

6 Pole Mini SPEC Pak® Assembly Instructions

Review Prior to Assembly

NOTE: It is recommended to insert wires through housing before stripping wires or crimping contacts.



Check for dust & debris on the grommet, grommet cavities, O-rings, and gaskets prior to installing. Debris left on wire and external tears or cracks on the grommet are clear indicators of damage. Damaged grommets should be discarded and replaced since a water-tight seal cannot be ensured. Wire must be circular, smooth, and retain shape when compressed. Anderson Power will not guarantee a water tight seal can be achieved with wire that does not meet this criteria.

Grommet Sizing:

The size of the grommet is indicated by the two letter identifier “X-X”. Refer to the grommet size matrix in Table A. **NOTE:** Plug does not support a single jacketed multiconductor cable.

Wire Cavities:

There is a 3-hole grommet that supports discrete wire seal on 2 power wires and a 4 conductor auxiliary cable. Refer to Figure 1 for locations of power and auxiliary sealing cavities in grommet. The auxiliary location is indicated by arrows. The location of each wire is important to maintaining a proper seal. All wires must be coming out straight with no twisting from electrical contact locations.

Table A: Grommet sizing matrix

P/N	IDENTIFIER MARK	NO. OF HOLES	DISCRETE POWER JACKET (DIAMETER RANGE)		JACKETED SIGNAL (DIAMETER RANGE)	
			Ø A		Ø B	
			INCH	MM	INCH	MM
D-220-180-SP	D-A	3	.220-.240	5.59-6.10	.180-.200	4.57-5.08
D-220-220-SP	D-B				.220-.240	5.59-6.10
D-240-180-SP	D-C		.240-.260	6.10-6.60	.180-.200	4.57-5.08
D-240-220-SP	D-D				.220-.240	5.59-6.10
J-530-SP	J-A	1	.530-.550	13.46-14	N/A	N/A

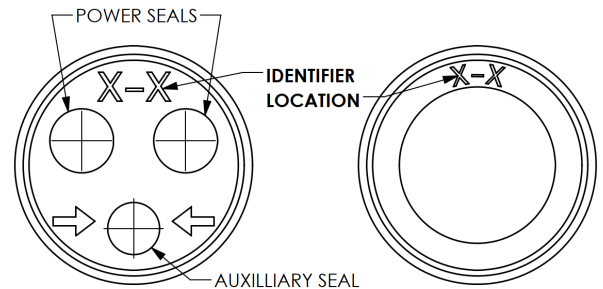


Figure 1: Grommet layout

Assembly Instructions Document Reference

Plug Assembly: Document Number 1S6922

Panel Mount Receptacle Assembly: Document Number 1S6923

Inline Receptacle Assembly: Document Number 1S6924

Panel Mount Receptacle Assembly

NOTE: For easiest construction it is recommended to have both sides of wires unterminated (not connected) prior to construction. Must have access to both front and back of panel during installation. Panel gasket/cover should be inspected for damage and debris on sealing ribs prior to assembly.

⚠ Damaged gaskets should be discarded as a proper seal cannot be guaranteed. Panel cutout surface should be inspected for debris, irregularities, and warp on panel surface.

* **If wires to be crimped while mounted to panel, ensure there is enough length of wire to be crimped from the front side.**

