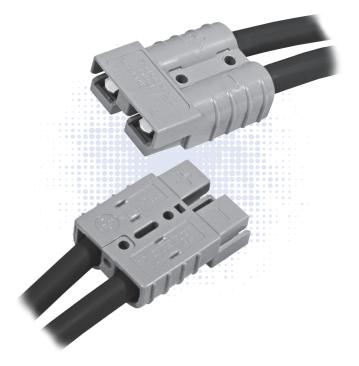
## SB<sup>®</sup> 50 Connectors - up to 120 amps



Based off the design pioneered by Anderson in 1953, APP®'s two pole SB® connectors set the standard for DC power distribution and battery connections. SB®50 connectors feature a one piece plastic housing using stainless steel springs to hold low resistance contacts in place. Wires sizes from #16 (1.5 mm<sup>2</sup>) to #6 (13.3 mm<sup>2</sup>) are held in the smallest of the SB® series housings.

- Low Resistance Silver or Tin Plated Copper Contacts Allows UL rated currents up to 120 amps
- UL Rated for Hot Plugging up to 50 Amps Great for battery or other applications where the ability to interrupt circuits is required
- Wire, PCB, and Busbar Contacts Allows one connection system to meet multiple needs

## SB50<sup>®</sup> ORDERING INFORMATION |

#### SB®50 Standard Housings

The smallest SB<sup>®</sup> housings work with wire contacts up to 6 AWG [10 mm<sup>2</sup>] as well as PCB, and busbar contacts. Genderless design mates with itself. Mechanical keys are color coded.

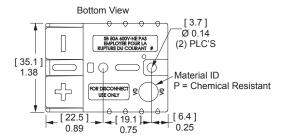
	Voltage		
	Color		
Description	Code	Part Nu	mbers
Minimum Qu	antity	500	100
Yellow	12V	992G5-BK	992G5
Orange	18V	992G7-BK	992G7
Red	24V	992G1-BK	992G1
Gray	36V	992-BK	992
Blue	48V	992G4-BK	992G4
Green	72V	992G6-BK	992G6
Black	80V	992G2-BK	992G2
	0 Black a	nd Grav hour	sings have t

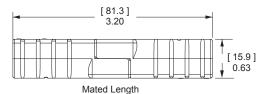
NOTE: SB<sup>®</sup>50 Black and Gray housings have the same keying features and can be intermated.

#### SB®50 Chemical Resistant Housings

Same features as the Standard SB<sup>®</sup>50 but molded in a chemical resistant PBT/ PC blend. Suitable for use to -40°C.

	Voltage				
	Color				
Description	Code	Part Nur	mbers		
Minimum Qu	antity	500	100		
Red	24V	P992G1-BK	P992G1		
Gray	36V	P992-BK	P992		
Black	80V	P992G2-BK	P992G2		
NOTE: SB <sup>®</sup> 50 Black and Gray housings have the					
same keying features and can be intermated.					

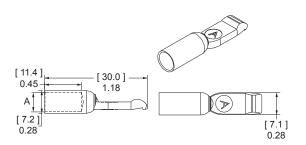




#### SB®50 Silver Plated Wire Contacts

Use two silver plated contacts per housing for the best electrical performance and durability up to 10,000 mating cycles. See redushing bushings in accessory section for smaller wires.

				Dimens	ions
		Mating	Loose Piece	- A	-
AWG	mm²	Force	Part Numbers	inches	mm
Minimum (	Quantity		1,000 100		
6	13.3	Low	1307-BK 1307	0.22	5.59
6	13.3	High	5900-BK 5900	0.22	5.59
8	8.4	High	5952-Bk 5952	0.19	4.83
12 to 10	3.3 to 5.3	Low	5953-BK 5953	0.14	3.56
12 to 10	3.3 to 5.3	High	5915-BK 5915	0.14	3.56

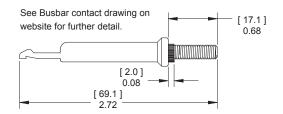


#### SB®50 Silver Plated Busbar Contacts

**SECTION 3** 

Use 2 busbar contacts per housing to provide a quick disconnect input or output busbar connection. Busbar contacts are for mating with wire contacts only. Part number 75BBS includes lock nuts. Locknuts must be ordered separately for B01956P4.

		Mating			
Туре	Thread	Force	Loose Pi	iece Part Nu	mbers
Minimum (	Quantity		1,000	20	10
Busbar	#10-24	High	B01915P1	-	75BBS
Lock Nut	#10-24	-	H1216P8	110G54	-



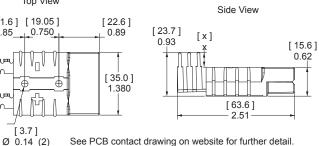
#### 55A Right Angle Standard Powerclaw PCB Contacts

Standard Powerclaw contacts are for use inside a SB®50 housing Top View and provide a color coded right angle connection to the PCB. **SB® 50** Description [21.6] [19.05] - Loose Piece Part Numbers -[22.6] 0.85 0.750 0.89 Minimum Quantity ... 500 100 [8.0] 0.32 Tin Plated PC5930T-BK PC5930T Silver Plated PC5930S-BK PC5930S VUV [27.4] [35.0] 1.08 1.380 ηш

Omf

[11.4]

0.45

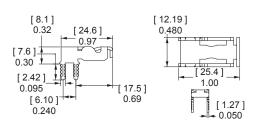


See PCB contact drawing on website for further detail.

#### 55A Right Angle Mini Powerclaw PCB Contacts

Right angle Mini Powerclaw contacts can be used on the PCB edge without a SB®50 housing on the PCB side. A self polarizing design only allow SB®50 wire housings to mate to PCB contacts one way.

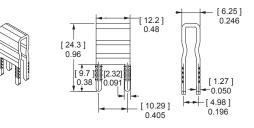
Description	- Loose Piece Part Number				
Minimum Quantity	1,000	100			
Tin Plated	PC5934T-BK	PC5934T			
Silver Plated	PC5934S-BK	PC5934S			



#### 55A Vertical Mini Powerclaw PCB Contacts

Vertical Mini Powerclaw contacts save space by not requiring a SB $^{\circ}50$  housing on the PCB side. The guide housing is required for to provide a polarized connection. (See SB $^{\circ}50$  accessories).

Description	- Loose Piece Part Numbers				
Minimum Quantity	1,500	100			
Tin Plated	PC5933T-BK	PC5933T			
Silver Plated	PC5933S-BK	PC5933S			



## | SB®50 CONNECTOR SPECIFICATIONS |

Electrical		Mechanical		
Current Rating Amperes <sup>1</sup>	UL 1977 CSA	Wire Size Range	AWG	mm²
Wire to Wire UL 1977 (6 AWG)	120 50	Wire Contacts with Bushings	16 to 6	1.3 to 13.3
Wire to PCB UL 1977 (6 AWG)	50			
		Max. Wire Insulation Diameter	in.	mm
Voltage Rating AC/DC			0.440	11.200
UL 1977	600			
		Operating Temperature <sup>2</sup>	°F	°C
PCB Connector Recommended	l Voltage	Standard	-4° to 221°	-20° to 105
per IEC 60950-1 Table 2L Pollut	tion Degree <sup>2</sup>	Chemical Resistant*	-40 to 221°	-40° to 105
Mini Vert. Contact	522	*Chemical resistant material not available	for PCB guide	housings
Mini Horiz. Contact	504			
Standard Contact	950			
		Mating Cycles No Load by Plating	Silver (Ag)	Tin (Sn)
Dielectric Withstanding Voltage	e	Wire and PCB Contacts	10,000	1,500
Volts AC	2,200			
		Avg. Mating / Unmating Force	Lbf.	Ν
Avg. Mated Contact Resistance	e Milliohms¹	Wire to Wire Low Force Contacts	10	44
1 1/4" of #6 AWG wire	0.200	Wire to Wire High Force Contacts	15	67
PCB Contact to Contact	0.500	Standard Powerclaw to Wire	15	66
		Mini Powerclaw to Wire	8	36
UL Hot Plug Current Rating Am	peres - 250 cycles at 120V DC			
Wire- wire	50A	PCB Specifications		
PCB- wire	40A	Mounting Style	Plated Throu	gh Hole
(Vertical Mini Powerclaw)		Max PCB Thickness- in. [mm]	Standard: 0.7	15 [0.381]
· · · · · · · · · · · · · · · · · · ·			Mini: 0.2	5 [0.635]
Materials		Recommended Traces	#8 AWG Cro	ss Section
Housing				
Standard Plastic Resin	Polycarbonate	Min. Contact / Spring Retention Force	Lbf.	N
Chem. Resistant Resin	Polycarbonate / PBT blend	Wire Housing	50	222
Contact Retention Spring	Stainless Steel	5		
1 0		Min. Creepage / [Clearance] Distance	in.	mm
Housing Flammability Rating		Standard Powerclaw	0.374	9.5
UL94	V-0	Mini Vert. Powerclaw	0.213	5.4
		Mini Horz. Powerclaw	0.205	5.2
Contact				-
Base	Copper Alloy	Protection		
Wire Plating	Silver	Touch Safety with Wire Contacts		
PCB Plating	Sn or Ag over Ni	IEC 60529 IP10		
		ILC 00323 IF 10		
Contact Termination Methods				_
Crimp <sup>3</sup>	Wire Contacts	<sup>1</sup> Based on: 105°C rated or better cable of	•	
Hand Solder	Wire and PCB Contacts	recommended tooling, and a 25°C ambie		•
Solder Dip*	PCB Contacts	the maximum operating temperature. CS	-	
Wave Solder*	PCB Contacts	<sup>2</sup> Limited by the thermal properties of the o	-	-
Wrench / Socket	Busbar Contacts	<sup>3</sup> Use APP <sup>®</sup> recommended tooling only. All	ternate tools m	ay adversely
WIEIICH / SUCKEL	DUSDAI CUIILACIS	performance of our connectors along wit	h I II and CSA	roconition

