

SBS®X-75A Assembly Instructions

NOTE: For easiest construction it is recommended to not strip or crimp wires onto cable until after step 1. Should customer choose to crimp contacts and insert contacts on wires thru grommet during installation, grommet should be inspected for any damage that may have occurred during installation to both external and internal ribs. Silicone debris left on wire and external tears or cracks on the grommet are clear indicators of damage. Damaged grommets should be discarded and replaced as a water-tight seal cannot be ensured if damage to grommet has occurred.

Step 1

Slide grommet over power wires and signal or ground cable (if present) (see figure 1). Slide down far enough for wires to be fully inserted into housing; approximately 3.0" [118 mm]. It is recommended to have the signal cable cut 0.200" to 0.300" [5.1 to 7.6 mm] longer than the power wire to eliminate strain on the signal positions should the wires go under tension. For panel mount assemblies place panel gasket over back of housing prior to assembly.



Figure 1

Step 2

Strip power wires as well as signal or ground wire/cable (if present). Ensure wires are stripped enough for completed insertion into contact crimp barrels (table A and figures 2 & 3).



Table A: Cable Stripping Dimensions

Connector Series	Contact Type	"X"		NOTE
		Inches	mm	
SBS®X-75A	Power/Ground	0.56	14.0	< 0.380" (9.65 mm) Outer Diameter Wire (figure 2)
	Power/Ground	1.10	27.9	≥ 0.380" (9.65 mm) Outer Diameter Wire (figure 3)
	Auxiliary Cable	1.10	27.9	All cable jackets
	Auxiliary Pin	0.18	4.6	For use when wire insulation OD is SMALLER than crimp barrel ID
	Auxiliary Socket	0.21	5.3	
	Auxiliary Pin	0.24	6.1	For use when wire insulation OD is LARGER than crimp barrel ID
	Auxiliary Socket	0.28	7.1	



Figure 2

(0.56" [14.2 mm] Strip Length)



Figure 3

(1.10" [28.0 mm] Strip Length)

Step 3

Crimp power, signal and ground contacts onto wires using the appropriate crimping tooling (tables B and C).

- a. Make sure to crimp signal contacts in the same orientation that your signal housing will be. Signal Housing is intended for use with two pin contacts to be on top and two socket contacts on bottom.
- b. Refer to crimp document 1S6848 SBS®X-75A crimp specifications as reference to determine crimp quality.

Table B: Power/Ground Contacts Listed for Use with SBS®X-75A Series

Contact Part Number	Wire Size AWG	Wire Size mm ²	Crimp Tool
1339G4	4	25	1387G1 pneumatic tool + 1388G6 die + 1389G9 locator
1339G2	6	16	1309G4 hand tool or 1387G1 pneumatic tool + 1388G6 die + 1389G9 locator
1339G5	8	10	1309G4 hand tool or 1387G1 pneumatic tool + 1388G6 die + 1389G9 locator
1339G3	10 to 12	2.5 to 6	1309G4 hand tool or 1387G1 pneumatic tool + 1388G7 die + 1389G9 locator

Ground Contacts Listed for Use with SBS®X-75A Series

Contact Part Number	Wire Size AWG	Wire Size mm ²	Crimp Tool (Number of Crimps = Single)
1340G1	6	16	11309G4 hand tool or 1387G1 pneumatic tool + 1388G6 die + 1389G20 locator
1340G2	8	10	1309G4 hand tool or 1387G1 pneumatic tool + 1388G6 die + 1389G20 locator
1340G3	10 to 12	2.5 to 6	1309G4 hand tool or 1387G1 pneumatic tool + 1388G7 die + 1389G20 locator