Components found in panel mount kit (Figure 2)
Kit P/N: SK7-034M06

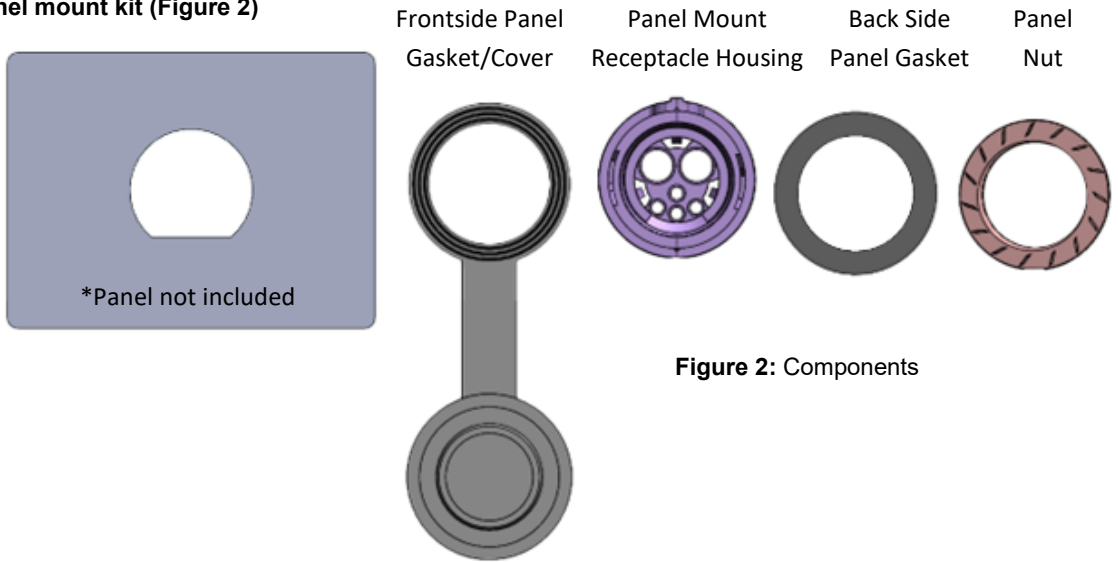


Figure 2: Components

Step 1a

Put the main panel mount receptacle housing's threads through the frontside panel gasket cover [116149P1] then install through the recommended panel cutout (Figure 3). Check to make sure the lock indicator is orientated with the window on the cover. Cover may need to be creased (Figure 4).

