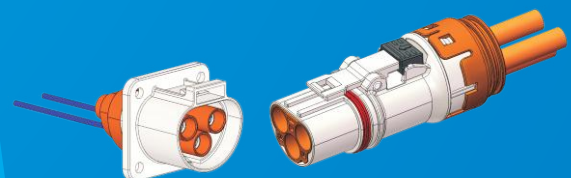
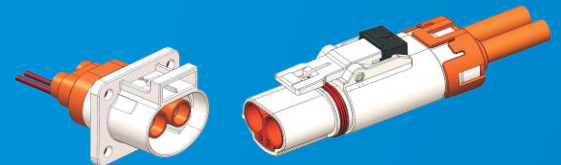
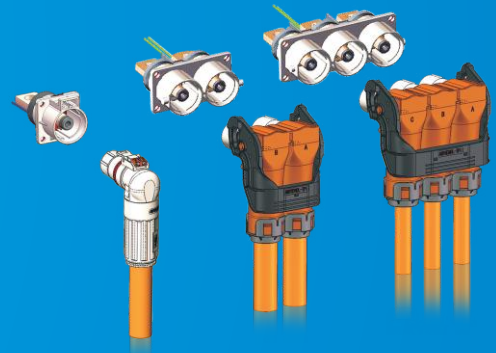
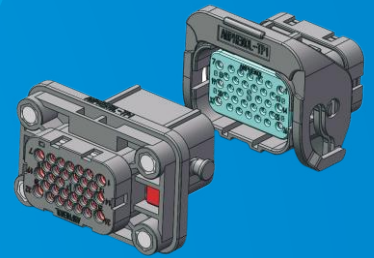
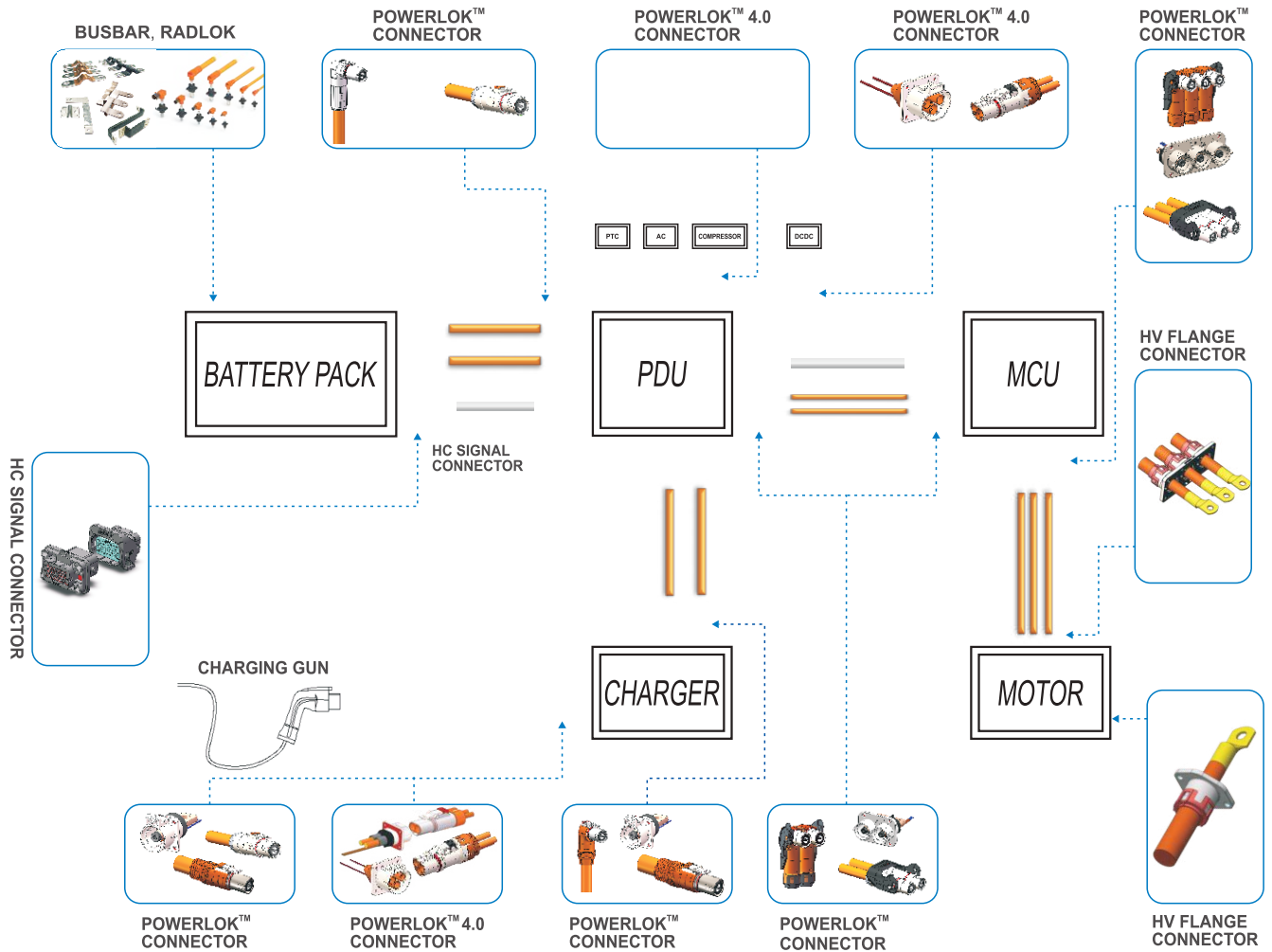


Amphenol

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TP



SYSTEM CONNECTION SKETCH



01/14



PowerLok™ Connector

Utilizing Amphenol latest RADSOK® technology, Amphenol PowerLok™ product is the answer to HEV/EV where a custom, reliable, easy to install, and cost effective solution is required. PowerLok™ has many features: fully shielding, Automatic Secondary Lock, HVIL optional, Multi Polarization.

15/22



PowerLok™ 4.0 Connector

Amphenol PowerLok™ 4.0 Connector is designed for EV's medium and small current application. In the supplementary of PowerLok™ products all advantages at the same time, the 2,3,4,2+4 positions small size design can be adapted to the application in narrow space better.

23/30



RADLOK™ Connector

Effective Utilizing Amphenol latest RADSOK® technology, Amphenol RADLOK product line is designed with compactness and robustness in mind.

31/34



HC Signal Connector

Amphenol HC series connectors are designed as a high-performance, cost-effective solution for the signal and power transmission field usage. The connector are matches 16# terminals for power and 20# terminal for signal, which are highly integrated designed together.

POWERLOK™ CONNECTOR



Application

POWERLOK™ series is a low cost, compact, metal-shell interconnect solution utilizing RADSOK® contact technology for EV and Hybrid transportation application. Up to 1000V ranging from 90A-500A with HVIL, 360° shielding, environmental sealing, keying, straight and right angle configurations, and up to 3 power circuits. Accommodates cable size from 16mm² to 150mm² with and without shielding. Available in assembled and overmolded versions.

POWERLOK™ series connectors are engineered for diverse applications as its wide power range coverage, including electric powertrains of automotive, trucks, bus, agricultural and construction machines, and off-road vehicles. Furthermore, POWERLOK™ series are also widely employed in stationary energy storage systems.

Key Features

- High Voltage Inter Lock
- 360° shielding
- 1POS, 2POS, 3POS Positions Available
- 90D(Right angle) and 180D(Straight)
- Multiple keys available
 - 1POS (X, Y, U, V, W, T keys)
 - 2POS & 3POS (X, Y keys)
- RADSOK® contact technology
- RoHS/REACH Compliant
- Mating Cycle: 100Min
- Mating Force: 75N MAX.
- Voltage Rating: 1000VDC
- DC Current Rating: 120A,200A,300A, 400A,500A
- Insulation Resistance: 500MΩ
- IP rating: IP67(mated)
IP2X(unmated)
- Salt Spray: 48h
- Temperature range: -40°C~+125°C

PowerLok™ Recommended Cable Size & Current Rating

Series	Accepted Cable Size	Current Rating
120 Series	16mm ²	90A
	25mm ²	120A
200 Series	25mm ²	120A
	35mm ²	150A
	50mm ²	200A
300 Series	35mm ²	150A
	50mm ²	200A
	70mm ²	250A
	95mm ²	300A
400 Series	70mm ²	250A
	95mm ²	300A
	120mm ²	400A
	135mm ²	450A
500 Series	95mm ²	300A
	120mm ²	400A
	135mm ²	450A
	150mm ²	500A

*Customization is allowed if above sizes are not what you need.

PowerLok™ Receptacle



180 Degree Busbar Lug



Thread Pin



Tubular Lug



90 Degree BusbarLug

Series	180 Degree BusBar Lug						Thread Pin						Tubular Lug						90 Degree Busbar Lug	
	1POS		2POS		3POS		1POS		2POS		3POS		1POS		2POS		3POS		1POS	
	With HVIL	W/O HVIL	With HVIL	W/O HVIL	With HVIL	W/O HVIL	With HVIL	W/O HVIL	With HVIL	W/O HVIL	With HVIL	W/O HVIL	With HVIL	W/O HVIL	With HVIL	W/O HVIL	With HVIL	W/O HVIL	With HVIL	W/O HVIL
120A	*	*	*	*				*						*						
200A	*	*						*						*						
300A	*	*	*	*	*	*		*	*	*	*	*		*	*	*	*	*	*	
400A	*	*						*						*					*	
500A	*	*						*						*					*	

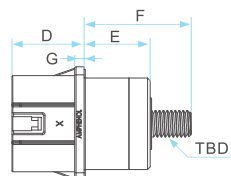
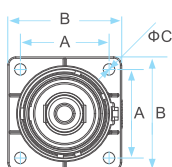
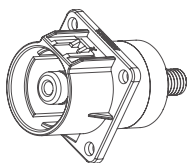
180 Degree Busbar Lug Receptacle

Product	180 Degree Busbar Lug 1POS Dimensions(mm)									
	Series	A	B	C	D	E	F	G	H	
PowerLok™ 1POS 180 Degree Busbar Lug Receptacle	120A	20.0	28.0	Φ3.6	18.0	13.0	31.5	3.0	24.5	
	200A	25.0	33.0	Φ4.2	20.7	19.3	39.5	3.0	32.3	
	300A	27.0	35.0	Φ4.2	20.7	21.3	49.3	3.0	39.3	
	400A	33.5	43.0	Φ4.3	27.2	25.0	55.2	3.5	45.2	
	500A	33.5	43.0	Φ4.3	27.2	25.0	56.0	3.5	46.0	

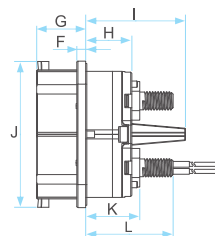
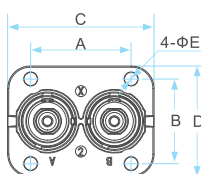
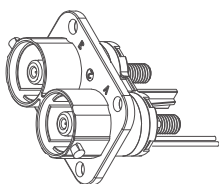
Product	180 Degree Busbar Lug 2POS Dimensions(mm)														
	Series	A	B	C	D	E	F	G	H	I	J	K	L	M	
PowerLok™ 2POS 180 Degree Busbar Lug Receptacle	120A	35.0	25.5	48.0	34.0	Φ3.6	3.0	18.5	14.5	29.5	49.0	23.5	33.0	9.8	
	300A	45.0	38.0	65.6	49.6	Φ6.2	4.0	22.0	20.0	49.0	65.4	35.0	43.0	18.2	

Product	180 Degree Busbar Lug 3POS Dimensions(mm)														
	Series	A	B	C	D	E	F	G	H	I	J	K	L	M	
PowerLok™ 3POS 180 Degree Busbar Lug Receptacle	300A	75.0	38.0	95.6	49.6	Φ10.0	4.0	22.0	20.7+1.0	44.7+0.1	18.2	35.0+0.1	43.0+0.1	95.6	

