

Amphenol®

Interconnect Solutions for Hybrid & Electric Vehicles



电动汽车/混合动力汽车
高压连接与配电解决方案

Company Introduction 公司简介

Amphenol

► | Amphenol

is one of the largest manufacturers of interconnect products in the world. The company designs, manufactures and markets electrical, electronic and fiber optic connectors, coaxial and flat-ribbon cable, and interconnect systems. Amphenol has long been the accepted leader in providing quality connectors and interconnect systems to the Industrial, Military and Telecommunication markets.

► | 安费诺集团

是全球规模最大的互连产品生产商之一。Amphenol专注于电气、电子、光纤连接器、同轴扁平带状电缆以及互连系统的设计、制造和销售。长期以来，Amphenol因其品质优良的连接器和互连系统产品，受到工业、军事和通信领域的高度认可，并在市场中占据着主导地位。





Amphenol Industrial Operations

Amphenol Industrial Operations (AIO), a division of the Amphenol Corporation, is a prominent manufacturer of cylindrical connectors known around the world. Amphenol Industrial's product lines consist of rectangular, standard miniature, fiber optic, EMI/EMP filter, and a variety of special application connectors.

Manufacturing connectors since 1932, we take pride that Amphenol Industrial Operations is the undisputed leader in interconnect systems for harsh environment applications. Innovations like our RADSOK® contact technology can provide roughly 50% more current through the same size pin. Connectors utilizing this RADSOK® technology will outperform similar products in the market hands down.

The Sidney, NY facility, nestled at the foothills of the Catskill Mountains, is over 307,000 square feet. This complex houses over 1000+ employees incorporating state-of-the-art manufacturing technologies. The facility is both ISO9001 certified and qualified to MIL-STD-790 requirements.

► | 安费诺工业部

安费诺工业部是安费诺集团八大事业部中最重要的事业部之一。她是全球恶劣环境互连系统解决方案的不可争议的领导者，其工业连接器的设计和生产技术水平长居全球领先地位。

安费诺工业产品包括圆形、矩形、标准微型、光纤、EMI/EMP滤波器以及各种特殊应用连接器。

安费诺工业总部位于美国纽约州，面积超过30,700平方英尺，雇员1000余人，拥有最先进的生产技术，其创新的RADSOK®专利端子技术提供比市场上同等大小的普通端子多50%~100%的载流能力，运用此技术的安费诺连接器轻易地超越了市场的上同类产品。安费诺工业部工厂获得美国ISO9001认证以及MIL-STD-790认证。



Amphenol Technology (Zhuhai) Co., Ltd.

Established in 2007, Amphenol Technology (Zhuhai) Co., Ltd. is a manufacturing facility for Amphenol Industrial Operations, which serves a number of industrial markets, included but not limited to Factory Automation, Transportation, Heavy Equipment, Alternative Energy, Energy Storage, Server/Data Comm and Power Distribution.

Amphenol Technology (Zhuhai) Co., Ltd. covers an area of 28470m² and is equipped with CNC, plating, injection molding and assembly workshops. This plant specializes in the design and manufacturing of industrial connectors featuring high power, high density, medium to high voltage electrical properties, and harsh environment applications.

With industry leading engineering, design and manufacturing expertise, Amphenol Technology (Zhuhai) Co., Ltd. has earned more than 30 utility patents on its innovative interconnects. Many of the products produced have been certified by independent standards including UL, IEC/TUV, ATEX, IECEx and MA. The facility is also certified to ISO 9001, ISO 14001 and IATF 16949.

► | 安费诺科技（珠海）有限公司

安费诺科技（珠海）有限公司是由美国安费诺集团独资建立、隶属于安费诺工业部在中国的生产工厂之一。工厂成立于2007年，位于珠海市金湾区三灶镇科技园，占地面积28,470平方米，雇员600人以上。工厂主设CNC车间、电镀车间、注塑车间、装配车间等。公司拥有强大的设计研发能力和先进的生产技术，目前已获得30余项实用新型专利证书。工厂通过了ISO 9001、ISO 14001和IATF 16949等相关认证。

安费诺科技（珠海）有限公司专注于工业连接器及电缆组件的研发生产与销售，产品以大电流、高密度信号、中/高电压、耐各种极端恶劣环境及高可靠性为特色，广泛应用于重型设备、轨道交通、新能源、储能、服务器/数据通信、智能电网以及机器人/自动化控制等众多领域。

Interconnect Solutions for Hybrid and Electric Vehicles



► | Interconnect Solutions for Hybrid and Electric Vehicles

A progression away from gasoline and towards a new automotive energy market, including hybrid and electric driven vehicles (HEV) has many demanding electrical requirements. The electrical systems used on HEVs require higher amperages and voltages, smaller component footprints and more reliable and safer operation.

With over eighty years of experience in the interconnect industry, Amphenol Industrial Products Group (AIPG) brings its design, manufacturing, and innovation to the hybrid and electric market. As an undisputed global leader of interconnect solutions for harsh environments, AIPG has solutions to solve any technical challenge. Whether it's a new connector design or one of our existing products, an over molded or mechanically terminated cable assembly, complex harness, or complete electrical packaging solution, AIPG has the expertise to satisfy all HEV needs.

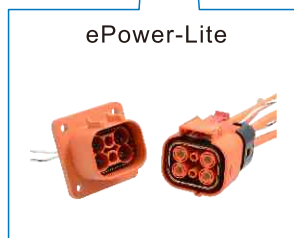
► | 电动和混合动力车辆电气互连解决方案

随着传统汽油转向新的汽车能源市场的发展，包括混合动力和纯电动车辆(HEV)在内，对电气系统都有着苛刻的要求。这些电气系统都要求有更大的电流电压、更紧凑的空间结构和更安全可靠的操作性能等。

今天，拥有超过80年连接器设计制造经验的安费诺工业产品集团（简称安费诺工业部），将她设计、制造和创新的产品带入了这个飞速发展的市场。作为全球不可争议的恶劣环境电气互连系统解决方案的领导者，安费诺工业部拥有各种互连解决方案来迎接任何技术上的挑战。不论是现有的产品或是新产品的的设计、是热塑成型或是线夹锁合的电缆组件、复杂线束，或是完整的电气集成方案，安费诺工业部都有相应的技术和产品来满足混合动力和纯电动车辆市场的任何需要。

