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PowerLok™ 4.0 Connector

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

- Operating voltage: 1000VDC
- Mating cycle: 100Min
- Current rating: 5A-60A
- Operating temperature: -40°C - +125°C
- Protection Class: IP67(mated)
  IP2X(unmated)
- Flammability: UL94V-0
- Dielectric withstanding voltage: 5000VDC
- Available in 2,3,4 POS and 2Power+4Signal
- 360°shielding
- Automatic secondary lock

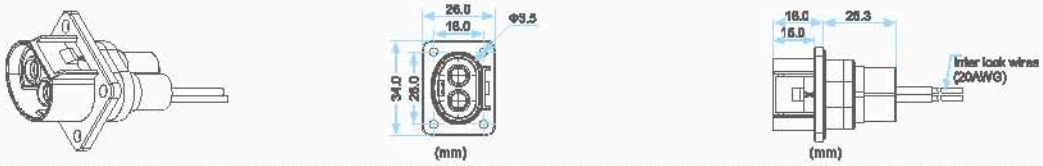
PowerLok™ 4.0 Recommended Cable Size & Current Rating

Series	Accepted Cable Size	Current Rating
40 Series	2.5mm²	25A
	4.0mm²	40A
	6.0mm²	45A
60 Series	2.5mm²	25A
	4.0mm²	40A
	6.0mm²	45A
	10.0mm²	60A

PowerLok™ 4.0 Receptacle

PowerLok™ 4.0 Receptacle	

2pos



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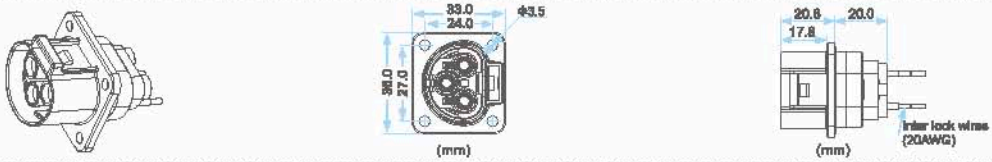

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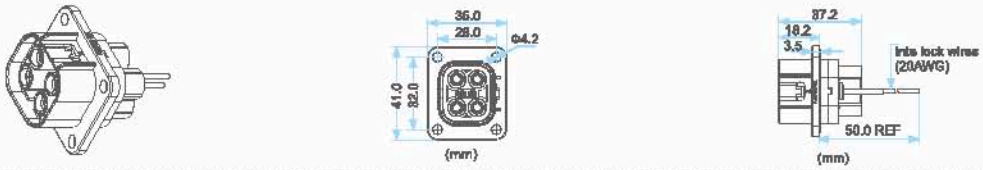
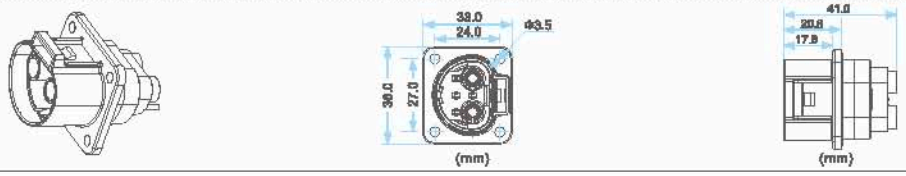


