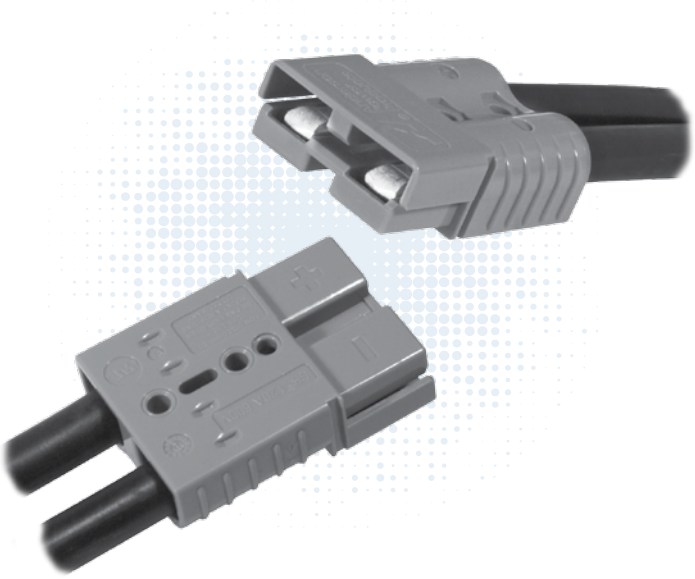
SB120® Connectors - up to 240 Amps



Like the other Multipole connectors, the SB®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 mm²) to #1 (42.4 mm²) are held in the second smallest SB® housing.

- **New extended range contacts expand wire size up to #1 AWG (42.4 mm²)**
  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® housings work with wire contacts up to 1 AWG [35 mm²] as well as busbar contacts. Genderless design mates with itself. Mechanical keys are color coded.

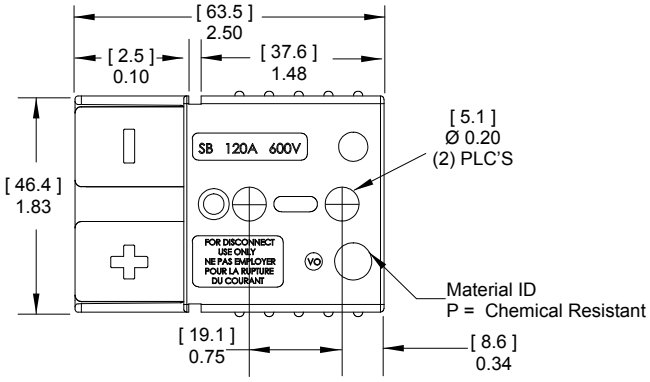
Description	Voltage Color Code	----- Part Numbers -----	
Minimum Quantity		250	50 ....
Red	24V	6810G3-BK	6810G3
Gray	36V	6810G1-BK	6810G1
Blue	48V	6810G2-BK	6810G2

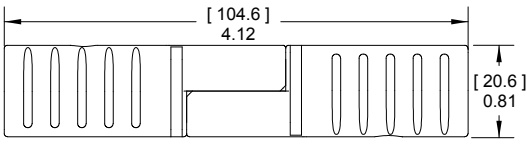
SB®120 Chemical Resistant (CR) Housings

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

Description	Voltage Color Code	------- Part Numbers -------	
Minimum Quantity		250	50 .....
Red	24V	P6810G3-BK	P6810G3
Gray	36V	P6810G1-BK	P6810G1

Bottom View





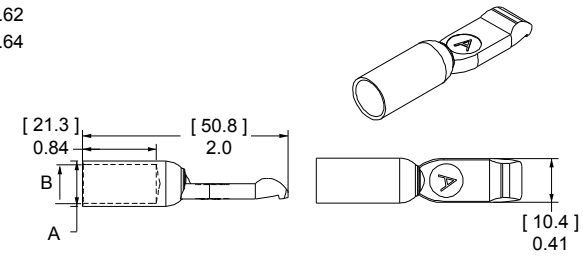
Mated Length

All Data Subject To Change Without Notice

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.

AWG	mm²	Mating Force	------- Loose Piece Part Numbers -------			Dimensions - A - inches	mm	- B - inches	mm
Minimum Quantity			600	500	50	.....			
1	42.4	Low	1323G1-BK	-	1323G1	0.47	11.94	0.39	9.91
2	33.6	High	-	1319-BK	1319	0.44	11.18	0.22	5.59
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

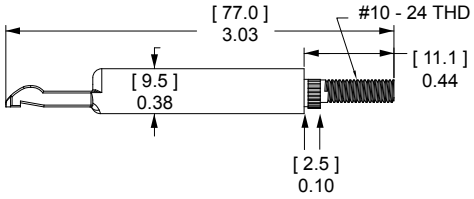


SB®120 Silver Plated Busbar Contacts

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.

