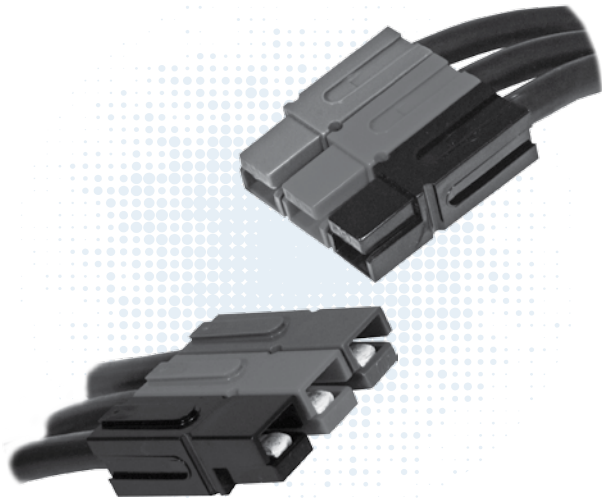


# Powerpole® Connectors

## - PP120: up to 240 Amps



PP120 series Powerpole® housings are designed to accommodate up to 1/0 (50 mm<sup>2</sup>) wires and handle high currents up to 240 amps. Reducing bushings allow PP120 to accept down to #8 (10 mm<sup>2</sup>) wires. Multiple colors of stackable housings combine with low resistance flat wiping technology to offer powerful connection capability.

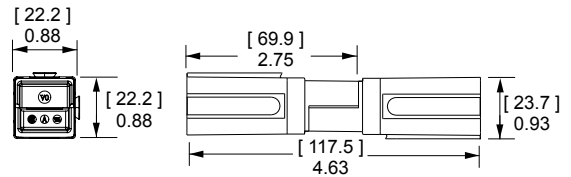
- **Large Wire Range Accommodates up to 1/0 (50mm<sup>2</sup>) Wire**  
*Reducing bushings allow as small as #8 (10 mm<sup>2</sup>) wire to be used*
- **Low Resistance Silver Plated Copper Contacts**  
*Allows currents up to 240 amps*
- **UL Rated for Hot Plugging up to 60 Amps**  
*Great for battery 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 [50mm<sup>2</sup>] or busbar contacts.

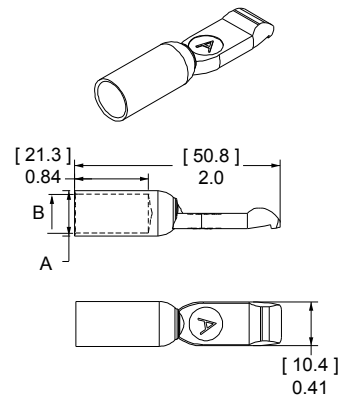
| Description          | ----- Part Numbers ----- |        |
|----------------------|--------------------------|--------|
| Minimum Quantity ... | 500                      | 50     |
| Red                  | 1321G3-BK                | 1321G3 |
| Green                | 1321G4-BK                | 1321G4 |
| 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 mm<sup>2</sup>) offer extended capability in the same housings. See reducing bushings in accessory section for smaller wires.

| AWG | mm <sup>2</sup> | Mating Force | ----- Loose Piece Part Numbers ----- |           | - A -  |      | - B -  |      |       |
|-----|-----------------|--------------|--------------------------------------|-----------|--------|------|--------|------|-------|
|     |                 |              | 600                                  | 500       | inches | mm   | inches | mm   |       |
| 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

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

## 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 <sup>3</sup> | Wire Contacts |
| Hand Solder        | Wire Contacts |

## Mechanical

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

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.

<sup>1</sup> 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.

<sup>2</sup> Limited by the thermal properties of the connector plastic housing.

<sup>3</sup> Use APP recommended tooling only. Alternate tools may adversely affect the performance of our connectors along with UL and CSA recognition.

<sup>4</sup> Based on 2 housings blocked together.



