



PowerLok™ 4.0 Connector

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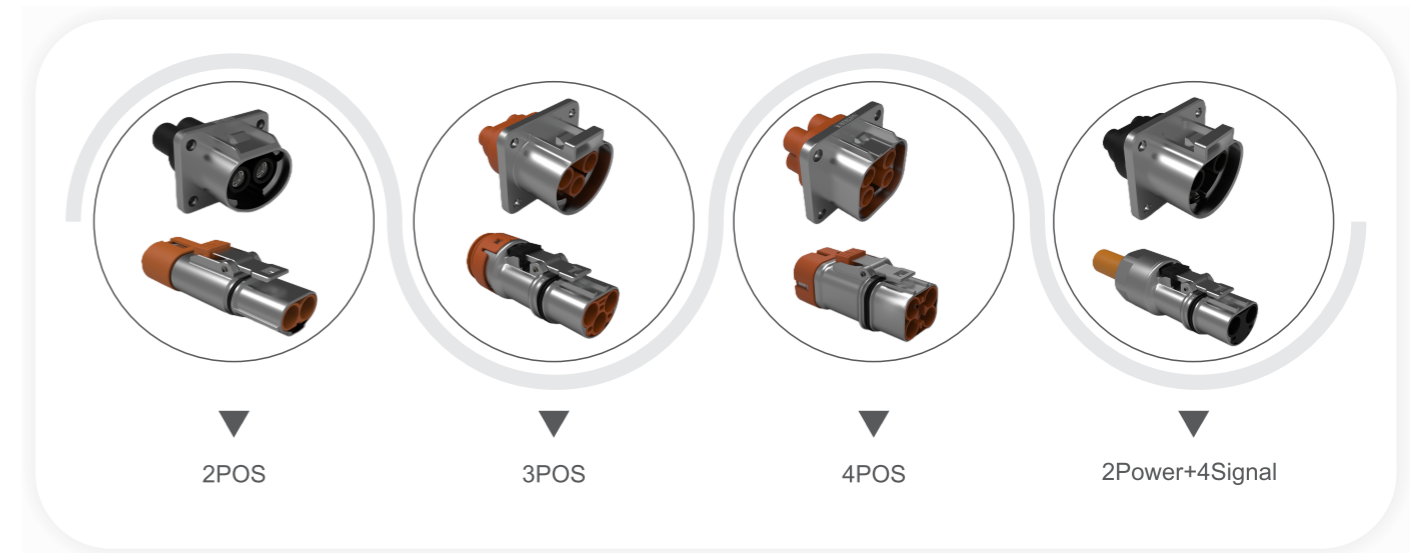
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PowerLok™ 4.0 Connector



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	
<ul style="list-style-type: none"> Operating voltage: 1000VDC Mating cycle: 100Min Current rating: 5A-60A Operating temperature: -40°C+125°C Protection Class: IP67(mated) 	<ul style="list-style-type: none"> 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	<p>Dimensions (mm): 26.0, 18.0, 34.0, 26.0, 18.0, 26.3, 15.0, 18.0, 26.3, 3.5, 20.0, 17.8, 20.0, 37.2, 18.2, 3.5, 50.0 REF, 41.0, 20.8, 17.8.</p>
3pos	<p>Dimensions (mm): 33.0, 24.0, 36.0, 27.0, 33.0, 24.0, 20.8, 17.8, 20.0, 37.2, 18.2, 3.5, 50.0 REF, 41.0, 20.8, 17.8.</p>
4pos	<p>Dimensions (mm): 35.0, 26.0, 41.0, 32.0, 35.0, 26.0, 37.2, 18.2, 3.5, 50.0 REF, 41.0, 20.8, 17.8.</p>
2Power+4Signal	<p>Dimensions (mm): 33.0, 24.0, 36.0, 27.0, 33.0, 24.0, 20.8, 17.8, 20.0, 37.2, 18.2, 3.5, 50.0 REF, 41.0, 20.8, 17.8.</p>

