SB® 175 Connectors

Up to 280 Amps

Wires sizes from 10 to 1/0 AWG (5.3 to 50 mm²) fit in the second to largest connector in the SB® series. The 3 pole SB® 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 mm²)**
  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

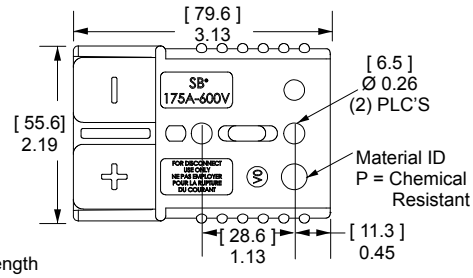
SB® 175 ORDERING INFORMATION

SB® 175 Standard Housings

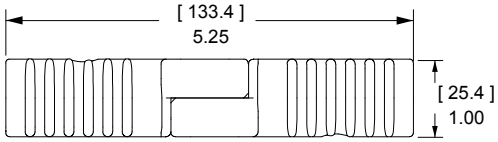
The second to largest SB® housings work with wire contacts up to 1/0 AWG (50 mm²) as well as busbar contacts. Genderless design mates with itself. Mechanical keys are color-coded. *NOTE: SB® 175 black housing is keyless and can be mated with all other colors.*

Description	Part Numbers	
Minimum Quantity	200	50
Yellow	943-BK	943
Orange	942-BK	942
Red	949-BK	949
Gray	940-BK	940
Blue	941-BK	941
Black (Keyless)	2-7252G11	-

Bottom View



Mated Length



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.

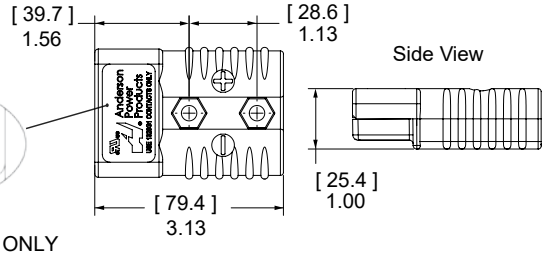
Description	Part Numbers	
Minimum Quantity	200	50
Red	P949-BK	P949
Gray	P940-BK	P940

SB® 175 2/0 Housing

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.

Description	Voltage Color-Code	Part Number
Minimum Quantity		100
Gray	36V	115107G1

Top View



Housing marking specifying 1328G1 contact ONLY

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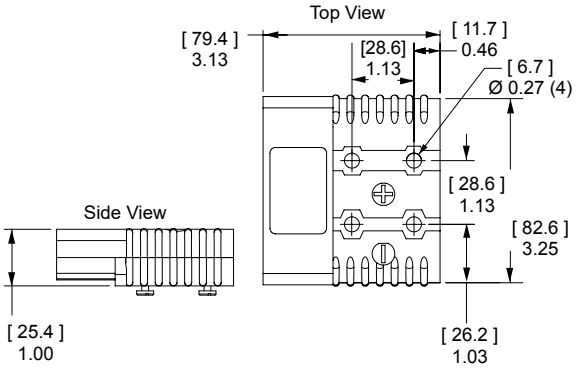
SB® 175 3 Pole Housings & Hardware

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	Part Numbers	
Minimum Quantity	100	25
Gray Housing and Hardware Kit	-	902
Gray Housing Top Half	2-5048	-
Gray Housing Bottom Half	2-5049	-
Hardware Kit	-	110G34

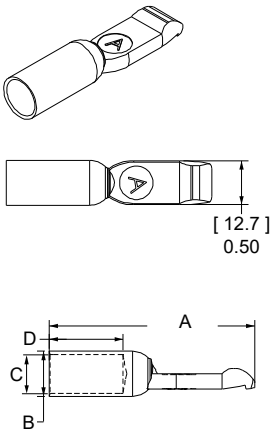


SB® 175 Silver Plated Wire Contacts

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

AWG	mm²	Mating Force	Loose Piece Part Numbers		Dimensions - A - inches	- A - mm	- B - inches	- B - mm	- C - inches	- C - mm	- D - inches	- D - mm
Minimum Quantity			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	26.42
2/0 *	70	Low	1328G1-BK	1328G1	2.35	59.69	0.64	16.26	0.49	12.45	1.04	26.42

* Use with 115107G1 only

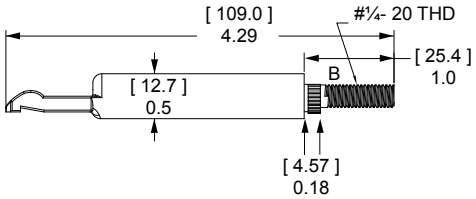


SB® 175 Silver Plated Busbar Contacts

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.