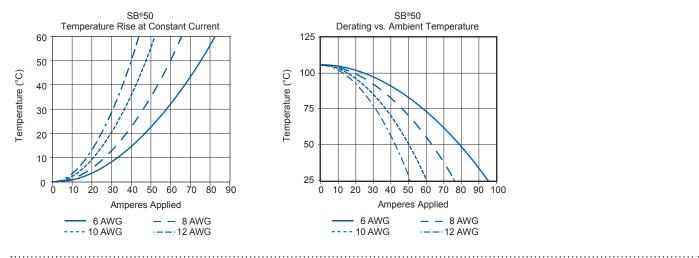


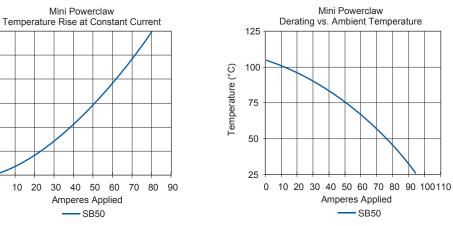
CSUS File No. E26226





## | SB®50 CONNECTOR TEMPERATURE CHARTS |





NOTE: Temperature rise charts are based on a 25°C ambient temperature. Powerclaw charts are based on #8 AWG equivalent copper foil on board side, mated to #6 AWG conductor on wire side.

## | SB<sup>®</sup> Accessories |

#### "T" Handle

60

50

40 30

20

10 0

0

Temperature (°C)

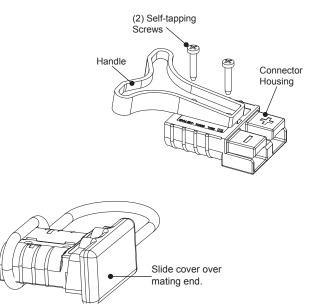
The "T" handle makes mating and unmating the connector easier. The non-conductive red plastic material is strong and safe. (2) Self tapping screws are used to secure the handle to the connector housing.

Description	Part Numbers	
Minimum Quantity	1,000	50
Red "T" Handle + Hardware Bag	-	SB50-HDL-RED
Hardware Bag (2 Screws)	-	104G17
Red "T" Handle Only	113899P1	-
#8 x 5/8" Screw (Order 2 Per Handle)	H1120P53	-



Prevents dust and dirt from entering the mating interface of the connector when unmated. NOTE: Not a Hermetic Seal.

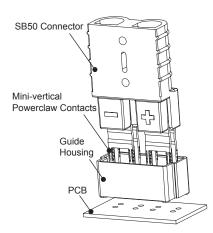
Description	Part Nu	mbers
Minimum Quantity	500	50
Dust Cover with Lanyard Strap, Red	113890P1	134G1



#### **Guide Housings for Vertical Mini Powerclaw Contacts**

Prevents polarity being reversed when a SB®50 is mated to vertical mini Powerclaw contacts.

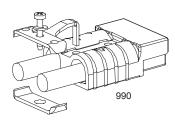
Description	Part Nui	mbers
Minimum Quantity	1,000	50
Black Guide Housing	PC-HSG-SB-BK	PC-HSG-SB



#### **Cable Clamps**

Durable metal cable clamps securely hold cables to prevent accidental strain or pulls from dislodging wire or contacts from the housing. Cable clamps are recommended for solder terminated wires.

	Cable Si			
	AWG or			
Description	(Inches O.D.)	(mm O.D.)	Part Nur	nbers
Minimum Quantity			500	50
Self Attaching for Discrete Conductor	8 to 6	10	990-BK	990
Self Attaching for Discrete Conductor	12 to 10	4 to 6	990G2-BK	990G2
Bolt on for Discrete Conductor	12 to 6	4 to 10	990G1-BK	990G1
Bolt on for Bundled Conductor	(0.320 to 0.450)	(4.27 to 11.43)	5905-BK	5905



Self attaching discrete conductor.

Bolt on discrete conductor.

990G1

9

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

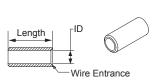
5905

Bolt on bundled conductors.

#### **Reducing Bushings**

Use with contact part number 5900-BK or 1307-BK to allow a smaller wire to be used with the connector. Electrical capability is derated with smaller wire.

					Dimensions			
					- 11	) -	- Leng	th -
Contact Barrel Size	Wire Size	Part	Numbers		inches	mm	inches	mm
Minimum Quantity		3,000	1,000	100				
#6 AWG [13.3 mm <sup>2</sup> ]	#8 AWG [8.4 mm²]	-	5912-BK	5912	0.18	4.57	0.45	11.43
#6 AWG [13.3 mm <sup>2</sup> ]	#12- 10 AWG [3.3- 5.3 mm²]	5910-BK	-	5910	0.14	3.56	0.47	11.94
#6 AWG [13.3 mm <sup>2</sup> ]	#16- 14 AWG [1.3- 2.1 mm <sup>2</sup> ]	5913-BK	-	5913	0.09	2.29	0.47	11.94

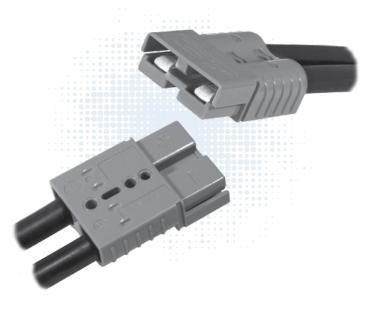


## SB<sup>®</sup> - Tooling Information

Wire Size Loose Piece Part Numbers			Loose Piece Contact Crimp Tools			Reeled Part Numbers					
AWG	mm²	Silver Plating	Hand Tool or	Pneumatic Bench Tool	+ Die	+ Locator	Number of Crimps	Tin Plating	ATS Applicator	ATS Press	Air Feed Kit
					5	SB50					
#6	13.3	1307									
#0	10.0	5900			1388G6			265G5	1385523-1	2-565435-2	692655-1
#8	8.4	5952	1309G4	1387G1		1389G6	Single				
#10 / 12	53/33	5953			1388G7			265G6	1385522-1	1725900-2 or	1424266-1 or
#10712	5.57 5.5	5915			130007			20300	1303322-1	[3-54500-1]	[354578-1]
					SE	3120					
#1	42.4	1323G1			1388G3						
#2	33.6	1319	1368	1387G1		1389G4	Single	N/A		N/A	
#4	21.2	1319G4	1300	1367 GT	1388G4	1309G4	Single	IN/A		N/A	
#6	13.3	1319G6									
					SB	175					
1/0	53.5	1382		1387G2	1303G13	1304G32	Double				
1/0	55.5	1302									
#1	42.4	1347		1387G1	1388G3	1389G3	Single				
#2	33.6	1383	1368					N/A		N/A	
#2	33.0	1363	1300	1387G2	1303G13	1304G32	Double	IN/A		IN/A	
#4	21.1	1384		1387G1	1388G3	1389G3	Single				
#4	21.1	1304		1387G2	1303G13	1304G32	Double				
#6	13.3	1348		1387G1	1388G4	1389G3	Single				
					SE	3350					
300mcm	152	910			N/A		Single				
4/0	107.2	908			1303G3						
3/0	85	916	1368	129702		1204024	Dauble	N/A		N/A	
2/0	67.4	907		1387G2	1303G12	1304G31	Double				
1/0	53.5	917									

NOTE: See website for the most current informatmion.