Table C: Auxiliary Contacts Listed for Use with SBS®X-75A Series

Contact Part Number	Wire Size AWG	Wire Size mm ²	Crimp Tool	Insertion Tool	Extraction Tool	Inspection Tool
PM16P1416C30	16 to 14	Post-Mate Pin, 6.6 mm	PM1000G1 (hand tool & locator) TM0001 + TL0001 Pin + TL0002 Sockets (Mil Standard hand tool & locators) TP0001 + TL0001 (pins) + TL0002 Sockets (pneumatic tool & locators)	PM1002G1 Wire size 24 to 16 AWG (0.50 to 1.0 mm ²) 11038G3 Wire size 14 AWG (1.5 mm ²)	PM1003G1	PM1003GX
PM16P1416A30	16 to 14	Pre-Mate Pin, 9.3 mm				
PM16P1416S30	16 to 14	Standard Length Pin, 7.7 mm				
PM16S1416S32	16 to 14	Socket				
PM16P1620C30	20 to 16	Post-Mate Pin, 6.6 mm				
PM16P1620A30	20 to 16	Pre-Mate Pin, 9.3 mm				
PM16P1620S30	20 to 16	Standard Length Pin, 7.7 mm				
PM16S1620S32	20 to 16	Socket				
PM16P2024C30	24 to 20	Post-Mate Pin, 6.6 mm				
PM16P2024A30	24 to 20	Pre-Mate Pin, 9.3 mm				
PM16P2024S30	24 to 20	Standard Length Pin, 7.7 mm				
PM16S2024S32	24 to 20	Socket				

Step 4a.

Orient signal cable so the two pin contacts are in line with the top of the signal housing (arrow symbol up) and the two socket contacts on the bottom. Load signal contacts into signal housing by inserting all contacts into rear of signal housing simultaneously. Press each contact forward using proper insertion tool based on wire size as shown above. Use inspection tool #PM1003GX to ensure the auxiliary contacts are properly seated in the connector housing (see figure 4).

4b. For ground, simply press the contact into the center ground housing the same way as the power contacts (see figure 4).

Figure 4



Step 5

Load both power contacts and signal/ground housing into the main connector body starting with the signal/ground housing and then the power contacts (see figure 5). Ensure both power contacts are fully seated on their respective springs and the signal/ground housing is completely latched into place. Signal Housing should be flush with front of the connector (see in figure 6).

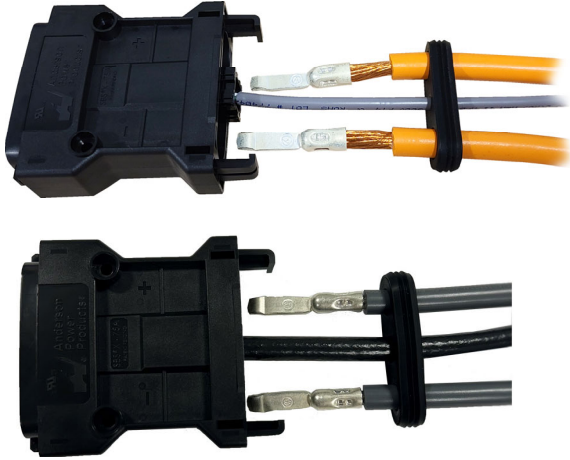


Figure 5



Figure 6

- There are four keying positions that the signal or ground housing can be placed in as noted by hood position and direction of arrow on rear of housing (up, down, left, and right). Each position will key the connector so it will only mate with other connectors with the same signal housing orientation.
- Note that signal/ground housings must be in the same orientation when placed vertically (either up or down), or placed opposite when placed horizontally (left & right) in order to mate properly.
- If the center signal or ground housings are inserted incorrectly, when trying to mate, you may use the Signal Housing Extraction Tool #116081P1 to remove the housing. To remove the signal or ground housings, start by training the cable down or up so it is out of the way. Using Signal Housing Extraction Tool, compress the tool and place prongs into the grooves on either side of the signal or ground housing. Push the tool forward until a positive stop is reached, the tool will have wedged beneath the internal latches (see figure 7). Release compression to allow the tool to lift the internal latches. Gently push on the front of the signal or ground housings to extract the housing (see figure 8).