# 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

| 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 mm <sup>2</sup>                          |
| 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<br>-4 °F to 221 °F         |

## Protection

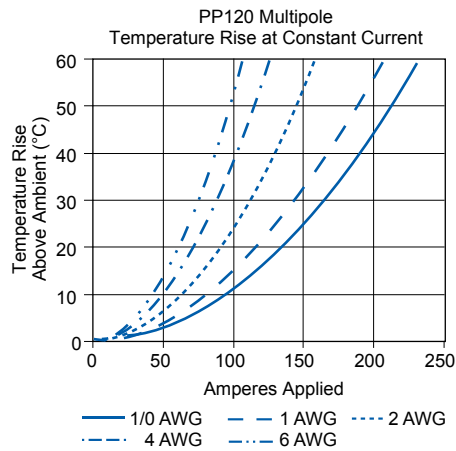
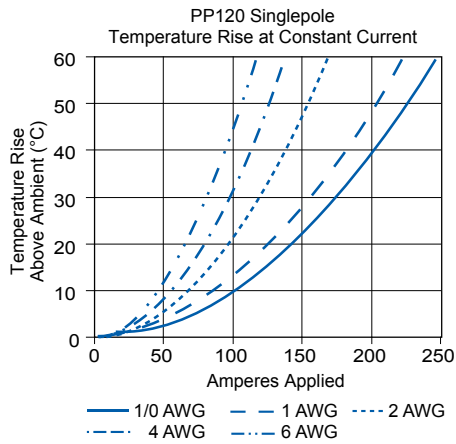
|  |
|--|
| <b>Touch Safety with Wire Contacts</b> |
| IEC 60529 IP10                         |



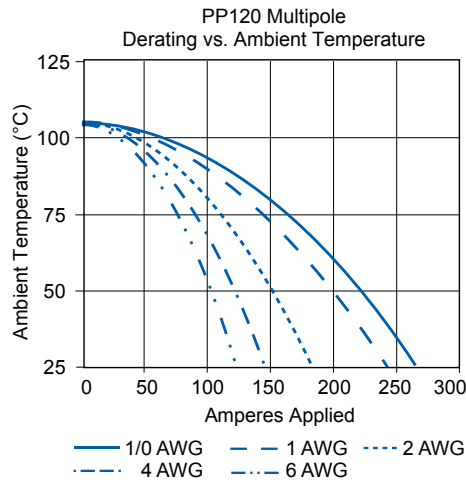
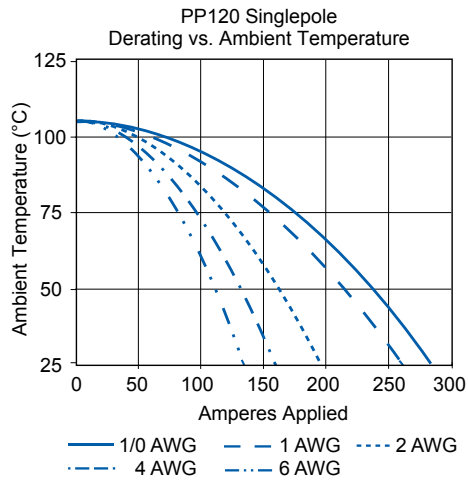
NOTE 3: Refer to the Constructional Data form for additional information on our website., [www.andersonpower.com](http://www.andersonpower.com)

# 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

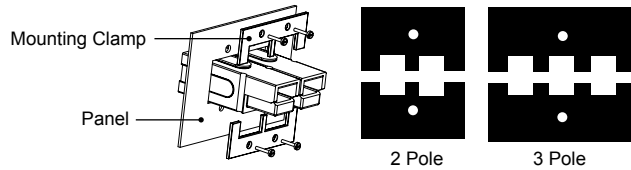


# | POWERPOLE® PP120 ACCESSORIES |

## 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.

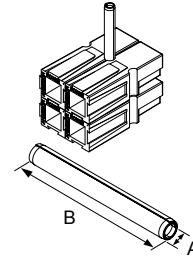
| Description          | - Part Numbers -   |
|----------------------|--------------------|
| Minimum Quantity ... | 20 sets of 2 ..... |
| 2 Pole               | 1464G1             |
| 3 Pole               | 1464G2             |