## SB120<sup>®</sup> Connectors - up to 240 Amps



Like the other Multipole connectors, the SB<sup>®</sup>120 offers color-coded mechanically keyed housings. Keys can be used to identify and separate different circuits, or prevent users from accidentally cross mating different voltages. Wires sizes from #10 (5.3 mm<sup>2</sup>) to #1 (42.4 mm<sup>2</sup>) are held in the second smallest SB<sup>®</sup> housing.

• New extended range contacts expand wire size up to #1 AWG (42.4 mm<sup>2</sup>)

Allows UL rated currents up to 240 amps

- Chemical resistant housing option Extends temperature range down to -40°C, while offering enhanced UV and chemical resistance
- · Panel mounting grooves

With use of mounting clamps, can be easily mounted through panels

## SB®120 ORDERING INFORMATION |

#### SB®120 Standard Housings

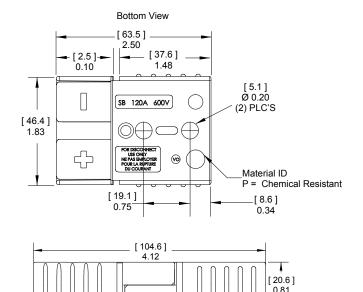
The second to smallest SB<sup>®</sup> housings work with wire contacts up to 1 AWG [35 mm<sup>2</sup>] as well as busbar contacts. Genderless design mates with itself. Mechanical keys are color coded.

	Voltage		
	Color		
Description	Code	Part Num	bers
Minimum Qu	antity	250	50
Red	24V	6810G3-BK	6810G3
Gray	36V	6810G1-BK	6810G1
Blue	48V	6810G2-BK	6810G2

#### SB®120 Chemical Resistant (CR) Housings

Same features as the Standard SB<sup>®</sup>120 but molded in a chemical resistant PBT/ PC blend. Suitable for use to -40°C.

	Voltage		
	Color		
Description	Code	Part Nun	nbers
Minimum Qua	antity	250	50
Red	24V	P6810G3-BK	P6810G3
Gray	36V	P6810G1-BK	P6810G1

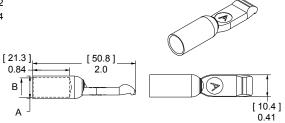




#### SB®120 Silver Plated Wire Contacts

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

					Dime	nsions		
		Mating				- A -	- B -	
AW	/G mm²	Force	Loose	Piece Part Nun	nbers	inches mm	inches mm	
Min	nimum Quan	tity	600	500	50			
1	42.4	Low	1323G1-BK	-	1323G1	0.47 11.94	0.39 9.91	NEW)
2	33.6	High	-	1319-BK	1319	0.44 11.18	0.22 5.59	$\sim$
4	21.1	High	-	1319G4-BK	1319G4	0.44 11.18	0.30 7.62	
6	13.3	High	-	1319G6-BK	1319G6	0.44 11.18	0.34 8.64	

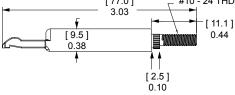


#### SB®120 Silver Plated Busbar Contacts

Use 2 busbar contacts per housing to provide a quick disconnect input or output busbar connection. Busbar contacts are for mating with wire contacts only. Part number 120BBS includes lock nuts. Locknuts must be ordered separately for B01997P1.

		Mating				
Туре	Thread	Force	L	oose Piece P	art Numbei	°S
Minimum	Quantity .		1,000	300	20	10
Busbar	#10-24	High	-	B01997P1	-	120BBS
Lock Nut	#10-24	-	H1216P8	-	110G54	-

See Busbar contact drawing on website for further detail. [77.0] #10 - 24 THD 3.03 [11.1]



## SB®120 CONNECTOR SPECIFICATIONS |

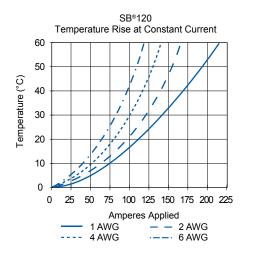
Electrical			Mechanical		
Current Rating Amperes <sup>1</sup>	UL 1977 C	SA	Wire Size Range	AWG	mm²
Wire to Wire (1 AWG)	240 13	30	Wire Contacts with Bushings	10 - 1	5.3 - 42
Wire to Busbar (2 AWG)	120				
			Max. Wire Insulation Diameter	in.	mm
Voltage Rating AC/DC				0.600	15.240
UL 1977	600				
			Operating Temperature <sup>2</sup>	°F	°C
Dielectric Withstanding Volta	ge		Standard	-4° to 221°	-20° to
Volts AC	2,200		Chemical Resistant*	-40 to 221°	-40° to
Avg. Mated Contact Resistan	ce Milliohms¹		Mating Cycles No Load by Plating	Silver (Ag)	
5 1/2" of #2 AWG wire	0.136		Wire and Busbar Contacts	10,000	
Lat Dive Current Dating Ame	area Wire 9 Duchar		• • • • • • • • • • • • • • •		
Hot Plug Current Rating Amp 250 cycles at 120V DC	60A		Avg. Mating / Unmating Force	Lbf. 20	N 89
	00/1		Wire to Wire	20	03
Materials			Min. Contact / Spring Retention Force	20	03
,	007			75	03
Materials	Polycarbonate		Min. Contact / Spring Retention Force		03
Materials Housing		nd	Min. Contact / Spring Retention Force	75	
Materials Housing Standard Plastic Resin	Polycarbonate	nd	Min. Contact / Spring Retention Force	75	
Materials Housing Standard Plastic Resin Chem. Resistant Resin Contact Retention Spring	Polycarbonate Polycarbonate / PBT bler Stainless Steel	nd	Min. Contact / Spring Retention Force Ibf N	75	
Materials Housing Standard Plastic Resin Chem. Resistant Resin	Polycarbonate Polycarbonate / PBT bler Stainless Steel	nd	Min. Contact / Spring Retention Force Ibf N Protection	75	
Materials Housing Standard Plastic Resin Chem. Resistant Resin Contact Retention Spring	Polycarbonate Polycarbonate / PBT bler Stainless Steel	nd	Min. Contact / Spring Retention Force Ibf N Protection Touch Safety with Wire Contacts	75	
Materials Housing Standard Plastic Resin Chem. Resistant Resin Contact Retention Spring Housing Flammability Rating	Polycarbonate Polycarbonate / PBT bler Stainless Steel	nd	Min. Contact / Spring Retention Force Ibf N Protection Touch Safety with Wire Contacts	75	
Materials Housing Standard Plastic Resin Chem. Resistant Resin Contact Retention Spring Housing Flammability Rating UL94	Polycarbonate Polycarbonate / PBT bler Stainless Steel		Min. Contact / Spring Retention Force Ibf N Protection Touch Safety with Wire Contacts IEC 60529 IP10	75 333.6	
Materials Housing Standard Plastic Resin Chem. Resistant Resin Contact Retention Spring Housing Flammability Rating UL94 Wire & Busbar Contacts	Polycarbonate Polycarbonate / PBT bler Stainless Steel V-0		Min. Contact / Spring Retention Force Ibf N Protection Touch Safety with Wire Contacts IEC 60529 IP10	75 333.6	RoHS
Materials Housing Standard Plastic Resin Chem. Resistant Resin Contact Retention Spring Housing Flammability Rating UL94 Wire & Busbar Contacts Base Plating	Polycarbonate Polycarbonate / PBT bler Stainless Steel V-0 Copper Alloy Silver		Min. Contact / Spring Retention Force Ibf N Protection Touch Safety with Wire Contacts IEC 60529 IP10	75 333.6 Certified	Rotts
Materials Housing Standard Plastic Resin Chem. Resistant Resin Contact Retention Spring Housing Flammability Rating UL94 Wire & Busbar Contacts Base Plating Contact Termination Method	Polycarbonate Polycarbonate / PBT bler Stainless Steel V-0 Copper Alloy Silver		Min. Contact / Spring Retention Force Ibf N Protection Touch Safety with Wire Contacts IEC 60529 IP10	75 333.6 Certified	Rotts
Materials Housing Standard Plastic Resin Chem. Resistant Resin Contact Retention Spring Housing Flammability Rating UL94 Wire & Busbar Contacts Base Plating	Polycarbonate Polycarbonate / PBT bler Stainless Steel V-0 Copper Alloy Silver		Min. Contact / Spring Retention Force Ibf N Protection Touch Safety with Wire Contacts IEC 60529 IP10	75 333.6 Certified	Rotts

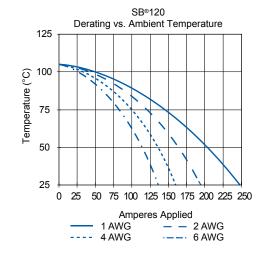
<sup>1</sup> Based on: 105°C rated or better cable of the largest size, Properly calibrated APP® recommended tooling, and a 25°C ambient temperature. UL rating not to exceed the maximum operating temperature. CSA rating below a 30°C temperature rise.

