

## SY® BATTERY CONNECTORS- Global 800.951.8774


### SY50, 120, 175 & 350AMP


- Single piece housings of impact resistant polycarbonate offer both high physical strength and superior dielectric properties
- Silver plated solid copper contacts offer low resistance for superior conductivity
- Self cleaning contact design resists arcing by keeping conductive surfaces clean and free of corrosion
- Contacts have flared and heat treated barrels which readily accept fine stranded wire and allow easy, quality crimping
- Integral stainless steel springs maintain constant pressure on the contact to insure a consistent, low-resistance connection



CONNECTOR #	DESCRIPTION (1 HOUSING AND 2 CONTACTS)	HOUSING #	CONTACT KIT #
<b>50AMP</b>			
SY6319	50AMP gray connector with 6GA contacts	SY992	SY903G1
SY6319G1	50AMP gray connector with 10-12GA contacts	SY992	SY904G1
SY6319G2	50AMP gray connector with 8GA contacts	SY992	SY905G1
SY6331G1	50AMP red connector with 6GA contacts	SY992G1	SY903G1
SY6331G2	50AMP red connector with 10-12GA contacts	SY992G1	SY904G1
SY6331G3	50AMP black connector with 6GA contacts	SY992G2	SY903G1
SY6331G4	50AMP black connector with 10-12GA contacts	SY992G2	SY904G1
SY6331G5	50AMP blue connector with 6GA contacts	SY992G3	SY903G1
SY6331G6	50AMP blue connector with 10-12GA contacts	SY992G3	SY904G1
SY6331G9	50AMP yellow connector with 8GA contacts	SY992G4	SY905G1
<b>120AMP</b>			
SY6330G2	120AMP gray connector with 2GA contacts	SY920	SY1319-G2
SY6330G4	120AMP gray connector with 4GA contacts	SY920	SY1319-G4
SY6330G6	120AMP gray connector with 6GA contacts	SY920	SY1319-G6
	120AMP blue connector with 2GA contacts	SY920G3	SY1319-G2
	120AMP blue connector with 4GA contacts	SY920G3	SY1319-G4
	120AMP blue connector with 6GA contacts	SY920G3	SY1319-G6
<b>175AMP</b>			
SY6325G1	175AMP gray connector with 1/0 contacts	SY940	SY944
SY6325G5	175AMP gray connector with 2GA contacts	SY940	SY944-2
SY6325G6	175AMP gray connector with 4GA contacts	SY940	SY944-4
SY6325G7	175AMP gray connector with 6GA contacts	SY940	SY944-6
SY6326G1	175AMP blue connector with 1/0 contacts	SY941	SY944
SY6326G5	175AMP blue connector with 2GA contacts	SY941	SY944-2
SY6326G6	175AMP blue connector with 4GA contacts	SY941	SY944-4
SY6326G7	175AMP blue connector with 6GA contacts	SY941	SY944-6
SY6327G1	175AMP orange connector with 1/0 contacts	SY942	SY944
SY6327G5	175AMP orange connector with 2GA contacts	SY942	SY944-2
SY6327G6	175AMP orange connector with 4GA contacts	SY942	SY944-4
SY6327G7	175AMP orange connector with 6GA contacts	SY942	SY944-6

Continued on Next Page

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 Listed by Canadian Standards Association for use with certified equipment. File No. LR82704