PowerLok™ 4.0 Plug

PowerLok™ 4.0 Plug	
2pos	<p>Dimensions (mm): 23.7, 26.4, 22.5, 41.5.</p>
3pos	<p>Dimensions (mm): 28.5, 28.5, 22.5, 46.8 REF.</p>
4pos	<p>Dimensions (mm): 30.1 REF, 28.5, 22.5, 43.5 REF.</p>
2Power+4Signal	<p>Dimensions (mm): 28.5, 22.5, 54.0 REF.</p>

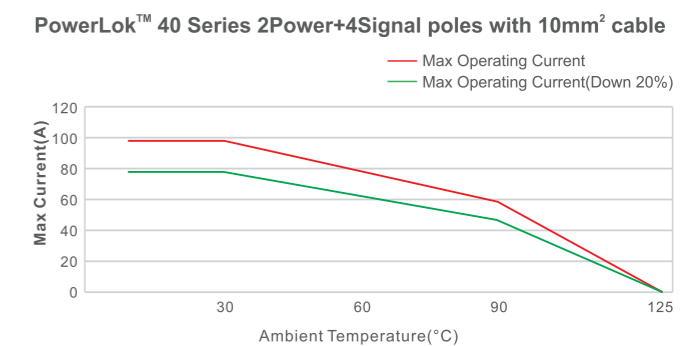
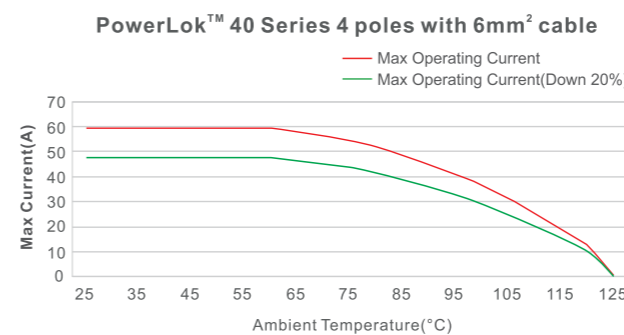
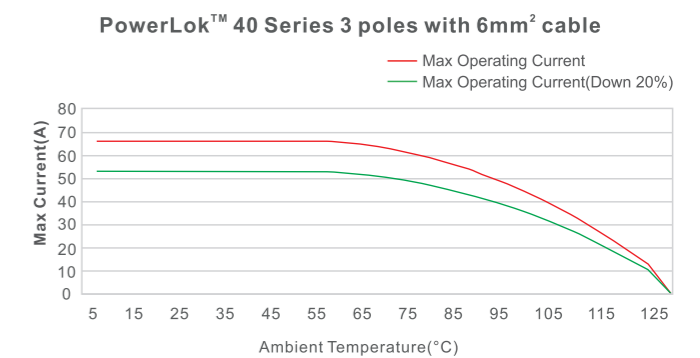
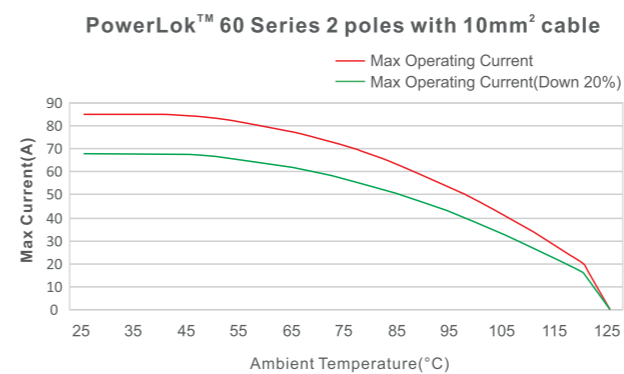
PowerLok™ 4.0 Key Map

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	U
Color	Orange	Black	Yellow	Color	Orange	Black	Yellow	Color	Orange	Black	Yellow	Color	Orange	Black	Yellow

CPA(connector position assurance) color for keying identification.