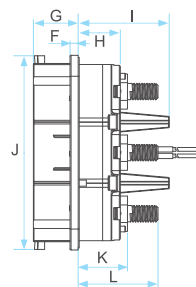
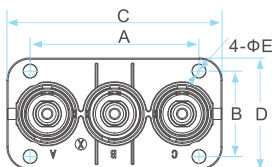
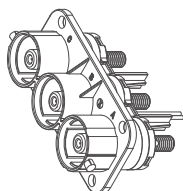
Thread Pin Receptacle



Product	Thread Pin 1POS Dimensions(mm)							
	Series	A	B	C	D	E	F	G
PowerLok™ 1POS Thread Pin Receptacle	120A	20.0	28.0	Φ3.6	18.0	13.0	32.0	3.0
	300A	27.0	35.0	Φ4.2	20.7	21.3	38.1	3.0
	500A	33.5	43.0	Φ4.3	27.2	25.0	40.5	3.5

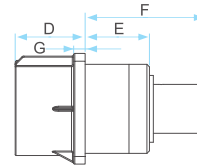
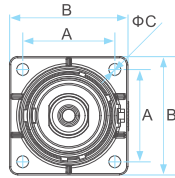
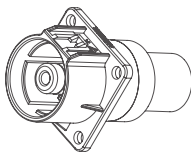


Product	Thread Pin 2POS Dimensions(mm)												
	Series	A	B	C	D	E	F	G	H	I	J	K	L
PowerLok™ 2POS Thread Pin Receptacle	300A	45.0	38.0	65.6	49.6	Φ6.2	4.0	22.0	20.7±0.1	44.7±0.1	65.4	24.2±0.1	39.2±0.1

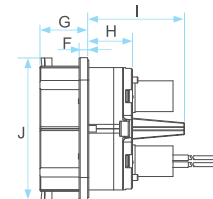
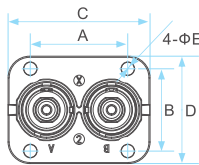
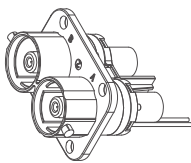


Product	Thread Pin 3POS Dimensions(mm)												
	Series	A	B	C	D	E	F	G	H	I	J	K	L
PowerLok™ 3POS Thread Pin Receptacle	300A	75.0	38.0	95.6	49.6	Φ6.2	4.0	22.0	20.7±0.1	44.7±0.1	95.1	24.2±0.1	39.2±0.1

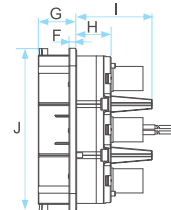
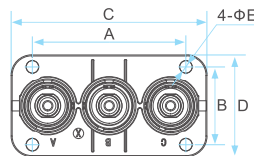
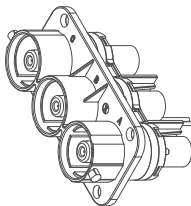
Tubular Lug Receptacle



Product	Tubular Lug 1POS Dimensions(mm)							
	Series	A	B	C	D	E	F	G
PowerLok™ 1POS Tubular Lug Receptacle	120A	20.0	28.0	Φ3.6	18.0	13.0	27.5	3.0
	300A	27.0	35.0	Φ4.2	20.7	21.3	TBD	3.0
	500A	33.5	43.0	Φ4.3	27.2	25.0	46.5	4.5

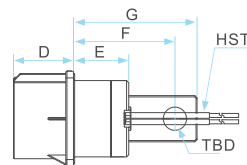
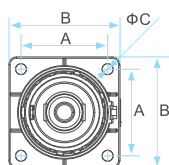
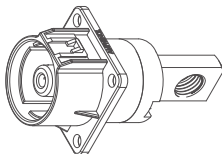


Product	Tubular Lug 2POS Dimensions(mm)										
	Series	A	B	C	D	E	F	G	H	I	J
PowerLok™ 2POS Tubular Lug Receptacle	300A	45.0	38.0	65.6	49.6	Φ6.2	4.0	22.0	20.7	44.7	65.4



Product	Tubular Lug 3POS Dimensions(mm)										
	Series	A	B	C	D	E	F	G	H	I	J
PowerLok™ 3POS Tubular Lug Receptacle	300A	75.0	38.0	95.6	49.6	Φ6.2	4.0	22.0	20.7	44.7	95.1

90 Degree Busbar Lug Receptacle

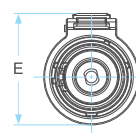
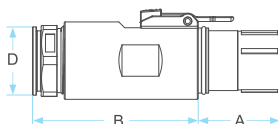
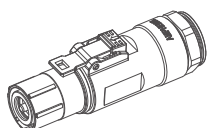


Product	90 Degree Busbar 1POS Dimensions(mm)								
	Series	A	B	C	D	E	F	G	H
PowerLok™ 1POS 90 Degree Busbar Receptacle	300A	27.0	35.0	Φ4.2	20.7	24.1	49.3	3.0	39.3
	400A	33.5	43.0	Φ4.3	27.2	25.0	55.2	3.5	45.2
	500A	33.5	43.0	Φ4.3	20.7	25.0	56.0	3.5	46.0

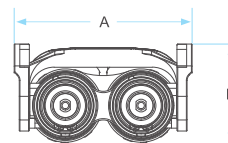
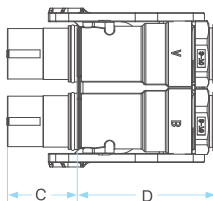
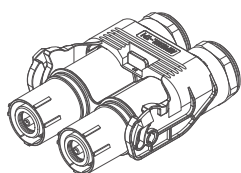
PowerLok™ Plug

Series	1POS				2POS				3POS			
	Assembly		Overmolded		Assembly		Overmolded		Assembly		Overmolded	
	Straight	Right Angle	Straight	Right Angle	Straight	Right Angle	Straight	Right Angle	Straight	Right Angle	Straight	Right Angle
120A			*	*			*	*				
200A	*	*										
300A	*	*	*	*	*	*			*	*		
400A			*	*								
500A			*	*								

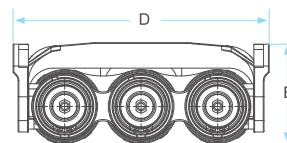
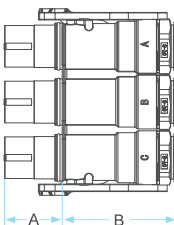
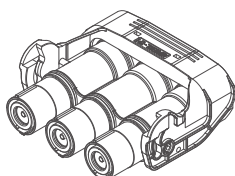
Straight Assembly Plug



Product	1POS Straight Assembly Plug Dimensions(mm)				
	Series	A	B	D	E(REF)
PowerLok™ 1POS Straight Assembly Plug	200A	29.8	54.3	Φ25.9	30.9
	300A	31.0	63.1	Φ29.5	34.4

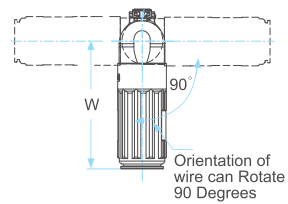
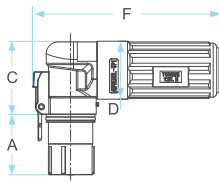
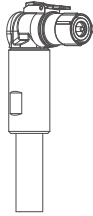


Product	2POS Straight Assembly Plug Dimensions(mm)				
	Series	A	B	C	D
PowerLok™ 2POS Straight Assembly Plug	300A	70.5	38.8	31.0	59.6

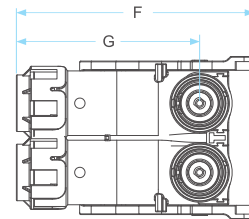
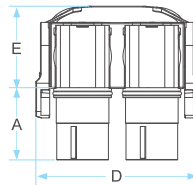
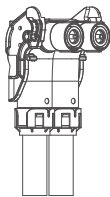


Product	3POS Straight Assembly Plug Dimensions(mm)				
	Series	A	B	D	E
PowerLok™ 3POS Straight Assembly Plug	300A	31.0	59.6	100.5	38.0

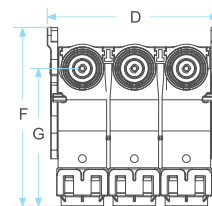
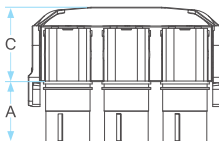
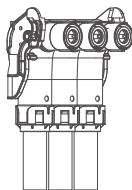
Right Angle Assembly Plug



Product	1POS Right Angle Assembly Plug Dimensions(mm)					
	Series	A	C	D	F(REF)	W
PowerLok™ 1POS Right Angle Assembly Plug	200A	29.8	34.7	Φ25.9	30.9	68.8
	300A	31.0	37.6	Φ25.9	34.4	78.1



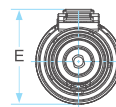
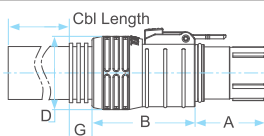
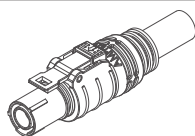
Product	2POS Right Angle Assembly Plug Dimensions(mm)					
	Series	A	D	E	F	G
PowerLok™ 2POS Right Angle Assembly Plug	300A	31.0	70.5	34.8	103.3	79.4



Product	3POS Right Angle Assembly Plug Dimensions(mm)					
	Series	A	C	D	F	G
PowerLok™ 3POS Right Angle Assembly Plug	300A	31.0	38.0	100.5	103.3	79.4

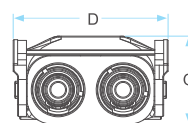
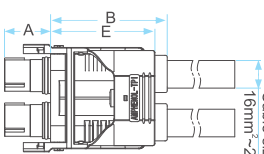
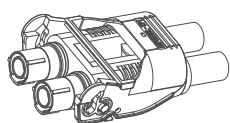
Note

Amphenol TPI can provide customized solutions based on customer's installation space. If you need to order or ask questions, please contact your sales representative for additional information!

Straight Overmolded Plug**Product****1POS Straight Overmolded Plug Dimensions(mm)**

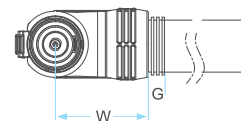
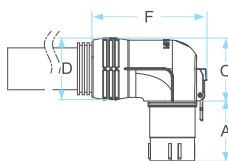
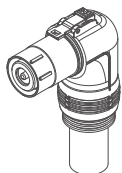
PowerLok™ 1POS Straight Overmolded Plug

Series	A	B	D	E	G
120A	22.5	39.0	Φ24.6	28.5	9.9
300A	31.0	45.0	Φ32.0	35.6	9.9
400A	41.1	52.0	Φ42.0	43.6	9.9
500A	41.1	52.0	Φ42.0	43.6	9.9

**Product****2POS Straight Overmolded Plug Dimensions(mm)**

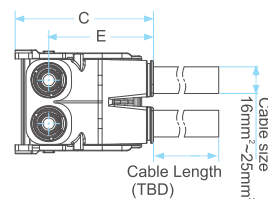
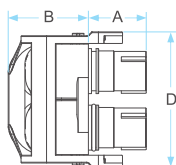
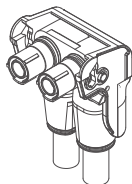
PowerLok™ 2POS Straight Overmolded Plug

Series	A	B	C	D	E
120A	22.5	57.0	29.7	52.5	51.0

Right Angle Overmolded Plug**Product****1POS Right Angle Overmolded Plug Dimensions(mm)**

PowerLok™ 1POS Right Angle Overmolded Plug

Series	A	C	D	F(PEF)	W	G
120A	22.5	25.3	Φ24.6	55.8	40.0	9.9
300A	31.0	32.5	Φ32.0	69.6	50.0	9.9
400A	41.1	43.0	Φ42.0	78.6	55.0	9.9
500A	41.1	43.0	Φ42.0	78.6	55.0	9.9

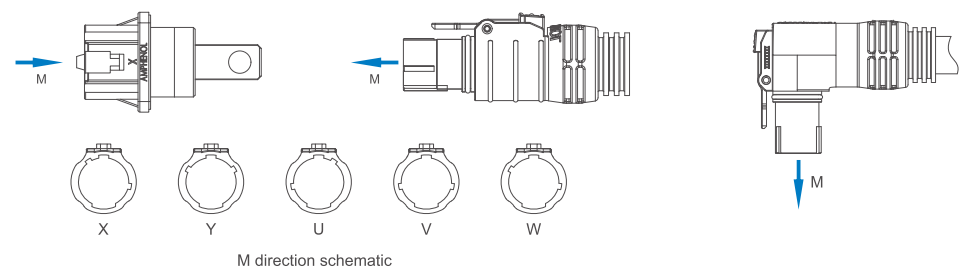
**Product****2POS Right Angle Overmolded Plug Dimensions(mm)**