See OEM Cross Reference on pages 2.25 - 2.26




# BATTERY


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### SY50, 120, 175 & 350AMP



CONNECTOR #	DESCRIPTION (1 HOUSING AND 2 CONTACTS)	HOUSING #	CONTACT KIT #
<b>350AMP CONTINUED</b>			
SY6328G1	175AMP yellow connector with 1/0 contacts	SY943	SY944
SY6328G5	175AMP yellow connector with 2GA contacts	SY943	SY944-2
SY6328G6	175AMP yellow connector with 4GA contacts	SY943	SY944-4
SY6328G7	175AMP yellow connector with 6GA contacts	SY943	SY944-6
SY6329G1	175AMP red connector with 1/0 contacts	SY949	SY944
SY6329G5	175AMP red connector with 2GA contacts	SY949	SY944-2
SY6329G6	175AMP red connector with 4GA contacts	SY949	SY944-4
SY6329G7	175AMP red connector with 6GA contacts	SY949	SY944-6
SY6320G1	350AMP gray connector with 2/0 contacts	SY906	SY907
SY6320G2	350AMP gray connector with 4/0 contacts	SY906	SY908
SY6320G3	350AMP gray connector with 1/0 contacts	SY906	SY917
SY6320G5	350AMP gray connector with 3/0 contacts	SY906	SY916
SY6321G1	350AMP blue connector with 2/0 contacts	SY912	SY907
SY6321G2	350AMP blue connector with 4/0 contacts	SY912	SY908
SY6321G3	350AMP blue connector with 1/0 contacts	SY912	SY917
SY6321G5	350AMP blue connector with 3/0 contacts	SY912	SY916
SY6322G1	350AMP red connector with 2/0 contacts	SY913	SY907
SY6322G2	350AMP red connector with 4/0 contacts	SY913	SY908
SY6322G3	350AMP red connector with 1/0 contacts	SY913	SY917
SY6322G5	350AMP red connector with 3/0 contacts	SY913	SY916
SY6323G1	350AMP yellow connector with 2/0 contacts	SY914	SY907
SY6323G2	350AMP yellow connector with 4/0 contacts	SY914	SY908
SY6323G3	350AMP yellow connector with 1/0 contacts	SY914	SY917
SY6323G5	350AMP yellow connector with 3/0 contacts	SY914	SY916
SY6324G1	350AMP green connector with 2/0 contacts	SY931	SY907
SY6324G2	350AMP green connector with 4/0 contacts	SY931	SY908
SY6324G3	350AMP green connector with 1/0 contacts	SY931	SY917
SY6324G5	350AMP green connector with 3/0 contacts	SY931	SY916
SY6400G1	350AMP orange connector with 2/0 contacts	SY932	SY907
SY6400G2	350AMP orange connector with 4/0 contacts	SY932	SY908
SY6400G3	350AMP orange connector with 1/0 contacts	SY932	SY917
SY6400G5	350AMP orange connector with 3/0 contacts	SY932	SY916

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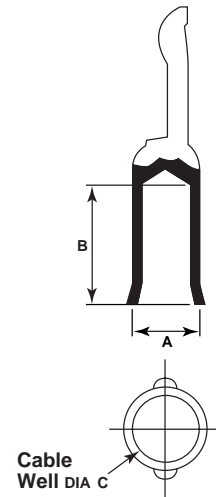
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See OEM Cross Reference on pages 2.25 - 2.26

## SY® BATTERY CONNECTORS- Global 800.951.8774

### REPLACEMENT CONTACT KITS

CATALOG #	AWG WIRE	A	B	C	QUANTITY
<b>SY50</b>					
SY903G1	6	0.29"/7mm	0.48"/12mm	0.22"/6mm	2
SY905G1	8	0.29"/7mm	0.48"/12mm	0.19"/5mm	2
SY904G1	10-12	0.29"/7mm	0.48"/12mm	0.14"/4mm	2
<b>SY120</b>					
SY1319-G2	2	0.45"/11mm	0.82"/21mm	0.35"/9mm	2
SY1319-G4	4	0.44"/11mm	0.82"/21mm	0.30"/8mm	2
SY1319-G6	6	0.44"/11mm	0.82"/21mm	0.22"/6mm	2
<b>SY175</b>					
SY944	1/0	0.52"/13mm	1.04"/26mm	0.44"/11mm	2
SY944-1	1	0.58"/15mm	1.02"/26mm	0.39"/10mm	2
SY944-2	2	0.52"/13mm	0.97"/25mm	0.35"/9mm	2
SY944-4	4	0.52"/13mm	1.02"/26mm	0.30"/8mm	2
SY944-6	6	0.37"/9mm	1.10"/28mm	0.22"/6mm	2
<b>SY350</b>					
SY908	4/0	0.77"/20mm	1.30"/33mm	0.64"/16mm	2
SY916	3/0	0.70"/18mm	1.25"/32mm	0.58"/15mm	2
SY907	2/0	0.64"/16mm	1.27"/32mm	0.50"/13mm	2
SY917	1/0	0.52"/13mm	1.01"/26mm	0.44"/11mm	2



### REDUCER BUSHINGS

PART #	DESCRIPTION
SY5918	350AMP 2/0 to 1/0
SY5687	175AMP 1/0 to 1 AWG
SY5690	175AMP 1/0 to 2 AWG

PART #	DESCRIPTION
SY5693	175AMP 1/0 to 4 AWG
SY5910	50AMP 6 AWG to 10-12 AWG

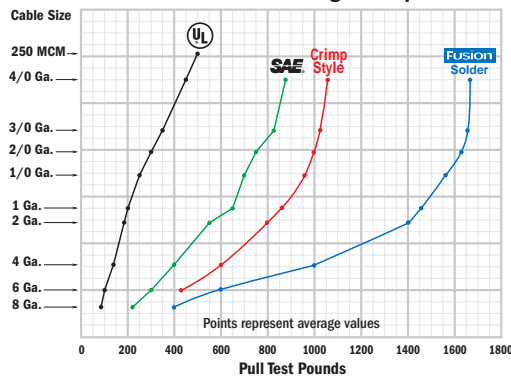


### SY® FUSION CONTACT TIPS

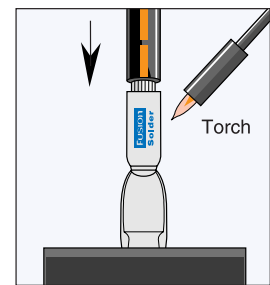
- Contacts come with pre-loaded flux and solder
- Contact come ready-to-use – just add heat
- Especially good in presence of destructive vibration or corrosive chemicals
- Fast and convenient
- Pull-out strength better than any crimp method