2POS		
3POS		
4POS		
2Power+4Signal		

PowerLok™ 4.0 Test Curve



These curves were tested with conformance to

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

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

W/O HVIL									
Cable Size									
Type	Key	2.5mm ²		4mm ²		6mm ²		10mm ²	
		Description	Part Number	Description	Part Number	Description	Part Number	Description	Part Number
Receptacle	X	PL082X-60-2.5	AC-HA000758	PL082X-60-4	AC-HA000761	PL082X-60-6	AC-HA000764	PL082X-60-10	AC-HA001085
	Y	PL082Y-60-2.5	AC-HA000759	PL082Y-60-4	AC-HA000762	PL082Y-60-6	AC-HA000765	PL082Y-60-10	AC-HA001086
	U	PL082U-60-2.5	AC-HA000760	PL082U-60-4	AC-HA000763	PL082U-60-6	AC-HA000766	PL082U-60-10	AC-HA001087
Plug	X	PL182X-60-2.5	AC-HA000746	PL182X-60-4	AC-HA000922	PL182X-60-6	AC-HA000928	PL182X-60-10	AC-HA001079
	Y	PL182Y-60-2.5	AC-HA000747	PL182Y-60-4	AC-HA000923	PL182Y-60-6	AC-HA000929	PL182Y-60-10	AC-HA001080
	U	PL182U-60-2.5	AC-HA000748	PL182U-60-4	AC-HA000924	PL182U-60-6	AC-HA000930	PL182U-60-10	AC-HA001081
	X	PL482X-60-2.5	AC-HA006056	PL482X-60-4	AC-HA003469	PL482X-60-6	AC-HA003466	PL482X-60-10	AC-HA002326
	Y	PL482Y-60-2.5	AC-HA006057	PL482Y-60-4	AC-HA003470	PL482Y-60-6	AC-HA003467	PL482Y-60-10	AC-HA002327
U	PL482U-60-2.5	AC-HA006058	PL482U-60-4	AC-HA003471	PL482U-60-6	AC-HA003468	PL482U-60-10	AC-HA002328	

With HVIL									
Cable Size									
Type	Key	2.5mm ²		4mm ²		6mm ²		10mm ²	
		Description	Part Number	Description	Part Number	Description	Part Number	Description	Part Number
Receptacle	X	PL082X-61-2.5	AC-HA000749	PL082X-61-4	AC-HA000752	PL082X-61-6	AC-HA000755	PL082X-61-10	AC-HA001082
	Y	PL082Y-61-2.5	AC-HA000750	PL082Y-61-4	AC-HA000753	PL082Y-61-6	AC-HA000756	PL082Y-61-10	AC-HA001083
	U	PL082U-61-2.5	AC-HA000751	PL082U-61-4	AC-HA000754	PL082U-61-6	AC-HA000757	PL082U-61-10	AC-HA001084
Plug	X	PL182X-61-2.5	AC-HA000743	PL182X-61-4	AC-HA000919	PL182X-61-6	AC-HA000925	PL182X-61-10	AC-HA001076
	Y	PL182Y-61-2.5	AC-HA000744	PL182Y-61-4	AC-HA000920	PL182Y-61-6	AC-HA000926	PL182Y-61-10	AC-HA001077
	U	PL182U-61-2.5	AC-HA000745	PL182U-61-4	AC-HA000921	PL182U-61-6	AC-HA000927	PL182U-61-10	AC-HA001078
	X	PL482X-61-2.5	AC-HA006059	PL482X-61-4	AC-HA003466	PL482X-61-6	AC-HA002044	PL482X-61-10	AC-HA002047
	Y	PL482Y-61-2.5	AC-HA006060	PL482Y-61-4	AC-HA003467	PL482Y-61-6	AC-HA002045	PL482Y-61-10	AC-HA002048
U	PL482U-61-2.5	AC-HA006061	PL482U-61-4	AC-HA003468	PL482U-61-6	AC-HA002046	PL482U-61-10	AC-HA002049	

