Powerpole® Connectors

PP75 - Up to 120 Amps



PP75 with Mounting Wings

PP75 series Powerpole® housings can be used for wire-to-wire, wire-to-board, and wire-to-busbar applications. Wire sizes from 16 to 6 AWG (1.3 to 13.3 mm²) offer power capabilities up to 120 amps per pole. Locking housings offer the capability to secure Powerpole® housings to each other and to mounting pads. Housings made from chemical resistant (CR) resin withstand industrial solvents better than standard housings.

- Large Wire Range Accommodates up to 6 (10 mm²) Wire Reducing bushings allow as small as 16 AWG (1.5 mm²) wire to be used
- Wire, PCB, and Busbar Contacts

 Allows one connection system to meet multiple needs
- Mini-Powerclaw PCB Contacts Minimize PCB Footprint Removes the PP75 housing from the board side

PP75 ORDERING INFORMATION

PP75 Standard Housings

The second smallest Powerpole® housing can be used with wire contacts up to 6 AWG (10 mm²) as well as PCB and busbar contacts.

Description	Part Numbers		
Minimum Quantity	1,000	100	
Red	5916G7-BK	5916G7	
Green	5916G6-BK	5916G6	
Black	5916G4-BK	5916G4	
White	5916G5-BK	5916G5	
Blue	5916-BK	5916	
Yellow	5916G15-BK	5916G15	
Orange	5916G14-BK	5916G14	
Gray	5916G16-BK	5916G16	

[15.9] 0.62 1.88 (17.0] 0.62 (17.0] (17.

PP75 Chemical Resistant (CR) Housings

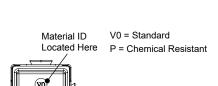
Has the same form and dimensions of the standard PP75 housing in a chemical resistant PBT / PC blend housing. Suitable for use to -40°C.

Description	Part Numbers
Minimum Quantity	1,000
Red	P5916G7-BK
Black	P5916G4-BK
White	P5916G5-BK
Blue	P5916-BK

PP75 Locking Dovetail Housings

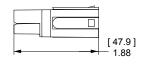
Offers dovetails for stacking housings that have a locking feature to prevent housings separating. Can mate to standard and chemical resistant housings, but cannot be stacked with them.

Description	Part Num	bers
Minimum Quantity	1,000	100
Red	75LOKRED-BK	75LOKRED
Green	75LOKGRN-BK	75LOKGRN
Black	75LOKBLK-BK	75LOKBLK
White	75LOKWHT-BK	75LOKWHT
Blue	75LOKBLU-BK	75LOKBLU
Gray	75LOKGRA-BK	75LOKGRA





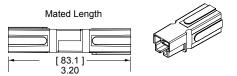
(a) (b) (c)



PP75 Premate Ground Housings

Offers a first-mate, last-break connection when stacked together with PP75 housings. Stacks together with PP75 standard and chemical resistant housings. Housings are mechanically keyed to prevent cross mating with power positions.

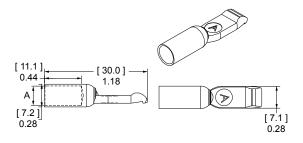
Description	Part Num	bers
Minimum Quantity	1,000	100
Green	5927G6-BK	5927G6



PP75 Silver Plated Wire Contacts

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

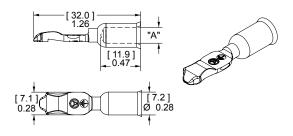
					Dimens	sions
		Mating	Loose	Piece	- A	۸-
AWG	mm²	Force	Part Nu	mbers	inches	mm
Minimum Q	uantity		1,000	100		
6	13.3	Low	1307-BK	1307	0.22	5.59
6	13.3	High	5900-BK	5900	0.22	5.59
8	8.4	High	5952-BK	5952	0.19	4.83
12 to 10	3.3 to 5.3	Low	5953-BK	5953	0.14	3.56
12 to 10	3.3 to 5.3	High	5915-BK	5915	0.14	3.56



PP75 Premate Ground Wire Contacts

Silver plated contacts for use with the PP75 Premate Ground Housing. Rated to 10,000 mating cycles.

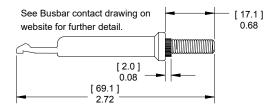
			Loose P	Piece	Dimens	
Type	AWG	mm²	Part Nun	nbers	inches	mm
Minimum C	Quantity		1,000	100		
Individual	6	13.3	1875G1-BK	1875G1	0.22	5.59
Individual	8	8.4	1875G2-BK	1875G2	0.19	4.83
Individual	12 to 10	3.3 to 5.3	1875G3-BK	1875G3	0.14	3.56



PP75 Silver Plated Busbar Contacts

Provide a quick disconnect input or output busbar connection. Busbar contacts are for mating with wire contacts only. Part number 75BBS includes lock nuts. Locknuts must be ordered separately for B01915P1.