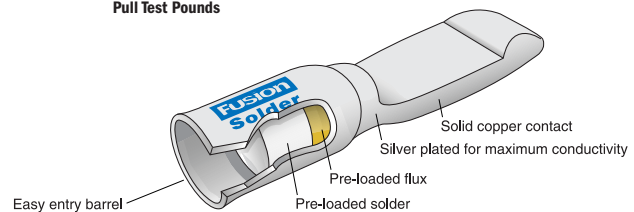
#### Relative Pull-Out Strength Comparison



**NEW ITEM!**



PART #	AMP	GAUGE
SY121105	175AMP	2GA
SY121107	175AMP	1/0
SY121108	350AMP	2/0
SY121109	350AMP	3/0
SY121110	350AMP	4/0



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# BATTERY

## SY® BATTERY CONNECTORS-Global 800.951.8774

### SPECIFICATIONS



MODEL	SY50	SY120	SY175	SY350
UL amperage*/voltage rating:	50AMPS/600VDC	120AMPS/600VDC	175AMPS/600VDC	350AMPS/600VDC
Operating temperature range:	-20° to 105°C	-20° to 105°C	-20° to 105°C	-20° to 105°C
Current rating*:	50AMPS on 6AWG wire produces 30°C rise	120AMPS on 2AWG wire produces 35°C rise	175AMPS on 1/0AWG wire produces 30°C rise	350AMPS on 750MCM wire produces 35°C rise
Insulation with standing test voltage (volts, dc):	2200dc	2200dc	2200dc	2200dc
Maximum wire insulation diameter:	0.44"/11mm	0.50"/13mm	0.75"/19mm	1.10"/28mm
Average contact retention force:	Approximately 50lbs	Approximately 150lbs	Approximately 300lbs	Approximately 500lbs
Average contact resistance:	With 1¼" (32mm) of 6AWG wire 200 micro-ohms	With 1½" (38mm) of 2AWG wire 150 micro-ohms	With 1¾" (45mm) of 1/0AWG wire 100 micro-ohms	With 2½" (64mm) of 300MCM wire 50 micro-ohms
Vibration resistance:	Excellent	Excellent	Excellent	Excellent
Mating cycles:	10,000 For disconnect use only	10,000 For disconnect use only	10,000 For disconnect use only	10,000 For disconnect use only
Impact resistance:	High	High	High	High
Environmental restrictions:	Protected-no hydrocarbon fluids	Protected-no hydrocarbon fluids	Protected-no hydrocarbon fluids	Protected-no hydrocarbon fluids
Average mating and unmating force:	15LBS (6.75kg)	20LBS (9.00kg)	25LBS (11.25kg)	30LBS (13.50kg)

\* For largest wire or cable size



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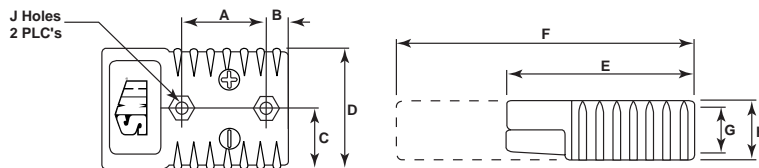
Flammability Rating: UL94V-0



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### HOUSING DIMENSIONS

MODEL	A	B	C	D	E	F	G	H	J DIA
SY50	0.75"/19mm	0.25"/6mm	0.72"/18mm	1.44"/37mm	1.88"/48mm	3.19"/81mm	0.45"/11mm	0.63"/16mm	0.14"/4mm
SY120	0.75"/19mm	0.34"/9mm	0.96"/24mm	1.92"/49mm	2.50"/64mm	4.13"/105mm	0.58"/15mm	0.81"/21mm	0.20"/5mm
SY175	1.13"/29mm	0.44"/11mm	1.09"/28mm	2.19"/56mm	3.13"/80mm	5.25"/133mm	0.75"/19mm	1.00"/25mm	0.27"/7mm
SY350	1.13"/29mm	1.38"/35mm	1.38"/35mm	2.75"/70mm	4.25"/108mm	7.19"/183mm	1.06"/27mm	1.31"/33mm	0.27"/7mm



