

SB®175 Connectors - up to 280 Amps



Wires sizes from #10 (5.3 mm²) to 1/0 (50 mm²) fit in the second to largest connector in the SB® series. The 3 pole SB®175 adds an additional position for power or grounding. All Multipole wire connector housings are genderless and mate to themselves minimizing inventory and assembly complexity.

- **Silver Plated Wire Contacts up to 1/0 (50 mm²)**
Allows UL rated currents up to 280 amps
- **Chemical Resistant Housing Option**
Extends temperature range down to -40°C, while offering enhanced UV and chemical resistance
- **UL Rated for Hot Plugging up to 100 Amps**
Great for battery or other applications where the ability to interrupt circuits is required

| SB®175 ORDERING INFORMATION |

SB®175 Standard Housings

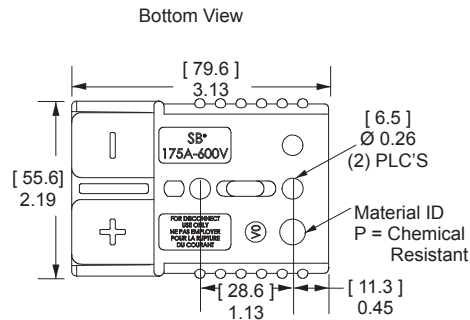
The second to largest SB® housings work with wire contacts up to 1/0 AWG [50 mm²] as well as busbar contacts. Genderless design mates with itself. Mechanical keys are color coded. NOTE: SB®175 black housing is keyless and can be mated with all other colors.

Description	--- Part Numbers ---	
Minimum Quantity	200	50 ...
Yellow	943-BK	943
Orange	942-BK	942
Red	949-BK	949
Gray	940-BK	940
Blue	941-BK	941
Black (Keyless)	2-7252G11	-

SB®175 Chemical Resistant Housings

Same features as the Standard SB®175 but molded in a chemical resistant PBT/ PC blend. Suitable for use to -40°C.

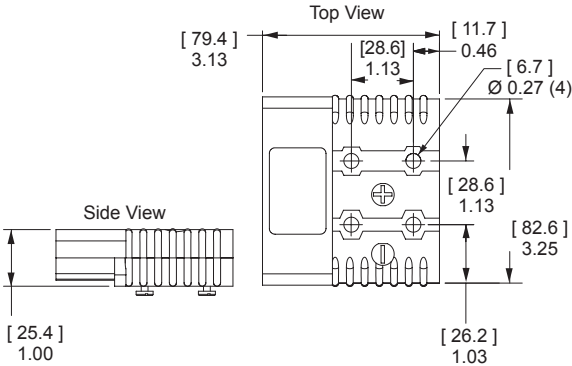
Description	--- Part Numbers ---	
Minimum Quantity	200	50 ...
Red	P949-BK	P949
Gray	P940-BK	P940



SB®175 3 Pole Housings & Hardware

A three pole version of the standard SB®175 housing has a two piece housing with springs and hardware. Useful for DC 2 wire plus ground and AC single phase applications.

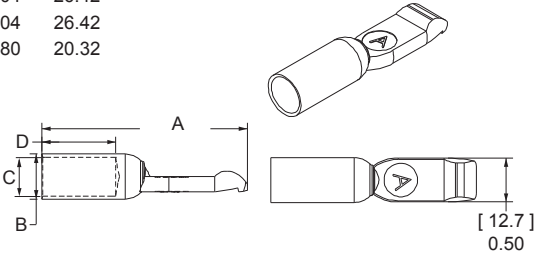
Description	--- Part Numbers ---	
Minimum Quantity	100	25
Gray Housing and Hardware Kit	-	902
Gray Housing Top Half	2-5048	-
Gray Housing Bottom Half	2-5049	-
Hardware Kit	-	110G34



SB®175 Silver Plated Wire Contacts

Silver plated contacts offer superior electrical performance and durability up to 10,000 mating cycles. See reducing bushings in accessory section for smaller wires.

