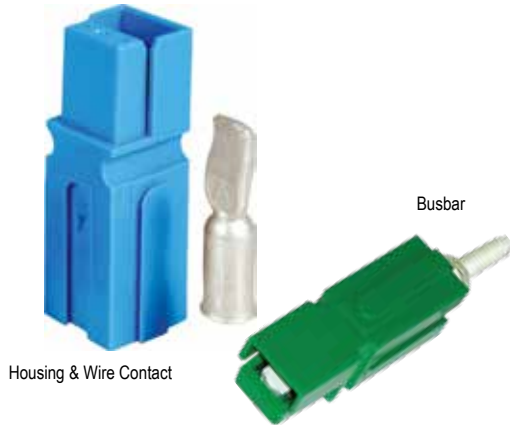


# Powerpole® Connector

## PP180 - Up to 350 Amps

POWERPOLE® PP180



PP180 are the largest of the Powerpole® series housings. They are designed to accommodate up to 3/0 (70 mm<sup>2</sup>) 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**

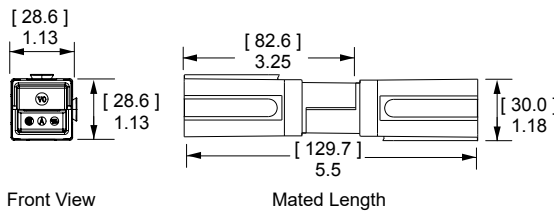
*Provides a hot swappable quick disconnect system for busbar power distribution*

## PP180 ORDERING INFORMATION

### PP180 Housings

The largest Powerpole® housing can be used with wire contacts for up to 3/0 AWG (85 mm<sup>2</sup>) 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   |

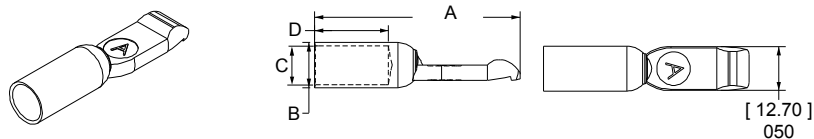


### PP180 Silver Plated Wire Contacts

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 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 |           |           |          | Dimensions |       |        |       |        |       |        |       |
|-----|-----------------|--------------|--------------------------|-----------|-----------|----------|------------|-------|--------|-------|--------|-------|--------|-------|
|     |                 |              | 500                      | 300       | 250       | 50       | - A -      |       | - B -  |       | - C -  |       | - D -  |       |
|     |                 |              |                          |           |           |          | inches     | mm    | inches | mm    | inches | mm    | inches | mm    |
| 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 |

\* Extended range

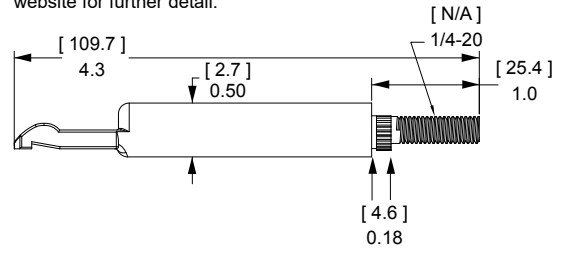


### PP180 Silver Plated Busbar Contacts

Use 1 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.