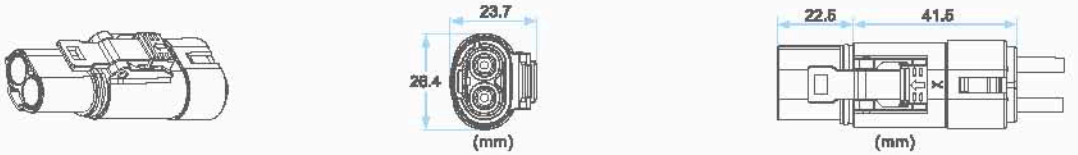
2Power+4Signal



PowerLok™ 4.0 Plug

PowerLok™ 4.0 Plug	

2pos



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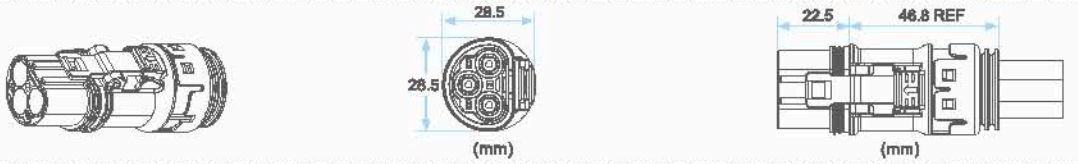
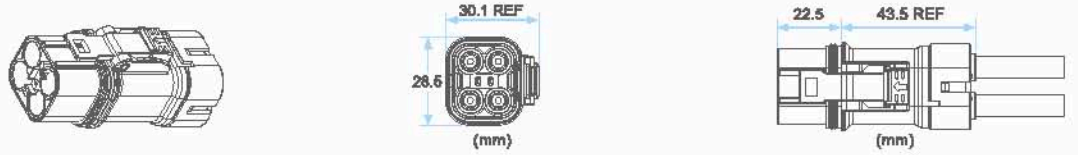
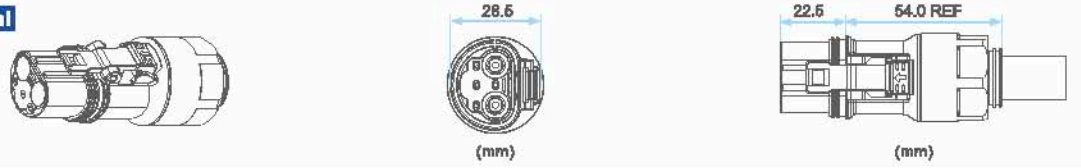


