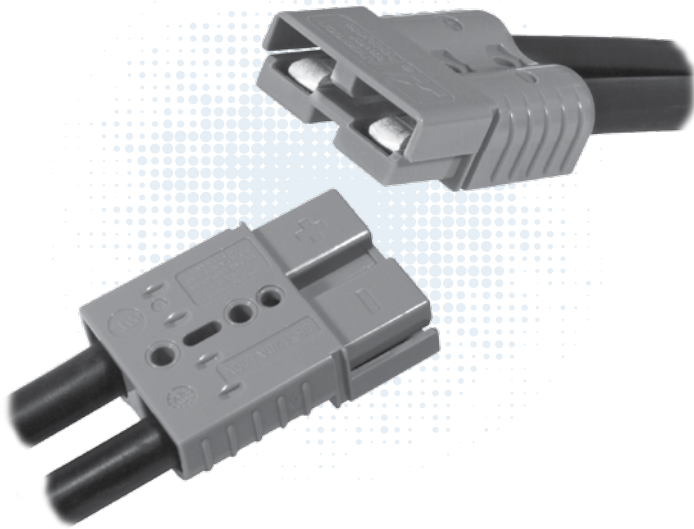


SB120[®] Connectors

- 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

SECTION 3
SB[®] 120

| SB[®]120 ORDERING INFORMATION |

SB[®]120 Standard Housings

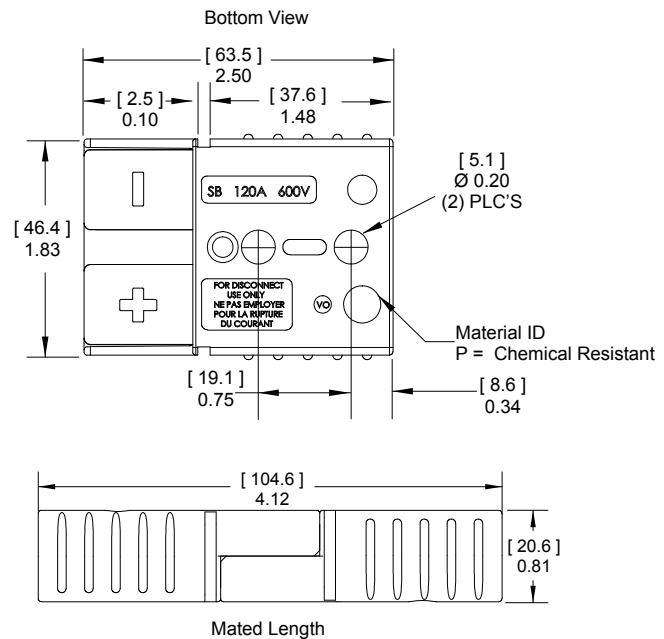
The second to smallest SB[®] housings work with wire contacts up to 1 AWG [35 mm²] as well as busbar contacts. Genderless design mates with itself. Mechanical keys are color coded.

| 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.

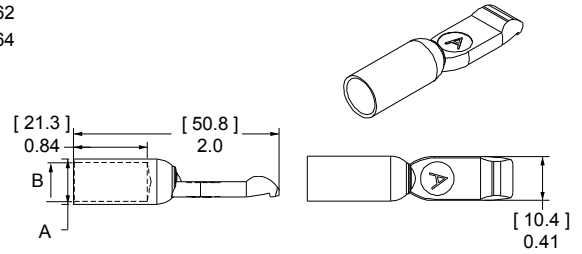
| Description | Voltage | Color | Code | ----- Part Numbers ----- |
|------------------------|---------|-------|------------|--------------------------|
| Minimum Quantity | | | | 250 50 |
| Red | 24V | | P6810G3-BK | P6810G3 |
| Gray | 36V | | P6810G1-BK | P6810G1 |



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 | mm ² | Mating Force | Loose Piece Part Numbers | | | Dimensions | | | |
|------------------|-----------------|--------------|--------------------------|-----------|--------|------------|-------|--------|------|
| | | | ----- | ----- | ----- | - A - | | - B - | |
| Minimum Quantity | | | 600 | 500 | 50 | inches | mm | inches | mm |
| 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 |

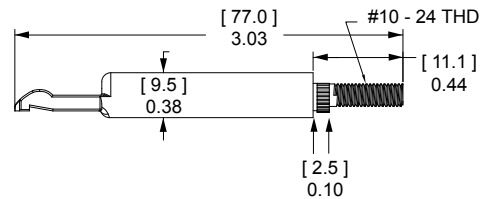


SB®120 Silver Plated Busbar Contacts

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

| Current Rating Amperes ¹ | UL 1977 | CSA |
|--|---------|-----|
| 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 Milliohms¹ | | |
| 5 1/2" of #2 AWG wire | 0.136 | |
| Hot Plug Current Rating Amperes - Wire & Busbar | | |
| 250 cycles at 120V DC | 60A | |

