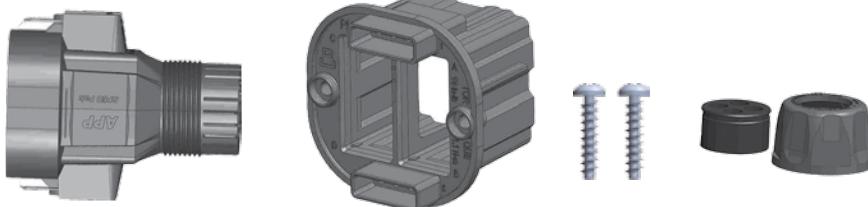


Mid Power SPEC Pak® Plug

Assembly Instructions

Plug Shell Kit:



Tools you will need:

- Wire Lubricant
- Crimp Tool(s)
- Philips Head Screw Driver
- 44mm wrench

1. Wire Protection

- Strip approximately 2 3/4 inches (69.8 mm) from the outer cable jacket, if applicable.
- Lubricate individual wires using Isopropyl alcohol. **WARNING:** Dry thoroughly before energizing the circuit. Follow all cautions on the lubricant container.
- Slide approximately 8 inches (203.2 mm) of wires through wire protection nut, wire protection seal (with the groove facing the wire protection nut) and plug shell. (See figure 1)
- Insert wire protection seal into shell. (See figure 2)

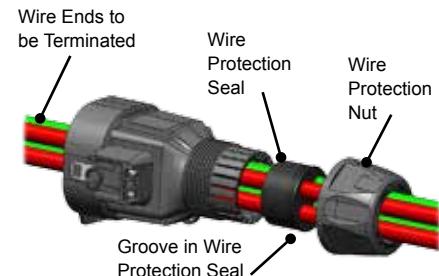


Figure 1

2. Prepare Wires

- Strip individual wire(s) taking care not to damage the copper conductor. (See Table 1)

Table 1 (See figure 3)

| APP Contact Part Number | Amps | “X” Inches | “X” mm | For more details, see document: |
|-------------------------|------|--|--------|---------------------------------|
| 1307 | | 9/16" | 14.5 | 1S1072 |
| 5953 | 75 | | | |
| PM16P2024S30 | | Wire Insulation OD < crimp barrel ID 0.21" (5.5mm) | | |
| PM16P1620S30 | | --- | | |
| PM16P1416S30 | 5 | | | 1S6420 |
| PM16P12S30 | | Wire Insulation OD > crimp barrel ID 0.28" (7.0mm) | | |

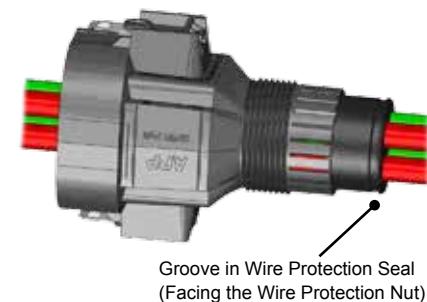


Figure 2

3. Crimp Contacts

- Crimp contacts per crimp tool instructions. (See Table 2). **WARNING:** Crimping with non-APP recommended tools may product high resistance or contact distortion resulting in improper seating of the contact in the Powerpole® housing and may effect UL & CSA approval.
- Keep all contacts parallel to each other while crimping. (See figure 3)

NOTE: This will ensure that contacts remain in proper position for mating and un-mating once installed into the Powerpole® housings. It will also make installation into Powerpole® holder easier.

