

# SB350® Connectors - up to 450 Amps



The SB®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 ORDERING INFORMATION |

### SB®350 Standard Housings

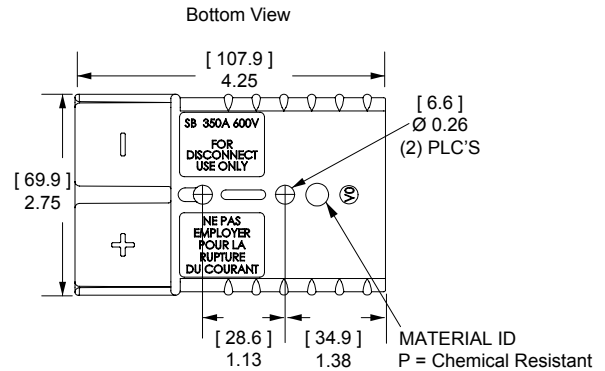
The largest SB® housings work with wire contacts up to 300 mcm [150 mm<sup>2</sup>] as well as busbar contacts. Genderless design mates with itself. Mechanical keys are color coded. NOTE: SB350 Black and Blue Housings have the same keying features and can be intermated.

| Description            | Voltage |          | Part Numbers |        |
|------------------------|---------|----------|--------------|--------|
|                        | Color   | Code     | ---          | ---    |
| Minimum Quantity ..... |         |          | 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.

| Description            | Voltage |         | Part Numbers |         |
|------------------------|---------|---------|--------------|---------|
|                        | Color   | Code    | ---          | ---     |
| Minimum Quantity ..... |         |         | 50           | 25 .... |
| Red                    | 24V     | P913-BK | P913         |         |
| Gray                   | 36V     | P906-BK | P906         |         |



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## SB®350 Silver Plated Wire Contacts

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

| AWG                    | mm <sup>2</sup> | Mating Force | - Loose Piece Part Numbers - |        |        | Dimensions |        |       |       |
|------------------------|-----------------|--------------|------------------------------|--------|--------|------------|--------|-------|-------|
|                        |                 |              |                              |        |        | - A -      |        | - B - |       |
|                        |                 |              |                              |        | 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 |

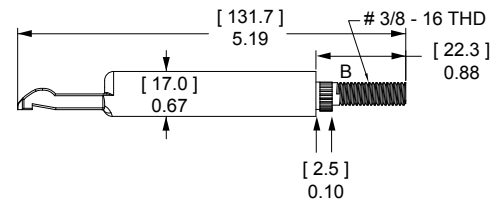


## SB®350 Silver Plated Busbar Contacts

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.

| Type                   | Thread | Mating Force | - Loose Piece Part Numbers - |        |
|------------------------|--------|--------------|------------------------------|--------|
|                        |        |              |                              |        |
| Minimum Quantity ..... |        |              | 50                           | 10     |
| Busbar                 | 1/4-20 | High         | B01998P1                     | 350BBS |
| Lock Nut               | 1/4-20 | -            | H1216P9                      | 110G73 |

See Busbar contact drawing on website for further detail.



## | SB®350 CONNECTOR SPECIFICATIONS |

### Electrical

|  |                |            |
|--|----------------|------------|
| <b>Current Rating Amperes<sup>1</sup></b>                  | <b>UL 1977</b> | <b>CSA</b> |
| Wire to Wire (4/0 AWG)                                     | 450            | 350        |
| <b>Voltage Rating AC/DC</b>                                | 600            |            |
| UL 1977  |                |            |
| <b>Dielectric Withstanding Voltage</b>                     | 2,200          |            |
| Volts AC   |                |            |
| <b>Avg. Mated Contact Resistance Milliohms<sup>1</sup></b> | 0.050          |            |
| 2 1/2" of 300mcm wire                                      |                |            |
| <b>Hot Plug Current Rating Amperes - Wire &amp; Busbar</b> | 100A           |            |
| 250 cycles at 120V DC                                      |                |            |