		Mating			
Type	Thread	Force	P	art Numbers	S
Minimum (Quantity		1,000	20	10
Busbar	10-24	High	B01915P1	-	75BBS
Lock Nut	10-24	_	H1216P8	110G54	_

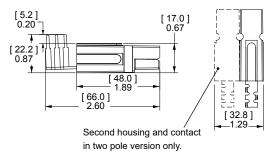


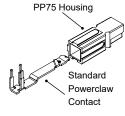
55A Right Angle Standard Powerclaw PCB Contacts

Standard Powerclaw contacts are for use inside a PP75 housing and provide a color-coded right angle connection to the PCB.

Description	Loose Piece Part Numbers	
Minimum Quantity	500	100
Tin Plated	PC5930T-BK	PC5930T
Silver Plated	PC5930S-BK	PC5930S

See PCB contact drawing on website for further detail.





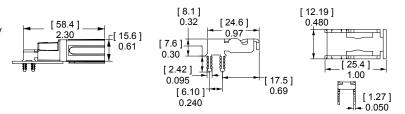
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55A Right Angle Mini Powerclaw PCB Contacts

Right angle Mini Powerclaw contacts can be used on the PCB edge without a PP75 housing on the PCB side. A self polarizing design only allow PP75 wire housings to mate to PCB contacts one way.

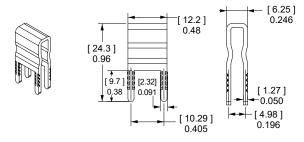
	Loose Piece	
Description	Part Nur	mbers
Minimum Quantity	1,000	100
Tin Plated	PC5934T-BK	PC5934T
Silver Plated	PC5934S-BK	PC5934S



55A Vertical Mini Powerclaw PCB Contacts

Vertical Mini Powerclaw contacts save space by not requiring a PP75 housing on the PCB side. The guide housing is required for 2 pole applications to provide a polarized connection. (See PP75 accessories).

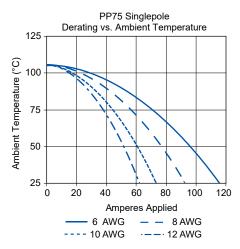
	Loose Piece		
Description	Part Nun	nbers	
Minimum Quantity	1,500	100	
Tin Plated	PC5933T-BK	PC5933T	
Silver Plated	PC5933S-BK	PC5933S	

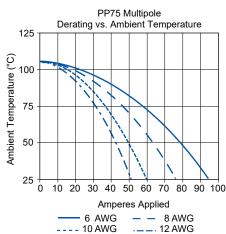


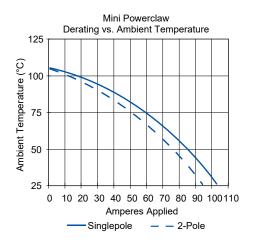
See PCB contact drawing on website for further detail.

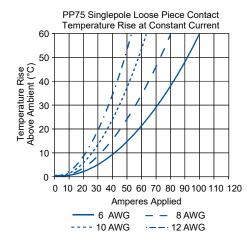
PP75 CONNECTOR TEMPERATURE CHARTS - Temperature rise charts are based on a 25°C ambient temperature.

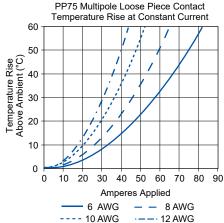
Current - Temperature Derating per IEC 60512-5-2 Test 5B

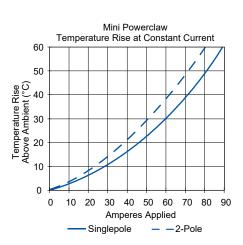












NOTE: Powerclaw charts are based on 8 AWG equivalent copper foil on board side, mated to 6 AWG conductor on wire side.