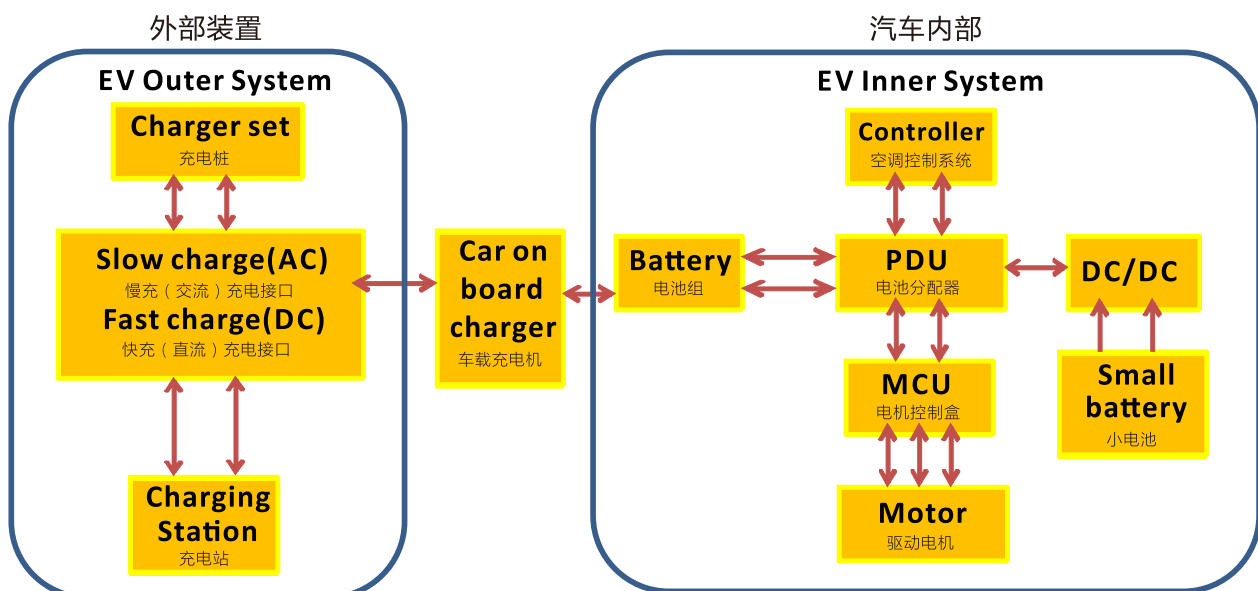
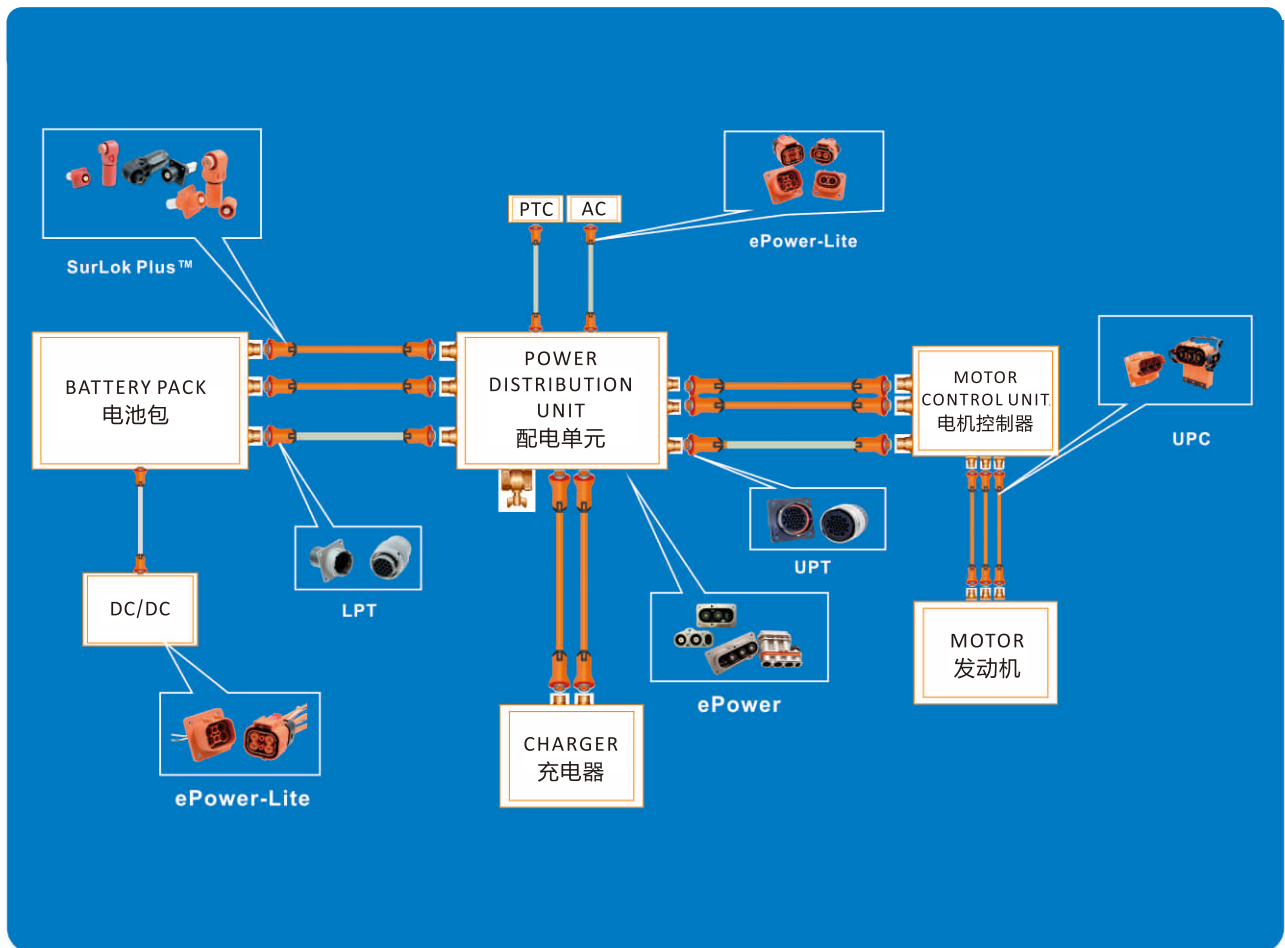


Where in the HEV Ecosystem our Products are Found 产品应用领域



EV Application System

电动汽车应用系统



安费诺高压电气系列产品应用指南

Application Guide for Amphenol High Voltage Product Series

设备 Equipment	输入/输出接口 Interface of Input/Output	规格/对应产品 Specification/Product			产品详情页 Page Number
高压配电箱 PDU	电驱动空调 Electric driven air conditioner	2W,25A~80A;600VDC,Shielded (2芯、25A~80A、600VDC、带屏蔽)	Power: ePower-Lite series 电源: ePower-Lite 系列	SurLok Plus 	SurLok Plus 系列 P4~P8
	电加热器 Electric heater	2W,25A~80A;600VDC,Shielded (2芯、25A~80A、600VDC、带屏蔽)	Power: ePower-Lite series 电源: ePower-Lite 系列		
	电动助力转向 Electric power steering system(EPAS)	2W,25A~80A;600VDC,Shielded (2芯、25A~80A、600VDC、带屏蔽)	Power: ePower-Lite series 电源: ePower-Lite 系列	UPC 	UPC 系列 P9~P11
	电机控制器 Motor controller	2W<250A;600VDC,Shielded (2芯、<250A、600VDC、带屏蔽)	UPC series/ 系列 ePower series/系列		
	电控制冷 Electric control refrigeration system	2W<250A;600VDC,Shielded (2芯、<250A、600VDC、带屏蔽)	UPC series/ 系列 ePower series/系列		
	电池 Battery	1W,<250A,750VDC, unshielded/shielded (1芯、<250A、750VDC、不带或带屏蔽)	SurLok Plus series/系列	ePower 	ePower 系列 P12
	充电机 Charger	1W,<250A,750VDC, unshielded/shielded (1芯、<250A、750VDC、不带或带屏蔽)	SurLok Plus series/系列		
	信号控制 Signal controller	20W~48W, 5A~23A, 250VAC,unshielded (20W~48W, 5A~230A, 250VAC,不带屏蔽)	Signal: UPT 系列 信号: UPT 系列		ePower-Lite 系列 P13~P14
动力电池组 Power battery pack	充电输入 Charging input	2W, 25A~80A;600VDC,Shielded (2芯、25A~80A、600VDC、带屏蔽)	ePower-Lite series/系列	ePower-Lite 	
	DC/DC电压输入 DC/DC voltage input	2W, 25A~80A;600VDC,Shielded (2芯、25A~80A、600VDC、带屏蔽)	ePower-Lite series/系列		
	直流充电输入 DC charging input	2W<250A;600VDC,Shielded (2芯、<250A、600VDC、带屏蔽)	LPT/UPC series/ 系列 ePower series/系列	UPT 	LPT 系列 P15~P16
	主电源输出 Main power output	2W<250A;600VDC,Shielded (2芯、<250A、600VDC、带屏蔽)	LPT/UPC series/ 系列 ePower series/系列		
	电池内部连接 Battery internal connection	客户定制 Custom design	SurLok Plus series/系列 Custom Design for Flex Busbar 定制铜排等		
DC/DC变压器 DC/DC transformer	直流输入 DC input	2W, 25A~80A;600VDC,Shielded (2芯、25A~80A、600VDC、带屏蔽)	ePower-Lite series/系列	LPT 	UPT 系列 P17~P19
驱动电机 Drive motor	交流输入 AC input	3W<250A, 600VDC, Shielded (3芯、<250A、600VDC、带屏蔽)	LPT/UPC series/ 系列 ePower series/系列		
逆变器 Invertor	交流输出 AC output	3W<250A, 600VDC, Shielded (3芯、<250A、600VDC、带屏蔽)	LPT/UPC series/ 系列 ePower series/系列	Flexible Busbar 	Flexible Busbar 系列 P20
	直流输入 DC input	2W<250A;600VDC,Shielded (2芯、<250A、600VDC、带屏蔽)	LPT/UPC series/ 系列 ePower series/系列		
车载充电机 Vehicle-mounted charger	交流输入 AC input	3W, 25A~80A; 600VDC, Shielded or unshielded (3芯、25A~80A; , 600VDC、屏蔽或非屏蔽)	ePower-Lite series/ePower-Lite 系列		
	直流输出 DC output	2W, 25A~80A;600VDC, Shielded (2芯、25A~80A;、600VDC、带屏蔽)			