4pos

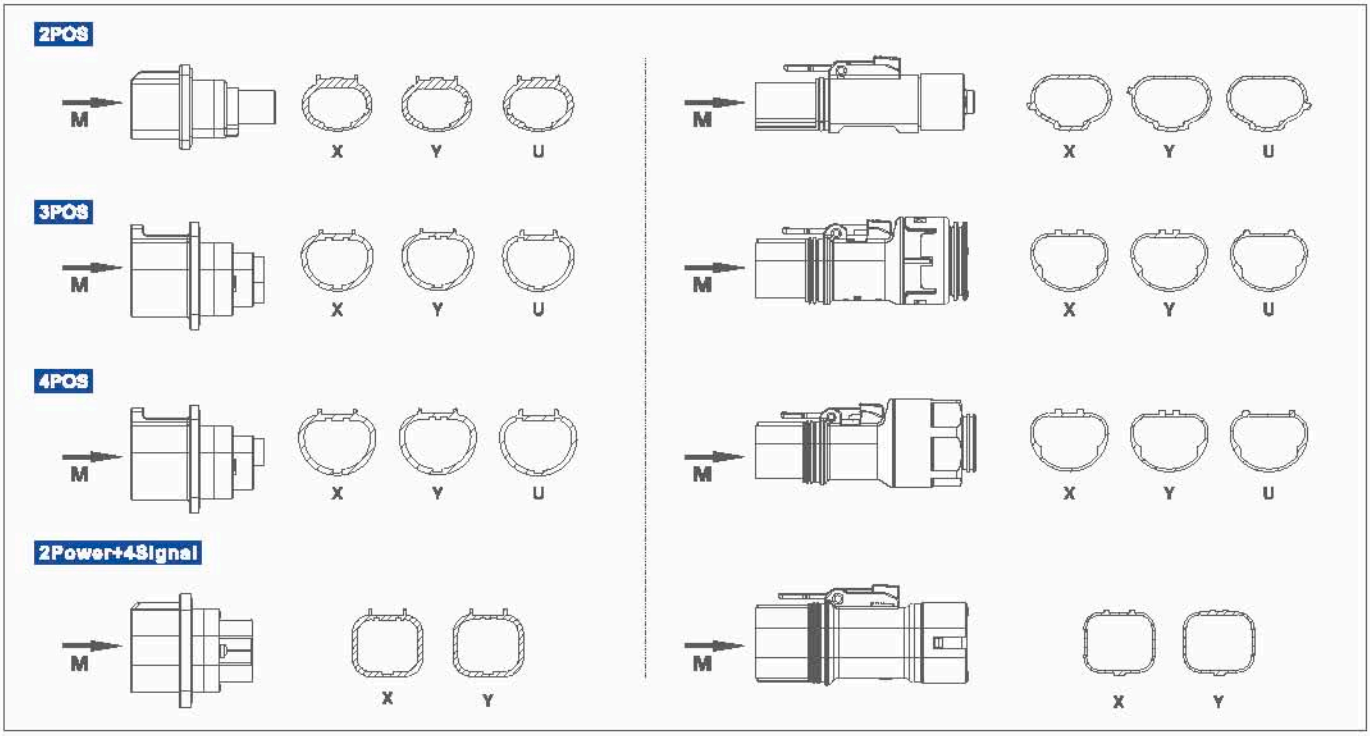


2Power+4Signal



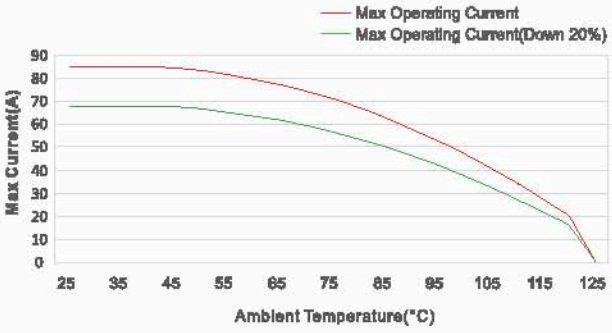
PowerLok™ 4.0 Key Map

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

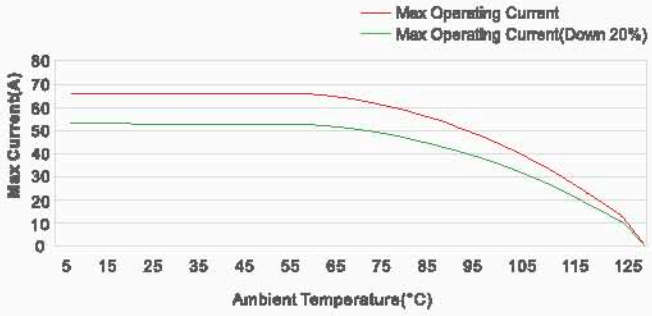


PowerLok™ 4.0 Test Curve

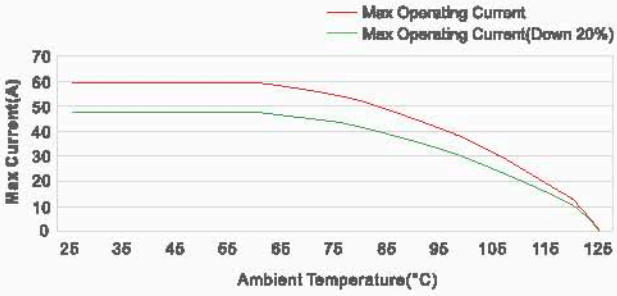
PowerLok™ 60 Series 2 poles with 10mm² cable



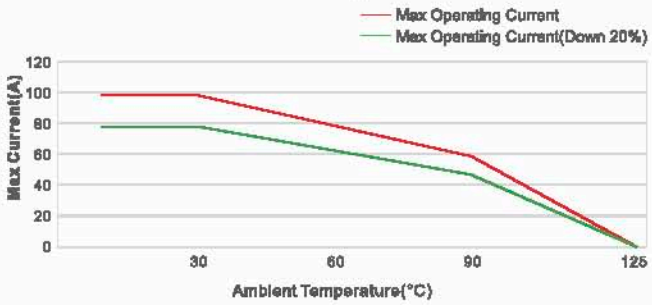
PowerLok™ 40 Series 3 poles with 6mm² cable



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

PL 082 X - 60 - 4

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	2.5mm²
		182	2POS Plug Connector, Straight	Y			4	4mm²
		482	2POS Plug Connector, Straight, Un-Shielding	U	61	60A With HVIL	6	6mm²
							10	10mm²

W/O HVIL

Type	Key	Cable Size 2.5mm² Description	Cable Size 2.5mm² Part Number	Cable Size 4mm² Description	Cable Size 4mm² Part Number	Cable Size 6mm² Description	Cable Size 6mm² Part Number	Cable Size 10mm² Description	Cable Size 10mm² 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