Table 2

| APP Contact PN | Wire Size | Hand Tool PN | Instruction Sheet PN | Please inquire for additional tooling options: |
|----------------|--|--------------|----------------------|--|
| 1307 | 6 AWG 13.30 mm ² | | | |
| 5953 | 10 – 12 AWG 5.30 – 3.30 mm ² | 1309G4 | 1S6373 | Pneumatic |
| PM16P2024S30 | 24 – 20 AWG 0.25 – 0.50 mm ² | | | |
| PM16P1620S30 | 20 – 16 AWG 0.50 – 1.30 mm ² | PM1000G1 | 1S6497 | Pneumatic |
| PM16P1416S30 | 16 – 14 AWG 1.30 – 2.10 mm ² | | | |
| PM16P12S30 | 12 AWG 3.30 mm ² | | | |

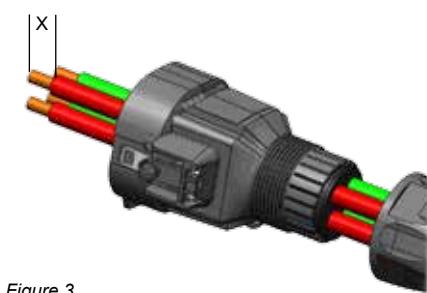


Figure 3

Mid Power SPEC Pak® Plug

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4. Populate Powerpole® holders

- a. Orient Powerpole® housing with hood down. (See figure 4)
- b. Block Powerpole® by interlock dovetails. The Powerpole® housing will be stacked one (1) wide and two (2) high. (See figure 5)
- c. Orient Powerpole® holder with  on the left.
 - i. Positions for the power contacts are labeled A thru D with A being in the upper right corner as you are looking at the front of the holder or upper left corner as you are looking at the back of the holder. (See figure 6)
 - ii. Positions for the auxiliary (PowerMod®) contacts are labeled with 1 and 8. 1 is located in the upper right corner and 8 located in the lower left corner as you are looking at the front of the holder. (See figure 6)
- d. Insert first set of 1x2 blocked Powerpole® from the rear. Hood is down.
NOTE: You feel them snap into place when fully inserted.
- e. Insert second set of 1x2 blocked Powerpole® from the rear, if applicable. Hood is down. **NOTE:** You feel them snap into place when fully inserted.

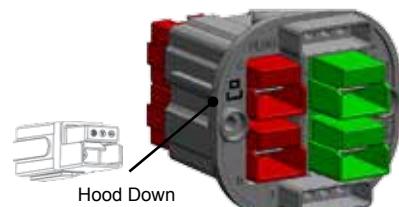


Figure 4

Correct



Figure 5

Incorrect



5. Power contact installation

- a. Orient the Powerpole® housing with hood down. (See figure 4)
- b. Insert contact, from the back, into the Powerpole® housing per your configuration. (See figure 7) Contacts will snap into place. **NOTE:** The contact will slip under the internal barrier and snap over the internal retaining pin. (See figure 8)
- c. Repeat Step 5b as necessary.

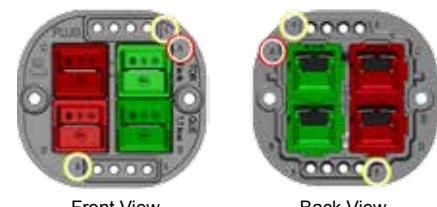


Figure 6

6. Auxiliary contact installation, if applicable

- a. Insert pin, from the back, into the Powepole® holder per your configuration. Contacts will snap into place. (See figure 9)

7. Final Assembly

- a. Orient shell with APP SPEC Pak® up. (See figure 10)
- b. Orient Powerpole® holder with  on the left. (See figure 10)
- c. Slide holder into shell. (See figure 10) **NOTE:** The holder will only go in one way.
- d. Using two(2) M3.5 x 15mm Phillips head screws, secure the holder to the shell.
 - i. Recommended torque: 10 in-lbs (1.1 N-m)
- e. Gently pull on the power contact wires to remove excess slack in the wires.
- f. If using auxiliary contacts, create 1/4" to 1/2" (6mm to 13mm) of slack in the auxiliary contact wires.
- g. Hand tighten wire protection nut.
- h. Using a 44 mm wrench or strap wrench, tighten wire protection nut $\frac{3}{4}$ to 1 turn.

8. Assembly is complete, (See figure 11)



Side View



Front View

Figure 11

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Figure 10