SurLok Plus™ 系列



The SurLok Plus™ compression lug is a field installable, high reliable alternative to common compression lugs. Using industry standard crimp, screw, and busbar termination options, thus eliminating the need to purchase special torque tools.

Amphenol's SurLok Plus™ is an environmentally sealed version of our original SurLok but available in smaller sizes, and features a quick lock and press-to-release design. Incorporating the latest R4 RADSOK® Technology, SurLok Plus™ is a compact, quick mating, and robust product line.

The RADSOK® high amperage contact technology utilizes high tensile strength properties of a stamped and formed, high conductivity alloy grid to produce low insertion forces while maintaining a large conductive surface area.

The R4 version of the RADSOK® represents the culmination of three years of research and development in laser welding copper based alloys.

SurLok Plus是一款现场安装型、高性能压接连接器（压线鼻子）。采用行业标准的压接、锁螺丝和汇流排接线，而不需要特殊的扭力工具。

SurLok Plus是安费诺原有SurLok的环境密封版本，但尺寸上可以做到更小，同时具有快速锁定和按压解锁的特点。SurLok Plus采用了最新的R4 RADSOK®技术，是一款快速插拔、结构紧凑而可靠耐用的产品。

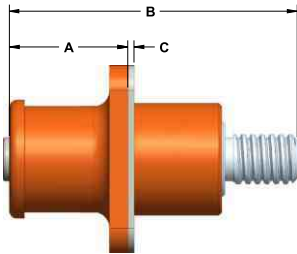
► | Features & Benefits 性能特点：

- **R4 RADSOK® Technology**
R4 RADSOK®端子技术
- **IP67 rated**
防水等级IP67
- **Touch Proof**
防触电设计
- **Quick lock and press-to-release design**
快速锁定和按压解锁设计
- **“Keyway” design to prevent incorrect mating**
“键位”设计防止误配
- **360° rotating plug**
360°旋转插头
- **Various termination options (Threaded, Crimp, Busbar)**
多种接线方式（螺纹、压接、汇流排）
- **Compact robust design**
紧凑而坚固的结构设计

Technical Data 技术参数			
Contact Size 端子尺寸	5.7mm(120A) 8.0mm(200A) 10.3mm(350A)	IP Rating 防水等级	IP67
Current Rating 额定电流	120A~350A	Protection 防护等级	Touch Proof 防触电
Operating Voltage 工作电压	1000V AC/DC	Flammability 阻燃等级	UL 94-V0
Operating Temp 工作温度	-40℃ to 125℃	Locking 锁定方式	Spring Locking 弹簧锁

Screw Termination

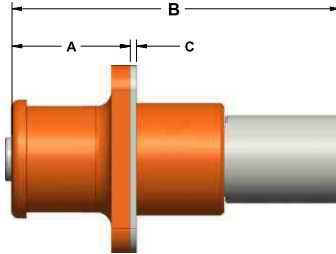
锁螺丝接线



Size	Screw Termination		
	A	B	C
5.7mm	16.5	36.7	1.0
8.0mm	19.0	46.1	1.0
10.3mm	25.8	55.5	0.3

Crimp Termination

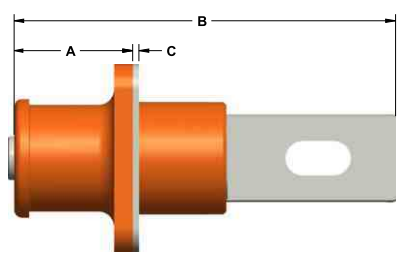
压接接线



Size	Crimp Termination		
	A	B	C
5.7mm	16.5	40.7	1.0
8.0mm	19.0	52.7	1.0
10.3mm	25.8	50mm ² : 65.8	0.3
		70mm ² : 68.8	
		85mm ² : 71.8	

Busbar Termination

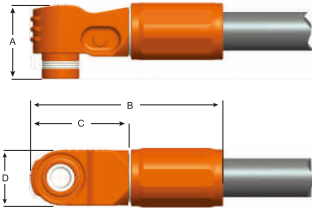
汇流排接线



Size	Busbar Termination		
	A	B	C
5.7mm	16.5	46.7	1.0
8.0mm	19.0	61.2	1.0
10.3mm	25.8	68.8	0.3

Right Angle Plug

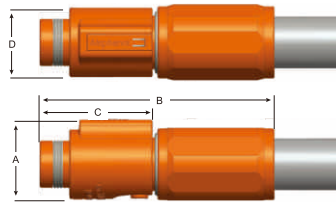
弯头插头



Size	Plug Dimension			
	A	B	C	D
5.7mm	22.6	55.1	30.0	18.0
8.0mm	29.0	74.5	38.4	21.6
10.3mm	41.2	84.5	42.5	28.0

Straight Plug

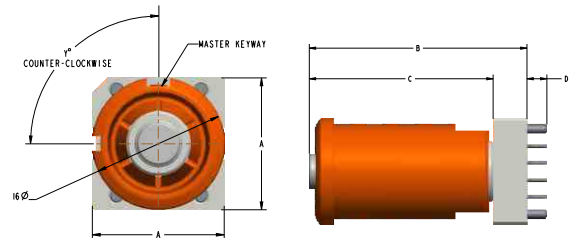
直头插头



Size	Plug Dimension			
	A	B	C	D
8.0mm	24.45	72.4	34.8	21.4

Straight Receptacle

直头插座



Size	Press-Fit Termination			
	A	B	C	D
5.7mm	16.0	32.8	27.7	3.0

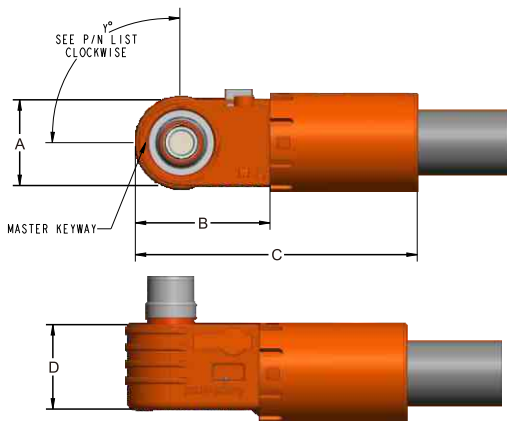
SurLok Plus™ EMI version (8.0mm)



► Features & Benefits 性能特点:

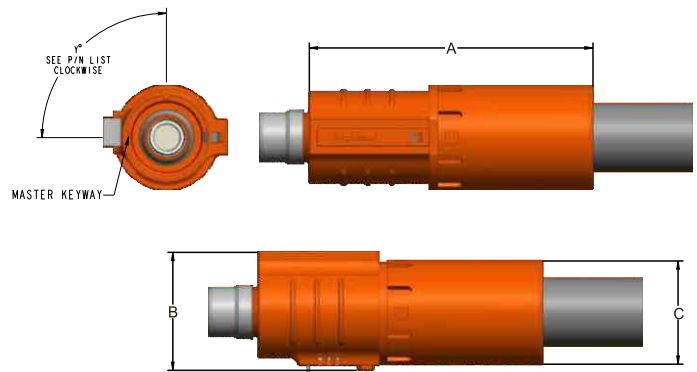
- EMI shielding
EMI 屏蔽
- HVIL function
高压互锁功能
- Secondary locking system
副锁功能
- Flammability: UL 94 V-0
防火等级
- Wide amperage range: 150A~250A
电流范围: 150A~250A
- RoHS compliant
符合无铅要求

Right Angle Plug 弯头插头



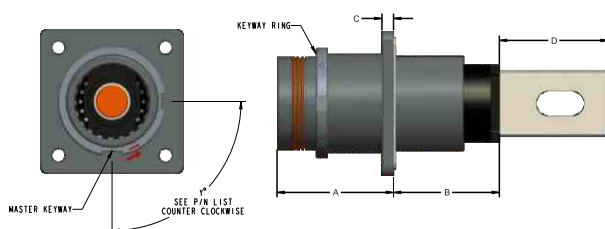
Size	Plug Dimension			
	A	B	C	D
8.0mm	26.2	41.2	86.2	25.8

Straight Plug 直头插头



Size	Plug Dimension		
	A	B	C
8.0mm	82.5	34.3	30.0

Receptacle 插座



Size	Receptacle Dimension			
	A	B	C	D
8.0mm	25.15	22.85	2.5	23.5

SurLok Plus 5.7mm

Product Series: SurLok Plus™ 产品系列		Plug 插头		RADSOK® Size 端子尺寸		Applicable Cable Size 接线尺寸		Backshells 尾附件		Sealing 密封		Connector Color 连接器颜色		Keyway (Omit for no Keyway) 键位 (省略为无键位)		
SLP	P	Right Angle Plug 90° 弯头插头	A	5.7mm	16	16mm² : 100 Amps	B	W/ Backshells 带尾附件	S	IP67 Sealed (W/ Grommet & O-Rings) IP67密封(带密封垫圈&O型圈)	O	Orange 橙	0	90°		
													1	180°		
					25	25mm² : 120 Amps	N	W/O Backshells (For Overmolding Only) 不带尾附件(仅注塑)	N	Non-Sealed 非密封	B	Black 黑	2	60°		
													R	Red 红	3	120°
															4	150°

Product Series: SurLok Plus™ 产品系列		Receptacle 插座		RADSOK® Size 端子尺寸		*Applicable Cable Size (for Crimping Termination only) 适合接线尺寸 (仅为压接接线)		Termination Style 接线方式		Panel Mount 面板安装		Sealing 密封		Connector Color 连接器颜色		Keyway (Omit for no Keyway) 键位 (省略为无键位)	
SLP	R	Receptacle W/O Keyway 插座不带键位	A	5.7mm	16	16mm² : 100 Amps	B	Busbar 汇流排(母排)	P	Panel Mount W/ Flange 面板安装 带法兰盘	S	IP67 Sealed (W/ Grommet & O-Rings) IP67密封(带密封垫圈&O型圈)	O	Orange 橙	0	90°	
							T	Threaded Post 锁螺丝					B	Black 黑	1	180°	
	IR	Receptacle W/Keyway 插座带键位		25	25mm² : 120 Amps	N	W/O Flange 不带法兰盘	N	Non-Sealed 非密封	R	Red 红	2	60°				
												3	120°				
												4	150°				
												C	Crimp 压接				

SurLok Plus 8.0mm

Product Series: SurLok Plus™ 产品系列		Plug 插头		RADSOK® Size 端子尺寸		Applicable Cable Size 接线尺寸		Backshells 尾附件		Sealing 密封		Connector Color 连接器颜色		Keyway (Omit for no keyway) 键位 (省略为无键位)	
SLP		P	Right Angle Plug 90° 弯头插头	B	8.0mm	35	35mm² : 150 Amps	B	W/Backshells 带尾附件	S	IP67 Sealed (W/ Grommet & O-Rings) IP67密封(带密封 垫圈&O型圈)	O	Orange 橙	0	90°
						50	50mm² : 200 Amps	N	W/O Backshells (For O vermolding Only) 不带尾附件(仅注塑)	N	Non-Sealed 非密封		B	Black 黑	1
		R	Red 红									2			60°
												3	120°		
		4	150°												

Product Series: SurLok Plus™ 产品系列		Receptacle 插座		RADSOK® Size 端子尺寸		*Applicable Cable Size (for Crimping Termination only) 适合接线尺寸 (仅为压接接线)		Termination Style 接线方式		Panel Mount 面板安装		Sealing 密封		Connector Color 连接器颜色		Keyway (Omit for no keyway) 键位 (省略为无键位)	
SLP		R	Receptacle W/O Keyway 插座不带键位	B	8.0mm	35	35mm² : 150 Amps	B	Busbar 汇流排(母排)	P	Panel Mount W / Flange 面板安装 带法兰盘	S	IP67 Sealed (W/ Grommet & O- Rings) IP67密封(带密封 垫圈&O型圈)	O	Orange 橙	0	90°
			T				Threaded Post 锁螺丝	B	Black 黑					1	180°		
		IR	Receptacle W/Keyway 插座带键位	50	50mm² : 200 Amps	N	W/O Flange 不带法兰盘	N	Non- Sealed 非密封	R	Red 红	2	60°				
												C	Crimp 压接	3	120°		
												4	150°				

SurLok Plus 10.3mm

Product Series: SurLok Plus™		Plug	RADSOK® Size		Applicable Cable Size		Backshells		Sealing		Connector Color		Keyway	
产品系列		插头	端子尺寸		接线尺寸		尾附件		密封		连接器颜色		键位	
SLP	P	Right Angle Plug 90° 弯头插头	C	10.3mm	50	50mm² : 200 Amps	B	W/ Backshells 带尾附件	S	IP67 Sealed (W/ Grommet & O-Rings) IP67防水密封(带密封垫圈&O型圈)	O	Orange 橙	0	90°
					70	70mm² : 250 Amps							B	Black 黑
					85	85mm² : 300 Amps	N	W/O Backshells (For Overmolding Only) 不带尾附件(仅注塑)	N	Non-Sealed 非密封	R	Red 红		
						95mm² : 350 Amps							3	120°

Product Series: SurLok Plus™	Receptacle		RADSOK® Size		*Applicable Cable Size (for Crimping Termination only)		Termination Style		Panel Mount		Sealing		Connector Color		Keyway	
产品系列	插座		端子尺寸		适合接线尺寸 (仅为压接接线)		接线方式		面板安装		密封		连接器颜色		键位	
SLP	IR	Receptacle W/Keyway 插座带键位	C	10.3mm	50	50mm² : 200 Amps	B	Busbar 汇流排(母排)	P	Panel Mount W/ Flange 面板安装 带法兰盘	S	IP67 Sealed (W/ Grommet & O-Rings) IP67密封(带密封垫圈&O型圈)	O	Orange 橙	0	90°
					70	70mm² :250 Amps	T	Threaded Post 锁螺丝					B	Black 黑	1	180°
					85	85mm² : 300 Amps	C	Crimp 压接	N	W/O Flange 不带法兰盘	N	Non- Sealed 非密封	R	Red 红	2	60°
													3	120°		
													4	150°		