PowerLok™ 2POS Right Angle Overmolded Plug

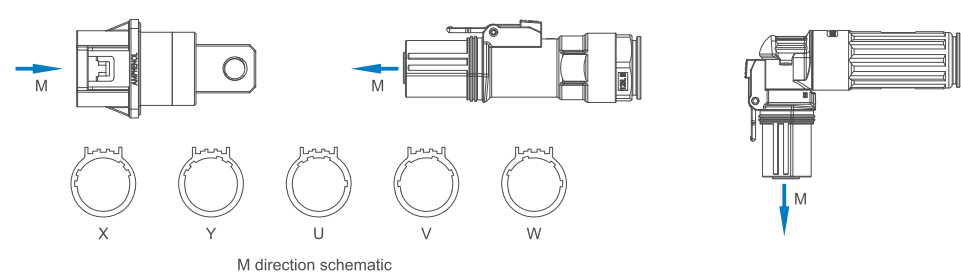
Series	A	B	C	D	E
120A	22.5	31.2	70.0	52.5	53.0

PowerLok™ Connector Key Map

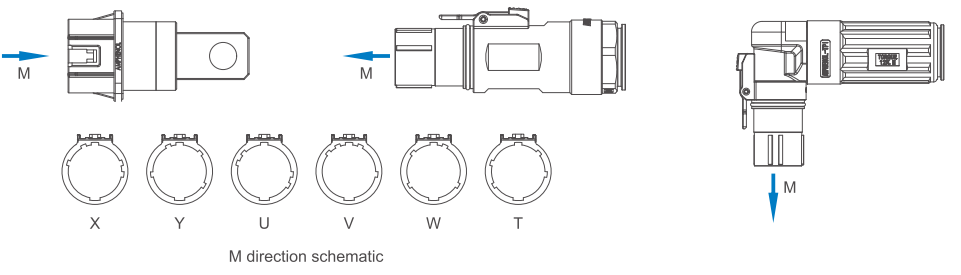
1POS-120A



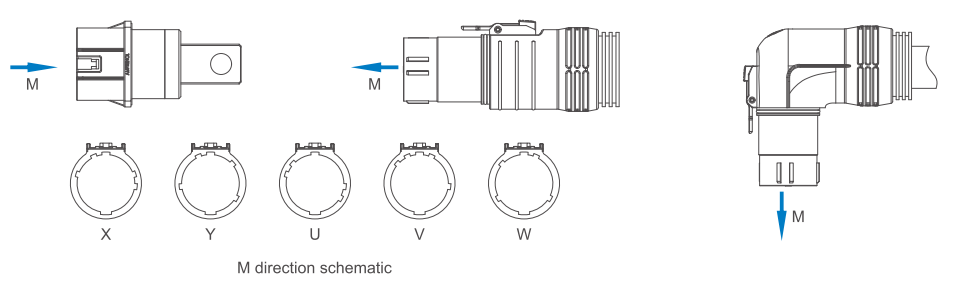
1POS-200A



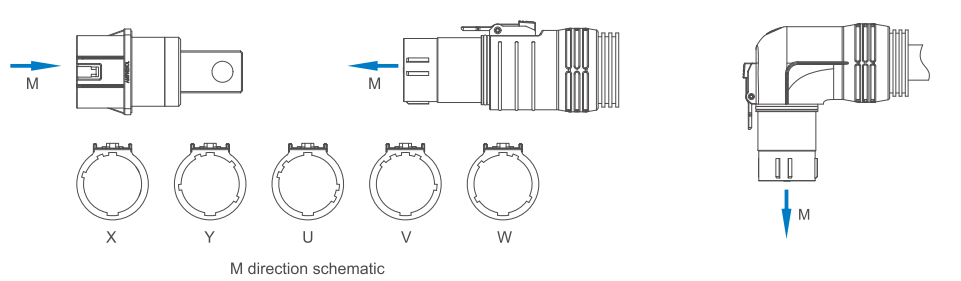
1POS-300A

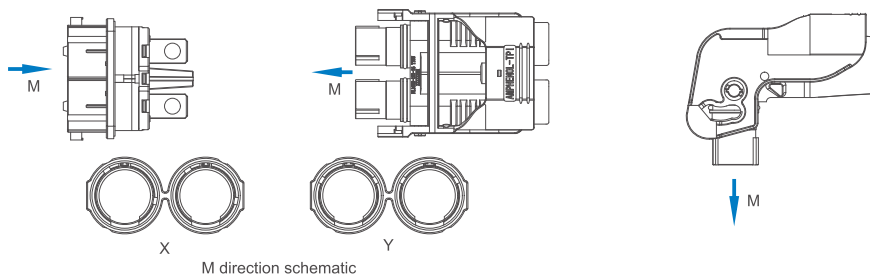
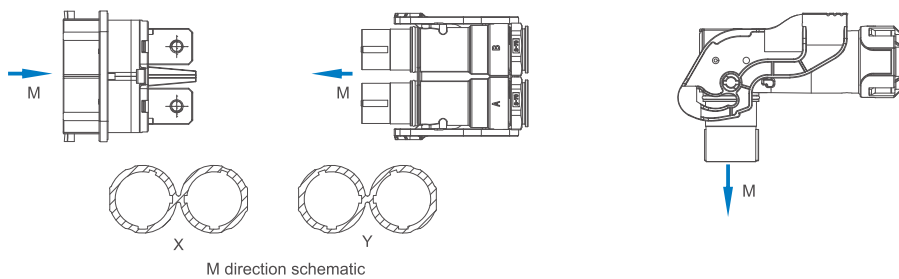
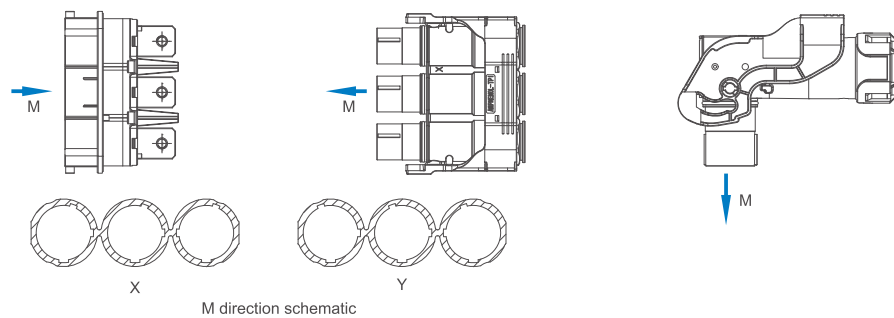


1POS-400A



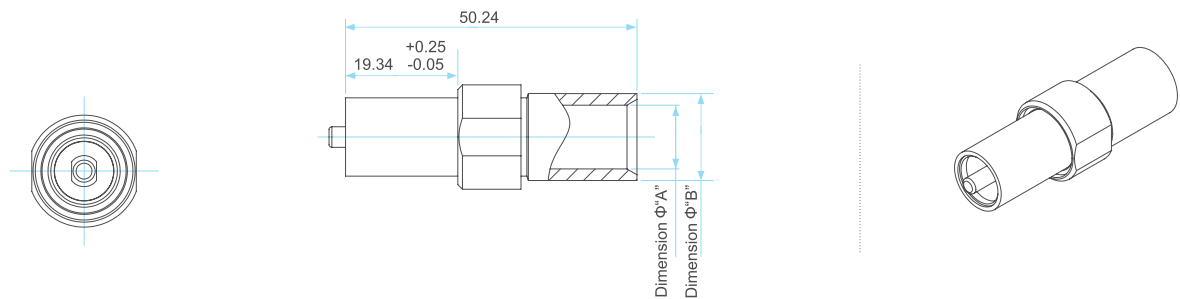
1POS-500A



2POS-120A**2POS-300A****3POS-300A**

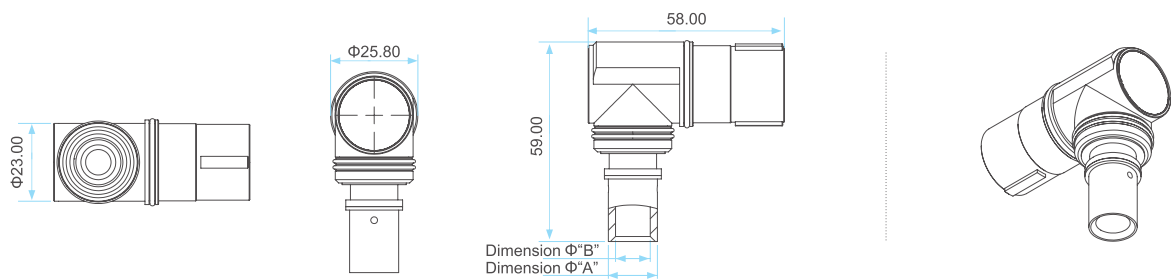
PowerLok™ Terminal

300A 1POS&2POS&3POS Straight



Part Number	Dimension "A"	Dimension "B"	Cable Size
AC-CP001017	7.50	10.00	25mm ²
AC-CP000872	8.80	11.80	35mm ²
AC-CP000689	9.00	12.00	35mm ²
AC-CP001018	10.30	14.50	50mm ²
AC-CP000876	11.00	15.00	50mm ²
AC-CP000871	12.50	16.50	70mm ²
AC-CP000878	12.50	16.80	70mm ²

300A 2POS&3POS Right Angle



Part Number	Dimension "A"	Dimension "B"	Cable Size
AC-CP000994	14.5	10.3	50mm ²
AC-CP000995	14.5	10.3	50mm ²
AC-CP000996	16.5	12.5	70mm ²

Ordering Information-PowerLok™ 1POS Receptacle W/O HVIL

		PL 00		X - 300		- 10		M10	
Product Type	Connector Type	Key (Touch Proof Cover Color)		Current & HVIL		Termination Type		Termination Size	
PowerLok™	00 1POS Receptacle	X	Orange	120	120A W/O HVIL	10	180 Degree Busbar Lug	D ⁽¹⁾ +Stud Size	
		Y	Black	200	200A W/O HVIL	20	Thread Pin	M ⁽²⁾ +Stud Size	
		U	Yellow	300	300A W/O HVIL			M+Thread Size	
		V	Green	400	400A W/O HVIL			D+Cable Size	
		W	Red	400	400A W/O HVIL	90	90 Degree Busbar Lug	D+Stud Size	
		T	Blue	500	500A W/O HVIL			M+Stud Size	

Ordering Information-PowerLok™ 1POS Receptacle With HVIL

		PL 00		X - 301		- 10		M10	
Product Type	Connector Type	Key (Touch Proof Cover Color)		Current & HVIL		Termination Type		Termination Size	
PowerLok™	00 1POS Receptacle	X	Orange	121	120A With HVIL	10	180 Degree Busbar Lug	D+Stud Size	
		Y	Black	201	200A With HVIL			M+Stud Size	
		U	Yellow	301	300A With HVIL			D+Stud Size	
		V	Green	401	400A With HVIL	90	90 Degree Busbar Lug	D+Stud Size	
		W	Red	401	400A With HVIL			M+Stud Size	
		T	Blue	501	500A With HVIL			M+Stud Size	

Ordering Information-PowerLok™ 2POS Receptacle

		PL 08		2X - 300		- 10		M10	
Product Type	Connector Type	Key (Touch Proof Cover Color)		Current & HVIL		Termination Type		Termination Size	
PowerLok™	08 2POS Receptacle	2X	Orange	120	120A W/O HVIL	10	Busbar Lug	D+Stud Size	
				121	120A With HVIL			M+Stud Size	
		2Y	Black	300	120A W/O HVIL	20	Thread Pin	M+Thread Size	
				301	120A With HVIL	30	Tubular Lug	D+Cable Size	