Ordering Information-Powerlok™ 4.0 3POS

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
		183	3POS Plug Connector, Straight	Y			4	4mm ²
				U	41	40A With HVIL	6	6mm ²

W/O HVIL									
Cable Size									
Type	Key	2.5mm ²		4mm ²		6mm ²			
		Description	Part Number	Description	Part Number	Description	Part Number	Description	Part Number
Receptacle	X	PL083X-40-2.5	PL083X-40-2.5	PL083X-40-4	PL083X-40-4	PL083X-40-6	PL083X-40-6	PL083X-40-6	PL083X-40-6
	Y	PL083Y-40-2.5	PL083Y-40-2.5	PL083Y-40-4	PL083Y-40-4	PL083Y-40-6	PL083Y-40-6	PL083Y-40-6	PL083Y-40-6
	U	PL083U-40-2.5	PL083U-40-2.5	PL083U-40-4	PL083U-40-4	PL083U-40-6	PL083U-40-6	PL083U-40-6	PL083U-40-6
Plug	X	PL183X-40-2.5	PL183X-40-2.5	PL183X-40-4	PL183X-40-4	PL183X-40-6	PL183X-40-6	PL183X-40-6	PL183X-40-6
	Y	PL183Y-40-2.5	PL183Y-40-2.5	PL183Y-40-4	PL183Y-40-4	PL183Y-40-6	PL183Y-40-6	PL183Y-40-6	PL183Y-40-6
	U	PL183U-40-2.5	PL183U-40-2.5	PL183U-40-4	PL183U-40-4	PL183U-40-6	PL183U-40-6	PL183U-40-6	PL183U-40-6

With HVIL									
Cable Size									
Type	Key	2.5mm ²		4mm ²		6mm ²			
		Description	Part Number	Description	Part Number	Description	Part Number	Description	Part Number
Receptacle	X	PL083X-41-2.5	PL083X-41-2.5	PL083X-41-4	PL083X-41-4	PL083X-41-6	PL083X-41-6	PL083X-41-6	PL083X-41-6
	Y	PL083Y-41-2.5	PL083Y-41-2.5	PL083Y-41-4	PL083Y-41-4	PL083Y-41-6	PL083Y-41-6	PL083Y-41-6	PL083Y-41-6
	U	PL083U-41-2.5	PL083U-41-2.5	PL083U-41-4	PL083U-41-4	PL083U-41-6	PL083U-41-6	PL083U-41-6	PL083U-41-6
Plug	X	PL183X-41-2.5	PL183X-41-2.5	PL183X-41-4	PL183X-41-4	PL183X-41-6	PL183X-41-6	PL183X-41-6	PL183X-41-6
	Y	PL183Y-41-2.5	PL183Y-41-2.5	PL183Y-41-4	PL183Y-41-4	PL183Y-41-6	PL183Y-41-6	PL183Y-41-6	PL183Y-41-6
	U	PL183U-41-2.5	PL183U-41-2.5	PL183U-41-4	PL183U-41-4	PL183U-41-6	PL183U-41-6	PL183U-41-6	PL183U-41-6