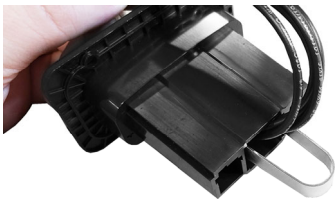


Figure 7

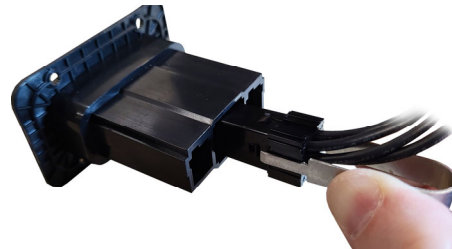


Figure 8

Step 6

For in-line assemblies slide the grommet up the wires to the rear of the connector housing (see figure 9). Apply even pressure to the grommet to push grommet until it is seated fully into the sealing cavity. Note that grommet will be a tight fit to ensure proper sealing. Check to ensure the grommet is completely inserted evenly all around with the grommet being flush or sub-flush to the rear of the housing (see figure 10). If you feel the pressure required is too high, check to ensure proper grommet is being used. If correct grommet has been chosen, then you may apply additional silicone-safe lubrication to the grommet.

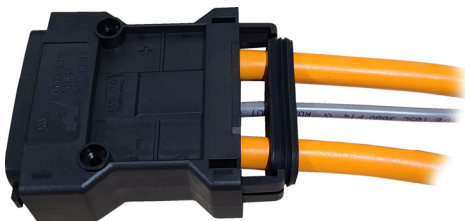


Figure 9



Figure 10

Step 7

Fasten cable clamps onto wires by alternating evenly to alleviate skewing. Screws are torqued to 6 in-lb [0.68 N-m]. Ensure cable clamps are snug to the power wire and ground wire if present (see figure 11).

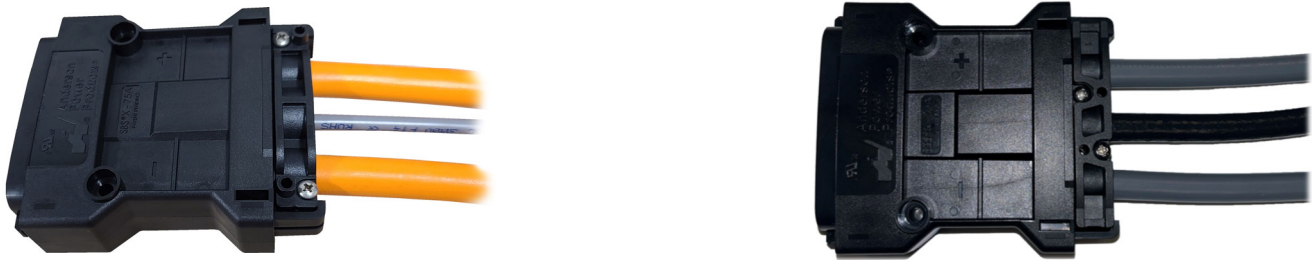


Figure 11

Step 8

For Panel Mount assemblies, Panel Mount Gasket should be flush with the back of the panel (see figure 12). When attaching Panel Mount assemblies, ensure mounting hardware has O-rings under bolt heads before assembling (see figure 13).



Figure 12



Figure 13

Step 9

Bolts to be torqued to 3 in-lb. [0.34 N-m] to ensure O-ring and panel mount gasket have compression. Minor gasket extrusion beyond panel flange is to be expected (see figure 14.) Note that mounting screw hardware is not included. To ensure proper installation, Bolt head is to be 0.270" [6.8 mm] MAX and should not be beveled or tapered so O-rings correctly seat in hardware. Bolt thread max diameter to be 0.140" [3.5 mm] and hex nuts to be 0.305" [7.7 mm] MAX flat-to-flat.



Figure 14

Step 10

Check the assembly to ensure signal housings are oriented correctly. Mate the connector up to 5 times to check all components are seated correctly and do not move around within the connectors.

IP68 Protection – Unmated

Anderson strongly recommends the usage of covers when connectors are not mated to maintain IP68 protection.