Type	Key	Cable Size 2.5mm² Description	Cable Size 2.5mm² Part Number	Cable Size 4mm² Description	Cable Size 4mm² Part Number	Cable Size 6mm² Description	Cable Size 6mm² Part Number	Cable Size 10mm² Description	Cable Size 10mm² 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

PL 183 X - 40 - 4

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	2.5mm²
		183	3POS Plug Connector, Straight	Y			4	4mm²
				U	41	40A With HVIL	6	6mm²

W/O HVIL

Type	Key	Cable Size 2.5mm² Description	Cable Size 2.5mm² Part Number	Cable Size 4mm² Description	Cable Size 4mm² Part Number	Cable Size 6mm² Description	Cable Size 6mm² Part Number
Receptacle	X	PL083X-40-2.5	PL083X-40-2.5	PL083X-40-4	PL083X-40-4	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
	U	PL083U-40-2.5	PL083U-40-2.5	PL083U-40-4	PL083U-40-4	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
	Y	PL183Y-40-2.5	PL183Y-40-2.5	PL183Y-40-4	PL183Y-40-4	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

With HVIL

Type	Key	Cable Size 2.5mm² Description	Cable Size 2.5mm² Part Number	Cable Size 4mm² Description	Cable Size 4mm² Part Number	Cable Size 6mm² Description	Cable Size 6mm² Part Number
Receptacle	X	PL083X-41-2.5	PL083X-41-2.5	PL083X-41-4	PL083X-41-4	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
	U	PL083U-41-2.5	PL083U-41-2.5	PL083U-41-4	PL083U-41-4	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
	Y	PL183Y-41-2.5	PL183Y-41-2.5	PL183Y-41-4	PL183Y-41-4	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

Ordering Information-Powerlok™ 4.0 4POS

PL 184 U - 40 - 6

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	2.5mm²
		184	4POS Plug Connector, Straight	Y	41	40A With HVIL	4	4mm²
				U			6	6mm²

W/O HVIL

Type	Key	Cable Size 2.5mm² Description	Cable Size 2.5mm² Part Number	Cable Size 4mm² Description	Cable Size 4mm² Part Number	Cable Size 6mm² Description	Cable Size 6mm² Part Number
Receptacle	X	PL084X-40-2.5	AC-HA002951	PL084X-40-4	AC-HA002954	PL084X-40-6	AC-HA002957
	Y	PL084Y-40-2.5	AC-HA002952	PL084Y-40-4	AC-HA002955	PL084X-40-6	AC-HA002958
	U	PL084U-40-2.5	AC-HA002953	PL084U-40-4	AC-HA002956	PL084X-40-6	AC-HA002959
Plug	X	PL184X-40-2.5	AC-HA002969	PL184X-40-4	AC-HA002972	PL184X-40-6	AC-HA002975
	Y	PL184Y-40-2.5	AC-HA002970	PL184Y-40-4	AC-HA002973	PL184X-40-6	AC-HA002976
	U	PL184U-40-2.5	AC-HA002971	PL184U-40-4	AC-HA002974	PL184X-40-6	AC-HA002977

With HVIL

Type	Key	Cable Size 2.5mm² Description	Cable Size 2.5mm² Part Number	Cable Size 4mm² Description	Cable Size 4mm² Part Number	Cable Size 6mm² Description	Cable Size 6mm² Part Number
Receptacle	X	PL084X-41-2.5	AC-HA002960	PL084X-41-4	AC-HA002963	PL084X-41-6	AC-HA002966
	Y	PL084Y-41-2.5	AC-HA002961	PL084Y-41-4	AC-HA002964	PL084X-41-6	AC-HA002967
	U	PL084U-41-2.5	AC-HA002962	PL084U-41-4	AC-HA002965	PL084X-41-6	AC-HA002968
Plug	X	PL184X-41-2.5	AC-HA002978	PL184X-41-4	AC-HA002981	PL184X-41-6	AC-HA002984
	Y	PL184Y-41-2.5	AC-HA002979	PL184Y-41-4	AC-HA002982	PL184X-41-6	AC-HA002985
	U	PL184U-41-2.5	AC-HA002980	PL184U-41-4	AC-HA002983	PL184X-41-6	AC-HA002986

Ordering Information-Powerlok™ 4.0 2Power+4Signal

PL 0824 U - 40 - 6

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	6mm²
		1824	2Power+4Signal Plug Connector, Straight	Y	41	40A With HVIL	10	10mm²
				U				

