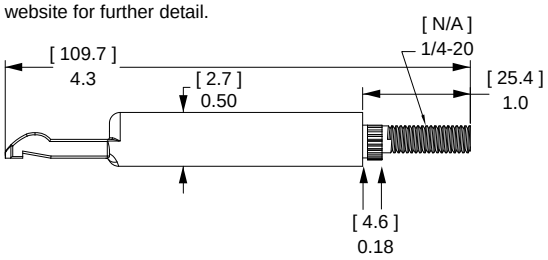


PP180 Silver Plated Busbar Contacts

Use 2 busbar contacts per housing to provide a quick disconnect input or output busbar connection. Busbar contacts are for mating with wire contacts only. Part number 180BBS includes lock nuts. Locknuts must be ordered separately for 180BBS-BK.

Thread	Mating Force	------ Loose Piece Part Numbers ------		
Minimum Quantity		1,000	120	10 .....
Busbar 1/4-20	High	180BBS-BK	180BBS	-
Lock Nut 1/4-20	N/A	H1216P7	110G56	110G55

See Busbar contact drawing on website for further detail.



| PP180 SPECIFICATIONS |

Electrical

Current Rating Amperes [1]	UL 1977	CSA
Singlepole (wire-wire) (3/0 AWG)	350	230
2x2 Block (wire-wire) (3/0 AWG)	350	
Singlepole (wire-busbar) (1/0 AWG)	180	
Voltage Rating AC/DC		
UL 1977	600	
Dielectric Withstanding Voltage		
Volts AC	2,200	
Avg. Mated Contact Resistance Milliohms [1]		
6" of 1/0 AWG wire	0.100	
UL Hot Plug Current Rating Amperes [4]		
250 cycles at 120V DC	75A	

Mechanical

Wire Size Range	AWG	mm²
Wire Contacts with Bushings	10 to 3/0	5.3 to 85
Max. Wire Insulation Diameter	**in.**	**mm**
	0.900	22.860
Operating Temperature [2]	**°F**	**°C**
	-4° to 221°	-20° to 105°
Mating Cycles No Load by Plating	**Silver (Ag)**	
Wire and Busbar Contacts	10,000	
Avg. Mating / Unmating Force	**Lbf.**	**N**
Wire & Busbar Contacts	10	44
Min. Contact / Spring Retention Force	**Lbf.**	**N**
	120	534

Materials

Housing	
Plastic Resin	Polycarbonate
Contact Retention Spring	Stainless Steel
Housing Flammability Rating	
UL94	V-0
Glow Wire	960°C (GWFI) / 850°C (GWIT)
Contact	
Base	Copper Alloy
Plating	Silver
Contact Termination Methods	
Crimp [3]	
Hand Solder	
Wrench / Socket*	

*Busbar Contacts Only

NOTE 1: See IEC 60664-1 for working voltage.
NOTE 2: Amp ratings are stated per position and based on all positions being fully loaded.
[1] Based on: 105°C rated or better cable of the largest size, Properly calibrated APP recommended tooling, and a 25°C ambient temperature. UL rating not to exceed the maximum operating temperature. CSA rating below a 30°C temperature rise.
[2] Limited by the thermal properties of the connector plastic housing.
[3] Use APP recommended tooling only. Alternate tools may adversely affect the performance of our connectors along with UL and CSA recognition.
[4] Based on 2 housings blocked together.

c UL us File No. E26226 | © CSA Certified File No. LR25154 | RoHS COMPLIANT APP | REACH COMPLIANCE APP

| IEC INFORMATION |

Connector Series	Configurations		Creepage / Clearance per IEC 60950-1	Material Group
PP180	Single Pole	Unmated	6.02 mm	IIIa
		Mated	6.02 mm	
	Stacked Powerpole®	Unmated	6.02 mm	
		Mated	6.02 mm	

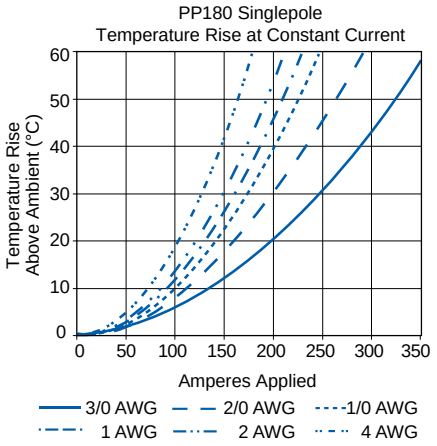
Attributes	PP180
AMP Rating AC/DC	180
Voltage Rating AC/DC (Steady State)	500 V AC/DC (Operational)
Breaking Capacity -AMP Rating /Cycles	180 Amp / 10 Cycles
Voltage Rating (Breaking Capacity)	220 VDC
FINGER Safety - Mated only	IEC 60529 - IP20
Wire Size tested	70 mm²
Contact Series Tested	1382G2
Climatic Testing (Cold,Heat & MFG)	IEC 60512 Test -11j, 11i & 11g,
Cycle Life	IEC 60512 Test 9a - 5000 Cycles
Mechanical Strength Impact	IEC 60512-5 @ 29.5 Inches - dropped 8 times
Temperature Range	-20 °C to 105 °C -4 °F to 221 °F