### Materials

|                                    |                           |
|------------------------------------|---------------------------|
| <b>Housing</b>                     |                           |
| Standard Plastic Resin             | Polycarbonate             |
| Chem. Resistant Resin              | Polycarbonate / PBT blend |
| Contact Retention Spring           | Stainless Steel           |
| <b>Housing Flammability Rating</b> |                           |
| UL94                               | V-0                       |
| <b>Wire &amp; Busbar Contacts</b>  |                           |
| Base                               | Copper Alloy              |
| Plating                            | Silver                    |
| <b>Contact Termination Methods</b> |                           |
| Crimp <sup>3</sup>                 | Wire Contacts             |
| Hand Solder                        | Wire Contacts             |
| Wrench / Socket                    | Busbar Contacts           |

### Mechanical

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

### Protection

|  |      |
|--|------|
| <b>Touch Safety with Wire Contacts</b> |      |
| 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.

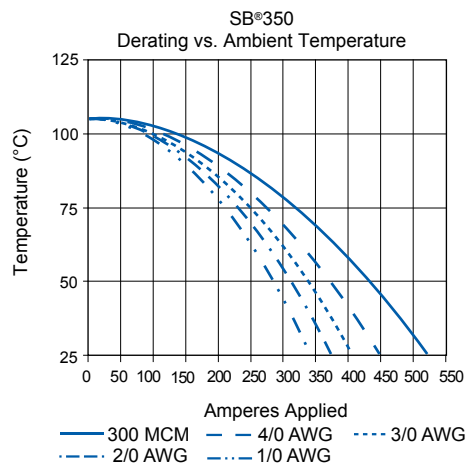
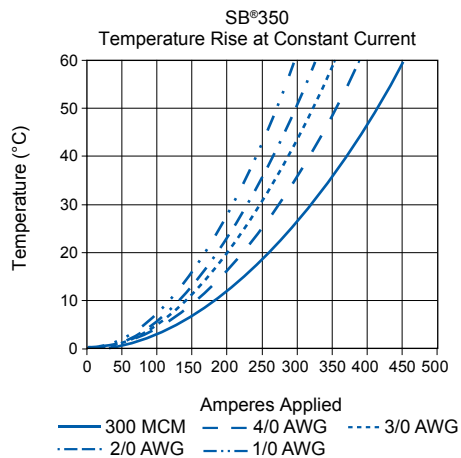
<sup>2</sup> Limited by the thermal properties of the connector plastic housing.

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



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# | SB® 350 CONNECTOR TEMPERATURE CHARTS |



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

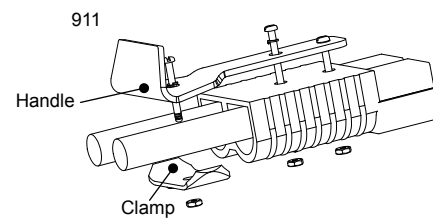
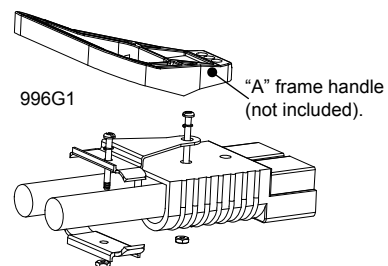
## | SB® 350 Accessories |

### 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.

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

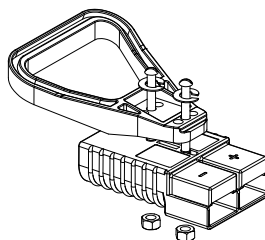
The given wire O.D. information is an estimate. Cable clamps should be evaluated for performance with the actual wire to be used.



### Handles

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

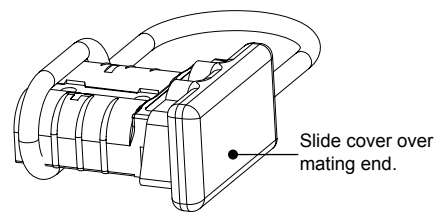
| Description           | ----- Part Numbers ----- |        |
|-----------------------|--------------------------|--------|
| Minimum Quantity .... | 100                      | 25 ... |
| Gray Handle Kit       | 995G2-APP                | 995G2  |
| Red Handle Kit        | 995G4-APP                | 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 Numbers ----- |        |
|------------------------------------|--------------------------|--------|
| 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.