SurLok Plus 8.0mm with EMI

Product Series: SurLok Plus™ 产品系列		Plug 插头		RADSOK® Size 端子尺寸		Applicable Cable Size 适合接线尺寸		Backshells 尾附件		Sealing 密封		Connector Color 连接器颜色		Keyway 键位		EMI 屏蔽		HVIL (Optional) 高压互锁 (可选项)	
SLP	P	Right Angle Plug 90° 弯头插头	B	8.0mm	35	35mm² : 150 Amps	B	W/ Backshells 带尾附件	S	IP67 Sealed (W/ Grommet & O-Rings) IP67密封(带密封垫圈&O型圈)	O	Orange 橙	0	90°	E	EMI	H	HVIL	
					50	50mm² : 200 Amps							B	270°					
	IP	Straight Plug 直头插头		50	50mm² : 200 Amps	N	W/O Backshells (For Overmolding Only) 不带尾附件(仅注塑)	N	Non-Sealed 非密封	B	Black 黑	2	60°						
				70	70mm² : 250 Amps							R	Red 红	3					120°
														4					150°

Product Series: SurLok Plus™ 产品系列		Receptacle 插座		RADSOK® Size 端子尺寸		Termination Style 接线方式		Panel Mount 面板安装		Sealing 密封		Connector Color 连接器颜色		Keyway 键位		EMI 屏蔽		HVIL (Optional) 高压互锁 (可选项)	
SLP		R	Receptacle W/O Keyway 插座不带键位	B	8.0mm	B	Busbar 汇流排(母排)	P	Panel Mount W/ Flange 面板安装 带法兰盘	S	IP67 Sealed (W/ Grommet & O-Rings) IP67密封(带密封圈&O型圈)	O	Orange 橙	0	90°	E	EMI	H	HVIL
										N		Non-Sealed 非密封	B	Black 黑	2				
		R	Red 红								3		120°						
											4		150°						
		IR	Receptacle W/Keyway 插座带键位																

UPC 系列



UPC (Ultimate Power Connector) is a plastic power connector series especially designed to be used in the hybrid electric vehicle market. The 2-pole and 3-pole connectors incorporate the patented RADSOK® technology for higher amperage, lower T-rise and voltage drop, and less resistance. RADSOK's twisted grid configuration allows for up to 50% more current to pass through the same size pin, while providing increased reliability and cycle durability, as well as lower mating forces.

The compact, plastic shell structure is light weight with a small footprint, has continuous power at 200A or 450 A, and is field installable and repairable. These attributes make UPC robust and the interconnect of choice for the EV and Hybrid markets.

UPC 是一个专为混合动力车辆市场应用而特别设计的塑胶大电流连接器。产品有2芯和3芯结构，采用了安费诺专利RADSOK® 端子技术，使其能承载更大的电流，具有低温升、低电压降和低阻抗的性能特点。RADSOK端子扭曲的网格结构比同等大小的端子可多承载50%以上的电流，同时增强了可靠性和耐久性，也降低了插拔力。

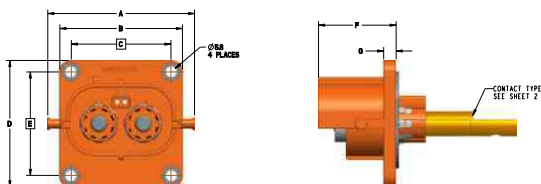
UPC紧凑的塑胶外壳结构兼具重量轻和体积小的特点，其连续电流达到200A或450A，可进行现场安装和维修，特别适合电动和混合动力车辆的电气互连应用。

► Features & Benefits 性能特点:

- **Plastic shell, light weight**
塑料外壳、重量轻
- **Compact design for space considerations with Evs**
紧凑的结构更适合空间局限的电动车市场
- **Wide amperage range (200A~450A)**
承载电流范围宽 (200A~450A)
- **Low mating/un-mating force** 低插拔力
- **Durability: 100 mating cycles minimum**
耐插拔最少100次
- **Touch-Proof (IEC602 IP2XB)** 防触电设计
- **UL 94V-0** 阻燃标准
- **HVIL** 高压互锁
- **EMI (60db/100M)** 防电磁干扰
- **IP67 when mated** 连接后的防水等级为 IP67
- **RoHS Compliant** 符合无铅标准

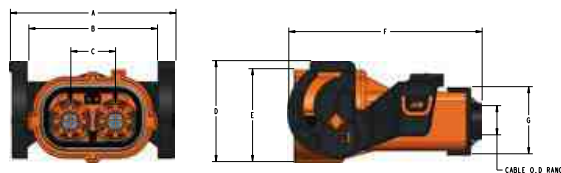
Technical Data 技术参数			
Current Rating 额定电流	Up to 450A(200A max 9.1mm w /50mm2 cable)	Test Voltage (sea level) 测试电压	3000V AC RMS
Contact Size 端子尺寸	9.1mm /12mm RADSOK	Operating Temperature 工作温度	-40°C to 125°C
Operating Voltage 工作电压	1000V	Durability 耐插拔	100 (Min) Mating Cycles 最少100次
Flammability 阻燃性	IP67(Mated)	Touch-Proof 防触电	UL 2251
Waterproof 防水等级	360° (60db/100M)	HVIL 高压互锁C	Integrated 集成
EMI 防电磁干扰	UL 94V-0	Recommended Torque 推荐扭矩	M5: 6 ~ 8N.M

2-Pole Receptacle 2芯插座



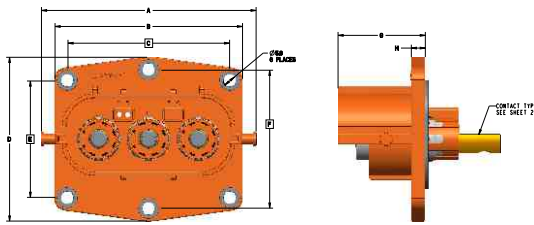
Size	Receptacle Dimensions						
	A	B	C	D	E	F	G
9.1mm	76.6	64	52	66	54	40.5	6.5

2-Pole 90° Plug 2芯直角 (90°) 插头



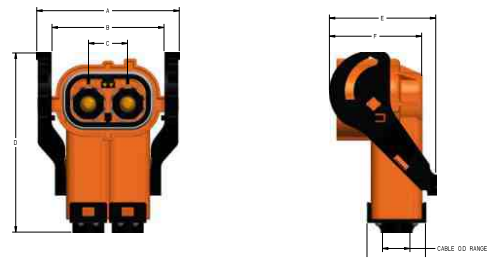
Size	2-Pole Plug Dimensions							Cable O.D Range
	A	B	C	D	E	F	G	
9.1mm	85	66	23	51.9	47.8	99.4	34.5	Ø15~17

3-Pole Receptacle 3芯插座



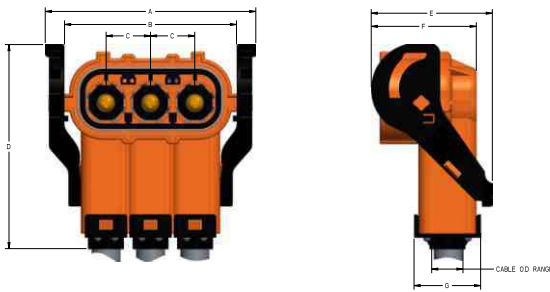
Size	Receptacle Dimensions							
	A	B	C	D	E	F	G	H
9.1mm	100	87	75	76	54	64	40.5	6.5

2-Pole Plug 2芯直插头



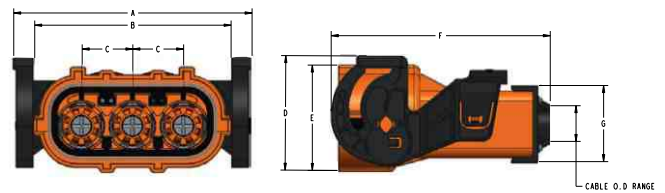
Size	Plug Dimensions							
	A	B	C	D	E	F	G	Cable O.D Range
9.1mm	64	66	23	106	63	54	34.5	Ø15~16