Type	Thread	Mating Force	Loose Piece Part Numbers		
Minimum Quantity			1,000	120	10
Busbar	1/4-20	High	-	180BBS-BK	180BBS
Lock Nut	1/4-20	-	H1216P7	110G56	110G55

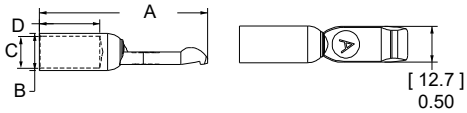
See Busbar contact drawing on website for further detail.



Silver Plated Wire Contacts - use with 2/0 Housing ONLY

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

Type	AWG	mm²	Loose Piece Part Numbers		Dimensions - A - inches	- A - mm	- B - inches	- B - mm	- C - inches	- C - mm	- D - inches	- D - 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



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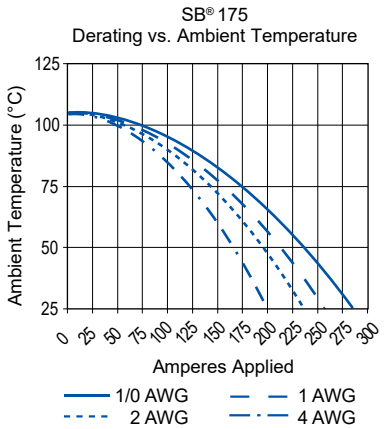
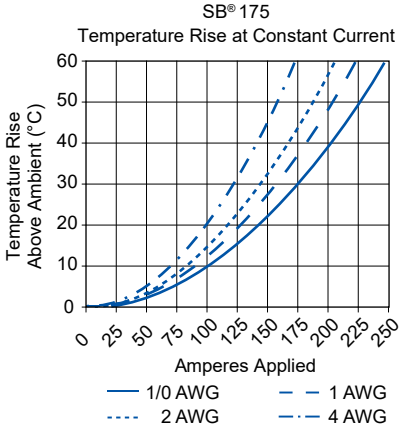
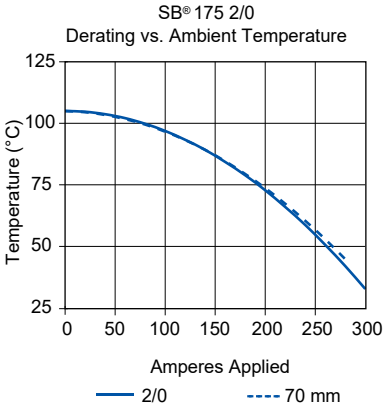
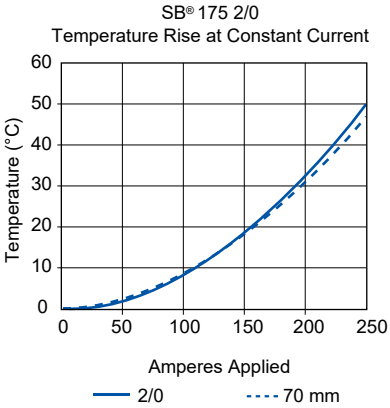
SB® 175 CONNECTOR TEMPERATURE CHARTS - Temperature rise charts are based on a 25°C ambient temperature.

