Anderson Power Products

Your Best Connection

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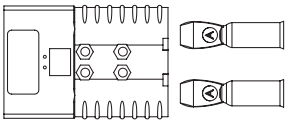
SBE® & SBX® Connectors

Assembly instruction for SBE®160, SBE®320, SBX®175 and SBX®350 Series two pole battery connectors with option for auxiliary contacts.

Contains one (1) housing and two (2) contacts.



FOR INSTALLATION BY A QUALIFIED ELECTRICIAN IN ACCORDANCE WITH NATIONAL AND LOCAL ELECTRICAL CODES AND THE FOLLOWING INSTRUCTIONS. THE SUITABILITY OF THIS TYPE OF TERMINATION MUST BE EVALUATED BY UNDERWRITERS' LABORATORIES, INC. AND CANADIAN STANDARDS. ASSOCIATION FOR THE END USE APPLICATION: Assemble contacts to the cables according to the equipment manufacturer's assembly instructions. The following instructions are supplied as a reference. Please note: instructions are included with each crimp tool for proper use.

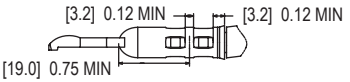
1. CONNECTOR RATINGS

			Max Cable Size	
Series	**Amperes**	**Volts**	**AWG**	**mm²**
SBE160	160	150	1/0	50
SBE320	320	150	300mcm	150
SBX175	175	600	1/0	50
SBX350	350	600	300mcm	150

2. TOOLING CHART

Contact	Wire	Pneumatic			Dieless
Part Number"	**Size**	**Bench Tool**	**+ Die +**	**Locator or**	**Hydraulic Tool**
6384G2	35 mm²	1387G1	1388G3	1389G3	1368
6384G1	1/0 AWG	1387G2	1303G2	1304G2	1368
6354	2/0 AWG	1387G1	1388G2	1389G2	1368
6354	2/0 AWG	1387G2	1303G12	1304G28	1368
6355	3/0 AWG	TBD	TBD	TBD	1368
6356	4/0 AWG	TBD	TBD	TBD	1368
6358	300 MCM	TBD	TBD	TBD	1368
1341G1	50 mm²	1387G2	1303G8	1304G27	1368
1341G2	70 mm²	1387G2	1303G7	1304G27	1368
1341G3	95 mm²	TBD	TBD	TBD	1368

CAUTION: When using cable with jacket diameter less than 0.423 inches (11mm) on the SBE160 / SBX175 and less than 0.709 inches (18mm) on the SBE320 / SBX350 thin wall heat shrink insulation should be evenly applied across the cable and contact barrel junction to insure finger protection.



3. REDUCING BUSHING

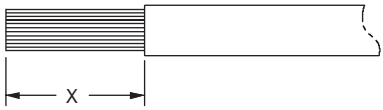
Bushing	Wire Size	For Use With	
Part Number	**AWG (mm²)**	**SBE160 / SBX175**	**SBE320 / SEX350**
5687	#1 (42.4)	6384G1 contact	6354 contact + 5918 bushing
5690	#2 (33.6)	6384G1 contact	6354 contact + 5918 bushing
5693	#4 (21.2)	6384G1 contact	6354 contact + 5918 bushing
5663	#6 (13.3)	6384G1 contact	6354 contact + 5918 bushing
5648	#10 (5.3)	6384G1 contact	6354 contact + 5918 bushing
5920	N/A (16)	6384G2 contact	6394 contact
5918	1/0 (53.5)	N/A	6354 contact

HEAT SHRINK INSULATION SPECIFICATIONS

Connector	Nominal	Minimum	Maximum
Series	**Tubing Size**	**Length**	**Wall Thickness**
SBE320 / SBX350	0.75 in (19mm)	2.0 in (51mm)	0.030 in (.76mm)
SBE160 / SBX175	0.50 in (12.7mm)	2.0 in (51mm)	0.025 in (.63mm)

4. CABLE STRIPPING DIMENSIONS FOR PRIMARY POWER CONTACTS

Connector Series	Strip "X" To Inches	mm
SBE320 / SBX350	1 3/8	35
SBE160 / SBX175	1 1/8	29



5. 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 over flow onto contact surfaces. DO NOT SOLDER DIP CONTACTS when contacts are soldered to unsupported lead. Underwriters' Laboratories, Inc. requires use of cable clamps, listed in table below.

Connector Ampere Rating	For Two Single Conductor Cables
SBE320 / SBX350	911G2
SBE160 / SBX175	945G2

6. CABLE / CONTACT & HOUSING ASSEMBLY

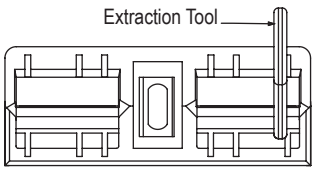
Observing polarity of markings, push each contact into rear of housing until notched side snaps over spring, tug on cable to make sure contact is locked into place.