W/O HVIL

Type	Key	Cable Size 6mm² Description	Cable Size 6mm² Part Number	Cable Size 10mm² Description	Cable Size 10mm² Part Number
Receptacle	X	PL0824X-40-6	PL0824X-40-6	PL0824X-40-10	PL0824X-40-10
	Y	PL0824Y-40-6	PL0824Y-40-6	PL0824Y-40-10	PL0824Y-40-10
	U	PL0824U-40-6	PL0824U-40-6	PL0824U-40-10	PL0824U-40-10
Plug	X	PL1824X-40-6	PL1824X-40-6	PL1824X-40-10	PL1824X-40-10
	Y	PL1824Y-40-6	PL1824Y-40-6	PL1824Y-40-10	PL1824Y-40-10
	U	PL1824U-40-6	PL1824U-40-6	PL1824U-40-10	PL1824U-40-10

With HVIL

Type	Key	Cable Size 6mm² Description	Cable Size 6mm² Part Number	Cable Size 10mm² Description	Cable Size 10mm² Part Number
Receptacle	X	PL0824X-41-6	PL0824X-41-6	PL0824X-41-10	PL0824X-41-10
	Y	PL0824Y-41-6	PL0824Y-41-6	PL0824Y-41-10	PL0824Y-41-10
	U	PL0824U-41-6	PL0824U-41-6	PL0824U-41-10	PL0824U-41-10
Plug	X	PL1824X-41-6	PL1824X-41-6	PL1824X-41-10	PL1824X-41-10
	Y	PL1824Y-41-6	PL1824Y-41-6	PL1824Y-41-10	PL1824Y-41-10
	U	PL1824U-41-6	PL1824U-41-6	PL1824U-41-10	PL1824U-41-10

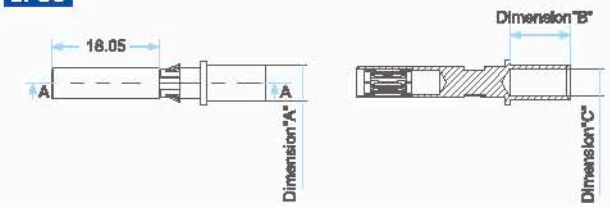
PowerLok™ 4.0 Terminal

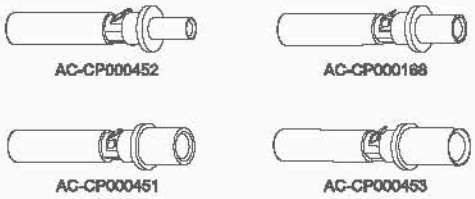
Important Note:

1、PowerLok™ 4.0 serial standard product packages include the terminals needed for one set assembly only.

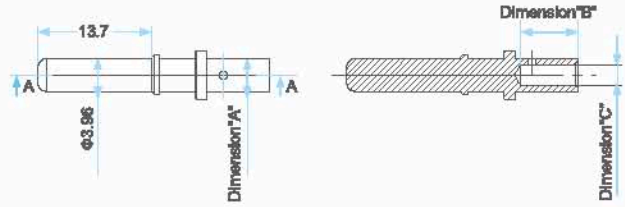
2、Extra terminals are accepted to be ordered alone, please refer to the details in the according page.3. As for 2Power+4Singal product, extra signal terminals for the wire crimping use are supposed to be ordered.

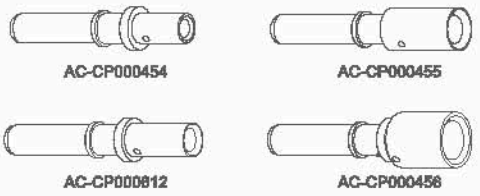
2POS





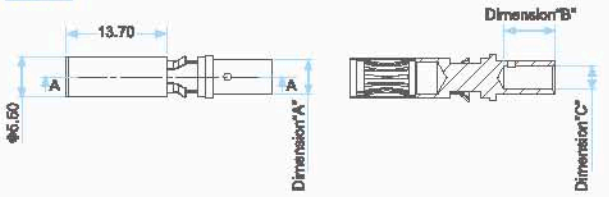
	Description	Part Number	Dimension"A"	Dimension"B"	Dimension"C"	Product Description
Socket Pin	PL082-61-2.5	AC-CP000452	Φ3.50	7.7	Φ2.30	4mm Soc, 2POS, Cable 2.5mm²
	PL082-61-4	AC-CP000168	Φ4.60	7.7	Φ3.00	4mm Soc, 2POS, Cable 4.0mm²
	PL082-61-6	AC-CP000451	Φ6.00	7.7	Φ3.80	4mm Soc, 2POS, Cable 6.0mm²
	PL082-61-10	AC-CP000453	Φ6.00	10.2	Φ4.50	4mm Soc, 2POS, Cable 10.0mm²