Ordering Information-PowerLok™ 3POS Receptacle

		PL 08		3X - 300		- 10		M10	
Product Type	Connector Type	Key (Touch Proof Cover Color)		Current & HVIL		Termination Type		Termination Size	
PowerLok™	08 3POS Receptacle	3X	Orange	300	300A W/O HVIL	10	Busbar Lug	D+Stud Size	
				301	300A With HVIL			M+Stud Size	
		3Y	Black	301	300A With HVIL	20	Thread Pin	M+Thread Size	
						30	Tubular Lug	D+Cable Size	

(1) D=Through hole

(2) M=Screw hole

Ordering Information-PowerLok™ 1POS Assembled Plug W/O HVIL

Product Type	Connector Type		Key (Touch Proof Cover Color)		Current & HVIL		Accepted Cable Size(mm ²)	Current Rating (A)
PowerLok™	18	Plug Connector, Straight, Shield	X	Orange	200	200A W/O HVIL	25	120
			Y	Black			35	150
	28	Plug Connector, Right Angle, Shield	U	Yellow			50	200
	48	Plug Connector, Straight, Un-Shield	V	Green	300	300A W/O HVIL	35	150
			W	Red			50	200
	58	Plug Connector, Right Angle, Un-Shield	T	Blue			70	250

Ordering Information-PowerLok™ 1POS Assembled Plug With HVIL

Product Type	Connector Type		Key (Touch Proof Cover Color)		Current & HVIL		Accepted Cable Size(mm ²)	Current Rating (A)
PowerLok™	18	Plug Connector, Straight, Shield	X	Orange	201	200A With HVIL	25	120
			Y	Black			35	150
	28	Plug Connector, Right Angle, Shield	U	Yellow			50	200
	48	Plug Connector, Straight, Un-Shield	V	Green	301	300A With HVIL	35	150
			W	Red			50	200
	58	Plug Connector, Right Angle, Un-Shield	T	Blue			70	250

Ordering Information-PowerLok™ 2POS Assembled Plug

Product Type	Connector Type		Key (Touch Proof Cover Color)		Current & HVIL		Accepted Cable Size(mm ²)	Current Rating (A)
PowerLok™	18	Plug Connector, Straight, Shield	2X	Orange	300	300A W/O HVIL	35	150
							50	200
	28	Plug Connector, Right Angle, Shield					70	250
	48	Plug Connector, Straight, Un-Shield	2Y	Black	301	300A With HVIL	35	150
							50	200
	58	Plug Connector, Right Angle, Un-Shield					70	250

Ordering Information-PowerLok™ 3POS Assembled Plug

Product Type	Connector Type		Key (Touch Proof Cover Color)		Current & HVIL		Accepted Cable Size(mm ²)	Current Rating (A)
PowerLok™	18	Plug Connector, Straight, Shield	3X	Orange	300	300A W/O HVIL	35	150
							50	200
	28	Plug Connector, Right Angle, Shield					70	250
	48	Plug Connector, Straight, Un-Shield	3Y	Black	301	300A With HVIL	35	150
							50	200
	58	Plug Connector, Right Angle, Un-Shield					70	250

Ordering Information-PowerLok™ 1POS Overmolded Plug

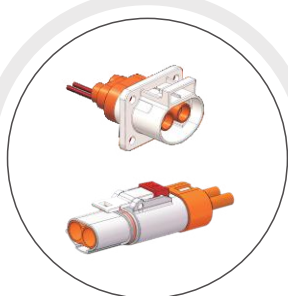
		PL 10 X		300 - 50			
Product Type	Connector Type	Key (Touch Proof Cover Color)		Current & HVIL		Accepted Cable Size(mm ²)	Current Rating(A)
PowerLok™	10 1POS Plug Straight	X	Orange	120	120A W/O HVIL	16	90
				121	120A With HVIL	25	120
		Y	Black	300	300A W/O HVIL	35	150
						50	200
		U	Yellow	301	300A With HVIL	70	250
						95	300
	20 1POS Plug Right Angle	V	Green	400	400A W/O HVIL	70	250
						95	300
		401	400A With HVIL			120	400
						135	450
		W	Red	500	500A W/O HVIL	95	300
						120	400
		T	Blue	501	500A With HVIL	135	450
						150	500

Ordering Information-PowerLok™ 2POS Overmolded Plug

		PL 10 2X		120 - 25			
Product Type	Connector Type	Key (Touch Proof Cover Color)		Current & HVIL		Accepted Cable Size(mm ²)	Current Rating(A)
PowerLok™	10 2POS Plug Straight	2X	Orange	120	120A W/O HVIL	16	90
	20 2POS Plug Right Angle	2Y	Black	121	120A With HVIL	25	120

POWERLOK™ 4.0 CONNECTOR

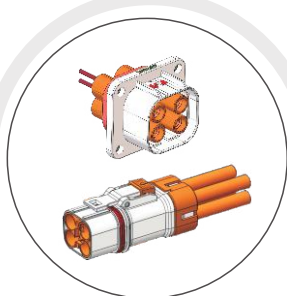




2POS



3POS



4POS



2Power+4Signal

PowerLok™ 4.0 series is a low cost compact metal-shell interconnect solution for accessory power and signal connections for EV and Hybrid transportation applications. Up to space 1000V ranging from 5A-60A with HVIL, 360° shielding, environmental sealing, and keying. Accommodates up to 4 signal circuits and up to 4 power circuits with cable sizes from 2.5mm² to 10mm². Available in assembled versions.

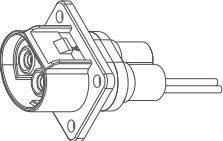
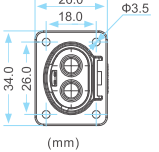
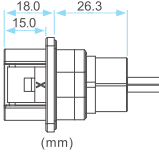
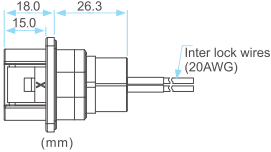
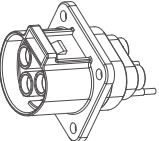
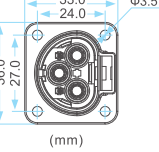
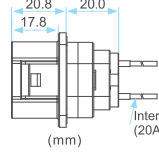
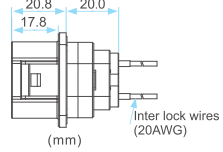
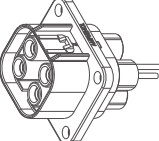
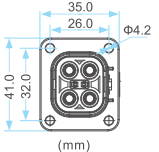
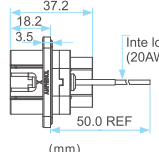
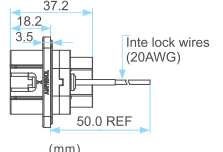
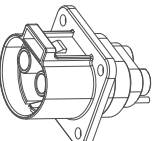
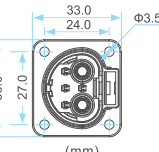
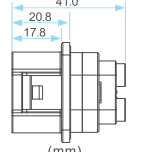
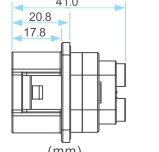
Key Features

- Operating voltage: 1000VDC
- Mating cycle: 100Min
- Current rating: 5A-60A
- Operating temperature: -40°C-+125°C
- Protection Class: IP67(mated)
- Flammability: UL94V-0
- Dielectric withstanding voltage: 5000VDC
- Available in 2,3,4 POS and 2Power+4Signal
- 360° shielding
- Automatic secondary lock

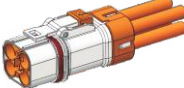
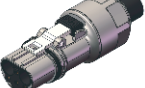
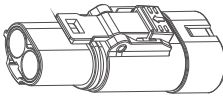
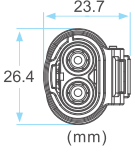
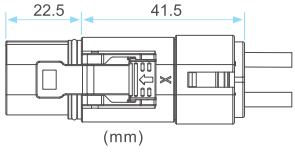
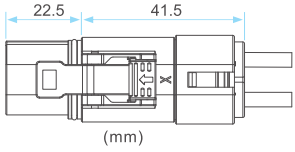
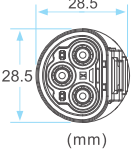
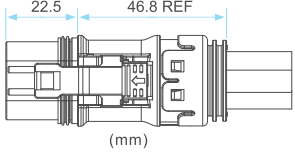
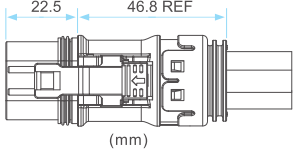
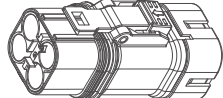
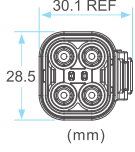
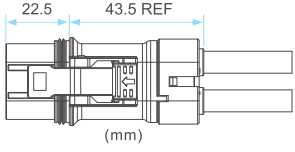
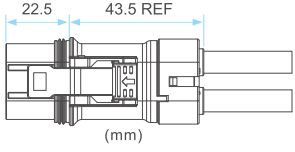
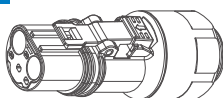
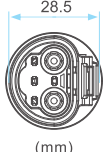
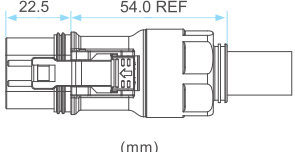
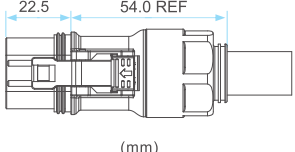
PowerLok™ 4.0 Recommended Cable Size & Current Rating

Series	Accepted Cable Size	Current Rating
40 Series	2.5mm ²	25A
	4.0mm ²	40A
	6.0mm ²	45A
60 Series	2.5mm ²	25A
	4.0mm ²	40A
	6.0mm ²	45A
	10.0mm ²	60A