AWG	mm²	Mating Force	Loose Piece - Part Numbers -		Dimensions							
					- A -		- B -		- C -		- D -	
					inches	mm	inches	mm	inches	mm	inches	mm
Minimum Quantity			500	50								
1/0	53.5	High	1382-BK	1382	2.35	59.69	0.52	13.21	0.44	11.18	1.04	26.42
1	42.4	High	1347-BK	1347	2.35	59.69	0.52	13.21	0.39	9.91	1.04	26.42
2	33.6	High	1383-BK	1383	2.35	59.69	0.52	13.21	0.35	8.89	1.04	26.42
4	21.1	High	1384-BK	1384	2.35	59.69	0.52	13.21	0.30	7.62	1.04	26.42
6	13.3	High	1348-BK	1348	2.10	53.34	0.37	9.40	0.22	5.59	0.80	20.32

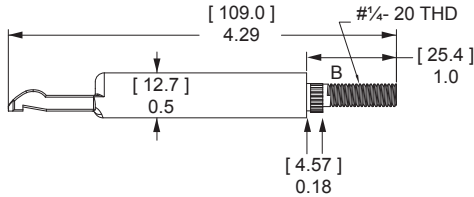


SB®175 Silver Plated Busbar Contacts

Provides a quick disconnect input or output busbar connection. Busbar contacts are for mating with wire contacts only. Part number 180BBS includes lock nuts. Locknuts must be ordered separately for 180BBS-BK.

Type	Thread	Mating Force	----- Loose Piece Part Numbers -----		
Minimum Quantity			1,000	120	10
Busbar	1/4-20	High	-	180BBS-BK	180BBS
Lock Nut	1/4-20	-	H1216P7	110G56	110G55

See Busbar contact drawing on website for further detail.



| SB®175 CONNECTOR SPECIFICATIONS |

Electrical			Mechanical		
Current Rating Amperes ¹	UL 1977	CSA	Wire Size Range	AWG	mm²
Wire to Wire (1/0 AWG)	280	175	Wire Contacts with Bushings	10 to 1/0	5.3 to 53.5
Wire to Busbar (1/0 AWG)	200				
3 Pole Wire to Wire (1/0 AWG)	175				
Voltage Rating AC/DC			Max. Wire Insulation Diameter	in.	mm
UL 1977	600			0.600	15.240
Dielectric Withstanding Voltage			Operating Temperature²	°F	°C
Volts AC	2,200		Standard	-4° to 221°	-20° to 105°
			Chemical Resistant*	-40 to 221°	-40° to 105°
Avg. Mated Contact Resistance Milliohms ¹			Mating Cycles No Load by Plating	Silver (Ag)	
6" of 1/0 AWG wire	0.100		Wire and Busbar Contacts	10,000	
UL Hot Plug Current Rating Amperes - Wire & Busbar			Avg. Mating / Unmating Force	Lbf.	N
250 cycles at 120V DC 1/0 wire	100A		2 Pole	25	111
			3 Pole	35	156
			Min. Contact / Spring Retention Force		
			lbf	150	
			N	667	
			Mechanical Shock ⁴		
			MIL-STD-202	213 Condition A	50g's
			Vibration High Frequency ⁴		
			MIL-STD-202	204 Condition A	10g's

Materials		
Housing		
Standard Plastic Resin	Polycarbonate	
Chem. Resistant Resin	Polycarbonate / PBT blend	
Contact Retention Spring	Stainless Steel	
Housing Flammability Rating		
UL94	V-0	
Glow Wire	960°C (GWFI) / 850°C (GWIT)	
Wire & Busbar Contacts		
Base	Copper Alloy	
Plating	Silver	
Contact Termination Methods		
Crimp ³	Wire Contacts	
Hand Solder	Wire Contacts	
Wrench / Socket	Busbar Contacts	

NOTE 1: See IEC 60664-1 for working voltage.

NOTE 2: Amp ratings are stated per position and based on all positions being fully loaded.

¹ Based on: 105°C rated or better cable of the largest size, Properly calibrated APP recommended tooling, and a 25°C ambient temperature. UL rating not to exceed the maximum operating temperature. CSA rating below a 30°C temperature rise.

