

## SBS® Connector Assembly Instructions



The following instructions are supplied as a reference. For installation by a qualified electrician in accordance with national and local electrical codes and the equipment manufacturer's assembly instruction. The suitability of this type of termination must be evaluated by the Underwriter's Laboratories, Inc. and Canadian Standard Association for the end use application.

SBS crimp contacts are for use with stranded Copper (Cu) wire only. Crimp tools recommended by APP are required to achieve the designed performance of the connector. Use of solid wires, alternate conductor materials, or tools not recommended by Anderson Power can affect safety agency approvals of the connector and may produce unpredictable or health threatening results.

**Table A: Contacts listed for use with SBS Series**

Contact P/N	Wire Size
1339G2	#6 AWG
1339G5	#8 AWG
1339G3	#10 to 12 AWG

**Table B: Ground Contacts listed for use with SBS75G Series**

Contact P/N	Wire Size
1340G1	#6 AWG
1340G2	#8 AWG
1340G3	#10 to 12 AWG

**Table C: Auxiliary Contacts listed for use with SBS75x Series**

Contact P/N	Wire Size	Length
PM16P12S30	#12 AWG	Standard Length 7.7mm
PM16P1416S30	#14 to 16 AWG	Standard Length 7.7mm
PM16P1620S30	#16 to 20 AWG	Standard Length 7.7mm
PM16P2024S30	#20 to 24 AWG	Standard Length 7.7mm
PM16P12A30	#12 AWG	Pre-Mate 9.3mm
PM16P1416A30	#14 to 16 AWG	Pre-Mate 9.3mm
PM16P1620A30	#16 to 20 AWG	Pre-Mate 9.3mm
PM16P2024A30	#20 to 24 AWG	Pre-Mate 9.3mm
PM16P12B30	#12 AWG	Pre-Mate 8.5mm
PM16P1416B30	#14 to 16 AWG	Pre-Mate 8.5mm
PM16B1620B30	#16 to 20 AWG	Pre-Mate 8.5mm
PM16P2024B30	#20 to 24 AWG	Pre-Mate 8.5mm
PM16P12C30	#12 AWG	Post-Mate 6.4mm
PM16P1416C30	#14 to 16 AWG	Post-Mate 6.4mm
PM16P1620C30	#16 to 20 AWG	Post-Mate 6.4mm
PM16P2024C30	#20 to 24 AWG	Post-Mate 6.4mm

## 1. Wire preparation:

- a. SBS®75x - If using bundled cable, strip outer jacket to 2.05 inches (52mm).
- b. SBS®75x - Cut power conductor 0.733 inches shorter than socket signal conductors. Cut pin signal conductors 0.51 inches shorter than socket signal conductors.
- c. SBS®50, SBS®75x, SBS®75G, - Strip cable to dimensions in Table D.

## 2. \*Crimp contact to cable following Tables E and F or solder following Recommended Soldering Techniques.

- a. Soldering recommended for cables with solid or minimal conductor stranding (ex. THHN type wire).

**NOTE:** *If using the cable clamp, secure the main clamp housing to the SBS®75x connector housing using the included screw and nut before installing/inserting power and auxiliary contacts (Recommended torque is 8 inches - lbs). If using bundle wires, make sure bundle is secured (not individual wires).*

## 3. Insert contacts into the SBS® housing:

### Main Power Contacts

- a. Observing proper polarity as marked on the housing, place contact in housing with notched side of tongue next to spring.
- b. Push contact and cable into housing until it snaps over end of spring; tug slightly to make sure contact is locked into place.

### Optional Ground Contacts (SBS75G only)

- a. Power/Ground contacts are marked with the ground symbol  $\perp$  and are to be used in the center location of the SBS75G housing only.
- b. Observing proper polarity as marked on the housing, place contact in housing with notched side of tongue next to spring.
- c. Push contact and cable into housing until it snaps over end of spring; tug slightly to make sure contact is locked into place.

### Optional Aux. Contacts (SBS®75x only)

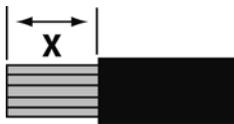
- a. Terminated contacts are to be inserted from the rear side of the connector using insertion tool 111038G3 (with APP logo facing up the two upper holes are for pin contacts and two lower holes are for socket contacts).