PowerLok™ 4.0 Receptacle

PowerLok™ 4.0 Receptacle				
2pos				
3pos				
4pos				
2Power+4Signal				

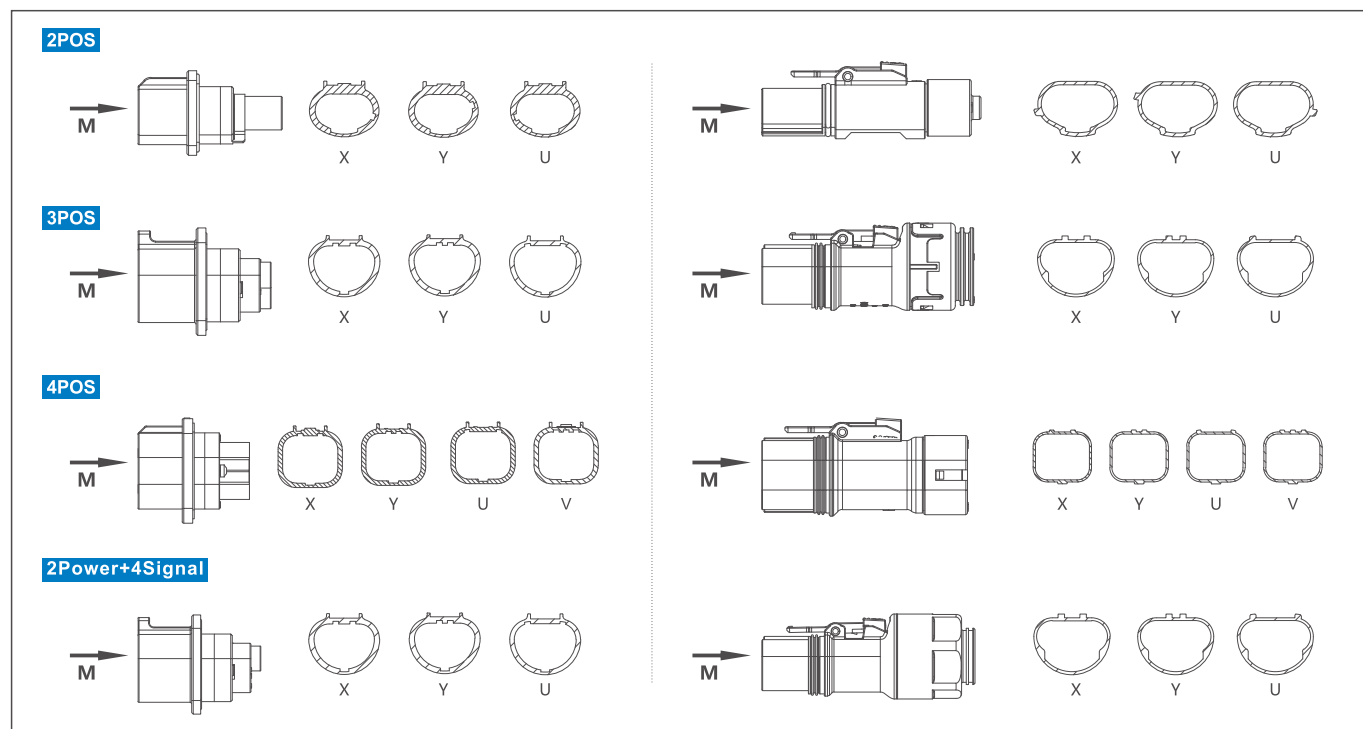
PowerLok™ 4.0 Plug

PowerLok™ 4.0 Plug				
2pos				
3pos				
4pos				
2Power+4Signal				

PowerLok™ 4.0 Key Map

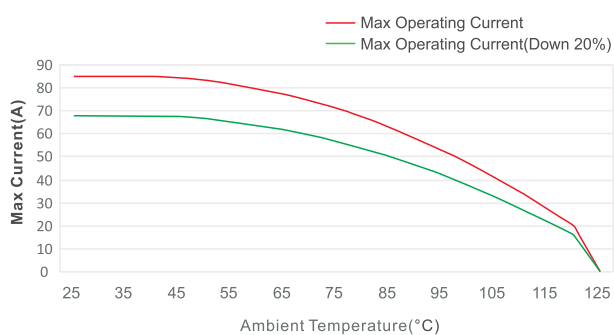
2POS				3POS				4POS				2Power+4Signal		
Series	60A			Series	40A			Series	40A			Series	40A	
Key	X	Y	U	Key	X	Y	U	Key	X	Y	U	Key	X	Y
Color	Orange	Black	Yellow	Color	Orange	Black	Yellow	Color	Orange	Black	Yellow	Color	Orange	Black

CPA(connector position assurance) color for keying identification.

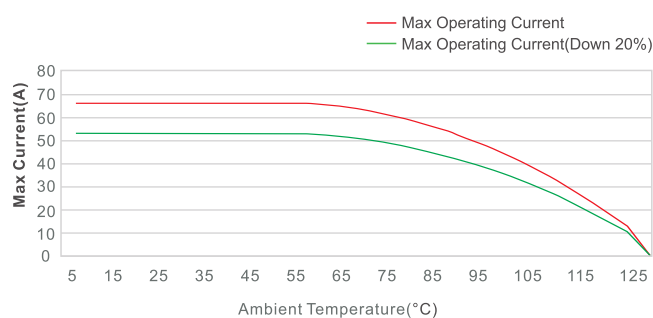


PowerLok™ 4.0 Test Curve

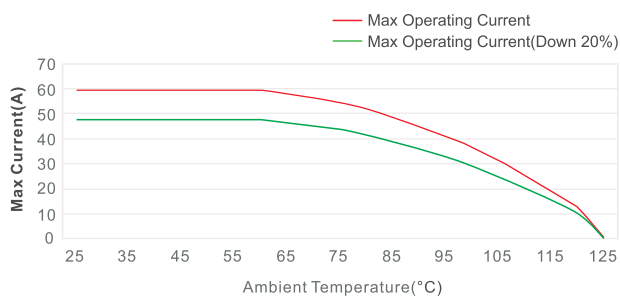
PowerLok™ 60 Series 2 poles with 10mm² cable



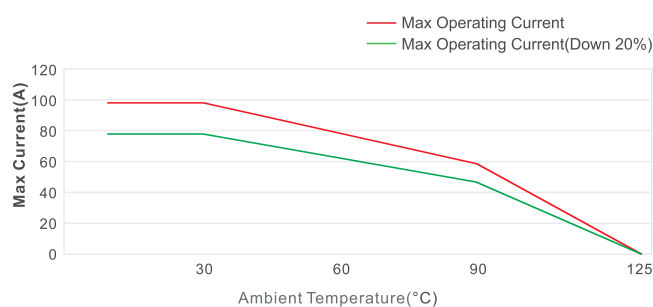
PowerLok™ 40 Series 3 poles with 6mm² cable



PowerLok™ 40 Series 4 poles with 6mm² cable



PowerLok™ 40 Series 2Power+4Signal poles with 10mm² cable



These curves were tested with conformance to

- All poles are energized in series
- Length of cables are greater than 1400mm
- Measurement were carried out in an enclosure without external movement of air
- The measuring point is terminal surface

Ordering Information-Powerlok™ 4.0 2POS

Product Type		Connector Type		Polarization	Current & HVIL		Accepted Cable Size	
PL	PowerLok™ 4.0	082	2POS Receptacle	X	60	60A W/O HVIL	2.5	2.5mm ²
		182	2POS Plug Connector, Straight	Y			4	4mm ²
		482	2POS Plug Connector, Straight, Un-Shielding	U	61	60A With HVIL	6	6mm ²
							10	10mm ²

Ordering Information-Powerlok™ 4.0 3POS & 4POS

Product Type		Connector Type		Polarization	Current & HVIL		Accepted Cable Size	
PL	PowerLok™ 4.0	083	3POS Receptacle	X	40	40A W/O HVIL	2.5	2.5mm ²
		084	4POS Receptacle	Y			4	4mm ²
		183	3POS Plug Connector, Straight	U	41	40A With HVIL	6	6mm ²
		184	4POS Plug Connector, Straight					

Ordering Information-Powerlok™ 4.0 2Power+4Signal

Product Type		Connector Type		Polarization	Current & HVIL		Accepted Cable Size	
PL	PowerLok™ 4.0	0824	2Power+4Signal Receptacle	X	40	40A W/O HVIL	6	6mm ²
				Y				
		1824	2Power+4Signal Plug Connector, Straight	U	41	40A With HVIL	10	10mm ²

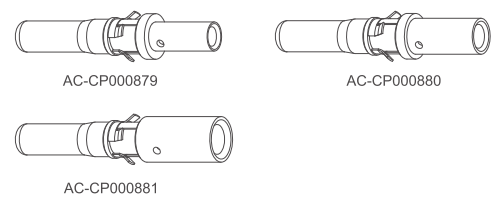
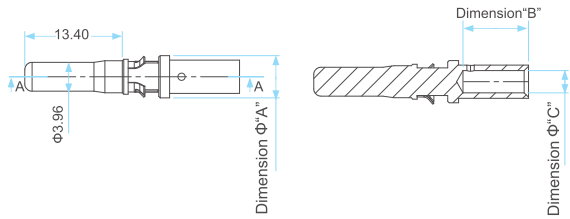
PowerLok™ 4.0 Terminal



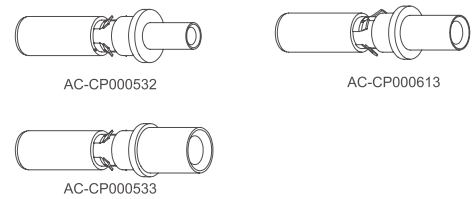
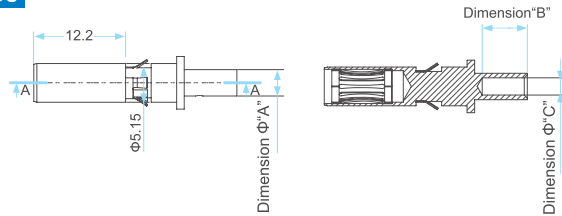
Important Note:

1. The standard packages of PowerLok™ 4.0 include the terminals needed for assembly.
2. Extra terminals are accepted to be ordered alone, please refer to the details in the according page.3. As for 2Power+4Singal product, extra signal terminals for the wire crimping use are supposed to be ordered.

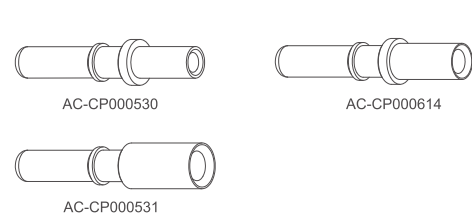
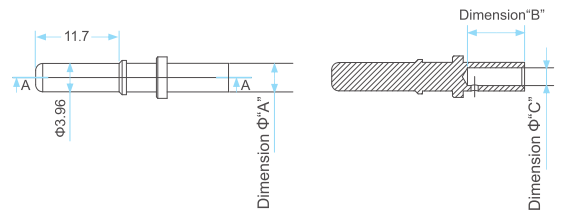
2POS						
	Description	Part Number	Dimension "A"	Dimension "B"	Dimension "C"	Product Description
Socket Pin	PL082-61-2.5	AC-CP000452	3.50	7.7	2.30	4mm Soc, 2POS, Cable 2.5mm ²
	PL082-61-4	AC-CP000168	4.60	7.7	3.00	4mm Soc, 2POS, Cable 4.0mm ²
	PL082-61-6	AC-CP000451	6.00	7.7	3.80	4mm Soc, 2POS, Cable 6.0mm ²
	PL082-61-10	AC-CP000453	6.00	10.2	4.50	4mm Soc, 2POS, Cable 10.0mm ²
	Description	Part Number	Dimension "A"	Dimension "B"	Dimension "C"	Product Description
Plug Pin	PL182-61-2.5	AC-CP000454	3.70	6.95	2.50	4mm Pin, 2POS, Cable 2.5mm ²
	PL182-61-4	AC-CP000612	4.57	9.0	3.05	4mm Pin, 2POS, Cable 4.0mm ²
	PL182-61-6	AC-CP000455	5.80	9.0	3.80	4mm Pin, 2POS, Cable 6.0mm ²
	PL182-61-10	AC-CP000456	7.40	9.0	5.20	4mm Pin, 2POS, Cable 10.0mm ²
3POS						
	Description	Part Number	Dimension "A"	Dimension "B"	Dimension "C"	Product Description
Socket Pin	PL083-41-2.5	AC-CP000882	3.70	6.0	2.50	4mm Soc, 3POS, Cable 2.5mm ²
	PL083-41-4	AC-CP000883	4.57	7.0	3.05	4mm Soc, 3POS, Cable 4.0mm ²
	PL083-41-6	AC-CP000884	5.80	7.0	3.80	4mm Soc, 3POS, Cable 6.0mm ²



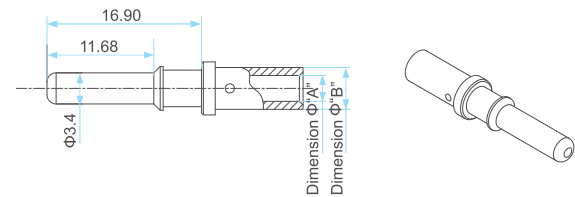
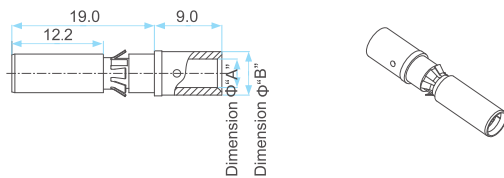
	Description	Part Number	Dimension "A"	Dimension "B"	Dimension "C"	Product Description
Plug Pin	PL183-41-2.5	AC-CP000879	3.70	8.0	2.50	4mm Pin, 3POS, Cable 2.5mm ²
	PL183-41-4	AC-CP000880	4.57	9.0	3.05	4mm Pin, 3POS, Cable 4.0mm ²
	PL183-41-6	AC-CP000881	5.80	9.0	3.80	4mm Pin, 3POS, Cable 6.0mm ²

4POS

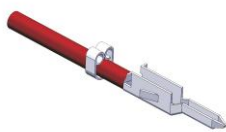
	Description	Part Number	Dimension "A"	Dimension "B"	Dimension "C"	Product Description
Socket Pin	PL084-41-2.5	AC-CP000532	3.70	8.0	2.50	4mm Soc, 4POS, Cable 2.5mm ²
	PL084-41-4	AC-CP000613	4.57	9.0	3.05	4mm Soc, 4POS, Cable 4.0mm ²
	PL084-41-6	AC-CP000533	5.80	9.0	3.80	4mm Soc, 4POS, Cable 6.0mm ²