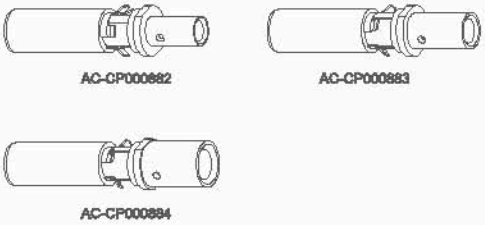




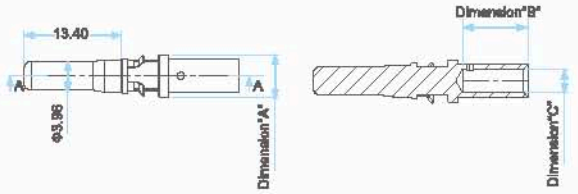
	Description	Part Number	Dimension"A"	Dimension"B"	Dimension"C"	Product Description
Plug Pin	PL182-61-2.5	AC-CP000454	Φ3.70	6.95	Φ2.50	4mm Pin, 2POS, Cable 2.5mm²
	PL182-61-4	AC-CP000812	Φ4.57	9.0	Φ3.05	4mm Pin, 2POS, Cable 4.0mm²
	PL182-61-6	AC-CP000455	Φ5.80	9.0	Φ3.80	4mm Pin, 2POS, Cable 6.0mm²
	PL182-61-10	AC-CP000456	Φ7.40	9.0	Φ5.20	4mm Pin, 2POS, Cable 10.0mm²

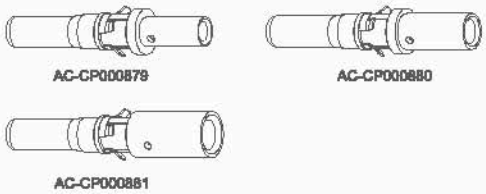
3POS





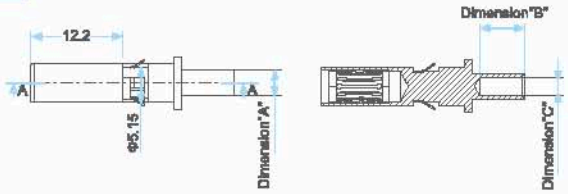
	Description	Part Number	Dimension"A"	Dimension"B"	Dimension"C"	Product Description
Socket Pin	PL083-41-2.5	AC-CP000882	Φ3.70	6.0	Φ2.50	4mm Soc, 3POS, Cable 2.5mm²
	PL083-41-4	AC-CP000883	Φ4.57	7.0	Φ3.05	4mm Soc, 3POS, Cable 4.0mm²
	PL083-41-6	AC-CP000884	Φ5.80	7.0	Φ3.80	4mm Soc, 3POS, Cable 6.0mm²

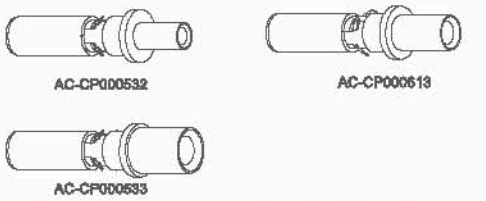




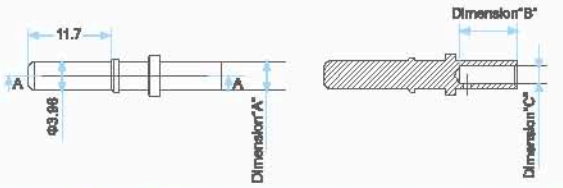
	Description	Part Number	Dimension"A"	Dimension"B"	Dimension"C"	Product Description
Plug Pin	PL183-41-2.5	AC-CP000879	Φ3.70	8.0	Φ2.50	4mm Pin, 3POS, Cable 2.5mm²
	PL183-41-4	AC-CP000880	Φ4.57	9.0	Φ3.05	4mm Pin, 3POS, Cable 4.0mm²
	PL183-41-6	AC-CP000881	Φ5.80	9.0	Φ3.80	4mm Pin, 3POS, Cable 6.0mm²