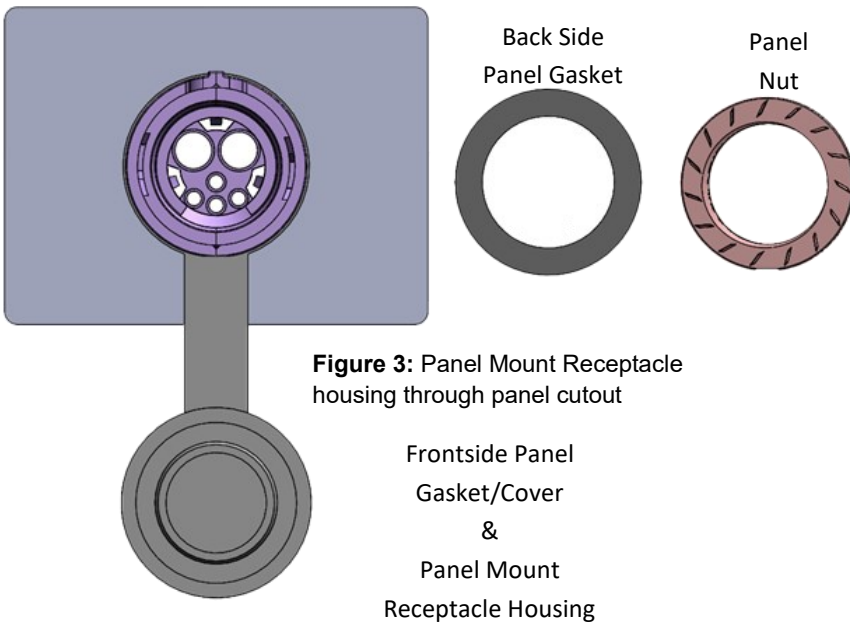


Figure 3: Panel Mount Receptacle housing through panel cutout

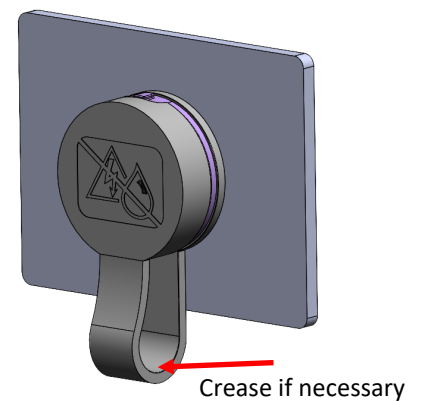


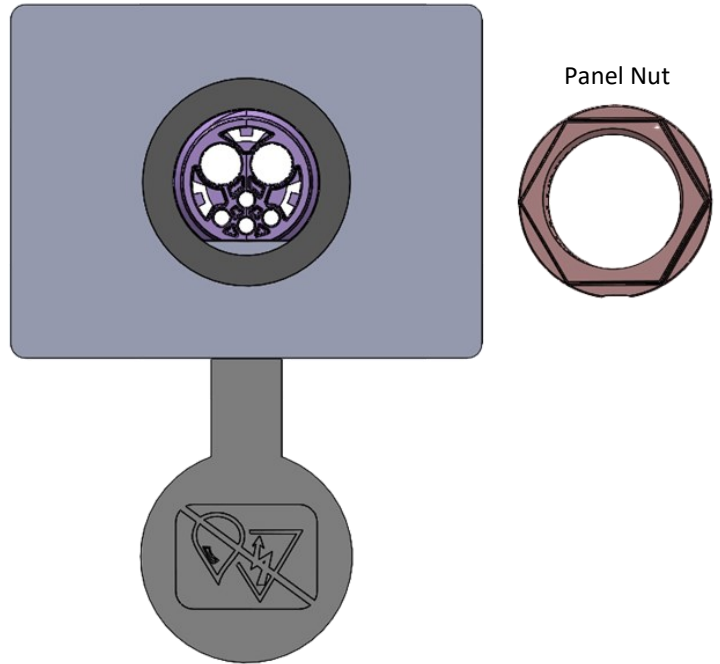
Figure 4: Orientation of cover

Step 1b

On the backside of the panel, install the backside panel gasket onto the threads of the housing until the gasket is flush with the panel (Figure 5).

Figure 5: Backside panel mount on housing

- Frontside Panel Gasket/Cover
- Panel Mount Receptacle Housing
- Back Side Panel Gasket



Step 1c

Screw on panel nut until tight, plus 1/3 turn (Figure 6).

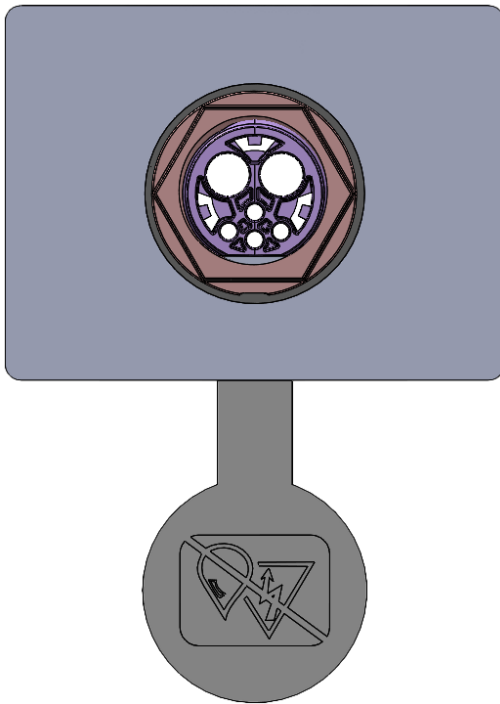


Figure 6: Panel nut tightened to housing

- Frontside Panel Gasket/Cover
- Panel Mount Receptacle Housing
- Back Side Panel Gasket
- Panel Nut (tightened to snug)

Step 2

Strip jacketed auxiliary cable and auxiliary wires (Table B, Figure 7).