<sup>2</sup> Limited by the thermal properties of the connector plastic housing.

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

## | SB®120 CONNECTOR TEMPERATURE CHARTS |





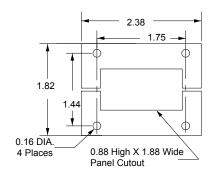
NOTE: Temperature rise charts are based on a 25°C ambient temperature.

## | SB® 120 Accessories |

#### Mounting Clamp for SB®120

Mounting clamps can be used for fastening a SB<sup>®</sup>120 series housings to a panel. Fastening hardware not included.

Description	Part Number
Minimum Quantity	20 sets of 2
Panel Mount Bracket for SBS <sup>®</sup> 50	1467G1

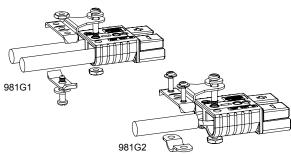


#### **Cable Clamps**

Durable metal cable clamps securely hold cables to prevent accidental strain or pulls from dislodging wire or contacts from the housing. Cable clamps are recommended for solder terminated wires.

	Cable		
	Min / Max		
Description	Inches O.D.	mm O.D.	- Part Numbers -
Minimum Quantity			50
Bolt on for Discrete Conductor	0.70 to 0.23	17.7 to 5.8	981G1
Bolt on for Bundled Conductor	0.73 to 0.29	18.5 to 7.3	981G2

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



#### "T" Handle

The "T" handle makes mating and unmating the connector easier. The non-conductive red plastic material is strong and safe. (2) Self tapping screws are used to secure the handle to the connector housing.

Description	Part	Numbers
Minimum Quantity	1,000	50
Red "T" Handle + Hardware Bag	-	SB120-HDL-RED
Red "T" Handle Only	113899P1	-
#8 x 7/8" Screw (Order 2 Per Handle)	H1120P43	-

#### **Dust Cover**

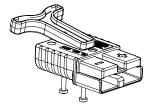
Prevents dust and dirt from entering the mating interface of the connector when unmated. NOTE: Not a Hermetic Seal.

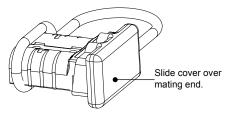
Description	Part Nu	mbers
Minimum Quantity	100	50
Dust Cover with Lanyard Strap, Black	B02019P1	134G4

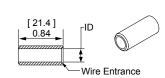
#### **Reducing Bushings**

Use with contact part number 1319-BK to allow a smaller wire to be used with the connector. Electrical capability is derated with smaller wire.

					Dimens	ions
					- ID	) _
Contact Barrel Size	Wire Size	Pa	art Numbers		inches	mm
Minimum Quantity		2,000	1,000	100		
#2 AWG [33.6 mm <sup>2</sup> ]	#4 AWG [21.2 mm²]	5919-BK	-	5919	0.28	7.11
#2 AWG [33.6 mm <sup>2</sup> ]	#6 AWG [16 mm²]	-	5920-BK	5920	0.23	5.84
#2 AWG [33.6 mm <sup>2</sup> ]	#10 - 8 AWG [5.3 - 8.4 mm²]	5921-BK		5921	0.18	4.57







## SB175<sup>®</sup> Connectors - up to 280 Amps



## SB®175 ORDERING INFORMATION |

#### SB®175 Standard Housings

The second to largest SB<sup>®</sup> housings work with wire contacts up to 1/0 AWG [50 mm<sup>2</sup>] as well as busbar contacts. Genderless design mates with itself. Mechanical keys are color coded. NOTE: SB175 black is keyless and can be mated with all other colors.

	Voltage		
	Color		
Description	Code	Part Num	bers
Minimum Quantity	/	200	50
Yellow	12V	943-BK	943
Orange	18V	942-BK	942
Red	24V	949-BK	949
Gray	36V	940-BK	940
Blue	48V	941-BK	941
Black (Keyless)	80V	2-7252G11	-
Brown	96V	940-BK	940

#### SB®175 Chemical Resistant Housings

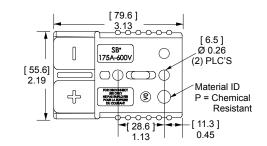
Same features as the Standard SB®175 but molded in a chemical resistant PBT/ PC blend. Suitable for use to -40°C.

	Voltage Color		
Description	Code	Part Nu	mbers
Minimum Qu	antity	200	50
Red	24V	P949-BK	P949
Gray	36V	P940-BK	P940

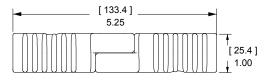
Wires sizes from #12 (3.3 mm<sup>2</sup>) to 1/0 (50 mm<sup>2</sup>) fit in the second to largest connector in the SB<sup>®</sup> series. The 3 pole SB<sup>®</sup>175 adds an additional position for power or grounding. All Multipole wire connector housings are genderless and mate to themselves minimizing inventory and assembly complexity.

- Silver Plated Wire Contacts up to 1/0 (50 mm<sup>2</sup>) 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

Bottom View



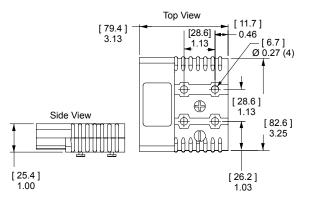
Mated Length



#### 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.

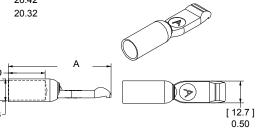
Description	Voltage Color Code	Part N	lumbers
Minimum Quantity		100	25
Gray Housing and Hardware Kit	36V	-	902
Gray Housing Top Half	-	2-5048	-
Gray Housing Bottom Half	-	2-5049	-
Hardware Kit	-	-	110G34



#### SB®175 Silver Plated Wire Contacts

Silver plated contacts offer superior electrical performance and durability up to 10,000 mating cycles.

					Dimensions							
		Mating	Loose F	Piece	- A	-	- B	-	- C	-	- D	) _
AWG	mm²	Force	- Part Nui	mbers -	inches	mm	inches	mm	inches	mm	inches	mm
Minimu	um Quar	ntity	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



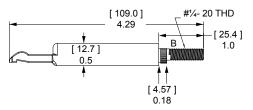
## SECTION 3 SB<sup>®</sup> 175

#### 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.

		Mating			
Туре	Thread	Force	Loose	Piece Part Nun	nbers
Minimum C	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		
Current Rating Amperes <sup>1</sup>	UL 1977	CSA
Wire to Wire (1/0 AWG)	280	175
Wire to Busbar (1/0 AWG)	200	
Voltage Rating AC/DC		
UL 1977	600	
Dielectric Withstanding Voltag		
Volts AC	2,200	
Avg. Mated Contact Resistand	e Milliohms <sup>1</sup>	
6" of 1/0 AWG wire	0.100	
	0.100	
UL Hot Plug Current Rating A	mperes - Wire & Bus	bar
250 cycles at 120V DC 1/0 wi		
Materials		
Materials		
Housing		
	Polycarbonate	
Housing	Polycarbonate Polycarbonate / Pl	3T bler
Housing Standard Plastic Resin		3T bler
Housing Standard Plastic Resin Chem. Resistant Resin Contact Retention Spring	Polycarbonate / Pl	3T bler
Housing Standard Plastic Resin Chem. Resistant Resin Contact Retention Spring Housing Flammability Rating	Polycarbonate / Pl Stainless Steel	3T bler
Housing Standard Plastic Resin Chem. Resistant Resin Contact Retention Spring	Polycarbonate / Pl	3T bler
Housing Standard Plastic Resin Chem. Resistant Resin Contact Retention Spring Housing Flammability Rating UL94	Polycarbonate / Pl Stainless Steel	3T bler
Housing Standard Plastic Resin Chem. Resistant Resin Contact Retention Spring Housing Flammability Rating UL94 Wire & Busbar Contacts	Polycarbonate / Pl Stainless Steel V-0	3T bler
Housing Standard Plastic Resin Chem. Resistant Resin Contact Retention Spring Housing Flammability Rating UL94 Wire & Busbar Contacts Base	Polycarbonate / Pl Stainless Steel V-0 Copper Alloy	3T bler
Housing Standard Plastic Resin Chem. Resistant Resin Contact Retention Spring Housing Flammability Rating UL94 Wire & Busbar Contacts	Polycarbonate / Pl Stainless Steel V-0	3T bler
Housing Standard Plastic Resin Chem. Resistant Resin Contact Retention Spring Housing Flammability Rating UL94 Wire & Busbar Contacts Base Plating	Polycarbonate / Pl Stainless Steel V-0 Copper Alloy Silver	3T bler
Housing Standard Plastic Resin Chem. Resistant Resin Contact Retention Spring Housing Flammability Rating UL94 Wire & Busbar Contacts Base Plating Contact Termination Methods	Polycarbonate / Pl Stainless Steel V-0 Copper Alloy Silver	3T bler
Housing Standard Plastic Resin Chem. Resistant Resin Contact Retention Spring Housing Flammability Rating UL94 Wire & Busbar Contacts Base Plating Contact Termination Methods Crimp <sup>3</sup>	Polycarbonate / Pl Stainless Steel V-0 Copper Alloy Silver Wire Contacts	3T bler
Housing Standard Plastic Resin Chem. Resistant Resin Contact Retention Spring Housing Flammability Rating UL94 Wire & Busbar Contacts Base Plating Contact Termination Methods	Polycarbonate / Pl Stainless Steel V-0 Copper Alloy Silver	3T bler