² Limited by the thermal properties of the connector plastic housing.

³ Use APP recommended tooling only. Alternate tools may adversely affect the performance of our connectors along with UL and CSA recognition.

⁴ Tested with contact part number 1382.



| IEC INFORMATION |

Connector Series	Configurations	Creepage/Clearance per IEC 60950-1	Material Group
SB®175	Unmated	5.73 mm	IIla
	Mated	5.73 mm	

Attributes	SB175
AMP Rating AC/DC	175
Voltage Rating AC/DC (Steady State)	500 V AC/DC (Operational)
Breaking Capacity - AMP Rating /Cycles	175 Amp / 10 Cycles
Voltage Rating (Breaking Capacity)	220 VDC
Finger Safety - Mated Only	IEC 60529 - IP20
Wire Size Tested	50 mm ²
Contact Series Tested	1382
Climatic Testing (Cold, Heat & MFG)	IEC 60512 Test -11j, 11i & 11g.
Cycle Life	IEC 60512 Test 9a - 5000 Cycles
Mechanical Strength Impact	IEC 60512-5 @ 29.5 Inches - dropped 8 times
Temperature Range	-20 °C to 105 °C -4 °F to 221 °F

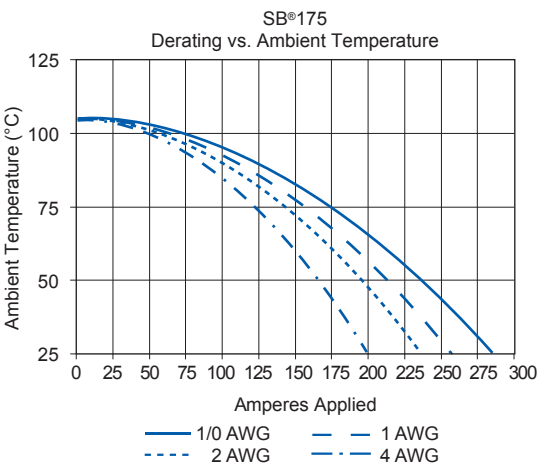
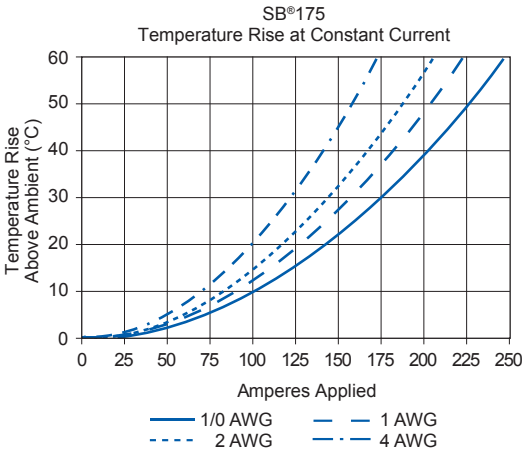
Protection	
Touch Safety with Wire Contacts	
IEC 60529	IP10
Environmental Sealing with Boots	
IEC 60529	IP64

NOTE 3: Refer to the Constructional Data form for additional information on our website., www.andersonpower.com

SB®175 CONNECTOR TEMPERATURE CHARTS | Temperature rise charts are based on a 25°C ambient temperature.

For Temperature Rise Above 60°C, Consult the Extended Temperature Rise Charts in the Appropriate Product Section on the Website.

Current - Temperature Derating per IEC 60512-5-2 Test 5B

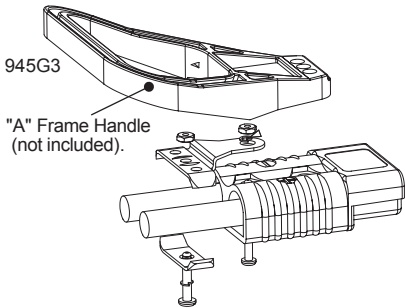
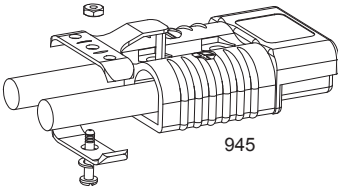
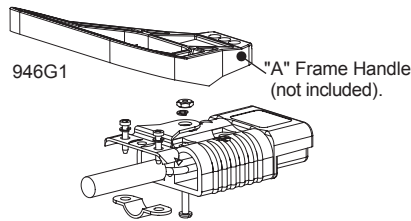