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









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SB® 175 CONNECTOR SPECIFICATIONS

ELECTRICAL		
Current Rating Amperes [1]	**UL 1977**	**CSA**
Wire-to-Wire (1/0 AWG)	280	175
Wire-to-Busbar (1/0 AWG)	200	
3 Pole Wire-to-Wire (1/0 AWG)	175	
Voltage Rating AC/DC		
UL 1977	600	
Dielectric Withstanding Voltage		
Volts AC	2,200	
Avg. Mated Contact Resistance Milliohms [1]		
6" of 1/0 AWG wire	0.100	
Hot Plug Current Rating Amperes - Wire & Busbar		
250 cycles at 120V DC 1/0 Wires	100A	

MATERIALS	
Housing	
Standard Plastic Resin	Polycarbonate
Chem. Resistant Resin	Polycarbonate / PBT blend
Contact Retention Spring	Stainless Steel
Housing Flammability Rating	
UL94	V-0
Glow Wire	960°C (GWFI) / 850°C (GWIT)
Wire & Busbar Contacts	
Base	Copper Alloy
Plating	Silver
Contact Termination Methods	
Crimp [3]	Wire Contacts
Hand Solder	Wire Contacts
Wrench / Socket	Busbar Contacts Only

MECHANICAL		
Wire Size Range	**AWG**	**mm²**
Wire Contacts with Bushings	10 to 1/0	5.3 to 53.5
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**
2 Pole	25	111
3 Pole	35	156
Min. Contact / Spring Retention Force	**Lbf.**	**N**
	150	667
Mechanical Shock [4]		
MIL-STD-202	213 Condition A	50g's
Vibration High Frequency [4]		
MIL-STD-202	204 Condition A	10g's

c UL us File No. E26226

© CSA Certified File No. LR25154

RoHS COMPLIANT APP

REACH COMPLIANCE APP

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.

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.

4 - Tested with contact part number 1382.

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SB® 175 CONNECTOR IEC INFORMATION

Connector Series	Configurations	Creepage / Clearance per IEC 60950-1	Material Group
SB® 175	Unmated	5.73 mm	IIIa
	Mated	5.73 mm	

PROTECTION	
Touch Safety with Wire Contacts	
IEC 60529	IP10 unmated
Environmental Sealing with Boots	
IEC 60529	IP64

ATTRIBUTES	SB® 175
AMP Rating AC/DC	175
Voltage Rating AC/DC (Steady State)	500 V AC/DC (Operational)
Breaking Capacity - AMP Rating / Cycles	175 Amp / 10 Cycles
Voltage Rating (Breaking Capacity)	220 VDC
Finger Safety - Mated Only	IEC 60529 - IP20
Wire Size Tested	50 mm²
Contact Series Tested	1382
Climatic Testing (Cold, Heat & MFG)	IEC 60512 Test-11j, 11i & 11g
Cycle Life	IEC 60512 Test 9a- 5000 Cycles
Mechanical Strength Impact	IEC 60512-5 @ 29.5 Inches- Dropped 8 Times
Temperature Range	-20 °C to 105 °C -4 °F to 221 °F

SB® 175 2/0 CONNECTOR SPECIFICATIONS

ELECTRICAL		
Current Rating (Amperes) [1]	**UL 1977**	**CSA**
2/0 AWG	340	200
70 mm²	315	185
Voltage Rating (AC/DC)		600
Dielectric Withstanding Voltage (AC)		2,200
AVG Contact Resistance (milli-ohms) [1]		0.045

MATERIALS	
Standard Housing	PC
Flammability Rating	UL94 V-0
Wire Power Contact	Copper Alloy, Silver Plate
Contact Termination Methods	
Crimp [3]	
Hand Solder	

MECHANICAL			
Contact Wire Range (AWG)		2/0	
(mm²)		70	
MAX Wire Insulation Diameter (in)		0.67	
(mm)		17.04	
Operating Temperature [2]		**°C**	**°F**
PC Housing		-20° to 105°	-4° to 221°
AVG Contact Retention Force for Standard PC Housing			
	(lbf)	150 lbf	
	(N)	667 n	
Mating Cycles (no load)		5,000	
Connector AVG Connect / Disconnect	**(lbf)**	55	
	(N)	245	

File No. E26226

[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.