Table B: Auxiliary Cable Stripping Dimensions

Connector Series	Wire Size AWG	Wire Size mm ²	Cable Type	"X"		"Y"	
				MM	IN	MM	IN
6P MINI SPEC PAK® PANEL MOUNT RECEPTACLE	20 - 24	.50 - .25	Auxiliary	5.5-6.5	.220-.260	39.5-65.0	1.530-2.660

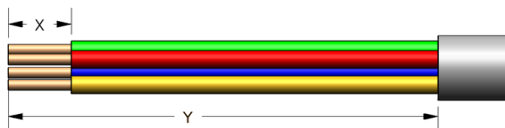


Figure 7: Jacketed Auxiliary Cable Stripping Dimensions

Step 3

Twist stripped auxiliary wire tips so all strands are together for easier insertion in housing. Feed auxiliary wires through panel mount housing from backside. Bend the 3 wires in the bottom positions out of the way for easier crimping (Figure 8).

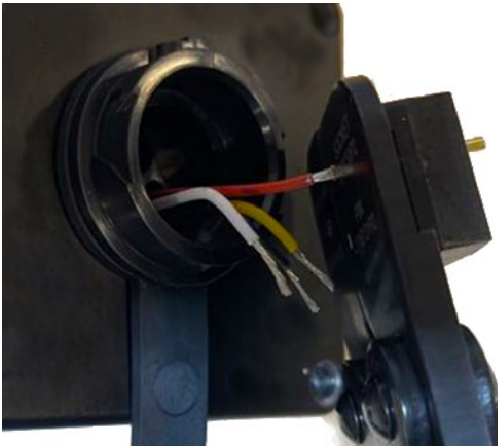


Figure 8: Auxiliary wires fed through panel mount housing with bottom three wires bent out of way

Step 4

Crimp auxiliary contacts onto wires following crimp specifications per (1S6910) with recommended crimp tools (Table C). See recommended auxiliary wire crimping sequencing (Figure 9).

Table C: Recommended Crimp Tools

Contact Part Number	Wire Size (AWG)	Wire Size mm ²	Crimp Tool
116130P1 (Socket)	20/24	.50 - .25	1309G12 , TM0001, TP0001

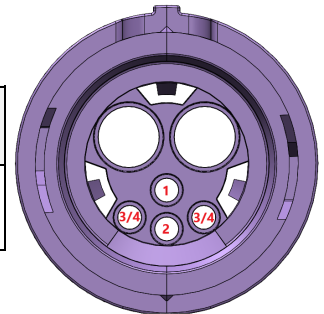


Figure 9: Recommended auxiliary wire crimping sequence

Step 5

Feed power wires through panel mount housing from backside. Strip power cables (Table D, Figure 10). Note: Crimped auxiliary wires may need to be gently pulled back into housing to seat them and allow for crimping of power wires.

Table D: Power Cable Stripping Dimensions

Connector Series	Wire Size AWG	Wire Size mm ²	Cable Type	"X"		"Y"	
				MM	IN	MM	IN
6P MINI SPEC PAK® PANEL MOUNT RECEPTACLE	8	10	Power	7.5-9.0	.300-.350	-	-

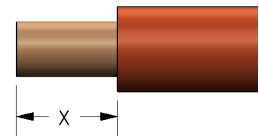


Figure 10: Power Cable Stripping Dimensions

Step 6

Crimp power contacts onto wires following crimp specifications per (1S6910) with recommended crimp tools (Table E, Figure 11).

Table E: Recommended Crimp Tools

Contact Part Number	Wire Size AWG	Wire Size mm ²	Crimp Tool
116133P1 (socket)	8	10	1309G13, 1387G1



Figure 11: Crimping power wire

Step 7

 **Prior to installing contact retainer inspect power socket tines. Tines should not be bent after contacts are seated. (Figure 12)**

Pull all wires back to seat contacts in housing. After inspection install socket contact retainer (Figure 13) . There will be an audible click when correctly installed. If desired , a cable tie is provided for cable management from the backside after fully assembled