## 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.

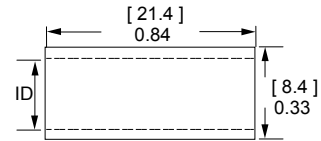
| Description          | ----- Part Numbers ----- |        | Dimensions    |             |        |        |
|----------------------|--------------------------|--------|---------------|-------------|--------|--------|
|                      |                          |        | - A -         |             | - B -  |        |
|                      |                          |        | 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.

| Contact Barrel Size            | Wire Size                                | ----- Part Numbers ----- |         |      | Dimensions - ID - |      |
|--------------------------------|--|--------------------------|---------|------|-------------------|------|
|                                |  |                          |         |      | inches            | mm   |
| Minimum Quantity               |  | 2,000                    | 1,000   | 100  |                   |      |
| #2 AWG [33.6 mm <sup>2</sup> ] | #4 AWG [21.2 mm <sup>2</sup> ]           | 5919-BK                  | -       | 5919 | 0.28              | 7.11 |
| #2 AWG [33.6 mm <sup>2</sup> ] | #6 AWG [16 mm <sup>2</sup> ]             | -                        | 5920-BK | 5920 | 0.23              | 5.84 |
| #2 AWG [33.6 mm <sup>2</sup> ] | #10 - 8 AWG [5.3 - 8.4 mm <sup>2</sup> ] | 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](http://www.andersonpower.com)



# Powerpole®

## - Tooling Information

| Wire Size                                       |            | Reeled Part Numbers |                | Reeled Contact Crimp Tool |                               |
|---|------------|---------------------|----------------|---------------------------|-------------------------------|
| AWG   | mm²        | Tin Plating         | Silver Plating | APP Applicator +          | APP Press                     |
| <b>PP15 / 45 Flat Wiping Power &amp; Ground</b> |            |                     |                |                           |                               |
| #16 / 20  | 1.3 / 0.52 | 262G1               | 262G2          | TD0101                    | 115V= TE0101<br>230V = TE0102 |
| #16 / 20  | 1.3 / 0.52 | 269G2               | N/A            |                           |                               |
| #12 / 16  | 3.3 / 1.3  | 261G1               | N/A            |                           |                               |
| #10 / 14  | 5.3 / 2.1  | 261G2               | 261G3          |                           |                               |
| #12 / 16  | 3.3 / 1.3  | 269G1               | N/A            |                           |                               |
| #10 / 14  | 5.3 / 2.1  | 269G3               | N/A            |                           |                               |
| #10 / 14  | 5.3 / 2.1  | 200G1L              | 200G3L         | TD0102                    |                               |
| #10 / 14  | 5.3 / 2.1  | 201G1H              | N/A            |                           |                               |
| #10 / 14  | 5.3 / 2.1  | 1830G1              | 1830G2         |                           |                               |

\* APP applicators are mechanical feed style and do not require an air feed kit.