PP75 SPECIFICATIONS

ELECTRICAL		
Current Rating Amperes ¹	UL 1977	CSA
Wire-to-Wire (6 AWG)	120	70
Wire-to-PCB (6 AWG)	55	50
Wire-to-Busbar (6 AWG)	75	
Voltage Rating AC/DC		
UL 1977	600	
PCB Connector Recommended Voltage ³		
per IEC 60950-1 Table 2L Pollution Degree ²		
Mini Vert. Contact Adjacent Poles	220	
Mini Horiz. Contact Adjacent Poles	200	
Standard Contact Adjacent Poles	635	
Dielectric Withstanding Voltage		
Volts AC	2,200	
Avg. Mated Contact Resistance Milliohms ¹		
Wire Contact with 1 1/4" of 6 AWG	0.200	
PCB Contact to Contact	0.500	
UL Hot Plug Current Rating Amperes - 250 Cycles at 120V DC ⁶		
Wire-to-Wire	50A	
PCB to Wire (Vertical Mini Powerclaw)	40A	
UL Ground Short Time Current Test - 75A Pre	mate Ground	
1530 Amps, 6 AWG Wire	6 Seconds	

MATERIAL	
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) / 800°C (GWIT)
Contact	
Base	Copper Alloy
Wire Plating	Silver
PCB Plating	Sn or Ag over Ni
Contact Termination Methods	
Crimp ⁴	Wire Contacts
Hand Solder	Wire and PCB Contacts
Solder Dip	PCB Contacts
Wave Solder	PCB Contacts
Wrench / Socket	Busbar Contacts

MECHANICAL			
Wire Size Range	AWG	mm²	
Wire Contacts with Bushings	16 to 6	1.3 to 13.3	
Max. Wire Insulation Diameter	in.	mm	
	0.437	11.100	
Operating Temperature ²	°F	°C	
Standard & Ground	-4° to 221°	-20° to 105°	
Chemical Resistant*	-40 to 221°	-40° to 105°	
*Chemical resistant material not available	e for PCB guide	housings	
Mating Cycles No Load by Plating	Silver (Ag)	Tin (Sn)	
Wire and PCB Contacts	10,000	1,500	
Avg. Mating / Unmating Force	Lbf.	N	
Wire to Wire Low Force Contacts	5	22	
Wire to Wire High Force Contacts	7	31	
Standard Powerclaw to Wire 7		31	
Mini Powerclaw to Wire 4 17			
PCB Specifications			
Mounting Style	Plated Through Hole		
Max PCB Thickness - in. (mm)	Standard: 0.15 (0.381) Mini: 0.25 (0.635)		
Recommended Traces	8 AWG Cross	Section	
Min. Contact / Spring Retention Force	Lbf.	N	
Wire Housing	50	222	
Min. Creepage / Clearance Distance PCB	in.	mm	
Standard Powerclaw Adjacent Poles	0.260	6.6	
Mini Vert. Powerclaw Adjacent Poles	0.087	2.2	
Mini Horz. Powerclaw Adjacent Poles	0.079	2.0	
Mechanical Shock 5			
MIL-STD-202	213 Condition A	50g's	
Vibration High Frequency 5	204	10g's	









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 Without use of spacers to increase creepage and clearance distances.
- 4 Use APP® recommended tooling only. Alternate tools may adversely affect the performance of our connectors along with UL and CSA recognition.
- 5 Tested with contact part number 5900.
- 6 Based on 2 housings blocked together.



IEC INFORMATION

Connector Series	Configurations		Creepage / Clearance per IEC 60950-1	Material Group
	Single Pole	Unmated	2.97 mm	
2075		Mated	2.97 mm	
PP75	Stacked Powerpole®	Unmated	2.97 mm	IIIa
		Mated	2.97 mm	

ATTRIBUTES	PP75
AMP Rating AC/DC	75
Voltage Rating AC/DC (Steady State)	250 V AC/DC (Operational)
Breaking Capacity - AMP Rating / Cycles	75 Amp / 10 Cycles
Voltage Rating (Breaking Capacity)	220 VDC
FINGER Safety - Mated Only	IEC 60529 - IP20
Wire Size Tested	16 mm²
Contact Series Tested	5900
Climatic Testing (Cold, Heat & MFG)	IEC 60512 Test-11j, 11i & 11g
Cycle Life	IEC 60512 Test 9a - 5,000 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

PROTECTION

Touch Safety with Wire Contacts

IEC 60529 IP10



POWERPOLE® PP75 ACCESSORIES

Strain Relief Grommets

Use for strain relief in the back side of a PP75 housing. Wire gauge given for reference only, use grommet ID and wire OD to determine suitability in the end application.