SB® 175 ACCESSORIES |

Cable Clamps

Durable metal cable clamps securely hold cables to prevent accidental strain or pulls from dislodging wire or contacts from the housing. Only Bolt On type clamps can be used with the handles. Cable clamps are recommended for solder terminated wires. Not for use with 3 pole housing.

Description	Cable Size		Part Numbers	
	Max / Min In. Inches O.D.	Max / Min mm mm O.D.		
Minimum Quantity			100	50
Self Attaching for Discrete Conductor	0.55 to 0.24	14 to 6	105G3	945
Bolt On for Discrete Conductor	0.66 to 0.24	16.7 to 6.2	945G3-BK	945G3
Bolt On for Bundled Conductor	0.75 to 0.29	18.3 to 7.3	946G1-BK	946G1

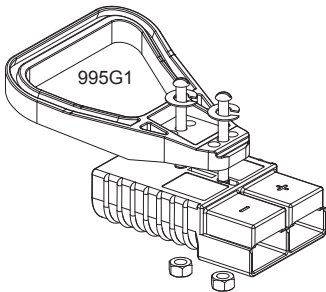


The given wire O.D. information is an estimate. Cable clamps should be evaluated for performance with the actual wire to be used.

Handles

Handles are made out of durable PC plastic. Hardware to attach to connector body included in kits. Not for use with 3 pole housing.

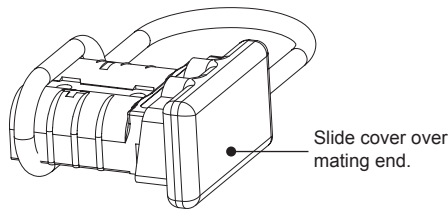
Description	Part Numbers	
Minimum Quantity	100	25
Gray Handle Kit	-	995G1
Red Handle Kit	-	995G3
Handle Only, Gray	3-5074P1	-
Handle Only, Red	3-5074P3	-
Handle Only, Black	3-5074P5	-
Hardware Bag	-	105G8



Dust Cover

Prevents dust and dirt from entering the mating interface of the connector when unmated. NOTE: Not a Hermetic Seal. Not for use with 3 pole housing.

Description	Part Numbers	
Minimum Quantity	500	50
Dust Cover with Lanyard Strap, Red	113890P2	134G2

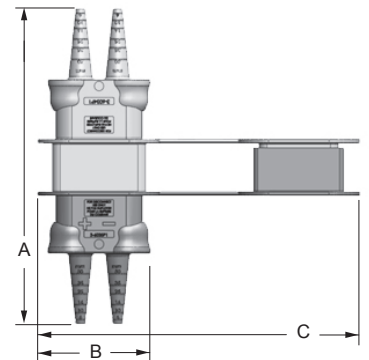


SB® Environmental Boots

SB® Environmental Boots provide water, dirt, chemical and UV protection for SB® 175 connectors. The durable boots shield the connectors from water and dirt to IP64* in both the mated and unmated condition.

Description	Part Number	
Minimum Quantity	250	25
SB® 175 Environmental Boot, Load	3-6037P1-BK	3-6037P1
SB® 175 Environmental Boot, Source	3-6036P1-BK	3-6036P1

Dimensions					
- A -		- B -		- C -	
in	mm	in	mm	in	mm
9.5	241	3.2	80	9.3	236

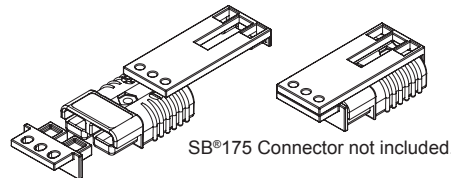


*IP64 test pending

SB®175 Lockout

Works with standard lockout - tagout equipment to prevent access to the mating interface of the connector. Made from durable PC plastic. Can be used with 3 pole housing to lockout positive and negative positions only.