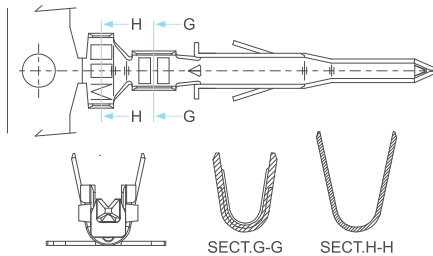
	Description	Part Number	Dimension "A"	Dimension "B"	Dimension "C"	Product Description
Plug Pin	PL184-41-2.5	AC-CP000530	3.70	8.0	2.50	4mm Pin, 4POS, Cable 2.5mm ²
	PL184-41-4	AC-CP000614	4.57	9.0	3.05	4mm Pin, 4POS, Cable 4.0mm ²
	PL184-41-6	AC-CP000531	5.80	9.0	3.80	4mm Pin, 4POS, Cable 6.0mm ²

2Power+4Signal

	Part Number	Dimension "A"	Dimension "B"	Product Description
Socket Pin	AC-HA010281-6	3.8mm	5.8mm	Cable 6mm ²
	AC-HA010281-1	4.5mm	6.0mm	Cable 10mm ²
	Part Number	Dimension "A"	Dimension "B"	Product Description
Plug Pin	AC-HA010282-6	3.8mm	5.8mm	Cable 6mm ²
	AC-HA010282-1	4.5mm	6.0mm	Cable 10mm ²

Signal Terminal

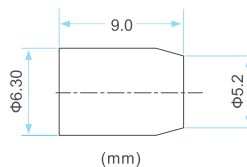
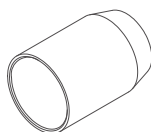
CRIMPING WIRE SCOPE: 18-24 AWG



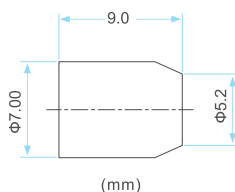
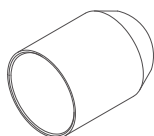
Part Number	Description
AC-HA010280-B	Loose 1000 pcs per bag
AC-HA010280-R	Chain 4000 pcs per reel

PowerLok™ 4.0 Shielding Ring

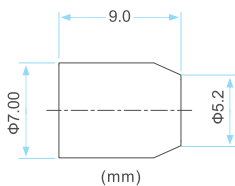
PowerLok™ 4.0 Shielding Ring: the choice of shielding rings highly depend on the cable size and the quantity is determined by the positions of connector selected. Shielding Ring components come with the standard items. No need to order separately.

2.5mm²


Cable Size	Shielding Ring Part Number	Description
2.5mm ²	AC-CP000947	Applicable to 2.5mm ² cable shielding ring for all PowerLok 4.0 2POS/3POS/4POS connectors.

4mm²


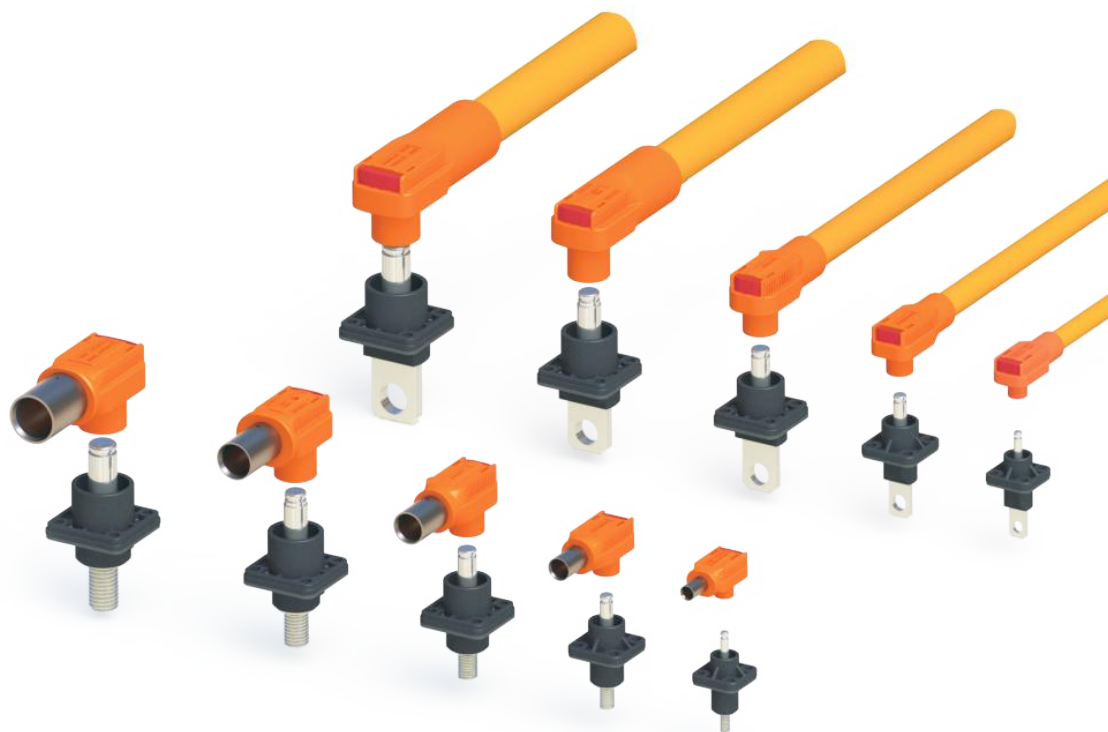
Cable Size	Shielding Ring Part Number	Description
4mm ²	AC-CP000948	Applicable to 4mm ² cable shielding ring for all PowerLok 4.0 2POS/3POS/4POS connectors.

6mm²


Cable Size	Shielding Ring Part Number	Description
6mm ²	AC-CP000949	Applicable to 6mm ² cable shielding ring for all PowerLok 4.0 2POS/3POS/4POS connectors.

RADLOK™ CONNECTOR





Description

RADLOK™ is a 1000V low cost tool free power interconnect utilizing RADSOK® contact technology available with current ratings from 70A to 500A. RADLOK™ is designed for energy storage, battery, and device power interconnects. RADLOK's quick connect and single finger press to release lock function replaces tools and hardware associated with standard lug terminals in their assembly and maintenance. Mating pins and receptacles available for bus bar and panel mount configurations with lug, thread, or mating RADLOK™ pin terminations. Available in orange, red, and black as discrete connectors or as molded cable assemblies.

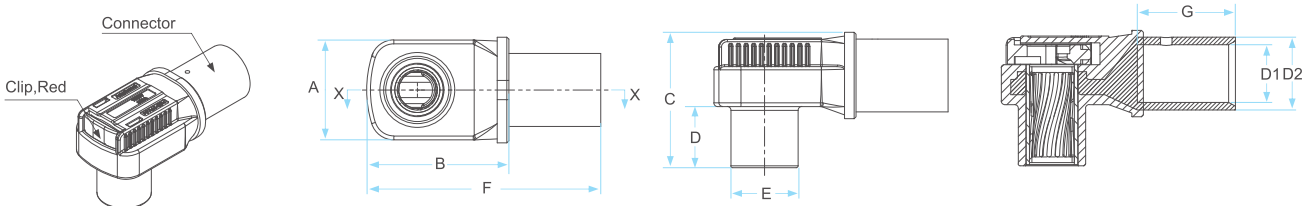
Key Features

- ⦿ Mating Cycle: 100Min
- ⦿ Inflammability: UL94V-0
- ⦿ Current Rating: 70A-500A
- ⦿ Tool-Free Mechanical Locking
- ⦿ Operating Voltage: 1000VDC
- ⦿ RoHS complaint
- ⦿ Temperature Range: -40°C~+125°C
- ⦿ Available in black, red, orange(contact us for customized color)
- ⦿ Available in 3.6mm, 5.7mm, 8.0mm, 10.0mm, 12.0mm, 14.0mm pin size

RADLOK™ Plug

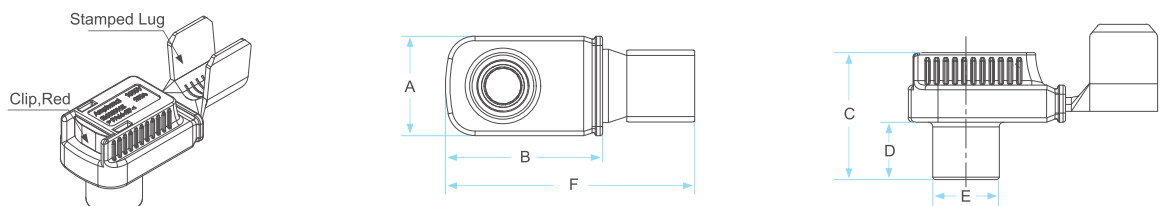


Tubular Version



RADSOK® Size(mm)	Recommended Cable Size(mm²)	Current(A)	Tubular Lug Version Dimensions(mm)								
			A	B	C	D	E	F	G	D1	D2
3.6	10	70	15.5	27.0	18.3	7.3	8.1	38.0	11.0	5.0	6.7
5.7	16	90	18.5	33.0	23.8	9.4	11.5	47.7	19.0	5.5	8.5
	25	120						47.7	19.0	7.2	9.5
8.0	35	150	21.7	39.6	27.7	11.8	14.6	56.0	22.0	9.2	11.5
	50	200						58.0	24.0	11.0	14.2
10.0	50	200	25.7	37.0	35.3	15.9	17.5	58.9	22.0	11.0	13.9
	70	250						60.9	24.0	12.0	15.5
	95	300						60.9	25.5	15.0	19.0
12.0	120	400	33.0	44.5	37.2	15.0	20.0	70.5	28.0	17.0	21.2
14.0	135	450	42.0	55.0	48.5	22.3	23.0	80.0	28.0	18.2	23.5
	150	500								19.0	24.0

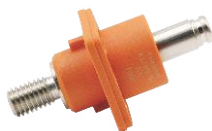
Stamped Version



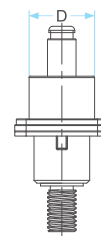
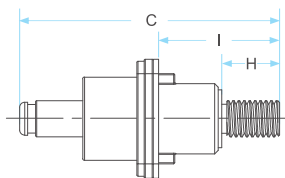
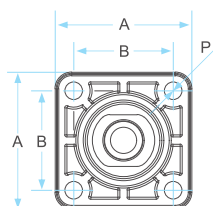
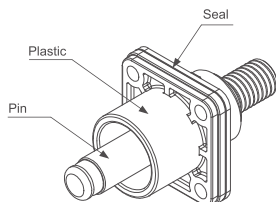
RADSOK® Size(mm)	Recommended Cable Size(mm²)	Current(A)	Tubular Lug Version Dimensions(mm)					
			A	B	C	D	E	F
3.6	10	70	15.5	27.0	18.0	7.3	8.1	38.8
5.7	16	90	18.5	30.0	21.9	9.2	11.2	43.6
	25	120						
8.0	35	150	21.7	34.3	27.7	12.5	14.5	50.1
	50	200						54.4
10.0	50	200	25.7	35.7	33.8	16.6	17.0	62.0
	70	250						
12.0	95	300	28.5	44.5	33.8	15.0	20.0	70.3
	120	400						

RADLOK™ Receptacle

Receptacle

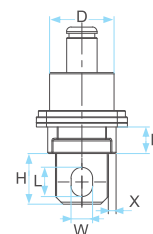
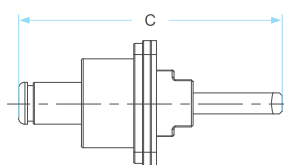
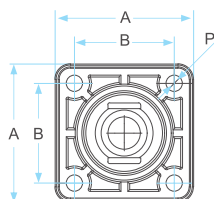
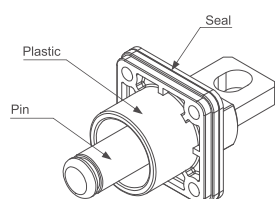