### VOLTAGE COLOR CODE

- Mechanical keys molded in connectors will engage only with connectors of same color
- This color code given for various voltages is only a suggestion

#### COLOR SUGGESTED VOLTAGE

Yellow	12VDC
Orange	18VDC
Red	24VDC
Gray	36VDC
Blue	48VDC
Green	72VDC

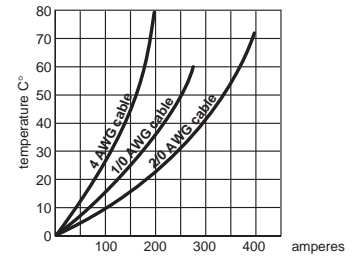
Interconnectable with SB Connectors (® Registered trademark Anderson Power Products) and S Connectors (® Registered trademark Brad Harrison Co.)

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### AMPERE/TEMPERATURE CURVES

- Ampere/Temperature curves help to evaluate and rate SY connectors in terms of applied load versus temperature rise. The graph shows some typical curves resulting from loading popular cable sizes into various connector housings\*\*, curves for cables between the smallest and largest can be easily estimated. Thus with consideration of both ampere and temperature characteristics, connectors can be selected according to load and temperature limits or requirements of particular installations.

\*\* Detailed specifications are available



## UL COMPATIBILITY REFERENCE GUIDE

### SY50, SY 175 & SY350 SERIES

- Underwriters Laboratories recognizes compatibility of SY Series Battery Connectors with Anderson Power Products SB® Series Connectors

#### Housings with 2 Contacts

WIRE SIZE	SMH #	ANDERSON #	COLOR	CURRENT RATING
<b>SY50</b>				
6GA	SY6319	6319	Gray	50AMP
10GA	SY6319G1	6319G1	Gray	30AMP
12GA	SY6319G1	6319G1	Gray	20AMP
6GA	SY6331G1	6331G1	Red	50AMP
10GA	SY6331G2	6331G2	Red	30AMP
12GA	SY6331G2	6331G2	Red	20AMP
<b>SY175</b>				
1/0	SY6325G1	6325G1	Gray	175AMP
1/0	SY6326G1	6326G1	Blue	175AMP
1/0	SY6327G1	6327G1	Orange	175AMP
1/0	SY6328G1	6328G1	Yellow	175AMP
1/0	SY6329G1	6329G1	Red	175AMP
<b>SY350</b>				
2/0	SY6320G1	6320G1	Gray	225AMP
3/0	SY6320G5	6320G5	Gray	275AMP
4/0	SY6320G2	6320G2	Gray	300AMP
2/0	SY6321G1	6321G1	Blue	225AMP
3/0	SY6321G5	6321G5	Blue	275AMP
4/0	SY6321G2	6321G2	Blue	300AMP
2/0	SY6322G1	6322G1	Red	225AMP
3/0	SY6322G5	6322G5	Red	275AMP
4/0	SY6322G2	6322G2	Red	300AMP
2/0	SY6323G1	6323G1	Yellow	225AMP
3/0	SY6323G5	6323G5	Yellow	275AMP
4/0	SY6323G2	6323G2	Yellow	300AMP
2/0	SY6324G1	6324G1	Green	225AMP
3/0	SY6324G5	6324G5	Green	275AMP
4/0	SY6324G2	6324G2	Green	300AMP
2/0	SY6400G1	6400G1	Orange	225AMP
3/0	SY6400G5	6400G5	Orange	275AMP
4/0	SY6400G2	6400G2	Orange	300AMP

#### Contacts (single)

WIRE SIZE	SMH #	ANDERSON #	CURRENT RATING
<b>SY50</b>			
6GA	SY903-1	5900	50AMP
8GA	SY905-1	5952	40AMP*
10GA	SY904-1	5915	30AMP
12GA	SY904-1	5915	20AMP
<b>SY 175</b>			
1/0	SY56-0560	1382 (B00374P1)	175AMP
<b>SY 350</b>			
2/0	SY56-0571	907 (B00416P1)	225AMP
3/0	SY916-1	916 (B00417P1)	275AMP
4/0	SY908-1	908 (B00418P1)	300AMP

#### Housings Only

SMH #	ANDERSON #	COLOR
<b>SY50</b>		
SY992	992	Gray
SY992G1	992G1	Red
<b>SY175</b>		
SY940	940	Gray
SY941	941	Blue
SY942	941	Orange
SY943	943	Yellow
SY949	949	Red
<b>SY350</b>		
SY906	906	Gray
SY912	912	Blue
SY913	913	Red
SY914	914	Yellow
SY931	931	Green
SY932	932	Orange

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\* UL requires minimum 65°C wire or cable for this rating

