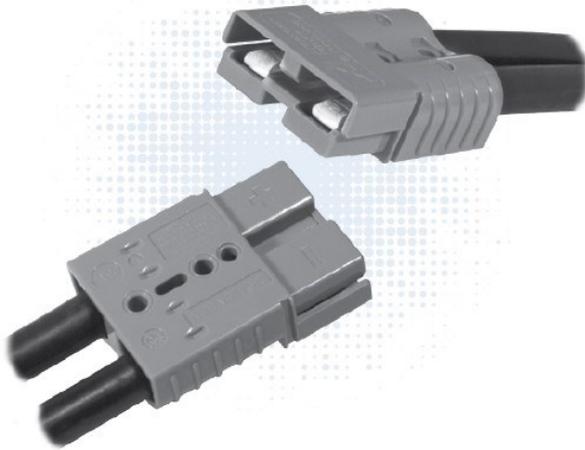


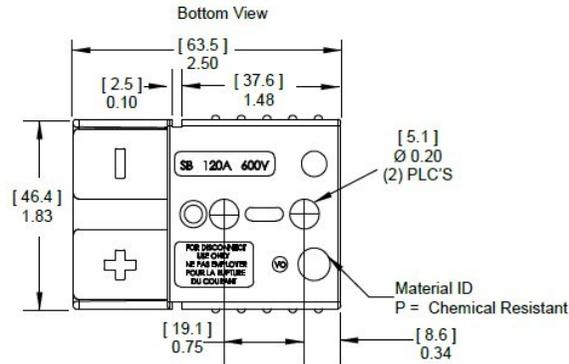
# M AND120-R

# SCHEDA TECNICA



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 mm<sup>2</sup>) to #1 (42.4 mm<sup>2</sup>) are held in the second smallest SB® 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*

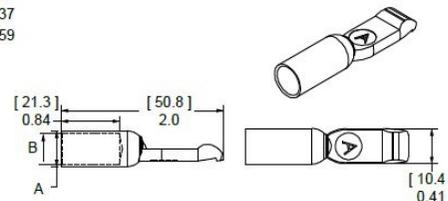


### SB®120 Silver Plated Wire Contacts

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 <sup>2</sup>	Mating Force
1	42.4	Low
2	33.6	High
4	21.1	High
6	13.3	High

Dimensions			
- A -		- B -	
inches	mm	inches	mm
0.47	11.94	0.39	9.91
0.44	11.18	0.34	8.64
0.44	11.18	0.29	7.37
0.44	11.18	0.22	5.59



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

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	
Glow Wire	960°C (GWFI) / 800°C (GWIT)	
<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 Only	

Mechanical		
<b>Wire Size Range</b>	<b>AWG</b>	<b>mm<sup>2</sup></b>
Wire Contacts with Bushings	10 - 1	5.3 - 42.4
<b>Max. Wire Insulation Diameter</b>	<b>in.</b>	<b>mm</b>
	0.600	15.240
<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>
Wire to Wire	20	89
<b>Min. Contact / Spring Retention Force</b>		
lbf	75	
N	333.6	

Connector Series	Configurations	Creepage/Clearance per IEC 60950-1	Material Group
SB®120	Unmated	4.10 mm	IIla
	Mated	4.10 mm	

Protection	
<b>Touch Safety with Wire Contacts</b>	
IEC 60529	IP10
<b>Environmental Sealing with Boots</b>	
IEC 60529	IP64



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

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

<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.

## SB®120 CONNECTOR TEMPERATURE CHARTS | Temperature rise charts are based on a 25°C ambient temperature.

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

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