Pin-Thread



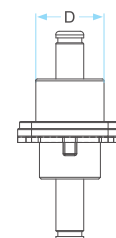
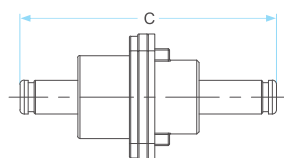
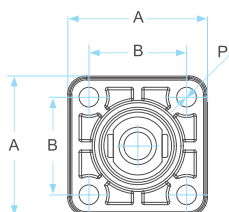
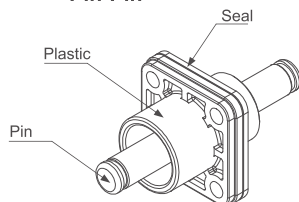
Pin End	RADSOKE® Size(mm)	Current(A)	Pin-Thread Dimensions(mm)							
			A	B	C	D	H	I	Thread	P
Pin-Thread	3.6	70	21.0	14.0	43.9	11.9	8	22.2	M4*0.7-6g	M3
	5.7	120	25.0	17.0	49.6	15.2	10	24.2	M6*1.0-6g	M4
	8.0	200	30.0	21.0	56.4	19.6	12	25.0	M8*1.25-6g	
	10.0	300	33.0	24.0	67.0	23.0	16	29.0	M10*1.5-6g	
	12.0	400	36.0	26.0	72.0	25.5	20	33.0	M12*1.75-6g	
	14.0	500	37.0	27.0	83.0	28.0	23	36.0	M12*1.75-6g	

Pin-Lug



Pin End	RADSOK® Size(mm)	Current(A)	Pin-Lug Dimensions(mm)									
			A	B	C	D	H	L	W	X	K	P
Pin-Lug	3.6	70	21.0	14.0	46.7	11.9	13.5	5.0	4.2	1.9	11.3	M3
	5.7	120	25.0	17.0	53.6	15.2	16.0	7.0	6.3	2.0	12.0	M4
	8.0	200	30.0	21.0	62.5	19.6	22.5	10.0	8.5	2.7	8.0	
	10.0	300	33.0	24.0	70.0	23.0	22.5	12.5	10.5	3.55	9.5	
	12.0	400	36.0	26.0	77.5	25.5	27.5	14.0	13.0	3.0	10.5	
	14.0	500	37.0	27.0	90.0	28.0	29.0	15.5	14.5	2.3	13.0	

Pin-Pin



Pin End	RADSOKE® Size(mm)	Current(A)	Pin-Pin Dimensions(mm)				
			A	B	C	D	P
Pin-Pin	3.6	70	21.0	14.0	41.3	11.9	M3
	5.7	120	25.0	17.0	50.0	15.2	M4
	8.0	200	30.0	21.0	60.8	19.6	
	10.0	300	33.0	24.0	74.5	23.0	
	12.0	400	36.0	26.0	78.0	25.5	
	14.0	500	37.0	27.0	96.0	28.0	

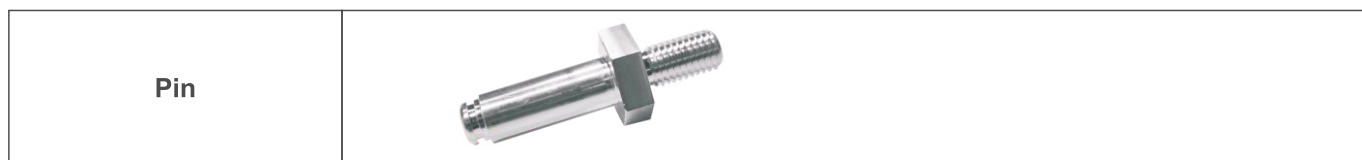
Ordering Information-RADLOK™ Plug

		RL 0 080		1 - 35		BK		
Product Type	Termination Type	RADSOK® Size		Lug Type	Cable Size(mm) / Current		Connector Color	
RADLOK™	0	RADLOK™ Plug	036	3.6mm	1-Tubular 2-Stamped	10	70A	Blank: Orange BK: Black RE: Red
			057	5.7mm		16	90A	
						25	120A	
			080	8.0mm		35	150A	
						50	200A	
			100	10.0mm		50	200A	
						70	250A	
		120	400A			95	300A	
						120	400A	
						135	450A	
						150	500A	

Ordering Information-RADLOK™ Receptacle

		RL 9 120 - 20		1 - F1		M10		RE	
Product Type	Termination Type	RADSOK® Size		Pin End	Plating Type	Receptacle Type	Hole Type	Connector Color	
RADLOK™	9 RADLOK™ Receptacle	036	3.6mm	10: Thread 20: Lug 30: Pin	1: Silver	F1: Feed Thru Pin	H10: Oval Hole D10: Through Hole PM10: Though Hole with Clinch Nut	Blank: Black OR: Orange RE: Red	
		057	5.7mm						
		080	8.0mm						
		100	10.0mm						
		120	12.0mm						
		140	14.0mm						

RADLOK™ Pin

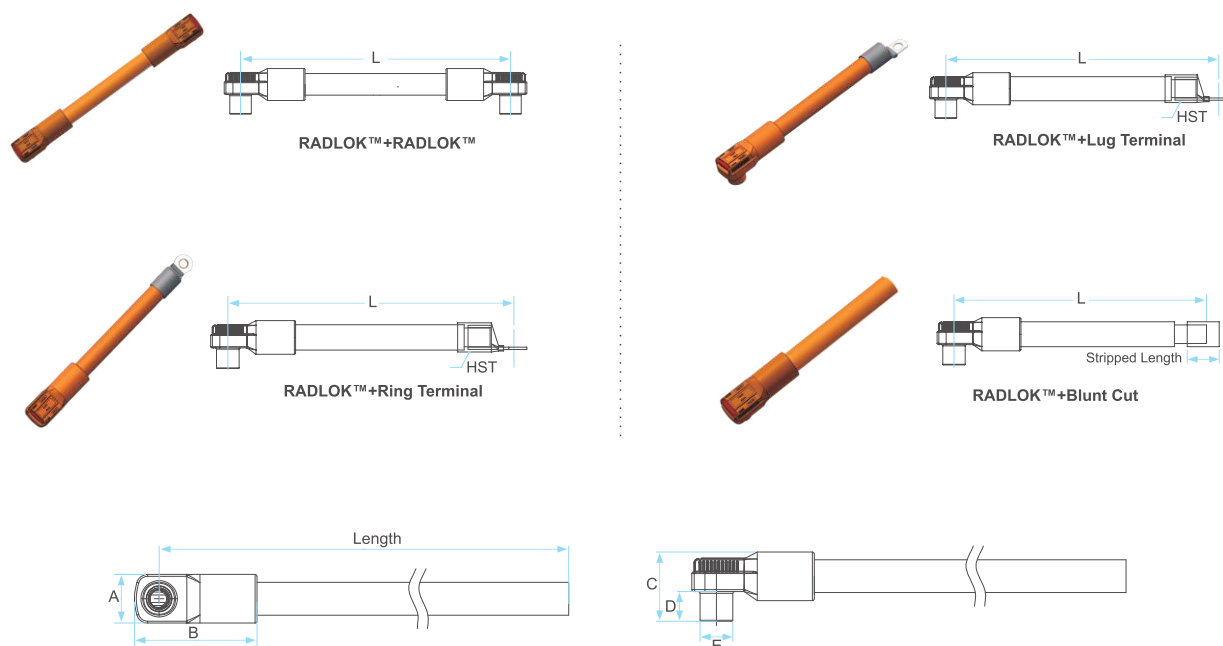


Pin End	RADSOK® Size(mm)	Current(A)	Pin Product Dimensions(mm)							
			A	B	C	H	S	Thickness	Thread	Torque Force
RADLOK™ Pin	3.6	70	3.6	17.5	28.0	8.0	7.0	1.0~2.5	M4*0.7-6g	2.5±0.2
	5.7	120	5.7	21.1	34.1	10.0	10.0	1.0~2.5	M6*1.0-6g	4.0±0.4
	8.0	200	8.0	26.4	42.4	12.0	13.0	1.0~3.5	M8*1.25-6g	7.5±0.5
	10.0	300	10.0	32.2	53.2	16.0	16.0	1.0~4.0	M10*1.5-6g	20.0±1.0
	12.0	400	12.0	32.6	58.6	20.0	18.0	1.0~4.5	M12*1.75-6g	24.0±1.0
	14.0	500	14.0	41.0	72.0	23.0	24.0	1.0~4.5	M12*1.75-6g	24.0±1.0

Ordering Information-RADLOK™ Pin

RL 9 036 - 101					
Product Type	Termination Type		RADSOK® Size		Plating Type
RADLOK™	9	RADLOK™ Pin	036	3.6mm	101: Silver
			057	5.7mm	
			080	8.0mm	
			100	10.0mm	
			120	12.0mm	
			140	14.0mm	

RADLOK™ Cable Assembly



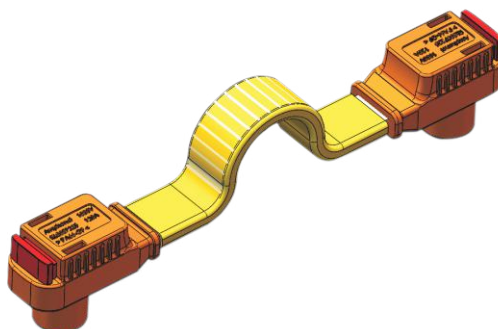
RADSOK® Size(mm)	Recommended Cbl Size(mm²)	Current(A)	Cable Assembly Dimensions(mm)				
			A	B	C	D	E
3.6	10	70	15.5	36.0	18.3	7.3	Φ8.1
5.7	16	90	18.5	47.0	21.9	9.4	Φ11.2
	25	120					
8.0	35	150	21.6	55.3	27.0	11.8	Φ14.6
	50	200					
10.0	50	200	26.0	53.0	33.8	15.9	Φ17.5
	70	250		63.2	34.3		
	95	300		65.5	37.0		
12.0	120	400	28.5	76.0	37.3	15.0	Φ20.0
14.0	135	450	31.0	77.0	46.3	22.3	Φ23.0
	150	500					

Ordering Information-Cable Assembly

RL1080-50-L200-OR-M8										
Product Type	Termination Type		RADSOK® Size		Cable Size (mm ²)	Current	Cable Length(mm)	Connector Color	Stud Size	
RADLOK™	1	RADLOK™+RADLOK™	036	3.6mm	10	70A	Min:120	OR: Orange BK: Black RE: Red	N/A	
			057	5.7mm	16	90A	Min:140		M/E+ Size eg: M6, M8,E6, E8	M ⁽¹⁾
	4	RADLOK™+Lug Terminal	080	8.0mm	25	120A	Min:150			6
					35	150A			8	5/16
	5	RADLOK™+Ring Terminal	100	10.0mm	50	200A	Min:170		10	3/8
					70	250A			12	1/2
	6	RADLOK™+Blunt Cut	120	12.0mm	95	300A	Min:180		N/A	
					120	400A			Stripped Length(mm)	
	7	RADLOK™+Striped	140	14.0mm	135	450A	Min:180			
					150	500A				

Please contact our regional sales for relevant product drawings.

PowerFlex™



Product Description

PowerFlex™ features a high flex, multi-layer laminated structure, specifically engineered for high-current power distribution applications. Integrated with Amphenol's RADSOK® connectors on both extremities, PowerFlex™ is the best solution for power connection in a limited space. PowerFlex™ can be customized to adapt different kinds of applications. Amphenol TPI is always open to propose the right solution for customers worldwide. In case of any inquiry, please contact our sales representatives in your region.