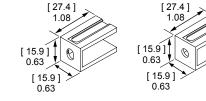
		Dimensions
		- A -
Description	Part Numbers	inches mm
Minimum Quantity	100	
6 AWG, Black	114411P2	0.35 8.89
8 AWG, Black	114411P1	0.25 6.35
10 to 12 AWG, Black	114411P3	0.17 4.32

A

Mounting Wing for Standard or CR Housings

Mounting wings can be used to secure dovetailed Powerpole® 75 series housings by passing fasteners through the wings in either a horizontal or vertical orientation. Useful for sheet metal panels, printed circuit boards, and many other mounting surfaces. Fasteners not included.

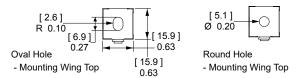
Description	Part Numl	bers
Minimum Quantity	1,000	100
Blue, Round Hole	1399G20-BK	1399G20
Blue, Oval Hole	1399G7-BK	1399G7



Mounting Wing for Locking Housings

Mounting wings can be used to secure Powerpole® 75 series housings with locking dovetails by passing fasteners through the wings in either a horizontal or vertical orientation. Useful for sheet metal panels, printed circuit boards, and many other mounting surfaces. Fasteners not included.

Description	Part Numbers		
Minimum Quantity	1,000	100	
Blue, Oval Hole	75LOKWNGBLU-BK	75LOKWNGBLU	
Blue, Round Hole	75LOKWNGBLU-R-BK	75LOKWNGBLU-R	

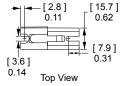


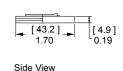


Surface Mount for Locking Housings

Use to secure Powerpole® 75 series housings with locking dovetails to a flat surface. Useful for sheet metal panels, printed circuit boards, and many other mounting surfaces. Fasteners not included.

Description	Part Numbers	
Minimum Quantity	1,000 100	
Blue	75LOKSMTBLU-BK	75LOKSMTBLU

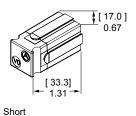


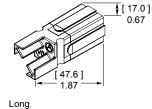


Spacer

Use to separate housings under high power to minimize power capability derating due to heat rise. They are recommended for squaring off a block of Powerpole® 75 housings to enable mounting accessories or retaining pins to be used. Combining long and short spacers opposite each other in a mated block adds keying features, or use two short spacers to avoid interference.

Description	Part Numbers		
Minimum Quantity	1000	100	
Red, Short	1399G23-BK	1399G23	
Red, Long	1399G21-BK	1399G21	



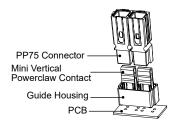


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Guide Housings for Vertical Mini Powerclaw Contacts

Prevents polarity being reversed when a two pole PP75 block is mated to vertical mini Powerclaw contacts. Fastening hardware not included.

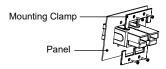
Description	Part Num	bers
Minimum Quantity	1,000	100
Black Guide Housing	PC-HSG-PP-RK	PC-HSG-PP



Mounting Clamp

Mounting clamps can be used for fastening a block of Powerpole® 75 series housings to a panel. Connector blocks must be a complete square for the clamps to work properly. Fastening hardware not included.

Description	Part Numbers
Minimum Quantity	50 sets of 2
2 or 4 Pole	1463G1
3 or 6 Pole	1463G2



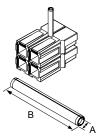




Retaining Pins

Retaining pins are used to keep stacked Powerpole® 75 series housings from separating. Retaining pins are inserted in the circular opening between two housings stacked side by side. Dimension B is +/- 0.015 in or 0.38 mm.

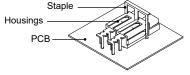
				Dimensions	
			- A -		- B -
Description	Part Nui	mbers	inches	mm	inches mm
Minimum Quantity	1,000	100			
1 Block High	111812P7	110G19	0.196 / 0.207	4.98 / 5.26	0.560 14.220
2 Block High	111812P6	110G18	0.196 / 0.207	4.98 / 5.26	1.000 25.400

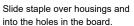


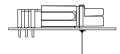
PCB Mounting Staples

Reduce strain on solder joints during mating and unmating. Staples bend over the underside of the PCB board to lock the housings in place. Staples are an interference fit with housings.

Part Number	Number of Stacked Powerpole® H x W
Minimum Quantity	100
PCSTAPLE-2	1 x 2





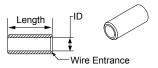


Fasten the staple by bending the leads on the bottom of the board.

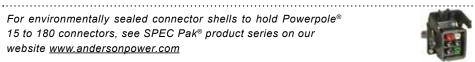
Reducing Bushings

Use with contact part number 5900-BK or 1307-BK to allow a smaller wire to be used with the connector. Electrical capability is derated with smaller wire.