| Description                           | Cable Size               |                      | - Part Numbers - |
|---------------------------------------|--------------------------|----------------------|------------------|
|                                       | Min / Max<br>Inches O.D. | Min / Max<br>mm O.D. |                  |
| 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 Numbers --- |         |
|------------------------|--------------------|----------------------|---------|
| Minimum Quantity ..... |                    | 500                  | 100 ... |
| 2/0 AWG [67.4 mm²]     | 1/0 AWG [53.5 mm²] | 5918-BK              | 5918    |



# SB®

## - Tooling Information

| Wire Size    |                 | Loose Piece Part Numbers | Loose Piece Contact Crimp Tools |                      |         |           | Reeled Part Numbers | Reeled Contact Crimp Tools |                |            |              |
|--------------|-----------------|--------------------------|---------------------------------|----------------------|---------|-----------|---------------------|----------------------------|----------------|------------|--------------|
| AWG          | mm <sup>2</sup> |                          | Hand Tool or                    | Pneumatic Bench Tool | + Die   | + Locator | Number of Crimps    | Tin Plating                | ATS Applicator | ATS Press  | Air Feed Kit |
| <b>SB50</b>  |                 |                          |                                 |                      |         |           |                     |                            |                |            |              |
| #6           | 13.3            | 1307<br>5900             | 1309G4                          | 1387G1               | 1388G6  | 1389G6    | Single              | 265G5                      | 1385523-1      | 2-565435-2 | 692655-1     |
| #8           | 8.4             | 5952                     |                                 |                      | 1388G7  |           |                     |                            |                |            |              |
| #10 / 12     | 5.3 / 3.3       | 5953<br>5915             |                                 |                      |         |           |                     |                            |                |            |              |
| <b>SB120</b> |                 |                          |                                 |                      |         |           |                     |                            |                |            |              |
| #1           | 42.4            | 1323G1                   | 1368                            | 1387G1               | 1388G3  | 1389G4    | Single              | N/A                        | N/A            |            |              |
| #2           | 33.6            | 1319                     |                                 |                      | 1388G4  |           |                     |                            |                |            |              |
| #4           | 21.2            | 1319G4                   |                                 |                      |         |           |                     |                            |                |            |              |
| #6           | 13.3            | 1319G6                   |                                 |                      |         |           |                     |                            |                |            |              |
| <b>SB175</b> |                 |                          |                                 |                      |         |           |                     |                            |                |            |              |
| 1/0          | 53.5            | 1382                     | 1368                            | 1387G2               | 1303G13 | 1304G32   | Double              | N/A                        | N/A            |            |              |
| #1           | 42.4            | 1347                     |                                 | 1387G1               | 1388G3  | 1389G3    | Single              |                            |                |            |              |
| #2           | 33.6            | 1383                     |                                 | 1387G2               | 1303G13 | 1304G32   | Double              |                            |                |            |              |
| #4           | 21.1            | 1384                     |                                 | 1387G1               | 1388G3  | 1389G3    | Single              |                            |                |            |              |
|              |                 |                          |                                 | 1387G2               | 1303G13 | 1304G32   | Double              |                            |                |            |              |
| #6           | 13.3            | 1348                     |                                 | 1387G1               | 1388G4  | 1389G3    | Single              |                            |                |            |              |
| <b>SB350</b> |                 |                          |                                 |                      |         |           |                     |                            |                |            |              |
| 300mcm       | 152             | 910                      | 1368                            | N/A                  |         |           | Single              | N/A                        | N/A            |            |              |
| 4/0          | 107.2           | 908                      |                                 | 1387G2               | 1303G3  | 1304G31   | Double              |                            |                |            |              |
| 3/0          | 85              | 916                      |                                 |                      | 1303G12 |           |                     |                            |                |            |              |
| 2/0          | 67.4            | 907                      |                                 |                      |         |           |                     |                            |                |            |              |
| 1/0          | 53.5            | 917                      |                                 |                      |         |           |                     |                            |                |            |              |

NOTE: See website for the most current information.



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#### Как с нами связаться

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