Mechanical		
Wire Size Range	AWG	mm²
Wire Contacts with Bushings	12 to 1/0	3.3 to 53.5
Max. Wire Insulation Diameter	in.	mm
	0.600	15.240
Operating Temperature <sup>2</sup>	°F	°C
Standard	-4° to 221°	-20° to 105°
Chemical Resistant*	-40 to 221°	-40° to 105°
Mating Cycles No Load by Plating	Silver (Ag)	
Wire and Busbar Contacts	10,000	
Avg. Mating / Unmating Force	Lbf.	N
2 Pole	25	111
3 Pole	35	156
Min. Contact / Spring Retention For	rce	
lbf	150	
Ν	667	

#### Protection

Touch Safety with Wire Contacts IEC 60529 IP10

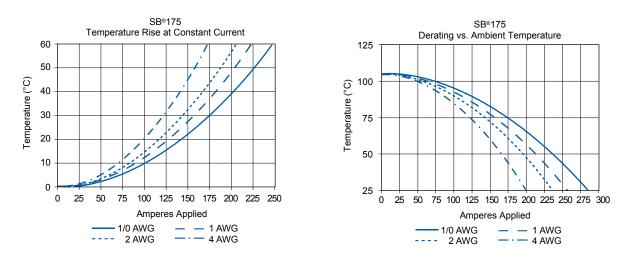
- <sup>1</sup> Based on: 105°C rated or better cable of the largest size, Properly calibrated APP® recommended tooling, and a 25°C ambient temperature. UL rating not to exceed the maximum operating temperature. CSA rating below a 30°C temperature rise.
- <sup>2</sup> Limited by the thermal properties of the connector plastic housing.
- <sup>a</sup> Use APP<sup>®</sup> recommended tooling only. Alternate tools may adversely affect the performance of our connectors along with UL and CSA recognition.







## | SB®175 CONNECTOR TEMPERATURE CHARTS |



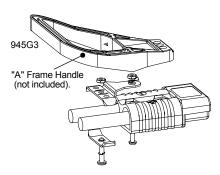


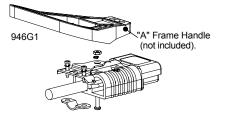
## | SB® 175 Accessories |

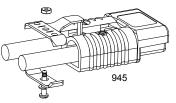
#### **Cable Clamps**

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.

	Max / Min In.	Max / Min mm		
Description	Inches O.D.	mm O.D.	Part Nur	nbers
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





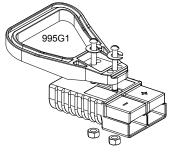


The given wire O.D. information is an estimate. Cable clamps should be evaluated for performance with the actual wire to be used.

#### 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-APP	995G1
Red Handle Kit	995G3-APP	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 Nu	imbers
Minimum Quantity	500	50
Dust Cover with Lanyard Strap, Red	113890P2	134G2

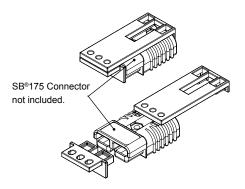


SECTION 3 SB<sup>®</sup> 175

#### 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.

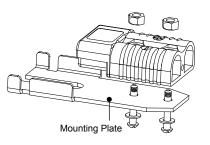
Description	P	art Numbers
Minimum Quantity	50	25
Red Lockout - Tagout Kit	GA-175 SB175-LOCKO	



#### 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	Numbers	
Minimum Quantity	96	25	10
Bracket and Hardware Kit	-	-	924
Bracket Only	B00333P1	-	-
Hardware Bag	-	105G1	-

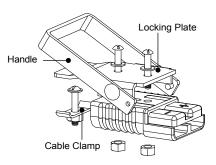


#### Manual Release Bracket - Locking Side

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

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

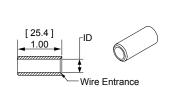
The given wire O.D. information is an estimate. Cable clamps should be evaluated for performance with the actual wire to be used.



#### 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.

						Dimens	sions
						- ID	) -
Contact Barrel Size	Wire Size		Part Num	bers		inches	mm
Minimum Quantity		1,500	1,000	500	100		
1/0 AWG [53.5 mm <sup>2</sup> ]	#1 AWG [42.4 mm²]	-	-	5687-BK	5687	0.39	9.91
1/0 AWG [53.5 mm <sup>2</sup> ]	#2 AWG [33.6 mm²]	5690-BK	-	-	5690	0.34	8.64
1/0 AWG [53.5 mm <sup>2</sup> ]	#4 AWG [21.2 mm²]	-	5693-BK	-	5693	0.27	6.86
1/0 AWG [53.5 mm <sup>2</sup> ]	#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 mm <sup>2</sup> ]	5648-BK	-	-	5648	0.19	4.83



## SB<sup>®</sup> - Tooling Information

Wire	Size	Loose Piece Part Numbers		Loose Piece C	ontact Cr	imp Tools		Reeled Part Numbers	Reeled Contact Crimp Tools		Tools
AWG	mm²	Silver Plating	Hand Tool or	Pneumatic Bench Tool	+ Die	+ Locator	Number of Crimps	Tin Plating	ATS Applicator	ATS Press	Air Feed Kit
	SB50										
#6	13.3	1307									
#0	10.0	5900			1388G6			265G5	1385523-1	2-565435-2	692655-1
#8	8.4	5952	1309G4	1387G1		1389G6	Single				
#10 / 12	53/33	5953			1388G7			265G6	1385522-1	1725900-2 or	1424266-1 or
#10712	5.57 5.5	5915			130007			20300	1303322-1	[3-54500-1]	[354578-1]
					SE	3120					
#1	42.4	1323G1			1388G3						
#2	33.6	1319	1368	1387G1	120701		1389G4 Single N/A	N/A		N/A	
#4	21.2	1319G4	1300	1307 91	1388G4	130904	Single	N/A		IN/A	
#6	13.3	1319G6									
					SB	175					
1/0	53.5	1382		1387G2	1303G13	1304G32	Double				
1/0	55.5	1302									
#1	42.4	1347		1387G1	1388G3	1389G3 Single					
#2	33.6	1383	1368					N/A		N/A	
#2	33.0	1363	1300	1387G2	1303G13	1304G32	Double	N/A		IN/A	
#4	21.1	1384		1387G1	1388G3	1389G3	Single				
#4	21.1	1304		1387G2	1303G13	1304G32	Double				
#6	13.3	1348		1387G1	1388G4	1389G3	Single				
					SE	3350					
300mcm	152	910			N/A		Single				
4/0	107.2	908			1303G3						
3/0	85	916	1368	400700		4004004	Daubli	N/A		N/A	
2/0	67.4	907		1387G2	1303G12	1304G31	Double				
1/0	53.5	917									

NOTE: See website for the most current informatmion.

## SB350<sup>®</sup> Connectors - up to 450 Amps



## | SB®350 ORDERING INFORMATION |

#### SB®350 Standard Housings

The largest SB $^{\circ}$  housings work with wire contacts up to 300 mcm [150 mm<sup>2</sup>] as well as busbar contacts. Genderless design mates with itself. Mechanical keys are color coded. NOTE: SB350 Black and Blue Housings have the same keying features and can be intermated.

	Voltage Color		
Description	Code	Part Numl	bers
Minimum Qua	antity	50	25
Yellow	12V	914-BK	914
Orange	18V	932-BK	932
Red	24V	913-BK	913
Gray	36V	906-BK	906
Blue	48V	912-BK	912
Green	72V	931-BK	931
Black	80V	2-7250G8	-

#### SB®350 Chemical Resistant Housings

Same features as the Standard SB®350 but molded in a chemical resistant PBT/ PC blend. Suitable for use to -40°C.