Mechanical

| Wire Size Range | AWG | mm ² |
|--|-------------|-----------------|
| Wire Contacts with Bushings | 10 - 1 | 5.3 - 42.4 |
| Max. Wire Insulation Diameter | | |
| | in. | mm |
| | 0.600 | 15.240 |
| Operating Temperature² | | |
| Standard | °F | °C |
| | -4° to 221° | -20° to 105° |
| Chemical Resistant* | -40 to 221° | -40° to 105° |
| Mating Cycles No Load by Plating | | |
| Wire and Busbar Contacts | Silver (Ag) | |
| | 10,000 | |
| Avg. Mating / Unmating Force | | |
| Wire to Wire | Lbf. | N |
| | 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 |
|-----------|------|

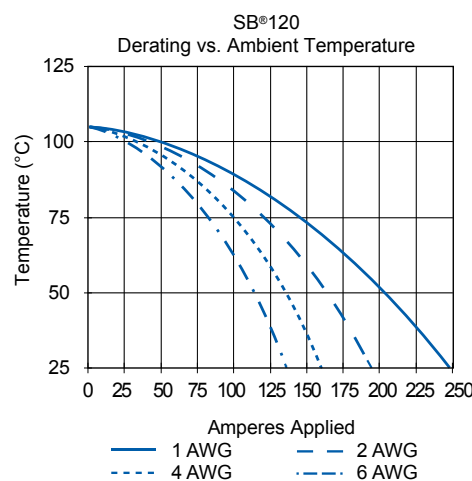
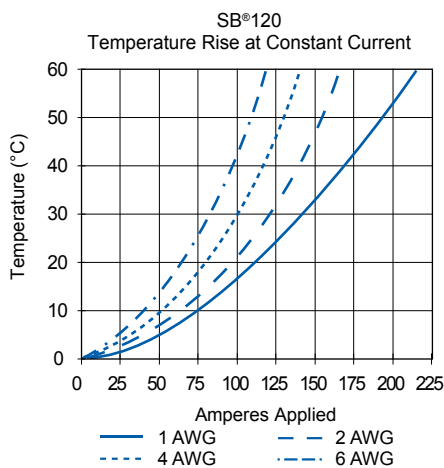


¹ Based on: 105°C rated or better cable of the largest size, Properly calibrated APP® recommended tooling, and a 25°C ambient temperature. UL rating not to exceed the maximum operating temperature. CSA rating below a 30°C temperature rise.

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 |



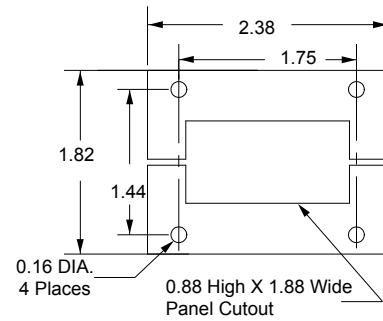
NOTE: Temperature rise charts are based on a 25°C ambient temperature.

| SB® 120 Accessories |

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 |

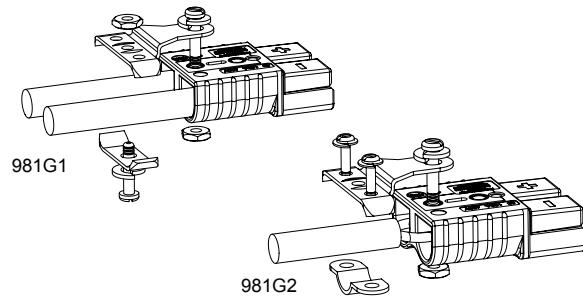


Cable Clamps

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.

| Description | Cable Size | | - Part Numbers - |
|--------------------------------|-----------------------|-------------------|------------------|
| | Min / Max Inches O.D. | Min / Max mm O.D. | |
| 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 |

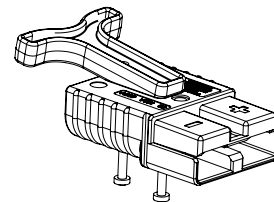
The given wire O.D. information is an estimate. Cable clamps should be evaluated for performance with the actual wire to be used.



“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.

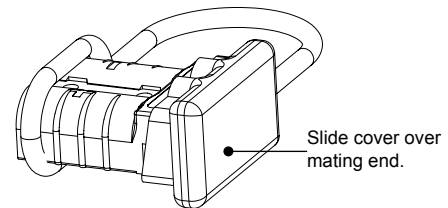
| Description | ----- Part Numbers ----- | |
|--------------------------------------|--------------------------|---------------|
| Minimum Quantity | 1,000 | 50 |
| Red “T” Handle + Hardware Bag | - | SB120-HDL-RED |
| Red “T” Handle Only | 113899P1 | - |
| #8 x 7/8” Screw (Order 2 Per Handle) | H1120P43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



Dust Cover

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

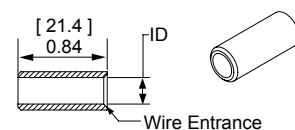
| Description | ----- Part Numbers ----- | |
|--------------------------------------|--------------------------|----------|
| Minimum Quantity | 100 | 50 |
| Dust Cover with Lanyard Strap, Black | B02019P1 | 134G4 |



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.

| Contact Barrel Size | Wire Size | ----- Part Numbers ----- | | | Dimensions - ID - | |
|------------------------|-----------------------------|--------------------------|---------|------|-------------------|------|
| | | | | | 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 |





Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



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