| Wire Size                                       |            | Loose Piece Part Numbers |                | Loose Piece Contact Crimp Tool |                        |         |         |                  |
|---|------------|--------------------------|----------------|--------------------------------|------------------------|---------|---------|------------------|
| AWG   | mm²        | Tin Plating              | Silver Plating | Hand Tool Or                   | Pneumatic Bench Tool + | Die +   | Locator | Number of Crimps |
| <b>PP15 / 45 Flat Wiping Power &amp; Ground</b> |            |                          |                |                                |                        |         |         |                  |
| #16 / 20  | 1.3 / 0.52 | N/A                      | 1332           | 1309G2 or 1309G8               | N/A                    | N/A     | N/A     | Single           |
| #12 / 16  | 3.3 / 1.3  | N/A                      | 1331           |                                |                        |         |         |                  |
| #16 / 20  | 1.3 / 0.52 | 262G1-LPBK               | 262G2-LPBK     |                                |                        |         |         |                  |
| #16 / 20  | 1.3 / 0.52 | 269G2-LPBK               | N/A            | 1309G3 or 1309G8               | N/A                    | N/A     | N/A     | Single           |
| #12 / 16  | 3.3 / 1.3  | 261G1-LPBK               | N/A            |                                |                        |         |         |                  |
| #10 / 14  | 5.3 / 2.1  | 261G2-LPBK               | 261G3-LPBK     |                                |                        |         |         |                  |
| #12 / 16  | 3.3 / 1.3  | 269G1-LPBK               | N/A            | 1309G6 or 1309G8               | N/A                    | N/A     | N/A     | Single           |
| #10 / 14  | 5.3 / 2.1  | 269G3-LPBK               | N/A            |                                |                        |         |         |                  |
| #10 / 14  | 5.3 / 2.1  | 200G1L-LPBK              | 200G3L-LPBK    |                                |                        |         |         |                  |
| #10 / 14  | 5.3 / 2.1  | 201G1H-LPBK              | N/A            | 1309G6 or 1309G8               | N/A                    | N/A     | N/A     | Single           |
| 310 / 14  | 5.3 / 2.1  | 1830G1-LPBK              | 1830G2-LPBK    |                                |                        |         |         |                  |
| <b>PP75</b>                                     |            |                          |                |                                |                        |         |         |                  |
| #6  | 13.3       | N/A                      | 1307           | 1309G4                         | 1387G1                 | 1388G6  | 1389G6  | Single           |
|   |            |                          | 5900           |                                |                        |         | 1389G21 |                  |
| #8  | 8.4        |                          | 1875G1         |                                |                        |         | 1389G6  |                  |
|   |            |                          | 5952           |                                |                        |         | 1389G21 |                  |
|   |            |                          | 1875G2         |                                |                        |         | 1389G6  |                  |
| #10 / 12  | 5.3 / 3.3  |                          | 5953           |                                |                        |         | 1389G21 |                  |
|   |            |                          | 5915           |                                |                        |         | 1389G6  |                  |
|   |            |                          | 1875G3         |                                |                        |         | 1389G21 |                  |
| <b>PP120</b>                                    |            |                          |                |                                |                        |         |         |                  |
| 1/0   | 53.5       | N/A                      | 1323G2         | 1368 Series                    | 1387G1                 | 1388G3  | 1389G4  | Single           |
| #1  | 42.4       |                          | 1323G1         |                                |                        |         |         |                  |
| #2  | 33.6       |                          | 1319           |                                |                        |         |         |                  |
| #4  | 21.2       |                          | 1319G4         |                                |                        |         |         |                  |
| #6  | 13.3       |                          | 1319G6         |                                |                        |         |         |                  |
| <b>PP180</b>                                    |            |                          |                |                                |                        |         |         |                  |
| 3/0   | 85         | N/A                      | 1328G2         | 1368 Series                    | 1387G2                 | 1303G12 | 1304G32 | Double           |
| 2/0   | 53.5       |                          | 1328G1         |                                |                        |         |         |                  |
| 1/0   | 53.5       |                          | 1382           |                                |                        |         |         |                  |
| #1  | 42.4       |                          | 1347           |                                |                        |         |         |                  |
| #2  | 33.6       |                          | 1383           |                                |                        |         |         |                  |
| #4  | 21.1       |                          | 1384           |                                |                        |         |         |                  |
| #6  | 13.3       |                          | 1348           |                                |                        |         |         |                  |
|   |            |                          |                |                                |                        | 1387G1  |         |                  |

- NOTE: See website for the most current information.
- NOTE: Insertion / Extraction tool for PP15/45 contacts = 111038G2

# Mouser Electronics

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## Anderson Power Products:

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