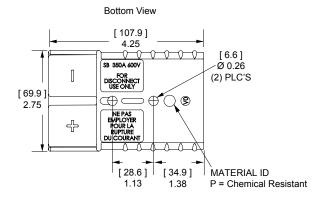
	Voltage		
	Color		
Description	Code	Part Nu	mbers
Minimum Quantity		50	25
Red	24V	P913-BK	P913
Gray	36V	P906-BK	P906

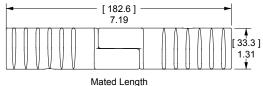
The SB<sup>®</sup>350 is the largest connector in the series with power capabilities up to 450 amps with 4/0 wire. Wires ranging from #1/0 (50 mm<sup>2</sup>) to 300 mcm (152 mm<sup>2</sup>) fit into the one piece housing available in standard PC or a chemical resistant PBT/PC blend. Silver plated wire or busbar contacts minimize electrical resistance while offering supreme durability and reliability.

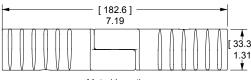
#### • Up to 300 mcm (152 mm<sup>2</sup>) Wires

Allows UL rated currents up to 450 amps with 4/0 wire

- Chemical Resistant Housing Option Extends temperature range down to -40°C, while offering enhanced UV and chemical resistance
- Same Housings Used for Wire and Busbar Contacts Enables color-coded mechanically keyed wire to busbar connections



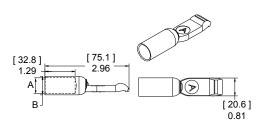




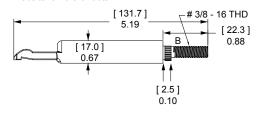
#### SB®350 Silver Plated Wire Contacts

Silver plated contacts offer superior electrical performance and durability up to 10,000 mating cycles.

							Dimen	sions	
		Mating				- A	-	- B	-
AWG	mm²	Force	- Loose F	Piece Part	Numbers -	inches	mm	inches	mm
Minimum	Quantity		200	150	50				
300mcm	152	High	-	910-BK	910	0.75	19.05	0.87	22.10
4/0	107.2	High	908-BK	-	908	0.64	16.26	0.75	19.05
3/0	85	High	916-BK	-	916	0.58	14.73	0.70	17.78
2/0	67.4	High	907-BK	-	907	0.49	12.45	0.64	16.26
1/0	53.5	High	917-BK	-	917	0.44	11.18	0.51	12.95



See Busbar contact drawing on website for further detail.



#### SB®350 Silver Plated Busbar Contacts

Use 2 busbar contacts per housing to provide a quick disconnect input or output busbar connection. Busbar contacts are for mating with wire contacts only. Part number 350BBS includes lock nuts. Locknuts must be ordered separately for B01998P1.

		Mating			
Туре	Thread	Force	- Loose Pie	ce Part Number	s -
Minimum	Quantity		. 50	10	
Busbar	1/4-20	High	B01998P1	350BBS	
Lock Nut	1/4-20	-	H1216P9	110G73	

## | SB®350 CONNECTOR SPECIFICATIONS |

Electrical				Mechanical
Current Rating Amperes <sup>1</sup>	ι	JL 1977	CSA	Wire Size Range
Wire to Wire (4/0 AWG)	4	150	350	Wire Contacts with Bushings
Voltage Rating AC/DC				Max. Wire Insulation Diameter
UL 1977	6	600		
Dielectric Withstanding Volta	age			Operating Temperature <sup>2</sup>
Volts AC	2	2,200		Standard
				Chemical Resistant
Avg. Mated Contact Resistar 2 1/2" of 300mcm wire		0.050		Meting Cycles No. Load by Disting
2 1/2 Of Southern wire	L	1.050		Mating Cycles No Load by Plating Wire and Busbar Contacts
Hot Plug Current Rating Am	oeres - Wire & E	Busbar		Wire and Basbar Contacts
250 cycles at 120V DC	1	00A		Avg. Mating / Unmating Force
				2 Pole
Materials				
Housing				Min. Contact / Spring Retention Fo
Standard Plastic Resin	Polycarbona			lbf
Chem. Resistant Resin	Polycarbona		blend	Ν
Contact Retention Spring	Stainless St	eel		Protection
Housing Flammability Rating	9			Touch Safety with Wire Contacts
UL94	V-0			IEC 60529 IP10
Wire & Busbar Contacts				<sup>1</sup> Based on: 105°C rated or better cabl
Base	Copper Allo	у		tooling, and a 25°C ambient tempera
Plating	Silver			temperature. CSA rating below a 30
				<sup>2</sup> Limited by the thermal properties of
Contact Termination Method	-			<sup>3</sup> Use APP <sup>®</sup> recommended tooling only
Crimp <sup>3</sup>	Wire Contac			connectors along with UL and CSA r
Hand Solder	Wire Contac			-
Wrench / Socket	Busbar Con	tacts		

Wire Size Range	AWG	mm²
Wire Contacts with Bushings	1/0 to 300 mcm	53.5 to 152
Max. Wire Insulation Diameter	in.	mm
	1.100	27.900
Operating Temperature <sup>2</sup>	°F	°C
Standard	-4° to 221°	-20° to 105°
Chemical Resistant	-40 to 221°	-40° to 105°
Mating Cycles No Load by Plating	Silver (Ag)	
Wire and Busbar Contacts	10,000	
Avg. Mating / Unmating Force	Lbf.	N
2 Pole	30	133
Min. Contact / Spring Retention For	rce	
lbf	150	
Ν	667	
Protection		
Touch Safety with Wire Contacts		
IEC 60529 IP10		

ble of the largest size, Properly calibrated APP® recommended rature. UL rating not to exceed the maximum operating 0°C temperature rise.

of the connector plastic housing.

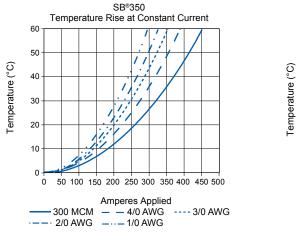
nly. Alternate tools may adversely affect the performance of our recognition.

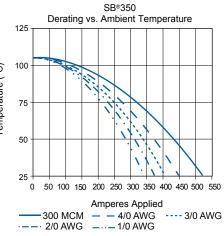






## | SB®350 CONNECTOR TEMPERATURE CHARTS|





NOTE: Temperature rise charts are based on a 25°C ambient temperature.

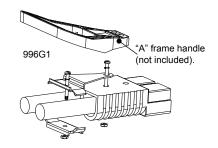
## | SB® 350 Accessories |

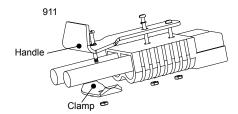
#### **Cable Clamps**

Durable metal cable clamps securely hold cables to prevent accidental strain or pulls from dislodging wire or contacts from the housing. Cable clamps are recommended for solder terminated wires.

	Cable		
	Min / Max	Min / Max	
Description	Inches O.D.	mm O.D.	- Part Number -
Minimum Quantity			10
Bolt On for Discrete Conductor	1.00 to 0.35	25.4 to 8.8	996G1
Discrete Conductor w/ Integral Handle	0.76 to 0.32	19.3 to 8.2	911

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

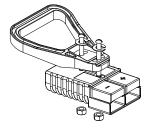




#### Handles

Handles are made out of durable PC plastic. Hardware to attach to connector body included in kits.

Description	Part Numbers			
Minimum Quantity	100	25		
Gray Handle Kit	995G2-APP	995G2		
Red Handle Kit	995G4-APP	995G4		
Handle Only, Gray	3-5074P1	-		
Handle Only, Red	3-5074P3	-		
Handle Only, Black	3-5074P5	-		
Hardware Bag	-	106G7		



#### **Dust Cover**

Prevents dust and dirt from entering the mating interface of the connector when unmated. NOTE: Not a Hermetic Seal.

Description	Part Nu	mbers
Minimum Quantity	500	50
Dust Cover with Lanyard Strap, Red	113890P3	134G3



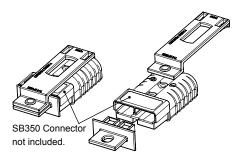
#### SB®350 Lockout

Works with standard lockout - tagout equipment to prevent access to the mating interface of the connector. Made from durable PC plastic.

 Description
 ------ Part Numbers ----- 

 Minimum Quantity ......
 50
 25

 Red Lockout - Tagout Kit
 GA-350
 SB350-LOCKOUT



#### Manual Release Bracket - Mounting Side

Works with the Locking Side to ease mating and unmating connectors.