To tether connector covers to the housings, first pull through geometry on the housings. Then pull cover through loop on end of cord. Finally, pull tight to secure cord loop around connector (see figure series 15 & 16) for example process. For panel mount assemblies, simply replace a mounting O-ring with tethered grommet. (see figure series 17) for example process.

Figure Series 15 - Receptacle Cover

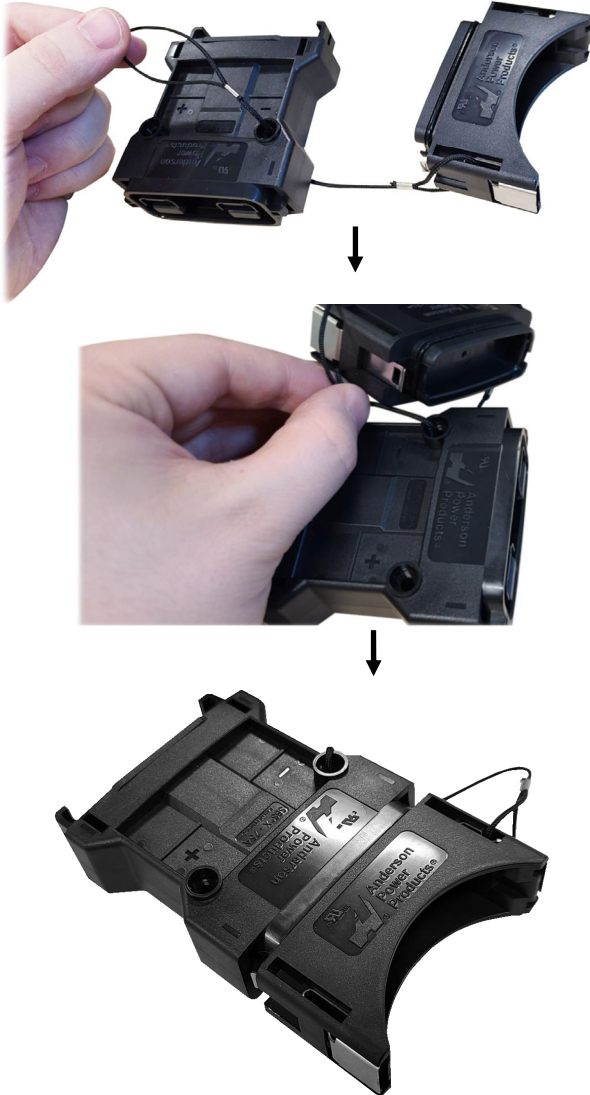
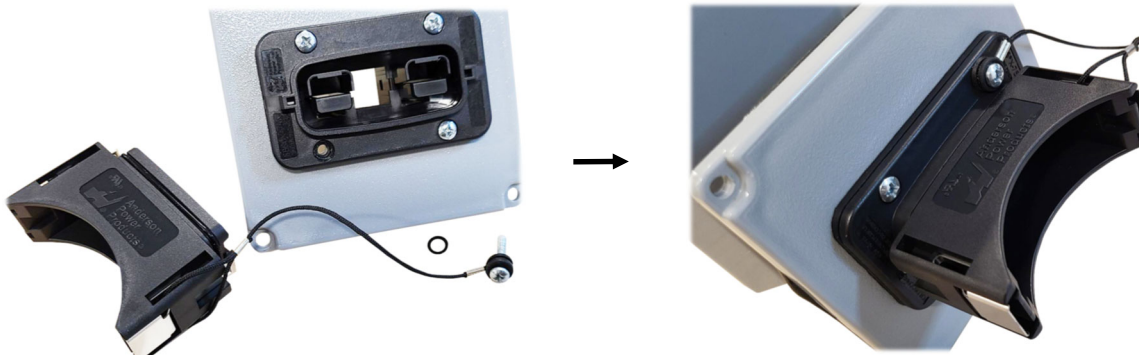


Figure Series 16 - Plug Cover



Figure Series 17 - Panel Mount Cover



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