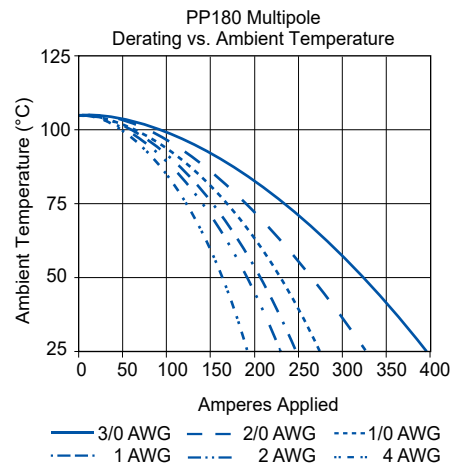
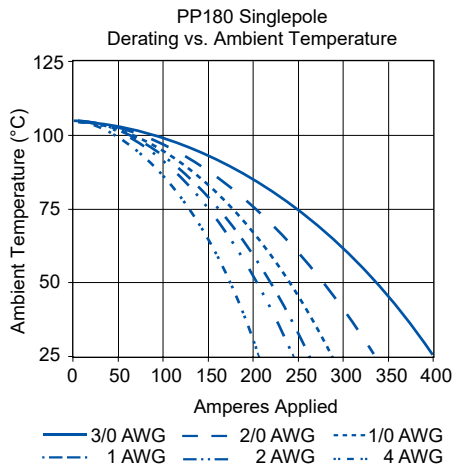
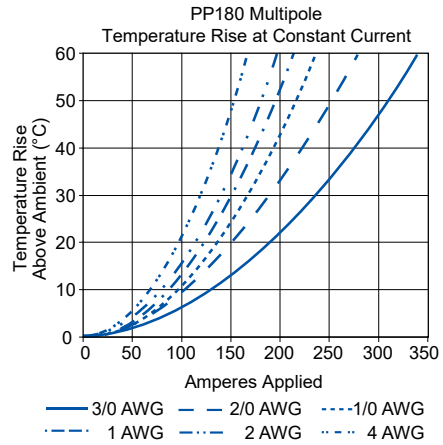
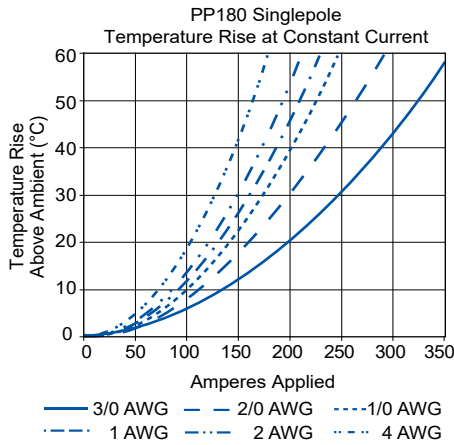
| Thread           | Mating Force | Loose Piece Part Numbers |        |        |
|------------------|--------------|--------------------------|--------|--------|
| Minimum Quantity |              | 1,000                    | 120    | 10     |
| Busbar 1/4-20    | High         | 180BBS-BK            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

See Busbar contact drawing on website for further detail.



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

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



POWERPOLE® PP180

# PP180 SPECIFICATIONS

## ELECTRICAL

| Current Rating Amperes <sup>1</sup>   | UL 1977 | CSA |
|---------------------------------------|---------|-----|
| Singlepole (Wire-to-Wire) (3/0 AWG)   | 350     | 230 |
| 2x2 Block (Wire-to-Wire) (3/0 AWG)    | 350     |     |
| Singlepole (Wire-to-Busbar) (1/0 AWG) | 180     |     |

### Voltage Rating AC/DC

|         |     |
|---------|-----|
| UL 1977 | 600 |
|---------|-----|

### Dielectric Withstanding Voltage

|          |       |
|----------|-------|
| Volts AC | 2,200 |
|----------|-------|

### Avg. Mated Contact Resistance Milliohms <sup>1</sup>

|                    |       |
|--------------------|-------|
| 6" of 1/0 AWG Wire | 0.100 |
|--------------------|-------|

### UL Hot Plug Current Rating Amperes <sup>4</sup>

|                       |     |
|-----------------------|-----|
| 250 Cycles at 120V DC | 75A |
|-----------------------|-----|

## 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>
- Hand Solder
- Wrench / Socket \*

\* Busbar Contacts Only

## MECHANICAL

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



File No. E26226



File No. LR25154



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.

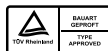
## IEC INFORMATION

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

## PROTECTION

### Touch Safety with Wire Contacts

|           |      |
|-----------|------|
| IEC 60529 | IP10 |
|-----------|------|

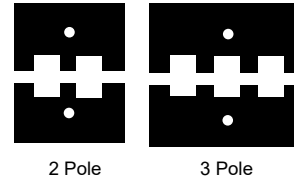
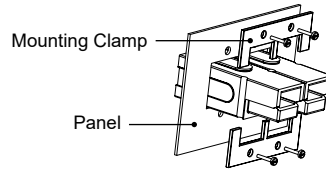


| ATTRIBUTES                              | PP180                                     |
|---|---|
| AMP Rating AC/DC                        | 180                                       |
| Voltage Rating AC/DC (Steady State)     | 500 V AC/DC (Operational)                 |
| Breaking Capacity - AMP Rating / Cycles | 180 Amp / 10 Cycles                       |
| Voltage Rating (Breaking Capacity)      | 220 VDC                                   |
| FINGER Safety - Mated Only              | IEC 60529 - IP20                          |
| Wire Size Tested                        | 70 mm <sup>2</sup>                        |
| Contact Series Tested                   | 1382G2                                    |
| Climatic Testing (Cold, Heat & MFG)     | IEC 60512 Test-11j, 11i & 11g             |
| Cycle Life                              | IEC 60512 Test 9a - 5,000 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           |