Ordering Information-Powerlok™ 4.0 4POS

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

W/O HVIL									
Cable Size									
Type	Key	2.5mm ²		4mm ²		6mm ²			
		Description	Part Number	Description	Part Number	Description	Part Number	Description	Part Number
Receptacle	X	PL084X-40-2.5	AC-HA002951	PL084X-40-4	AC-HA002954	PL084X-40-6	AC-HA002957	PL084X-40-6	AC-HA002957
	Y	PL084Y-40-2.5	AC-HA002952	PL084Y-40-4	AC-HA002955	PL084Y-40-6	AC-HA002958	PL084Y-40-6	AC-HA002958
	U	PL084U-40-2.5	AC-HA002953	PL084U-40-4	AC-HA002956	PL084U-40-6	AC-HA002959	PL084U-40-6	AC-HA002959
Plug	X	PL184X-40-2.5	AC-HA002969	PL184X-40-4	AC-HA002972	PL184X-40-6	AC-HA002975	PL184X-40-6	AC-HA002975
	Y	PL184Y-40-2.5	AC-HA002970	PL184Y-40-4	AC-HA002973	PL184Y-40-6	AC-HA002976	PL184Y-40-6	AC-HA002976
	U	PL184U-40-2.5	AC-HA002971	PL184U-40-4	AC-HA002974	PL184U-40-6	AC-HA002977	PL184U-40-6	AC-HA002977

With HVIL									
Cable Size									
Type	Key	2.5mm ²		4mm ²		6mm ²			
		Description	Part Number	Description	Part Number	Description	Part Number	Description	Part Number
Receptacle	X	PL084X-41-2.5	AC-HA002960	PL084X-41-4	AC-HA002963	PL084X-41-6	AC-HA002966	PL084X-41-6	AC-HA002966
	Y	PL084Y-41-2.5	AC-HA002961	PL084Y-41-4	AC-HA002964	PL084Y-41-6	AC-HA002967	PL084Y-41-6	AC-HA002967
	U	PL084U-41-2.5	AC-HA002962	PL084U-41-4	AC-HA002965	PL084U-41-6	AC-HA002968	PL084U-41-6	AC-HA002968
Plug	X	PL184X-41-2.5	AC-HA002978	PL184X-41-4	AC-HA002981	PL184X-41-6	AC-HA002984	PL184X-41-6	AC-HA002984
	Y	PL184Y-41-2.5	AC-HA002979	PL184Y-41-4	AC-HA002982	PL184Y-41-6	AC-HA002985	PL184Y-41-6	AC-HA002985
	U	PL184U-41-2.5	AC-HA002980	PL184U-41-4	AC-HA002983	PL184U-41-6	AC-HA002986	PL184U-41-6	AC-HA002986

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	10	10mm ²
		1824	2Power+4Signal Plug Connector, Straight	Y				
				U				

W/O HVIL									
Cable Size									
Type	Key	10mm ²							
		Description	Part Number	Description	Part Number	Description	Part Number	Description	Part Number
Receptacle	X		PL0824X-40-10-CA		AC-HA014096				
	Y		PL0824Y-40-10-CA		AC-HA014097				
	U		PL0824U-40-10-CA		AC-HA014098				
Plug	X		PL1824X-40-10-CA		AC-HA014093				
	Y		PL1824Y-40-10-CA		AC-HA014094				
	U		PL1824U-40-10-CA		AC-HA014095				

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+4Signal 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

	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


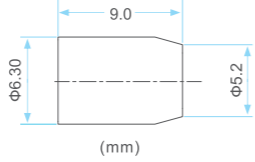

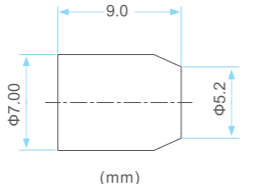
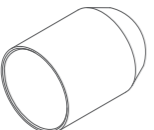
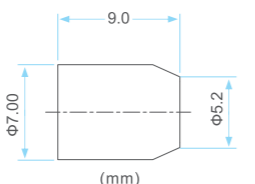
	Part Number	Dimension "A"	Dimension "B"	Product Description
Plug Pin	AC-HA010282-6	3.8mm	5.8mm	Cable 6mm ²
	AC-HA010282-1	4.5mm	6.0mm	Cable 10mm ²

Signal Terminal

	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.

<p>2.5mm²</p>  		
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.
<p>4mm²</p>  		
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.
<p>6mm²</p>  		
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.

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

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