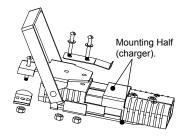
Description	Part Numbers			
Minimum Quantity	66	25	10	
Bracket and Hardware Kit	-	-	922G1	
Bracket Only	B00229P1	-	-	
Hardware Bag	-	106G6	-	

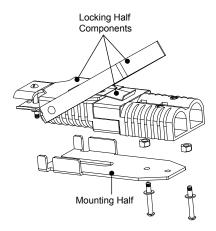
#### Manual Release Bracket - Locking Side with Cable Clamp

Works with the Mounting Side to ease mating and unmating connectors.

	Cable S		
	Min / Max	Min / Max	
Description	Inches O.D.	mm O.D.	- Part Numbers -
Minimum Quantity			10
Bracket and Hardware Kit w/ Clamp Kit	0.94 to 0.61	23.7 to 15.5	919

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

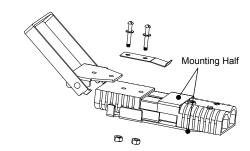




#### Manual Release Bracket - Locking Side no Cable Clamp

Works with the Battery side to ease mating and unmating connectors.

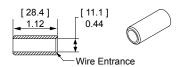
Description	- Part Numbers -
Minimum Quantity	10
Bracket and Hardware Kit No Clamp Kit	919G1



#### **Reducing Bushings: for Use with Contact # 907**

Use with contact part number 907-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 Nu	mbers
Minimum Quantity		500	100
2/0 AWG [67.4 mm <sup>2</sup> ]	1/0 AWG [53.5 mm <sup>2</sup> ]	5918-BK	5918



## SB<sup>®</sup> - Tooling Information

Wire	Size	Loose Piece Part Numbers		Loose Piece C	ontact Cr	imp Tools		Reeled Part Numbers	Reeled Contact Crimp		Tools
AWG	mm²	Silver Plating	Hand Tool or	Pneumatic Bench Tool	+ Die	+ Locator	Number of Crimps	Tin Plating	ATS Applicator	ATS Press	Air Feed Kit
	SB50										
#6	13.3	1307									
#0	10.0	5900			1388G6			265G5	1385523-1	2-565435-2	692655-1
#8	8.4	5952	1309G4	1387G1		1389G6	Single				
#10 / 12	53/33	5953			1388G7			265G6	1385522-1	1725900-2 or	1424266-1 or
#10712	5.57 5.5	5915			130007			20300	1303322-1	[3-54500-1]	[354578-1]
					SE	3120					
#1	42.4	1323G1			1388G3						
#2	33.6	1319	1368	1387G1		1389G4	Single	N/A		N/A	
#4	21.2	1319G4	1300	1307 91	1388G4	130904	Single	1.077			
#6	13.3	1319G6									
					SB	175					
1/0	53.5	1382		1387G2	1303G13	1304G32	Double				
1/0	55.5	1302									
#1	42.4	1347		1387G1	1388G3 1389G3 Single						
#2	33.6	1383	1368					N/A		N/A	
#2	33.0	1363	1300	1387G2	1303G13	1304G32	Double	N/A		IN/A	
#4	21.1	1384		1387G1	1388G3	1389G3	Single				
#4	21.1	1304		1387G2	1303G13	1304G32	Double				
#6	13.3	1348		1387G1	1388G4	1389G3	Single				
					SE	3350					
300mcm	152	910			N/A		Single				
4/0	107.2	908			1303G3						
3/0	85	916	1368	400700		4004004	Daubli	N/A	N/A		
2/0	67.4	907		1387G2	1303G12	1304G31	Double				
1/0	53.5	917									

NOTE: See website for the most current informatmion.



## SB® 2/0 SB®175 Sized Connector for 2/0 or 70mm<sup>2</sup> Wire



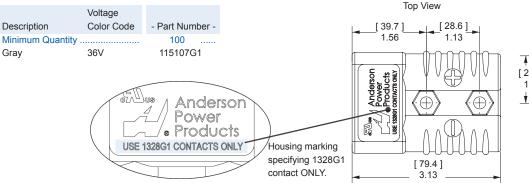
The SB<sup>®</sup> 2/0 is an extension of the SB<sup>®</sup>175 connector series with more power in the same footprint. The SB<sup>®</sup> 2/0 features outer dimensions that are identical to the SB<sup>®</sup>175, but has been designed to accept only a contact for 2/0 or 70mm<sup>2</sup> wire.

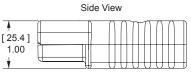
- Silver Plated Wire Contacts for 2/0 or 70mm<sup>2</sup> Wire Allows UL rated currents up to 340 amps
- Low Resistance Connection Silver plated power contacts are strongly forced together by stainless steel springs
- Same External Dimensions as SB<sup>®</sup>175 Use as a drop-in replacement for SB<sup>®</sup>175 where larger wires are needed

## | ORDERING INFORMATION |

#### SB<sup>®</sup> 2/0 Housings

Genderless design mates with itself. Can be cross mated with gray SB®175 housing, but amperage capability is limited to the SB®175 rating with the wire and contact used.

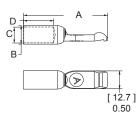




#### **Silver Plated Wire Contacts**

Silver plated contacts offer superior electrical performance and durability up to 5,000 mating cycles.

					Dimensions							
					- A	-	- B	-	- C	-	- D	-
Туре	AWG	mm²	- Loose Piece I	Part Numbers -	inches	s mm	inches	mm	inches	mm	inches	mm
Minimum	Quantity		300	50								
Individual	2/0	70	1328G1-BK	1328G1	2.35	59.69	0.64	16.26	0.49	12.45	1.04	26.42



## | SPECIFICATIONS |

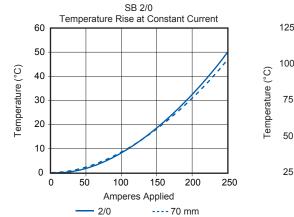
Electrical			Mechanical		
<b>Current Rating (Amperes</b>	) <sup>1</sup> UL 1977	CSA	Contact Wire Range	(AWG)	2/0
2/0 AWG	340	200	_	(mm²)	70
70 mm²	315	185	MAX Wire Insulation Diameter	(in)	0.67
Voltage Rating (AC/DC)		600**	Operating Temperature <sup>2</sup>	(mm) °C	17.04 °F
Dielectric Withstanding V	/oltage (AC)	2,200	PC Housing	-20° to 105°	-4° to 22
AVG Contact Resistance	(milli-ohms) <sup>1</sup>	0.045	AVG Contact Retention Force	(lbf)	150
			for Standard PC Housing	(N)	667
Materials			Mating Cycles (no load)		5,000
Standard Housing P	PC		Connector AVG Connect / Disconnect**	(lbf)	55
Flammability Rating	JL94 V-0			(N)	245
Wire Power Contact C	Copper alloy, silver plate				
Contact Termination Met	hods				
• Crimp <sup>3</sup>			CRU <sup>®</sup> US File No. E26226	APP	
Hand Solder					

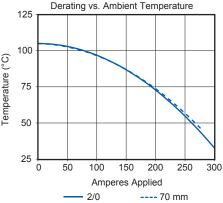
<sup>1</sup> Based on: 105°C rated or better cable of the largest size, Properly calibrated APP<sup>®</sup> recommended tooling, and a 25°C ambient temperature. UL rating not to exceed the maximum operating temperature. CSA rating below a 30°C temperature rise.

<sup>2</sup> Limited by the thermal properties of the connector plastic housing.

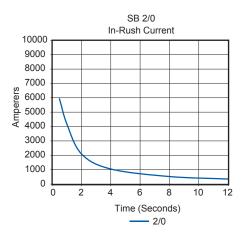
<sup>a</sup> Use APP<sup>®</sup> recommended tooling only. Alternate tools may adversely affect the performance of our connectors along with UL and CSA recognition.

### | TEMPERATURE CHARTS |





SB 2/0

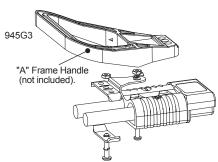


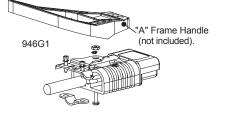
## | SB® 2/0 Accessories |

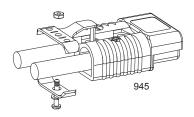
#### **Cable Clamps**

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.

	Cable Size				
	Max / Min In.	Max / Min mm			
Description	Inches O.D.	mm O.D.	Part Nur	nbers	
Minimum Quantity			100	50	
Self Attaching for Discrete Conductor		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	





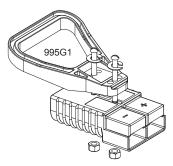


The given wire O.D. information is an estimate. Cable clamps should be evaluated for performance with the actual wire to be used.