All Data Subject To Change Without Notice

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SB® 175 ACCESSORIES

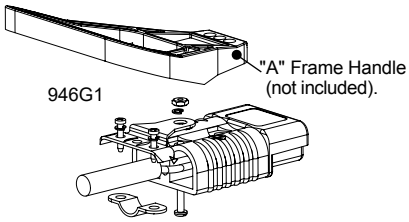
Cable Clamps

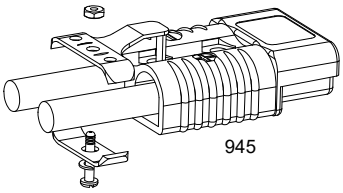
Durable metal cable clamps securely hold cables to prevent accidental strain or pulls from dislodging wire or contacts from the housing. Only Bolt On type clamps can be used with the handles. Cable clamps are recommended for solder terminated wires. Not for use with 3 pole housing.

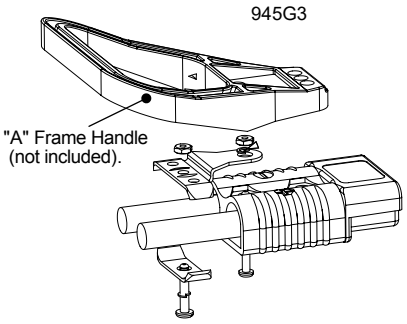
Description	Cable Size Max / Min In. Inches O.D.	Cable Size Max / Min mm mm O.D.	Part Numbers	
Minimum Quantity			100	50
Self Attaching for Discrete Conductor	0.55 to 0.24	14 to 6	105G3	945
Bolt On for Discrete Conductor	0.66 to 0.24	16.7 to 6.2	945G3-BK	945G3
Bolt On for Bundled Conductor	0.75 to 0.29	18.3 to 7.3	946G1-BK	946G1

* Torque value 30 (in - lbs) / 3.4 (Nm)

NOTE: For assembly of clamp to housing only







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

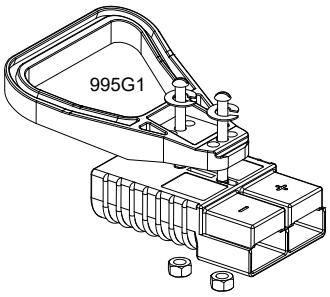
Handles

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
Red Handle Kit	-	995G3
Handle Only, Gray	3-5074P1	-
Handle Only, Red	3-5074P3	-
Handle Only, Black	3-5074P5	-
Hardware Bag	-	105G8

* Torque value 30 (in lbs) / 3.4 (Nm)

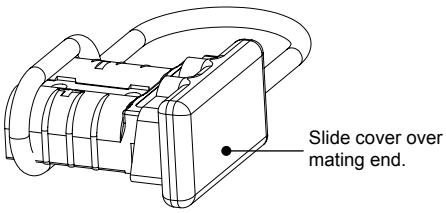
NOTE: For assembly of clamp to housing only



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 Numbers	
Minimum Quantity	500	50
Dust Cover with Lanyard Strap, Red	113890P2	134G2



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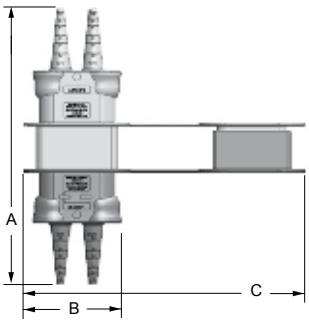
SB® Environmental Boots

SB® Environmental Boots provide water, dirt, chemical and UV protection for SB® 175 connectors. The durable boots shield the connectors from water and dirt to IP64* in both the mated and unmated condition.

Description	Part Numbers		Dimensions - A - in.	mm	- B - in.	mm	- C - in.	mm
Minimum Quantity	250	25						
SB® 175 Environmental Boot, Load	3-6037P1-BK	3-6037P1	9.5	241	3.2	80	9.3	236
SB® 175 Environmental Boot, Source	3-6036P1-BK	3-6036P1	9.5	241	3.2	80	9.3	236