# POWERPOLE® PP180 ACCESSORIES

## 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.

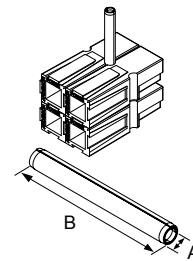


| Description      | Part Numbers |
|------------------|--------------|
| Minimum Quantity | 20 sets of 2 |
| 2 Pole           | 1465G1       |
| 3 Pole           | 1465G2       |

## 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.

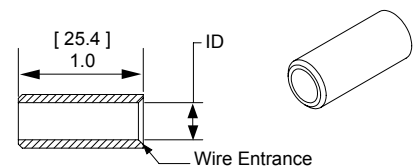
| Description      | Part Numbers |        | Dimensions    |             |          |        |
|------------------|--------------|--------|---------------|-------------|----------|--------|
|                  |              |        | - A - inches  |             | - B - mm |        |
| Minimum Quantity | 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 - |      |
|---------------------|-----------------|-----------|-----------------|--------------|---------|---------|------|-------------------|------|
| AWG                 | mm <sup>2</sup> | AWG       | mm <sup>2</sup> |              |         |         |      | inches            | mm   |
| Minimum Quantity    |                 |           |                 | 1,500        | 1,000   | 500     | 100  |                   |      |
| 1/0                 | 53.5            | 1         | 42.4            | -            | -       | 5687-BK | 5687 | 0.39              | 9.91 |
| 1/0                 | 53.5            | 2         | 33.6            | 5690-BK      | -       | -       | 5690 | 0.34              | 8.64 |
| 1/0                 | 53.5            | 4         | 21.2            | -            | 5693-BK | -       | 5693 | 0.27              | 6.86 |
| 1/0                 | 53.5            | 6         | 13.3            | -            | 5663-BK | -       | 5663 | 0.22              | 5.59 |
| 1/0                 | 53.5            | 10 to 8   | 5.3 to 8.4      | 5648-BK      | -       | -       | 5648 | 0.19              | 4.83 |



NOTE: Combination of a bushing and contact is not UL approved.

For environmentally sealed connector shells to hold Powerpole® 15 to 180 connectors, see SPEC Pak® product series on our website [www.andersonpower.com](http://www.andersonpower.com)



# Powerpole®

Tooling Information - APP® Applicators are Mechanical Feed Style and do not Require an Air Feed Kit.