								Dimensions				
Contact Barrel Size		Wire Size					- ID -		- Length -			
AWG	mm²	AWG	mm²	Part Numbers			inches	mm	Inches	mm		
Minimum Quantity				3,000	1,000	100						
6	13.3	8	8.4	-	5912-BK	5912	0.18	4.57	0.45	11.43		
6	13.3	12 to 10	3.3 to 5.3	5910-BK	-	5910	0.14	3.56	0.47	11.94		
6	13.3	16 to 14	1.3 to 2.1	5913-BK	-	5913	0.09	2.29	0.47	11.94		



For environmentally sealed connector shells to hold Powerpole® 15 to 180 connectors, see SPEC Pak® product series on our website www.andersonpower.com







Powerpole®

Tooling Information - APP® Applicators are Mechanical Feed Style and do not Require an Air Feed Kit.

	e Size	Loose Piece	Loose Piece Part Number		Loose Piece Contact Crimp Tools						
AWG	mm²	Tin Plating	Silver Plating	Hand Tool	OR	Pneumatic Bench Tool	+	Die	+	Locator	Number of Crimps
			PP15 / 4	15 Flat Wipinខ្	Pow	er & Ground					
16 to 20	1.3 to 0.52	N/A	1332								
12 to 16	3.3 to 1.3	N/A	1331	1309G2							
16 to 20	1.3 to 0.52	262G1-LPBK	262G2-LPBK	or 1309G8							
16 to 20	1.3 to 0.52	269G2-LPBK	N/A								
12 to 16	3.3 to 1.3	261G1-LPBK	N/A								
10 to 14	5.3 to 2.1	261G2-LPBK	261G3-LPBK	1309G3		N/A	N/A		N/A	Single	
12 to 16	3.3 to 1.3	269G1-LPBK	N/A	or 1309G8		IN/A		IN/A		N/A	Single
10 to 14	5.3 to 2.1	269G3-LPBK	N/A								
10 to 14	5.3 to 2.1	200G1L-LPBK	200G3L-LPBK								
10 to 14	5.3 to 2.1	201G1H-LPBK	N/A	1309G6 or							
310 to 14	5.3 to 2.1	1830G1-LPBK	1830G2-LPBK	1309G8							
			1	PP7	5			,		'	<u>'</u>
_			1307								
6	13.3		5900							1389G6	
8	8.4		1875G1		1387G1		1388G6		1389G21		
	5.3 to 3.3	N/A	5952	1309G4		1387G1				1389G6	Single
			1875G2							1389G21	
10 to 12			5953				1388G7		100005	7	
			5915					1388G7		1389G6	
			1875G3							1389G21	
				PP12	.0			'		'	<u>'</u>
1/0	53.5		1323G2					120062			
1	42.4		1323G1					1388G3			
2	33.6	N/A	1319	1368 Series		1387G1				1389G4	Single
4	21.2		1319G4					1388G4			
6	13.3		1319G6								
				PP18	0						
3/0	85		1328G2					1303G12			
2/0	53.5		1328G1					1303612			
1/0	53.5		1382		120762		1202012		1304G32	Double	
1	42.4	N/A	1347	1368 Series	368 Series 1387G2						
2	33.6		1383					1303G13			
4	21.1		1384								
6	13.3		1348			1387G1		1388G4		1389G3	Single
Insertion /	Extraction To	ol for PP15/45 Co	ontacts = 111038G	2							

NOTE: see website for the most current information.

www.andersonpower.com



Wir	e Size	Reeled Pa	rt Number	Reeled Contact Crimp Tools						
AWG	mm²	Tin Plating	Silver Plating	APP® Applicator	+	APP® Press				
PP15/45 Flat Wiping Power & Ground										
16 to 20	1.3 to 0.52	262G1	262G2							
16 to 20	1.3 to 0.52	269G2	N/A							
12 to 16	3.3 to 1.3	261G1	N/A	TD0101						
10 to 14	5.3 to 2.1	261G2	261G3	100101						
12 to 16	3.3 to 1.3 269G1		N/A			115V = TE0101 230V = TE0102				
10 to 14	5.3 to 2.1	269G3	N/A			2001				
10 to 14	5.3 to 2.1	200G1L	200G3L							
10 to 14	5.3 to 2.1	201G1H	N/A	TD0102						
10 to 14	5.3 to 2.1	1830G1	1830G2							

Your Best Connection™

2020-0055 DS-PP75 REV C7

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