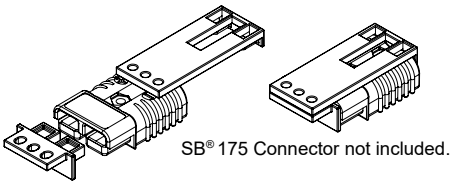
* IP64 test pending



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



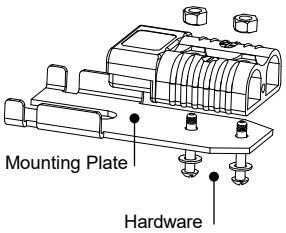
Manual Release Bracket - Mounting Side *

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

Description	Part Number
Minimum Quantity	10
Mounting Plate and Hardware Kit	924G1

* Torque value 30 (in - lbs) / 3.4 (Nm)

NOTE: For assembly of bracket to housing only



Manual Release Bracket - Locking Side *

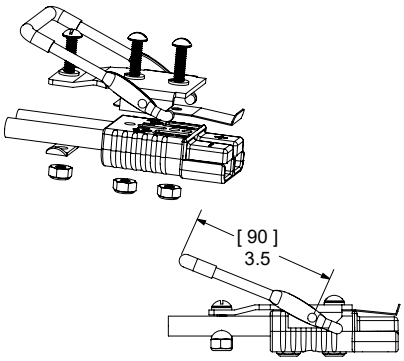
Works with the Mounting Side to ease mating and unmating connectors. Not for use with 3 pole housing.

Description	Cable Size Max / Min Inches O.D.	Max / Min mm O.D.	Part Number
Minimum Quantity			10
Locking plate, handle, clamp and hardware kit.	0.50 to 0.21	12.6 to 5.4	923G1

* Torque value 30 (in - lbs) / 3.4 (Nm)

NOTE: For assembly of bracket to housing only

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



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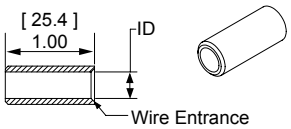
Reducing Bushings: for Use with Contact Part Number 1382

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.

Contact Barrel Size		Wire Size		Part Numbers				Dimensions - ID -	
AWG	mm²	AWG	mm²					inches	mm
Minimum Quantity				1,500	1,000	500	100		
1/0	53.5	1	42.4	-	-	5687-BK	5687	0.39	9.91
1/0	53.5	2	33.6	5690-BK	-	-	5690	0.34	8.64
1/0	53.5	4	21.2	-	5693-BK	-	5693	0.27	6.86
1/0	53.5	6	13.3	-	5663-BK	-	5663	0.22	5.59
1/0	53.5	10 to 8	5.3 to 8.4	5648-BK	-	-	5648	0.19	4.83



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SB® Tooling Information

Wire Size		Loose Piece Part Number	Loose Piece Contact Crimp Tools							
AWG	mm²	Silver Plating	Hand Tool	OR	Pneumatic Tool	+	Die	+	Locator	Number of Crimps
SB® 50										
6	13.3	1307	1309G4		1387G1		1388G6		1389G6	Single
		5900								
8	8.4	5952								
10 to 12	5.3 to 3.3	5953					1388G7		1389G7	
		5915								
SB® 120										
1	42.4	1323G1	1368 Series		1387G1		1388G3		1389G4	Single
2	33.6	1319					1388G4			
4	21.2	1319G4								
6	13.3	1319G6								
SB® 175										
1/0	53.5	1382	1368 Series		1387G2		1303G13		1304G32	Double
1	42.4	1347								
2	33.6	1383								
4	21.1	1384								
6	13.3	1348			1387G1		1388G4		1389G3	Single
SB® 350										
350 mcm	185	910	1368 Series		N/A					Double
300 mcm	152	910								
4/0	107.2	908			1387G2		1303G3		1304G31	
3/0	85	916					1303G12			
2/0	67.4	907								
1/0	53.5	917								

NOTE: See website for the most current information.

SB® 2/0 Tooling Information

Wire Size		Loose Piece Part Number	Loose Piece Contact Crimp Tools							
AWG	mm²	Silver Plating	Hand Tool	OR	Pneumatic Tool	+	Die	+	Locator	Number of Crimps
2/0	53.5	1328G1	1368		1387G2		1303G12		1304G32	Double

NOTE: See website for the most current information.

Your Best Connection™

2020-0055 DS-SB175 REV C7

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