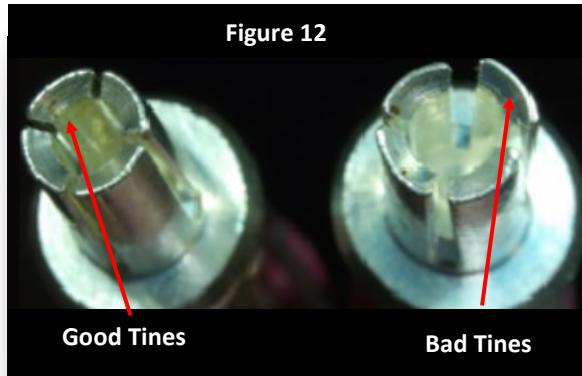


Figure 12: Good vs Bad Power Socket Comparison



Figure 13: Socket contact retainer install

All Data Subject to Change Without Notice

1S6923 Rev 0 **Your Best Connection™**

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NOTE: Extended strip length of the multiconductor cable or 20-24AWG [.50—.25mm²] is recommended as an alternative for ease of assembly.

Appendix Step I:

Strip jacketed auxiliary cable and auxiliary wires (Appendix Table A, Appendix Figure 1).

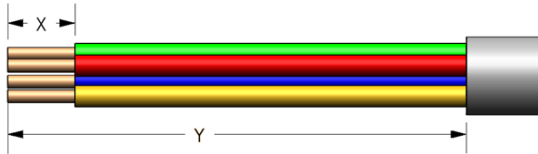
Return to respective Steps:

Plug (Pin Side): Document 1S6922, Page 2, Step 3

Inline Receptacle (Socket Side): Document 1S6924, Page 4, Step 3

Appendix Table A: Extended Auxiliary Cable Stripping Dimensions

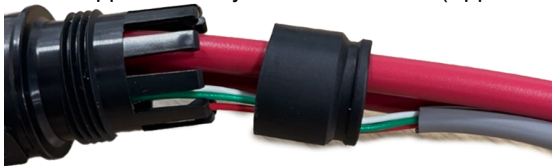
Connector Series	Wire AWG	Wire mm ²	Cable Type	"X"		"Y"	
				MM	IN	MM	IN
Extended Strip length Plug	20 - 24	.50 - .25	Auxiliary	5.5-6.5	.220-.260	39.5-65	1.530-2.660
Extended Strip length Inline Receptacle	20 - 24	.50 - .25	Auxiliary	5.5-6.5	.220-.260	65-115	2.660-4.527



Appendix Figure 1: Jacketed Auxiliary Cable Extended Stripping Dimensions Cable

Appendix Step II:

Push grommet forward down length of power wires until the grommet is seated in the fingers of the cable gland (Appendix Figures 2 & 3). The power contacts may need to be reseated in the housing by pulling on the power wires individually until properly seated. The individual 20-24AWG [.50—.25mm²] wires should now be visible outside of the connector. Measure and mark .787 in [20mm] back from stripped auxiliary cable's insulation (Appendix Figure 3).



Appendix Figure 2: Grommet prior to inserting into cable gland



Appendix Figure 3: Installed into cable gland fingers with .787 in [20mm] measured and marked from back of insulation

Appendix Step III:

With the power contacts in position, pull on the 20-24AWG [.50—.25mm²] wires until Auxiliary contacts are also seated. Now install the respective contact retainer (Appendix Figures 4 & 5).

Appendix Figure 4: Plug (Pin Side)



Appendix Figure 5: Receptacle (Socket Side)



Appendix Step IV:

Push the 20-24AWG [.50—.25mm²] cable through the cavity of the grommet until the .787 in [20mm] mark is no longer visible (Appendix Figures 6 & 7).

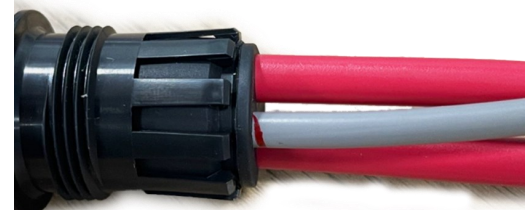
Return to respective step:

Plug (pin side): Document 1S6922, Page 5, Step 12

Inline Receptacle (socket side): Document 1S6924, Page 7, Step 14



Appendix Figure 6: Auxiliary cable prior to inserting into grommet .787 in [20mm]



Appendix Figure 7: Auxiliary cable after being inserted into grommet .787 in [20mm]