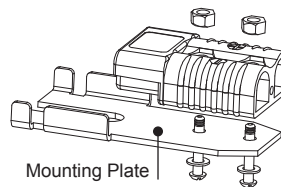
Description	Part Number	
Minimum Quantity	25	...
Red Lockout - Tagout Kit	SB175-LOCKOUT	



Manual Release Bracket - Mounting Side

Works with the Locking Side to ease mating and unmating connectors. Not for use with 3 pole housing.

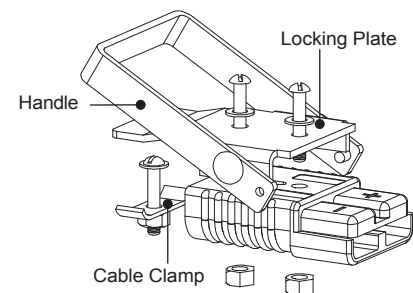
Description	Part Number	
Minimum Quantity	10	...
Bracket and Hardware Kit	924G1	



Manual Release Bracket - Locking Side

Works with the Mounting Side to ease mating and unmating connectors. Not for use with 3 pole housing.

Description	Cable Size		Part Number
	Max / Min Inches O.D.	Max / Min mm O.D.	
Minimum Quantity			10
Bracket and Hardware Kit w/ Clamp	0.50 to 0.21	12.6 to 5.4	923G1

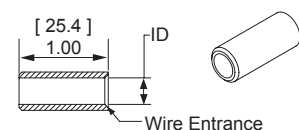


The given wire O.D. information is an estimate. Cable clamps should be evaluated for performance with the actual wire to be used.

Reducing Bushings: for Use with Contact # 1382

Use with contact part number 1382-BK to allow a smaller wire to be used with the connector. Electrical capability is derated with smaller wire.

Contact Barrel Size	Wire Size	Part Numbers				Dimensions	
		1,500	1,000	500	100	- ID -	inches mm
Minimum Quantity							
1/0 AWG [53.5 mm²]	#1 AWG [42.4 mm²]	-	-	5687-BK	5687	0.39	9.91
1/0 AWG [53.5 mm²]	#2 AWG [33.6 mm²]	5690-BK	-	-	5690	0.34	8.64
1/0 AWG [53.5 mm²]	#4 AWG [21.2 mm²]	-	5693-BK	-	5693	0.27	6.86
1/0 AWG [53.5 mm²]	#6 AWG [13.3 mm²]	-	5663-BK	-	5663	0.22	5.59
1/0 AWG [53.5 mm²]	#10 - 8 AWG [5.3 - 8.4 mm²]	5648-BK	-	-	5648	0.19	4.83



SB®

- Tooling Information

Wire Size		Loose Piece Part Numbers	Loose Piece Contact Crimp Tools					
AWG	mm²	Silver Plating	Hand Tool	Pneumatic Bench Tool	Die	Locator	Number of Crimps	
SB®50								
#6	13.3	1307	1309G4	1387G1	1388G6	1389G6	Single	
		5900						
#8	8.4	5952						
#10 / 12	5.3 / 3.3	5953			1388G7	1389G7		
		5915						
SB®120								
#1	42.4	1323G1	1368 Series	1387G1	1388G3	1389G4	Single	
#2	33.6	1319						
#4	21.2	1319G4			1388G4			
#6	13.3	1319G6						
SB®175								
1/0	53.5	1382	1368 Series	1387G2			Double	
#1	42.4	1347						
#2	33.6	1383			1303G13	1304G32		
#4	21.1	1384						
#6	13.3	1348		1387G1	1388G4	1389G3	Single	
SB®350								
300mcm	152	910	1368 Series	N/A			Double	
4/0	107.2	908		1387G2	1303G3	1304G31		
3/0	85	916						
2/0	67.4	907			1303G12			
1/0	53.5	917						

NOTE: See website for the most current information.