3-Pole Straight Plug 3芯直插头



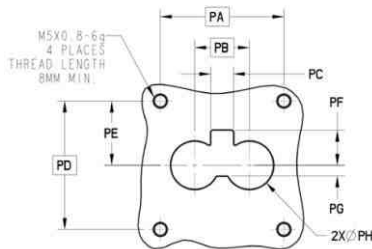
Size	Plug Dimensions							
	A	B	C	D	E	F	G	Cable O.D Range
9.1mm	109	89	23	106	63	54	34.5	Ø15~16

3-Pole 90° Plug 3芯直角 (90°) 插头



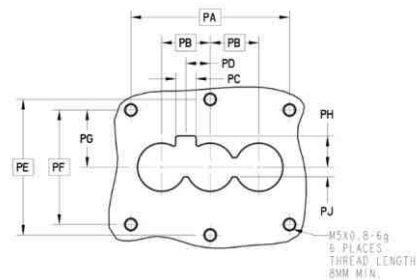
Size	3-Pole Plug Dimensions							
	A	B	C	D	E	F	G	Cable O.D Range
9.1mm	108	89	23	51.9	47.8	99.4	34.5	Ø15~17

Cut-Out Panel Layout of 2-Port(2芯插座面板开孔尺寸)



Size	Cut-Out Panel Dimensions							
	PA	PB	PC	PD	PE	PF	PG	PH
9.1mm	52	23	9.5	54	27	14.7	4.5	22.5

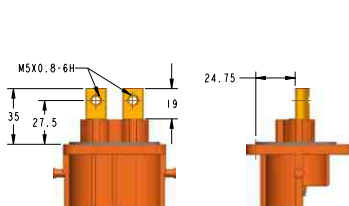
Cut-Out Panel Layout of 3-Port(3芯插座面板开孔尺寸)



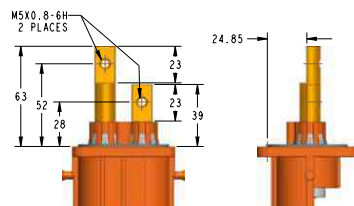
Size	Cut-Out Panel Dimensions								
	PA	PB	PC	PD	PE	PF	PG	PH	PJ
9.1mm	75	23	9.5	11.5	64	54	27	14.7	4.5

2芯插座汇流排接线类型

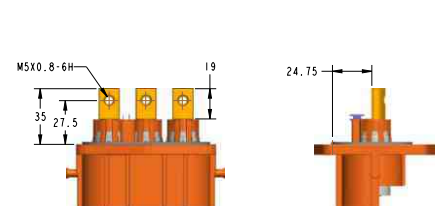
Busbar Type 1



Busbar Type 2

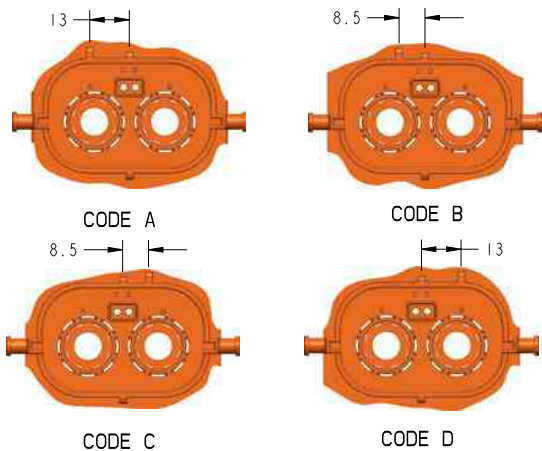


Busbar Type 1

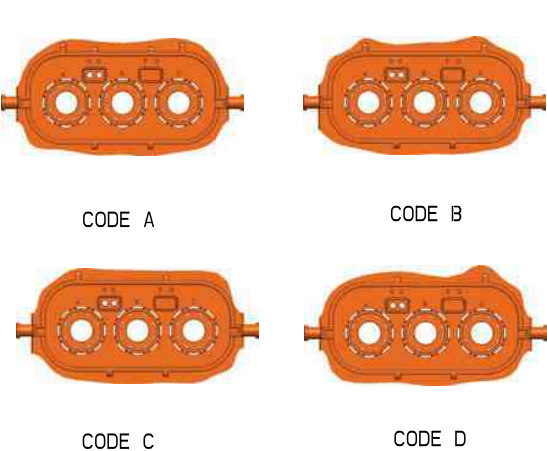


Codings 编码

2-Pole Receptacle 2芯插座编码



3-Pole Receptacle 3芯插座编码



Ordering Information 订购选型指南

Plug 插头

Product Series: UPC 产品系列	Connector Type 产品类型	RADSOK® Contact Size 端子尺寸	Pole Number 芯数	Coding Selection 编码选择	HVIL Selection 高压互锁选择	EMI Selection 电磁屏蔽选择	Crimp Wire Size 压接线号
UPC	P 90° Angular Plug 90° 弯头插头	01 9.1mm	2 2-Pole 2芯	A Code A	L HVIL 带高压互锁	S W/ Shielding Shell 带屏蔽外壳	1 35mm² (9.1mm Only)
	IP Straight Plug 直插头	02 14.0mm	3 3-Pole 3芯	B Code B	N No HVIL 不带高压互锁		2 50mm² (9.1mm Only)
				C Code C			5 25mm² (9.1mm Only)
				D Code D			3 95mm² (14.0mm Only)
							4 120mm² (14.0mm Only)
							6 150mm² (14.0mm Only)

Receptacle 插座

Product Series: UPC 产品系列	Connector Type 产品类型	RADSOK® Contact Size 端子尺寸	Pole Number 芯数	Coding Selection 编码选择	HVIL Selection 高压互锁选择	EMI Selection 电磁屏蔽选择	Contact Type 端子类型
UPC	R Box Mount Receptacle (盒式安装插座)	01 9.1mm	2 2-Pole 2芯	A Code A	L HVIL 带高压互锁	S W/ Shielding Shell 带屏蔽外壳	1 Busbar type 1 汇流排类型1
		02 14.0mm	3 3-Pole 3芯	B Code B	N No HVIL 不带高压互锁		2 Busbar type 2 汇流排类型2
				C Code C			
				D Code D			

ePower-Lite 系列



The ePower-Lite is a plastic power connector series especially designed to be used in the electric vehicle market. There are 2-pole, 3-pole and 4-pole for options. The robust plastic shell can withstand high temperature up to 125°C and provides 360 degree EMI function and integrated HVIL contacts in the connectors.

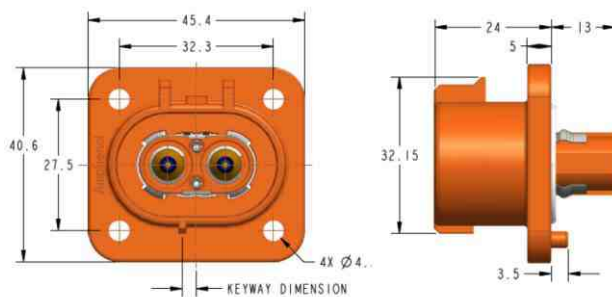
ePower-Lite是一个专为电动车辆市场设计的塑料电源连接器系列。

配置有2芯、3芯和4芯结构。其坚固的塑料外壳最高可耐 125°C 高温，同时提供360度EMI屏蔽功能，并在连接器中配备了HVIL高压互锁端子。

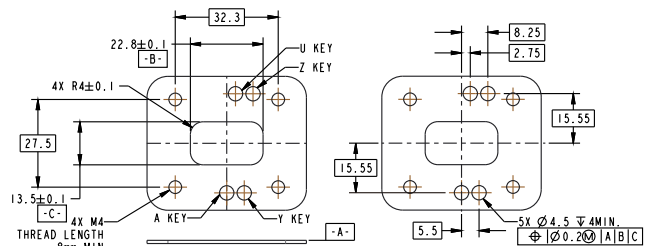
► Features & Benefits 性能特点:

- **Plastic shell, light weight**
塑料外壳、重量轻
- **Compact design for space considerations with EV/HEV**
特别为有空间局限性的电动/混合动力车辆市场设计的紧凑结构
- **Secondary locking feature**
增加的副锁功能
- **Low mating/un-mating force**
低插拔力
- **Durability: 100 mating cycles minimum**
最少耐100次插拔
- **Water proof: IP67**
防水等级: IP67
- **Touch proof: IEC 60529**
防触电设计
- **Flammability: UL 94V-0** 阻燃标准
- **EMC optional** 电磁兼容 (选项)
- **HVIL optional** 高压互锁 (选项)
- **Adding secondary locking** 增加了二级锁
- **RoHS Compliant** 符合无铅标准

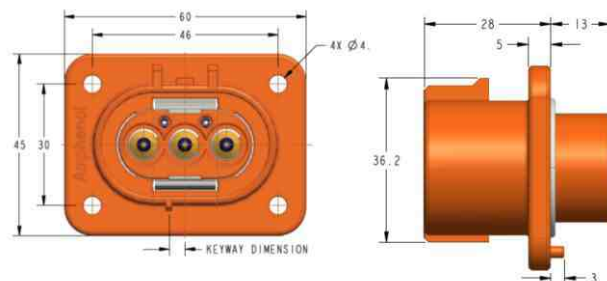
► 2-Pole Electrical Receptacle with HVIL & Shielding Shell 2芯带高压互锁和屏蔽电气插座



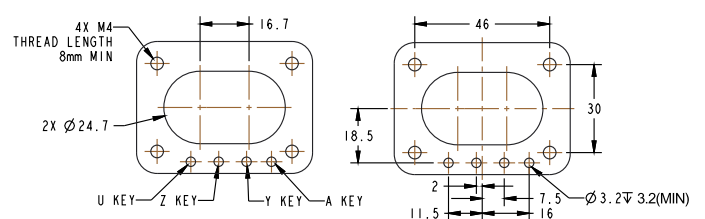
2芯插座面板开口尺寸



► 3-Pole Electrical Receptacle with HVIL & Shielding Shell 3芯带高压互锁和屏蔽电气插座

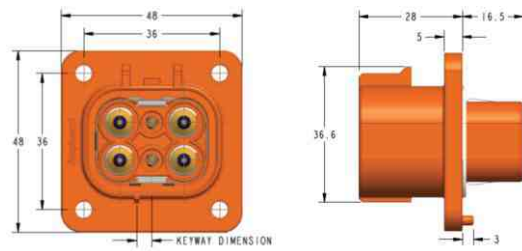


3芯插座面板开口尺寸

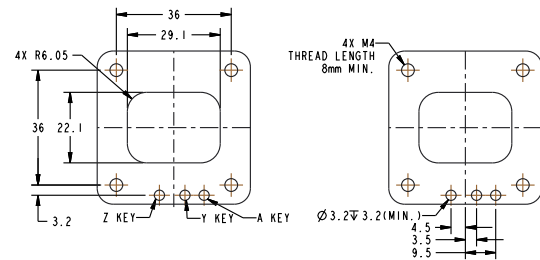


► 4-Pole Electrical Receptacle with HVIL & Shielding Shell

4芯带高压互锁和屏蔽电气插座

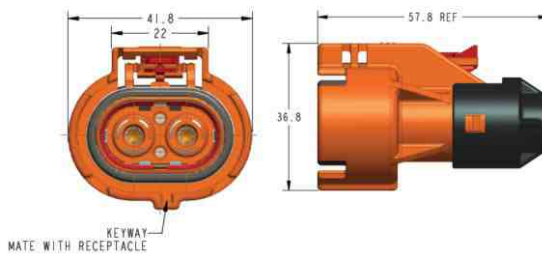


4芯插座面板开口尺寸



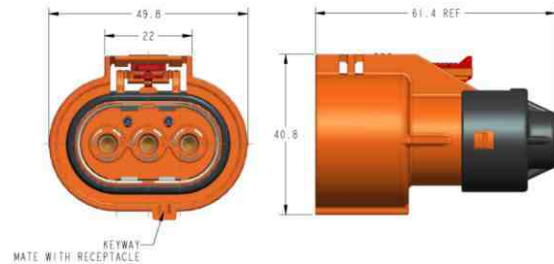
► 2-Pole Electrical Plug with HVIL & Shielding Shell

2芯带高压互锁和屏蔽电气插头



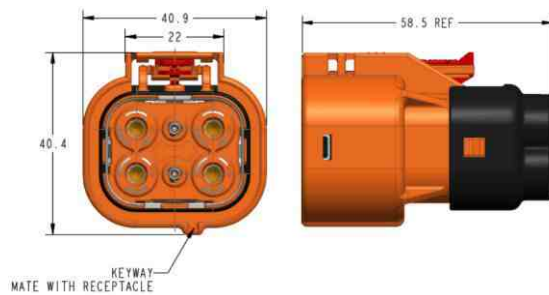
► 3-Pole Electrical Plug with HVIL & Shielding Shell

3芯带高压互锁和屏蔽电气插头



► 4-Pole Electrical Plug with HVIL & Shielding Shell

4芯带高压互锁和屏蔽电气插头



► Key Marking 键位标志



Technical Data 技术参数

Contact Test Current 端子测试电流	2-Pole 2芯	70 Amps/5 Amps	Test Voltage (Sea Level) 测试电压	3000V AC RMS
	3-Pole 3芯	70 Amps/5 Amps	Operating Temperature 工作温度	-40°C to 125°C
	4-Pole 4芯	70 Amps/13 Amps	Operating Voltage 工作电压	800V AC
Number of Contacts 端子数	2-Pole 2个	2&2	Finger Proof 防触电设计	IEC 60529
	3-Pole 3个	3&2	Durability 耐插拔	100(Min)
	4-Pole 4个	4&2	Water Proof 防水等级	IP67(Mated)
Contact Size 端子尺寸	2-Pole 2芯	3.6mm/#20	Salt Spray 盐雾测试	96H
	3-Pole 3芯	3.6mm/#20	HVIL 高压互锁	Yes
	4-Pole 4芯	3.6mm/#16	Recommended Torque 推荐扭矩	M4: 4~6N.M

► Ordering Information 订购选型指南

Product Series 产品系列	Connector Type 连接器类型	Pole Number 芯数	Cross Mating Proof 防误插键位	Crimped Wire Size 压接线缆尺寸
EL	P Plug	2	2-Pole	A
	R Receptacle	3	3-Pole	Y
		4	4-Pole	Z
				U
			Key/A	01
			Key/Y	02
			Key/Z	03
			Key/U	04
				2.5mm ²
				4.0mm ²
				6.0mm ²
				10.0mm ²

LPT 系列



The LPT Series is based on the MIL-C-26482 Series I and Amphenol's original PT Series. Cost effective without sacrificing quality. This series is a cylindrical bayonet connector constructed with an aluminum shell and features stamped and formed crimped contacts.