POWERPOLE® TOOLING

| Wire Size                                       |                 | Loose Piece Part Number |                | Loose Piece Contact Crimp Tools |    |                      |   |         |   |         |                  |  |  |  |  |         |  |  |  |
|---|-----------------|-------------------------|----------------|---------------------------------|----|----------------------|---|---------|---|---------|------------------|--|--|--|--|---------|--|--|--|
| AWG   | mm <sup>2</sup> | 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 to 20  | 1.3 to 0.52     | N/A                     | 1332           | 1309G2<br>or<br>1309G8          |    |                      |   |         |   |         |                  |  |  |  |  |         |  |  |  |
| 12 to 16  | 3.3 to 1.3      | N/A                     | 1331           |                                 |    |                      |   |         |   |         |                  |  |  |  |  |         |  |  |  |
| 16 to 20  | 1.3 to 0.52     | 262G1-LPBK              | 262G2-LPBK     |                                 |    |                      |   |         |   |         |                  |  |  |  |  |         |  |  |  |
| 16 to 20  | 1.3 to 0.52     | 269G2-LPBK              | N/A            |                                 |    |                      |   |         |   |         |                  |  |  |  |  |         |  |  |  |
| 12 to 16  | 3.3 to 1.3      | 261G1-LPBK              | N/A            | 1309G3<br>or<br>1309G8          |    | N/A                  |   | N/A     |   | N/A     | Single           |  |  |  |  |         |  |  |  |
| 10 to 14  | 5.3 to 2.1      | 261G2-LPBK              | 261G3-LPBK     |                                 |    |                      |   |         |   |         |                  |  |  |  |  |         |  |  |  |
| 12 to 16  | 3.3 to 1.3      | 269G1-LPBK              | N/A            |                                 |    |                      |   |         |   |         |                  |  |  |  |  |         |  |  |  |
| 10 to 14  | 5.3 to 2.1      | 269G3-LPBK              | N/A            | 1309G6<br>or<br>1309G8          |    |                      |   |         |   |         |                  |  |  |  |  |         |  |  |  |
| 10 to 14  | 5.3 to 2.1      | 200G1L-LPBK             | 200G3L-LPBK    |                                 |    |                      |   |         |   |         |                  |  |  |  |  |         |  |  |  |
| 10 to 14  | 5.3 to 2.1      | 201G1H-LPBK             | N/A            |                                 |    |                      |   |         |   |         |                  |  |  |  |  |         |  |  |  |
| 310 to 14                                       | 5.3 to 2.1      | 1830G1-LPBK             | 1830G2-LPBK    |                                 |    |                      |   |         |   |         |                  |  |  |  |  |         |  |  |  |
| <b>PP75</b>                                     |                 |                         |                |                                 |    |                      |   |         |   |         |                  |  |  |  |  |         |  |  |  |
| 6   | 13.3            | N/A                     | 1307           | 1309G4                          |    | 1387G1               |   | 1388G6  |   | 1389G6  | Single           |  |  |  |  |         |  |  |  |
|   |                 |                         | 5900           |                                 |    |                      |   |         |   |         |                  |  |  |  |  |         |  |  |  |
| 8   | 8.4             |                         | 1875G1         |                                 |    |                      |   |         |   |         |                  |  |  |  |  |         |  |  |  |
|   |                 |                         | 5952           |                                 |    |                      |   |         |   |         |                  |  |  |  |  |         |  |  |  |
|   |                 |                         | 1875G2         |                                 |    |                      |   |         |   |         |                  |  |  |  |  |         |  |  |  |
| 10 to 12  | 5.3 to 3.3      |                         | 5953           |                                 |    |                      |   |         |   |         |                  |  |  |  |  |         |  |  |  |
|   |                 |                         | 5915           |                                 |    |                      |   |         |   |         |                  |  |  |  |  |         |  |  |  |
|   |                 |                         | 1875G3         |                                 |    |                      |   |         |   |         |                  |  |  |  |  |         |  |  |  |
|   |                 |                         |                |                                 |    |                      |   | 1388G7  |   | 1389G6  |                  |  |  |  |  |         |  |  |  |
|   |                 |                         |                |                                 |    |                      |   |         |   | 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         |                                 |    |                      |   |         |   |         |                  |  |  |  |  |         |  |  |  |
|   |                 |                         |                |                                 |    |                      |   | 1388G4  |   |         |                  |  |  |  |  |         |  |  |  |
| <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           |                                 |    |                      |   |         |   |         |                  |  |  |  |  |         |  |  |  |
|   |                 |                         |                |                                 |    |                      |   |         |   |         |                  |  |  |  |  | 1303G13 |  |  |  |
| 6   | 13.3            |                         | 1348           |                                 |    |                      |   |         |   |         |                  |  |  |  |  |         |  |  |  |
|   |                 |                         |                |                                 |    |                      |   | 1388G4  |   | 1389G3  | Single           |  |  |  |  |         |  |  |  |

Insertion / Extraction Tool for PP15/45 Contacts = 111038G2

NOTE: see website for the most current information.

| Wire Size                                     |                 | Reeled Part Number |                | Reeled Contact Crimp Tools |   |                                |
|---|-----------------|--------------------|----------------|----------------------------|---|--------------------------------|
| AWG   | mm <sup>2</sup> | Tin Plating        | Silver Plating | APP® Applicator            | + | APP® Press                     |
| <b>PP15/45 Flat Wiping Power &amp; Ground</b> |                 |                    |                |                            |   |                                |
| 16 to 20                                      | 1.3 to 0.52     | 262G1              | 262G2          | TD0101                     |   | 115V = TE0101<br>230V = TE0102 |
| 16 to 20                                      | 1.3 to 0.52     | 269G2              | N/A            |                            |   |                                |
| 12 to 16                                      | 3.3 to 1.3      | 261G1              | N/A            |                            |   |                                |
| 10 to 14                                      | 5.3 to 2.1      | 261G2              | 261G3          |                            |   |                                |
| 12 to 16                                      | 3.3 to 1.3      | 269G1              | N/A            |                            |   |                                |
| 10 to 14                                      | 5.3 to 2.1      | 269G3              | N/A            |                            |   |                                |
| 10 to 14                                      | 5.3 to 2.1      | 200G1L             | 200G3L         | TD0102                     |   |                                |
| 10 to 14                                      | 5.3 to 2.1      | 201G1H             | N/A            |                            |   |                                |
| 10 to 14                                      | 5.3 to 2.1      | 1830G1             | 1830G2         |                            |   |                                |

### Your Best Connection™

2020-0055 DS-PP180 REV C7

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