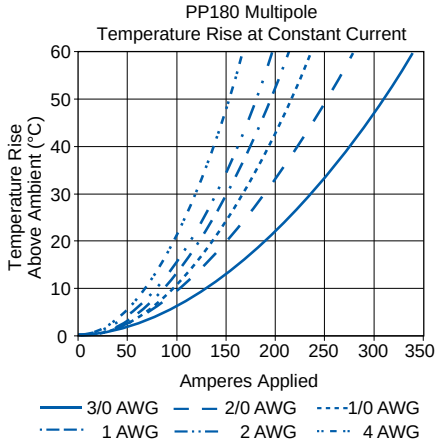
Protection	
Touch Safety with Wire Contacts	
IEC 60529	IP10

NOTE 3: Refer to the Constructional Data form for additional information on our website., www.andersonpower.com

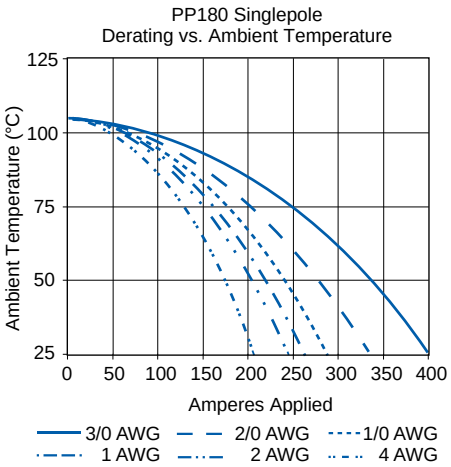
| PP180 TEMPERATURE CHARTS | Temperature rise charts are based on a 25°C ambient temperature.

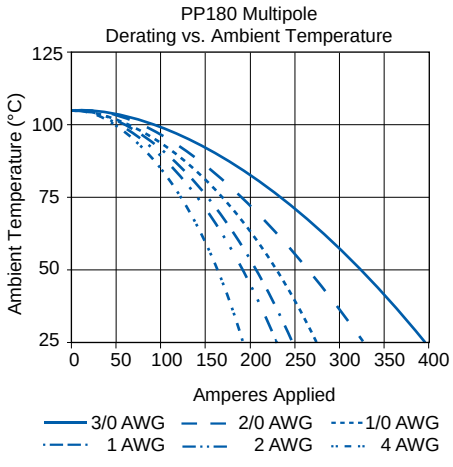
For Temperature Rise Above 60°C, Consult the Extended Temperature Rise Charts in the Appropriate Product Section on the Website.





Current - Temperature Derating per IEC 60512-5-2 Test 5B

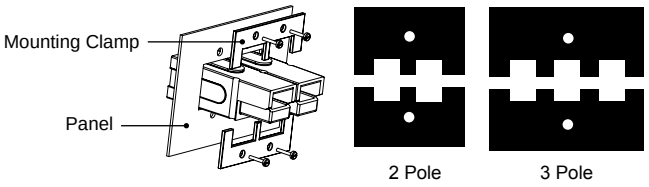




Mounting Clamp

Mounting clamps can be used for fastening a block of Powerpole® 180 series housings to a panel. Connector blocks must be a complete square for the clamps to work properly. Fastening hardware not included.

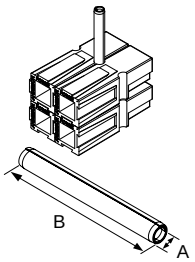
Description	- Part Numbers -
Minimum Quantity ...	20 sets of 2 .....
2 Pole	1465G1
3 Pole	1465G2



Retaining Pins

Retaining pins are used to keep stacked Powerpole® 180 series housings from separating. Retaining pins are inserted in the circular opening between two housings stacked side by side. Dimension “B” is +/- .015 in or .38 mm.

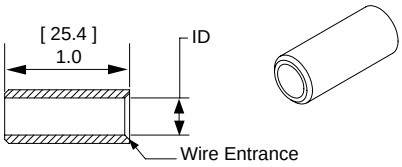
Description	----- Part Numbers -----		Dimensions - A - inches		- B - mm	
Minimum Quantity ...	1,000	100	.....			
1 Block High	111812P6	110G18	0.196 / 0.207	4.98 / 5.26	1.000	25.400
2 Block High	111812P8	110G20	0.196 / 0.207	4.98 / 5.26	1.500	38.100



Reducing Bushings

Use with contact part number 1382-BK to allow a smaller wire to be used with the connector. Electrical capability is derated with smaller wire.

Contact Barrel Size	Wire Size	---------- Part Numbers ----------				Dimensions - ID - inches	mm
Minimum Quantity		1,500	1,000	500	100	.....	
1/0 AWG [53.5 mm²]	#1 AWG [42.4 mm²]	-	-	5687-BK	5687	0.39	9.91
1/0 AWG [53.5 mm²]	#2 AWG [33.6 mm²]	5690-BK	-	-	5690	0.34	8.64
1/0 AWG [53.5 mm²]	#4 AWG [21.2 mm²]	-	5693-BK	-	5693	0.27	6.86
1/0 AWG [53.5 mm²]	#6 AWG [13.3 mm²]	-	5663-BK	-	5663	0.22	5.59
1/0 AWG [53.5 mm²]	#10 - 8 AWG [5.3 - 8.4 mm²]	5648-BK	-	-	5648	0.19	4.83



For environmentally sealed connector shells to hold Powerpole® 15-180 connectors, see SPEC Pak® product series on our website, www.andersonpower.com