Type	Thread	Mating Force	---------- Loose Piece Part Numbers ----------			
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.



| SB®120 CONNECTOR SPECIFICATIONS |

Electrical

	UL 1977	CSA
Current Rating Amperes[1]		
Wire to Wire (1 AWG)	240	130
Wire to Busbar (2 AWG)	120	
Voltage Rating AC/DC		
UL 1977	600	
Dielectric Withstanding Voltage		
Volts AC	2,200	
Avg. Mated Contact Resistance Milliohms[1]		
5 1/2" of #2 AWG wire	0.136	
Hot Plug Current Rating Amperes - Wire & Busbar		
250 cycles at 120V DC	60A	

Mechanical

	AWG	mm²
Wire Size Range		
Wire Contacts with Bushings	10 - 1	5.3 - 42.4
Max. Wire Insulation Diameter	**in.**	**mm**
	0.600	15.240
Operating Temperature[2]	**°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**
Wire to Wire	20	89
Min. Contact / Spring Retention Force		
lbf	75	
N	333.6	

Materials

Housing	
Standard Plastic Resin	Polycarbonate
Chem. Resistant Resin	Polycarbonate / PBT blend
Contact Retention Spring	Stainless Steel
Housing Flammability Rating	
UL94	V-0
Wire & Busbar Contacts	
Base	Copper Alloy
Plating	Silver
Contact Termination Methods	
Crimp[3]	Wire Contacts
Hand Solder	Wire Contacts
Wrench / Socket	Busbar Contacts Only

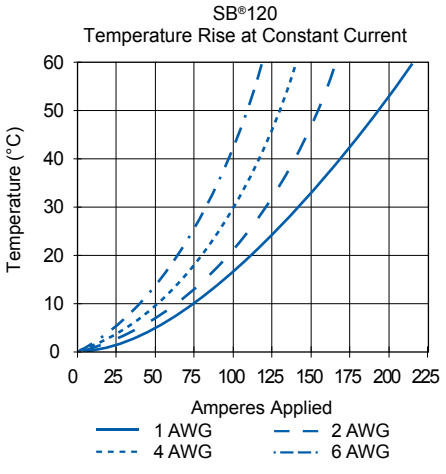
Protection

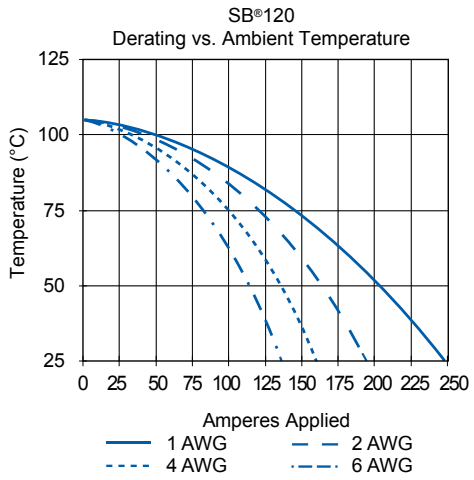
Touch Safety with Wire Contacts	
IEC 60529	IP10

c US File No. E26226 © CSA Certified File No. LR25154

[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.

| SB®120 CONNECTOR TEMPERATURE CHARTS |





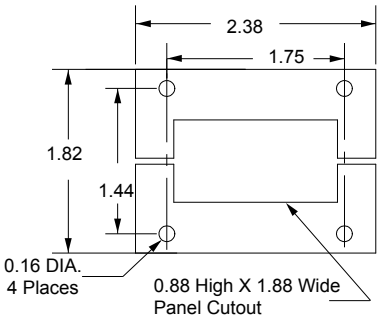
NOTE: Temperature rise charts are based on a 25°C ambient temperature.

All Data Subject To Change Without Notice

Mounting Clamp for SB®120

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

Description	--- Part Number ---
Minimum Quantity	20 sets of 2 ....
Panel Mount Bracket for SBS®50	1467G1

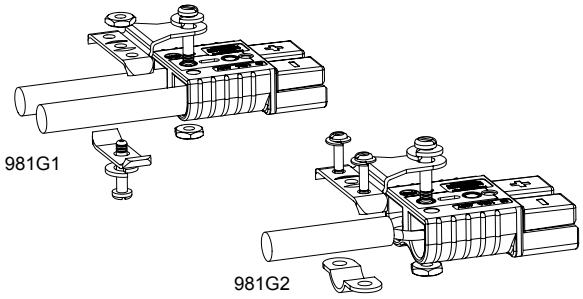


Cable Clamps

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 Size		
	Min / Max	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

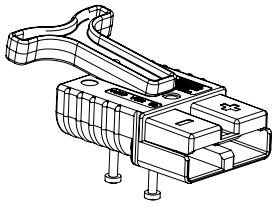
The given wire O.D. information is an estimate. Cable clamps should be evaluated for performance with the actual wire to be used.



"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.

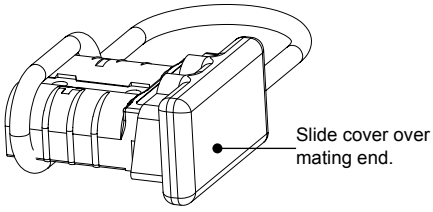
Description	---------- Part Numbers ----------	
Minimum Quantity	1,000	50 .....
Red "T" Handle + Hardware Bag	-	SB120-HDL-RED
Red "T" Handle Only	113899P1	-
#8 x 7/8" Screw (Order 2 Per Handle)	H1120P43	-



Dust Cover

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

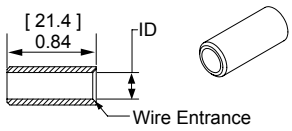
Description	------ Part Numbers ------	
Minimum Quantity	100	50 ....
Dust Cover with Lanyard Strap, Black	B02019P1	134G4



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.

					Dimensions - ID -	
Contact Barrel Size	Wire Size	---------- Part Numbers ----------			inches	mm
Minimum Quantity		2,000	1,000	100	.....	
#2 AWG [33.6 mm²]	#4 AWG [21.2 mm²]	5919-BK	-	5919	0.28	7.11
#2 AWG [33.6 mm²]	#6 AWG [16 mm²]	-	5920-BK	5920	0.23	5.84
#2 AWG [33.6 mm²]	#10 - 8 AWG [5.3 - 8.4 mm²]	5921-BK		5921	0.18	4.57



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FORSTAR®

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