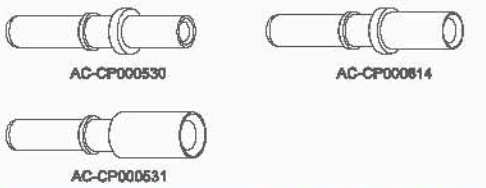
4POS





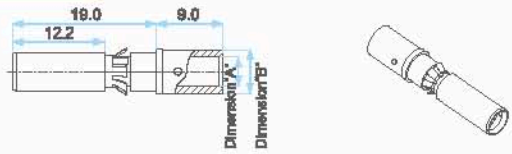
	Description	Part Number	Dimension"A"	Dimension"B"	Dimension"C"	Product Description
Socket Pin	PL084-41-2.5	AC-CP000532	Φ3.70	8.0	Φ2.50	4mm Soc, 4POS, Cable 2.5mm²
	PL084-41-4	AC-CP000613	Φ4.57	9.0	Φ3.05	4mm Soc, 4POS, Cable 4.0mm²
	PL084-41-6	AC-CP000533	Φ5.80	9.0	Φ3.80	4mm Soc, 4POS, Cable 6.0mm²

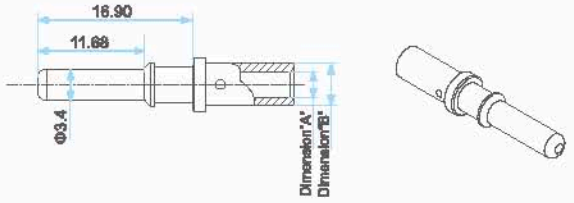




	Description	Part Number	Dimension"A"	Dimension"B"	Dimension"C"	Product Description
Plug Pin	PL184-41-2.5	AC-CP000530	Φ3.70	8.0	Φ2.50	4mm Pin, 4POS, Cable 2.5mm²
	PL184-41-4	AC-CP000614	Φ4.57	9.0	Φ3.05	4mm Pin, 4POS, Cable 4.0mm²
	PL184-41-6	AC-CP000531	Φ5.80	9.0	Φ3.80	4mm Pin, 4POS, Cable 6.0mm²

2Power+4Signal



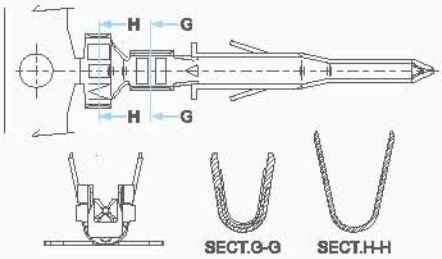


	Part Number	Dimension"A"	Dimension"B"	Product Description
Socket Pin	AC-HA010281-6	Φ3.8mm	Φ5.8mm	Cable 6mm²
	AC-HA010281-1	Φ4.5mm	Φ6.0mm	Cable 10mm²

	Part Number	Dimension"A"	Dimension"B"	Product Description
Plug Pin	AC-HA010282-6	Φ3.8mm	Φ5.8mm	Cable 6mm²
	AC-HA010282-1	Φ4.5mm	Φ6.0mm	Cable 10mm²

Signal Terminal

CRIMPING WIRE SCOPE: 18-24 AWG



TERMINAL SHOWN

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

Amphenol Technical Products International

Asia Pacific
GuangZhou, China
Tel: +86-20-3210 6099
Add: No.5 JianTaShan Road,GuangZhou Science City
Zipe Code: 510663

North America
Winnipeg, Manitoba, Canada
Tel: +1 204 697 2222
Add: 2110 Notre Dame Avenue

Europe
Milano, Italy
Tel: +39 02 932541
Add: Via Barbaiana 5, 20020 Lainate (MI)

Email: info@amphenol-tpi.com

Q-FLEX

www.q-flex.fi info@q-flex.fi
+358 2 4894 500