RADLOK™ Connector (Stamped Version)

Drawing	RADSOK® Size(mm)	RADLOK Size(mm ²)					
		W	H	h	D	P	Dimensions
	3.6	15.5	18.0	7.3	Φ8.10	27.0	Busbar material used is soft laminated copper busbar, customized according to customer requirement.
	5.7	18.5	21.9	9.2	Φ11.2	30.0	
	8.0	21.7	27.7	12.5	Φ14.5	34.3	
	10.0	25.7	33.3	16.1	Φ17.0	35.7	
	12.0	28.5	33.8	15.0	Φ20.0	44.5	
	14.0	31.0	42.5	22.3	Φ23.0	45.0	

HC SIGNAL CONNECTOR



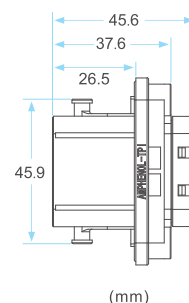
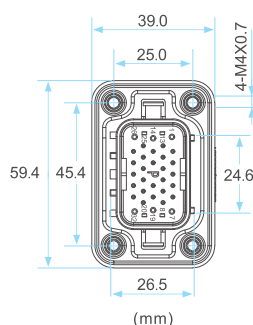
Amphenol HC Signal Series connectors are designed as a high-performance, cost-effective solution for the signal and power transmission for PDU in battery pack. The connector has integrated both signal and power transmission in one body.

Key Features	Technical Data	Typical Applications
- Colored Body and Enhanced Rib for Blind Mating - Up to IP68 Protection(mated) - Scalable Pin Count Per Specific Requirement⁽¹⁾ - Available with Key A, B and C Option - Available with CPA Option	- Pin Count: 32pin - Current Rating: Power: 13A MAX Signal: 5A MAX - Cable Size: Power: 14~18 AWG Signal: 20~22AWG - Dielectric Withstanding Voltage: 3000VDC - Operating Temperature: -40°C - +125°C - IP Rating: IP6K9K、IP68(mated, subersion in 1M depth water with 48 hours.) - Mating Cycle: 100Min - Air leakage: 60KPa - Fire Classification: UL94-V0	Signal and Power Transmission for PDU

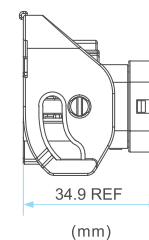
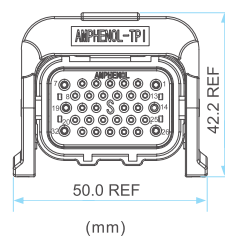
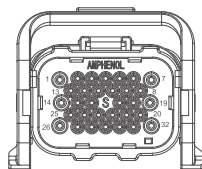
(1) Offer pin plug for unused pin seal

Dimensions

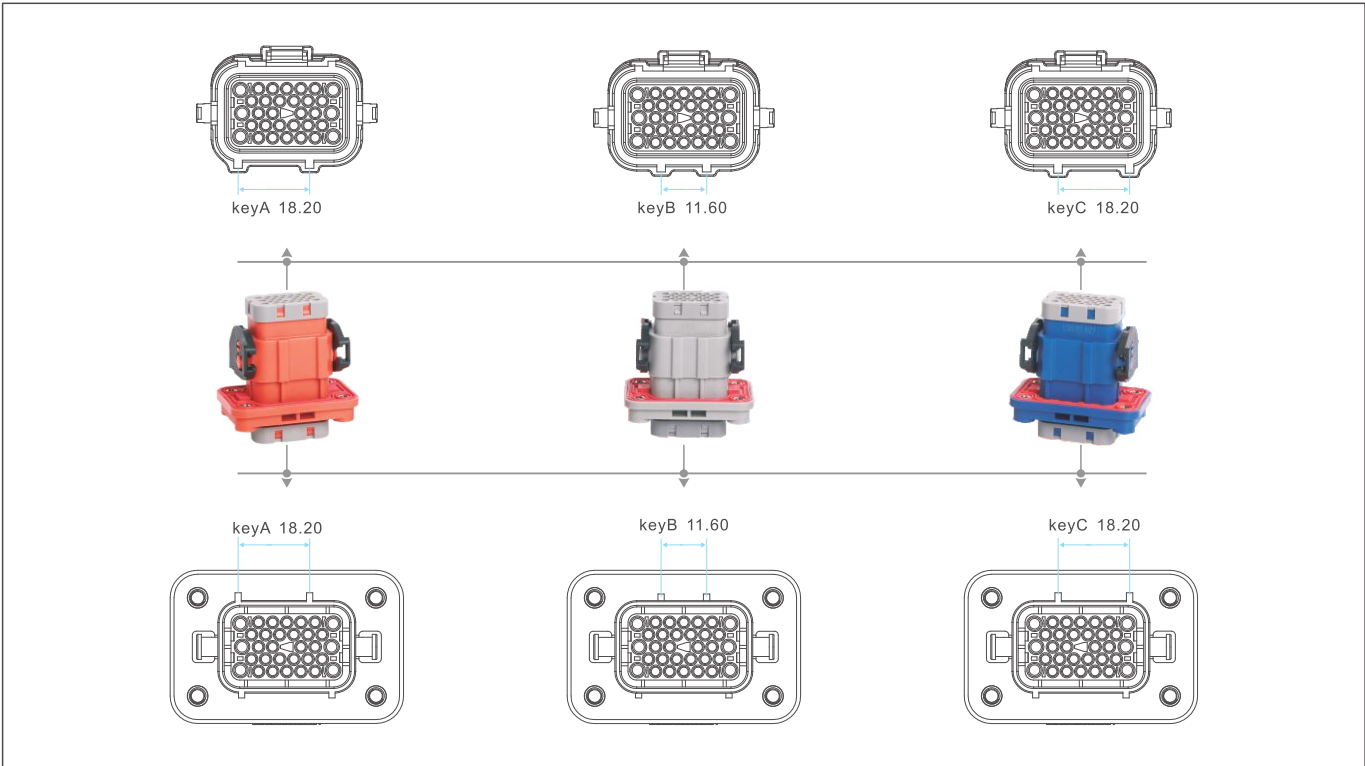
32POS Connector Receptacle



32POS Connector Plug



HC Signal Key Map



Ordering Information

HC 08 B - P32 - R								
Product Type		Connector Type		Polarization	Series		Installation Type	
HC	HC Signal	08	Receptacle Connector	A	P32	32POS	R	Rear mounted
				B				
				C				

► Terminal & Cable & Seal Plug Options

Receptacle	Terminal Type	Terminal Part Number	Wire gauge	Wire OD range	Seal Type	Seal Part Number
HC08A-P32-R	16#(power)	HCTM215XX	16-18 AWG	2.24-3.00mm	16#(power)	AC-CP000383
HC08B-P32-R	20#(signal)	HCTM121XX	20-22 AWG	1.35-2.50mm	20#(signal)	AC-CP000382
HC08C-P32-R						

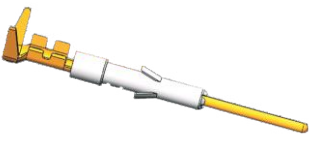
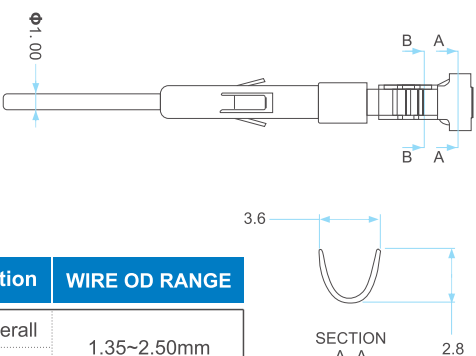
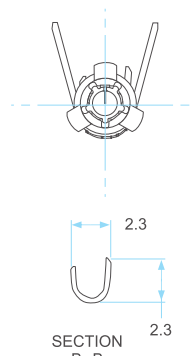
HC 18 B - S32 - 2								
Product Type		Connector Type		Polarization	Series		CPA	
HC	HC Signal	18	Plug Connector	A	S32	32POS	Blank	Without CPA
				B			2	With CPA
				C				

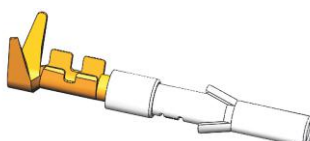
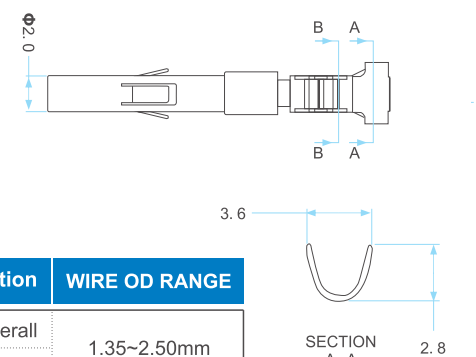
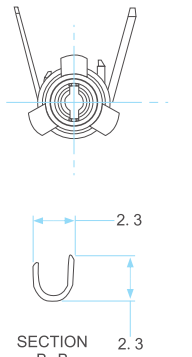
► Terminal & Cable & Seal Plug Options

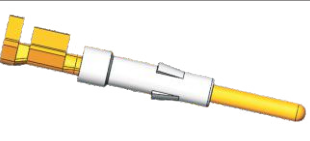
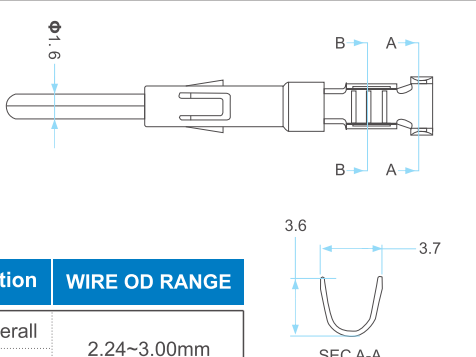
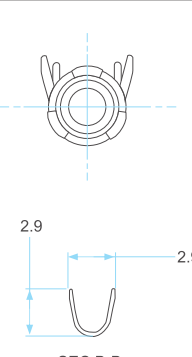
Plug		Terminal Type	Terminal Part Number	Wire gauge	Wire OD range	Seal Type	Seal Part Number
HC18A-S32	HC18A-S32-2	16#(power)	HCTF215XX	16-18 AWG	2.24-3.00mm	16#(power)	AC-CP000383
HC18B-S32	HC18B-S32-2	20#(signal)	HCTF121XX	20-22 AWG	1.35-2.50mm	20#(signal)	AC-CP000382
HC18C-S32	HC18C-S32-2						

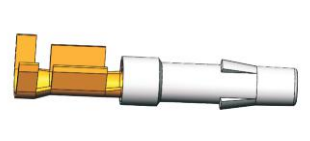
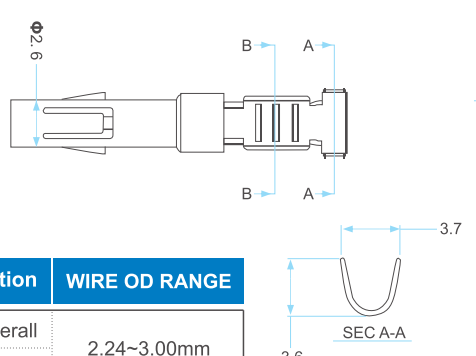
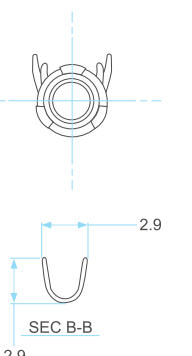
(1)Terminal plating specification:
XX=01 gold flash plate overall
XX=04 Tin over nickel

HC Signal Terminal

Signal Terminal		  	
Part Number	Description	Plating specification	WIRE OD RANGE
HCTM12101	HC Contact 20#Pin AWG20~22	Gold flash plate overall	1.35~2.50mm
HCTM12104	HC Contact 20#Pin AWG20~22	Tin over nickel	

Signal Terminal		  	
Part Number	Description	Plating specification	WIRE OD RANGE
HCTF12101	HC Contact 20#Socket AWG20~22	Gold flash plate overall	1.35~2.50mm
HCTF12104	HC Contact 20#Socket AWG20~22	Tin over nickel	

Power Terminal		  	
Part Number	Description	Plating specification	WIRE OD RANGE
HCTM21501	HC Contact 16#Pin AWG16~18	Gold flash plate overall	2.24~3.00mm
HCTM21504	HC Contact 16#Pin AWG16~18	Tin over nickel	

Power Terminal		  	
Part Number	Description	Plating specification	WIRE OD RANGE
HCTF21501	HC Contact 16#Socket AWG16~18	Gold flash plate overall	2.24~3.00mm
HCTF21504	HC Contact 16#Socket AWG16~18	Tin over nickel	

⚠ The information contained in this data sheet is for reference only

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