DISASSEMBLING CONNECTORS (see illustration)

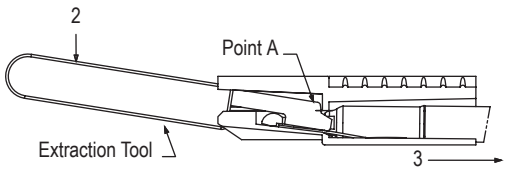
Switch off power first. Remove contact by inserting extraction tool (cat. no. SBE160 / SBX175 - 969P1, SBE320 / SBX350 - 970P1) as shown below (steps 1, 2, & 3).

CAUTION: Replace contacts individually on battery leads to reduce potential danger of shorting.

1. Insert extraction tool as shown between contact and housing to point A.



2. Press down to release contact from spring.
3. Pull cable to remove contact.

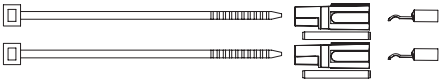


SBX® Auxiliary Contact
Assembly Instructions

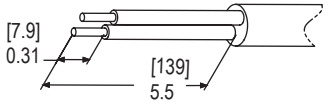
NOTE: These assembly instructions apply only to the catalog numbers listed below. For instructions to assemble the 1x4 Auxiliary Connector, use instruction 1S6229. Instruction 1S6229 is provided with all 1x4 Auxiliary Kits.

Catalog Number	Application	Contact	Wire Size	Retaining Pin Length
6344	SBE80, SBE160, SBO60, SBX175	1331	#12/16	0.85
6305G1	SBE320, SBX350	1331	#12/16	1.00
6310G1	SBE320, SBX350	1332	#16/20	1.00

Contains two each of: housings, contacts, retaining pins, & cable ties.



1. Single conductors use #12 to #18 AWG wire only. Strip to 0.31 inch (7.9mm) off end of insulation.



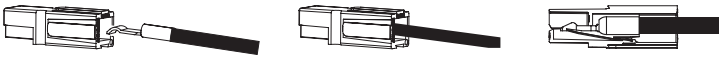
2. Twin conductor cable #12 to #18. Strip back outer jacket 5.50 inches (139 mm). (See illustration). Then strip conductor insulation as in 1.

3a. To crimp: use the recommended tool. Crimping by other means may disturb contact position in housing and or produce high resistance joints.

Crimp Tool	Catalog Number
Manual - cycle controlled	1309G2
Pneumatic - cycle controlled	1367G1

3b. To Solder: Not recommended.

4. Thread or push one or two auxiliary contacts and wires through the rear of the connector before inserting into auxiliary housings. Push into auxiliary housings through rear until notched side of contact tip snaps over spring. Tug wires to make sure wires are secure.



5. Slide two auxiliary Powerpole housings together by dovetails to stack vertically. They cannot be inserted separately into SBE/SBX housing. The rear of each of the Powerpole housings must be flush.

6. Slide stacked auxiliaries back into connector housing until seated. The male dovetail should be on top as shown in Figure 1. Make sure side grooves of auxiliaries are aligned for retaining pins and insert tubular pins. Tap pins in holes from top, as shown in Figure 1.

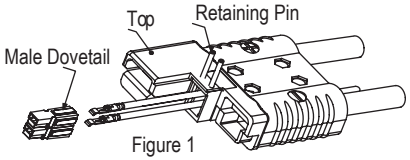


Figure 1

7. Cable ties are supplied to secure the auxiliary leads or cable to one of the main power cables. Leave slack or loop in leads to Powerpole contacts when applying cable ties. Wraps to be placed approximately 1 inch (25.4mm) apart as shown in Figure 2.

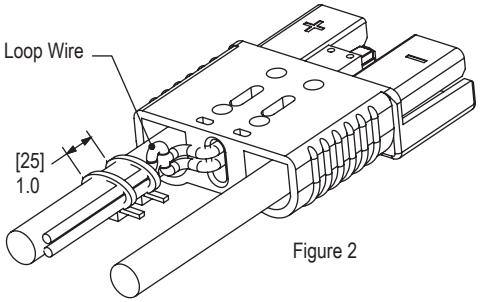


Figure 2

8. To remove auxiliary housings, punch out retaining pins from bottom of the connector housing with an 0.06 inch (1.5mm) diameter steel rod or pin driver. Pull auxiliary housings out of the SBE/SBX connector housing. Use contact insertion-extraction tool kit (part number 111038G2), to remove contacts from auxiliary housings see Figure 3.

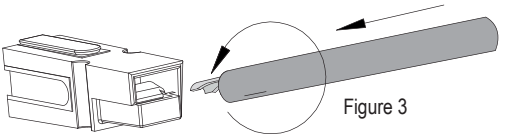


Figure 3

WARNING: UTMOST CAUTION SHOULD BE USED WHEN WORKING ON LIVE CONNECTOR CONTACTS

UL and CSA Reference - These connectors are recognized under the component program of Underwriters' Laboratories, File E26226, as well as Canadian Standards Association, Report LR25154.

PATENTS AND TRADEMARKS
This product is covered by the following patents: U.S. 3,794,957; U.K. 1,443,819; France 73,44153; Italy 1,000442; Japan 885,802; South Africa 74/0939; Canada 990,821. Other U.S. and foreign patents pending. "SBE, SBX, Powerpole and Anderson Power Products" are registered U.S. and foreign trademarks of Anderson Power Products, 13 Pratts Junction Road, Sterling, MA 01564-2305 USA

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