#### Handles

Handles are made out of durable PC plastic. Hardware to attach to connector body included in kits.

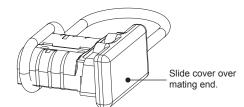
Description	Part Nur	nbers
Minimum Quantity	100	25
Gray Handle Kit	995G1-APP	995G1
Red Handle Kit	995G3-APP	995G3
Handle Only, Gray	3-5074P1	-
Handle Only, Red	3-5074P3	-
Handle Only, Black	3-5074P5	-
Hardware Bag	-	105G8



#### **Dust Cover**

Prevents dust and dirt from entering the mating interface of the connector when unmated. NOTE: Not a Hermetic Seal.

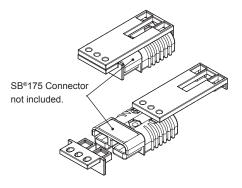
Description	Part Nu	umbers
Minimum Quantity	500	50
Dust Cover with Lanyard Strap, Red	113890P2	134G2



#### SB®175 Lockout

Works with standard lockout - tagout equipment to prevent access to the mating interface of the connector. Made from durable PC plastic.

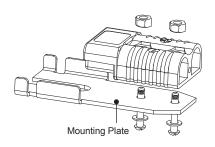
Description	Part Number		
Minimum Quantity	25		
Red Lockout - Tagout Kit	SB175-LOCKOUT		



#### Manual Release Bracket - Mounting Side

Works with the Locking Side to ease mating and unmating connectors.

Description	Part	Numbers	
Minimum Quantity	96	25	10
Bracket and Hardware Kit	-	-	924
Bracket Only	B00333P1	-	-
Hardware Bag	-	105G1	-

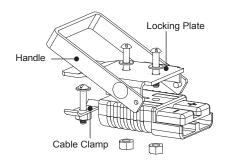


#### Manual Release Bracket - Locking Side

Works with the Mounting Side to ease mating and unmating connectors.

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

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



## | TOOLING INFORMATION |

Wire	Size	Loose Piece Part Numbers	Loo	se Piece	Contac	t Crimp	ΤοοΙ
AWG	mm²	Silver Plating	Hand Tool or	Pneumatic Bench Tool		+ Locator	Number of Crimps
2/0	53.5	1328G1	1368	1387G2	1303G12	1304G32	Double

NOTE: See website for the most current information.

All Data Subject To Change Without Notice

DS-SB2-0 REV 0

HEADQUARTERS: Anderson Power Products<sup>®</sup>, 13 Pratts Junction Road, Sterling, MA 01564-2305 USA T:978-422-3600 F:978-422-0128 EUROPE: Anderson Power Products<sup>®</sup> Ltd., Unit 3, Europa Court, Europa Boulevard, Westbrook, Warrington, Cheshire, WA5 7TN United Kingdom T: +44 (0) 1925 428390 F: +44 (0) 1925 520203 ASIA / PACIFIC: IDEAL Anderson Asia Pacific Ltd., Unit 922-928 Topsail Plaza, 11 On Sum Street, Shatin N.T., Hong Kong T:+(852) 2636 0836 F:+(852) 2635 9036 CHINA: IDEAL Anderson Technologies (Shenzhen) Ltd., Block A8 Tantou Western Industrial Park, Songgang Baoan District, Shenzhen, PR. China 518105 T: +(86) 755 2768 2118 F: +(86) 755 2768 2218 TAIWAN: IDEAL Anderson Asia Pacific Ltd., Taiwan Branch, 4F.-2, No.116, Dadun 20th St., Situn District, Taichung City 407, Taiwan (R.O.C.) T: +(886) 4 2310 6451 F:+(860) 4 2310 6460



# Extended Range Contacts SB<sup>®</sup> & Powerpole<sup>®</sup> Connectors

Designers are increasingly in need of greater current carrying capability without increasing size. The Extended Range Contact series meet this need by adding design flexibility and value to the SB120 and Powerpole 120 & 180 housings. Now these same connector housings are able to accommodate larger wire sizes and have increased amperage capability by up to 92%.

SB120 now accepts up to #1 AWG wire and is capable of 190 amps. PP120 is capable of 230 amps with the new 1/0 AWG contact. PP180 is now rated to 310 amps with 3/0 AWG wire. The availability of Extended Range Contacts are indicated on the connector data sheets by adding "Plus" to the connector model name (Example: SB120 Plus). See individual connector data sheets for more detailed specifications.







Extended Range Wider Barrel

Standard Barrel

1 AWG 1/0 3/0

## SPECIFICATIONS

Connector Model	SB120	PP120	PP180	Connector Model	SB120	PP120	PP180
Current Rating (Amperes)*	190	230	310	Life			
Voltage Ratings (AC/DC)*	600	600	600	a. No Load (mating cycles) b. Under Load	10,000	10,000	10,000
Contact Barrel Wire Size (AWG) (mm <sup>2</sup> )	#1 to #6 42.4 to 13.3	1/0 to #8 53.5 to 8.4	3/0 to #10 85.0 to 5.3	(Hot Plug 250 mating cycles @ 120V)	60A	60A	75A
Maximum Wire Insulation Diameter (inches) (mm)	0.575 14.6	0.600 15.24	0.900 22.86	Average Connection/Disconnect (lbf) (N)	20 89	8 36	20 89
Average Contact Resistance* (micro-ohms)	136	136	100	Operating Temperature (°C)** (°F)	-20° to 105° -4° to 221°	-20° to 105° -4° to 221°	-20° to 105 -4° to 221°
Dielectric Withstanding Voltage (AC)	2,200	2,200	2,200	Flammability Rating of Housing Material	UL94 V-0	UL94 V-0	UL94 V-0
Contact Retention Force (lbf)	100	100	170		010110	020110	010110
(N)	445	445	756				

\*\* Contact factory for higher temperature rated connector . SB®, UL and CSA Reference: This equipment is \* UL Rated for 75°C largest wire or cable size. an Underwriters Laboratories Inc® recognized component. It is also listed by the Canadian Standards Association as certified.

## ORDERING INFORMATION

	ded Range Con 3120, PP120 & P			PP120 Housi	) ings Only	PP180 Housi	) ings Only	SB12 Housi	0 ing Only
Part		- W	/ire -	Part		Part		Part	
Number	Description	AWG	sq. mm	Number	Description	Number	Description	Number	Description
6811G7	For use with SB120 (set)	#1	42.4	1321	Blue housing	1381	Blue housing	6810G1	Gray housing
1323G1	For use with PP120	#1	42.4	1321G1	Black housing	1381G1	Black housing	6810G2	Blue housing
1323G2	For use with PP120	#1/0	53.5	1321G2	White housing	1381G2	White housing	6810G3	Red housing
1328G1	For use with PP180	2/0	67.4	1321G3	Red housing	1381G3	Red housing		-
1328G2	For use with PP180	3/0	85.0	1321G4	Green housing	1381G4	Green housing		

#### Tooling

APP

Contact Part Number	Pneumat Bench To		+ Locator	or	Dieless Hydraulic Tool
1323G1 (6811G7) 1323G2	1387G1	1388G3	1389G3		
1328G1	1387G2	1303G4	1304G32		1368
1328G2		1303G12			

HEADQUARTERS: Anderson Power Products®, 13 Pratts Junction Road, Sterling, MA 01564-2305 USA T:978-422-3600 F:978-422-3700 EUROPE: Anderson Power Products® Ltd., Unit 3, Europa Court, Europa Boulevard, Westbrook, Warrington, Cheshire, WA5 7TN United Kingdom T: +44 (0) 1925 428390 F: +44 (0) 1925 520203 ASIA / PACIFIC: IDEAL Anderson Asia Pacific Ltd., Unit 922-928 Topsail Plaza, 11 On Sum Street, Shatin N.T., Hong Kong T:+(852) 2636 0836 F:+(852) 2635 9036 CHINA: IDEAL Anderson Technologies (Shenzhen) Ltd., Block A8 Tantou Western Industrial Park, Songgang Baoan District, Shenzhen, PR. China 518105 T: +(86) 755 2768 2118 F: +(86) 755 2768 218 F: +(86) 755 757 F: +(86) 755 757 F: +(86) 755 757 F: +(86) 755 755 F: +(86) 755 F: +(86 TAIWAN: IDEAL Anderson Asia Pacific Ltd., Taiwan Branch, 4F.-2, No.116, Dadun 20th St., Situn District, Taichung City 407, Taiwan (R.O.C.) T: +(886) 4 2310 6451 F:+(886) 4 2310 6450 www.andersonpower.com