**NOTE:** *If using the cable clamp, secure the auxiliary wires using the included cable tie. Loop the tie through the two slots in the clamp body so that the tie ratchet is outside the clamp body and tighten until fully snug. Screw the clamp to the main clamp body using the included self tapping screws once the power and auxiliary contacts are properly inserted. Screws should be torqued in an even and opposite manner by alternating between screws through the tensioning process. The bottom of the clamp should be equidistant on both sides from the clamp body when the recommended torque value is achieved on both screws. Do not over tighten (Recommended torque is 5 in-lbs). If individual wires are being used, visually inspect to make sure all wires are secured.*



**Table D: Cable Stripping Dimensions**

Connector Series	Contact Type	"X" Inches	"X" MM	Notes
SBS75G	Power / Ground	9/16	14	
SBS50	Main Power	9/16	14	
SBS75x	Main Power	9/16	14	
	Aux. Pin	0.18	4.6	For use when wire insulation OD is smaller than crimp barrel ID.
	Aux. Socket	0.21	5.3	
	Aux. Pin	0.24	6.1	For use when wire insulation OD is larger than crimp barrel ID.
	Aux. Socket	0.28	7.1	



**Recommended Soldering Techniques**

Use rosin flux solder only. Wrap cable strands. Melt solder into well, heat and insert stripped cable. Continue heating well until solder flows into wire, being careful not to overflow onto contact surface. Do not solder-dip contacts. Cable clamps required for solder connections (per Underwriter's Laboratories, Inc.) are listed on Table G.

**Table E: Recommended Crimping Techniques**

Wire Size		Power Contact Part Number	Pneumatic Bench Tool	+ Die	+ Locator	Number of Crimps	Hand Tool
#6	13.3	1339G2	1387G1	1388G6	1389G9	Single	1309G4
#8	8.4	1339G5		1388G7			
#10 / 12	5.3 / 3.3	1339G3		1388G6			
#6	13.3	1340G1		1388G7			
#8	8.4	1340G2		1388G6			
#10 / 12	5.3 / 3.3	1340G3		1388G7			

Wire Size		Auxiliary Contact Part Number	APP Hand Tool w/ Integral Locator	Mil Std. Hand Tool*	Pneumatic Tool*	Number of Crimps	Locator For: TM0001 & TP0001
#12 / 24	2.5 / 0.25	All Crimp Pins	PM1000G1	TM0001	TP0001	Single	TL0001
		All Crimp Sockets					TL0002

\*TP0001 and TM0001 tools require locators TL0001 for Pins and TL0002 for Sockets.  
 Note: See Website for the most current information

- Notes:**
1. Instructions are included with each crimp tool for proper operation. Use of non-Anderson Power crimp tools can affect UL & CSA Approval.
  2. Use appropriate reducing bushings for smaller cable sizes (selected from table F).
  3. For appropriate crimping die set, see APP® catalog or website.

\* PLEASE CONSULT YOUR AUTHORIZED ANDERSON REPRESENTATIVE FOR RECOMMENDED TERMINATION TOOLING

**Table F: Contact Reducing Bushing**

Bushing Number	For Use With	AWG Wire Size
5912	1339G2 or	#8 AWG
5910	1340G1	#10 - 12 AWG
5913	Contacts	#14 - 16 AWG

**Table G: Cable Clamp Catalog Numbers**

Connector Series	Clamp Part Number	Discrete Conductor Cables AWG (mm <sup>2</sup> )	Bundled conductor Cables O.D. Inches (mm)
SBS®50	990#	8 to #6 (10)	N/A
SBS®50	990G1	#12 to #6 (4 to 10)	N/A
SBS®50	5905	N/A	0.320 to 0.450 (4.27 to 11.43)
SBS®75x	PSBS75XCLP1	#12 to #6 (4 to 10)	0.39 to 0.60 (9.91 to 15.24)
SBS®75x	PSBS75XCLP2	#12 to #6 (4 to 10)	0.35 to 0.55 (8.89 to 13.97)

**Disassembling Unmated SBS® Connector**

Main Power and ground Contacts: Switch off power.

Remove contacts by depressing springs at the front end of the connector with an insulated screwdriver having a 1/8" blade. Pull the contact lightly out of the housing.

Optional Aux Contacts: Contacts are released from the front side of the connector using extraction tool PM1003G1 and removed from the rear.

**RECOGNITION:** Recognized under the Component

Program of Underwriter's Laboratories, Inc.® File E26226. UL and CSA Recognized Components.

**PATENT INFORMATION:** SBS® connectors are patented under number 6,994,595

**TRADEMARKS:** "Anderson Power Products", "APP" and "SBS" are registered U.S. and foreign trademarks of Anderson Power Products, 13 Pratts Junction Road, Sterling, MA 01564-2305 USA

**HEADQUARTERS:** Anderson Power Products®, 13 Pratts Junction Road, Sterling, MA 01564-2305 USA

T:978-422-3600 F:978-422-3700 [www.andersonpower.com](http://www.andersonpower.com)