LPT是基于军工MIL-C-26482系列I标准和安费诺原有PT系列产品开发的，结构改进、成本更具优势的金属外壳连接器。

► Features & Benefits 性能特点：

- **Aluminum shell construction provides high strength while being light in weight**
铝合金外壳兼顾轻量化和金属机械性能
- **Multiple shell plating options(up to 500H salt spray protection)**
提供多种外壳电镀选择
- **Stamped and formed crimp contacts with 3 tine retention system**
3爪冲压压接端子
- **Machined contacts available**
提供机加工端子选择
- **Quick positive mating**
快速卡口连接
- **Ingress protection up to IP67 and IP69K when mated**
连接后防水等级达到IP67&IP69K
- **High shock and high vibration resistance**
抗高频冲击和振动
- **Operating temperature: -40°C to 125°C**
工作温度范围: -40°C to 125°C
- **Intermateable with Amphenol's PT series**
与安费诺PT系列产品互配
- **UL/TUV certifications in process**
UL/TUL 认证中

Structure Features

5 Shell Styles : 5种外壳款式

- ① Box mounting receptacle 盒式安装插座
- ② Jam nut receptacle 锁紧螺母插座
- ③ Straight plug 直插头
- ④ Wall mounting receptacle 墙式安装插座
- ⑤ Inline receptacle 空中对接插座

3 Connector Finishes Available: 3种端子电镀

- ① Black zinc (RoHS) 镀黑锌 (无铅)
- ② Nickel (RoHS) 镀镍 (无铅)
- ③ Gray zinc nickel(RoHS) 镀灰色锌镍

4 Alternate Positioning : 4种旋转定位角度

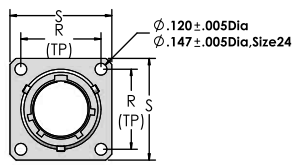
Insert rotation W,X,Y,Z 胶芯角度W,X,Y,Z

Crimp Contact Size : 压接端子尺寸 :

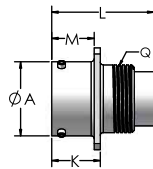
- ① #12: 14-12 (2.00-4.00mm²)
- ② #16: 18-16 (0.75-1.50mm²)
- ③ #20: 24-20 (0.25-0.50mm²)
- ④ Contact our sales team if you need RADSOK® or alternate size contact options
如需RADSOK大电流端子或其他端子要求，请咨询我们销售团队。

Technical Data 技术参数			
Test Current 测试电流	#20 contact 7.5A	Recommended Operating Voltage 推荐工作电压	I# 250V
	#16 contact 13A		II# 500V
Temperature Range 温度范围	40°C~125°C	Test Voltage AC 测试电压	I# 1500V
			II# 2300V
Ingress Protection 防水等级	IP67&IP69K	Salt Spray Test 盐雾测试	1.Black Zinc(non-conductive):48H 镀黑锌(非导电):48H
Mating Cycle 耐插拔次数	500 Cycles		2.Nickel(conductive):48H 镀镍(导电):48H
Vibration 抗振动	In accordance with test procedure EIA-364-28		3.Gray Zinc Nickel(conductive):500H 镀灰色锌镍(导电):48H
Thermal Shock 抗热冲击	In accordance with test procedure EIA-364-32	RoHS	Compliant 符合

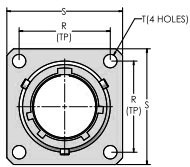
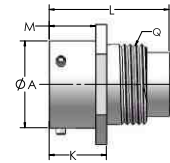
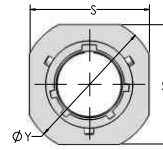
Shell Type 外壳类型



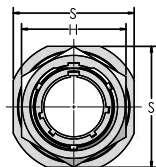
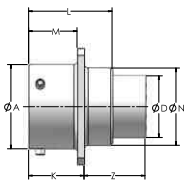
00: Wall Mounting Receptacle
墙装式插座



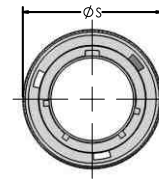
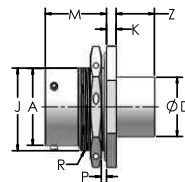
01: Inline Receptacle
空中对接插座



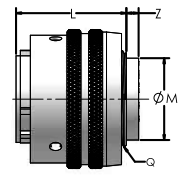
02: Box Mounting Receptacle
盒式安装插座



07: Jam nut Receptacle
锁紧螺母插座



06: Straight Plug
直插头



Back Shell Type 尾附件类型

"A"



常规应用 (非防水)

"SE"



分线密封尾附件

"PG"



电缆密封接头

"G"



热缩套管尾附件

"SE(SR)"



抗拉力电缆夹

Ordering Information 订购选型指南

1	2		3		4	5	6		7	8
LPT	06		SE		12-	10	S		W	(023)
Product Line 产品系列	Shell Type 外壳类型		Service Classes 服务等级		Shell Size 外壳尺寸	Insert Arrangement 胶芯排布	Contact 端子类型		Insert Rotation 胶芯旋转角度	Options 其他选项
LPT	00	Wall Mounting Receptacle	A	General Duty	8	4	P	Pin	W	1. Plating 电镀选项 "027" - Black Zinc "023" - Nickel "072" - Gray Zinc Nickel 2. "LC"- Less Contacts 无端子 3. "EMI" 带EMI屏蔽 4. "SR"-Strain Relief SR电缆夹
	01	Inline Receptacle	SE	Open Wire sealing	10	2,6	S	Socket	X	
	02	Box Mounting Receptacle	G	Heat Shrink Boot Adapter	12	4,8,10			Y	
	06	Straight Plug Receptacle	SE(SR)	Strain Relief Clamp	14	5,8,19,AA			Z	
	07	Jam Nut Receptacle	PG	Compressing Cable Gland	16	8, 26				
					18	5,8,11,32				
					20	16,41				
					22	55				
					24	31				

UPT 系列



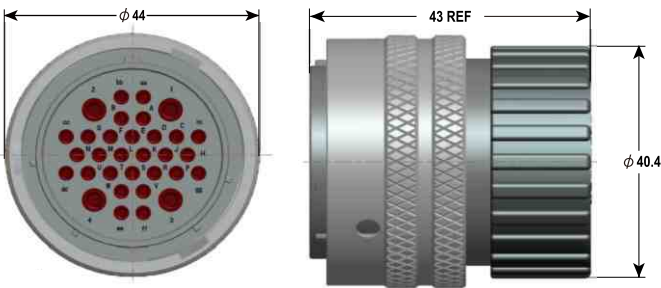
Based on the 26482 Series I, UPT is a plastic shell interconnect with a metal bayonet coupling system and crimp contacts. Featuring a light weight design, smaller footprint and easy field installation, the UPT is a cost effective industrial connector solution. The UPT provides more options for industrial interconnect markets that do not require a metal shell or Mil-Spec equivalents.

UPT连接器是基于26482 系列1标准开发的一款以塑料外壳、金属卡口连接螺母与压接端子为特色的连接器。UPT具有重量轻、体积小和易于现场安装的特点，是一款经济型的工业连接器。

UPT为不要求金属外壳或军标要求的工业电气连接市场中提供了更多的选择。

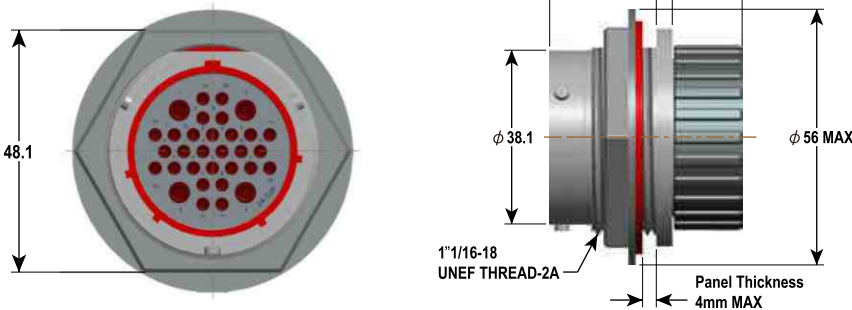
► UPT06D-24-32S

Size 24, 32 Way, Plug 外壳#24, 32芯 插头

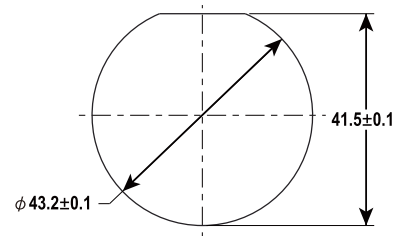


► UPT07D-24-32P

Size 24, 32 Way, Jam nut Receptacle
外壳#24, 32芯, 锁紧螺母插座



► Recommended cut-out 推荐面板开口尺寸



► Features & Benefits 性能特点:

- **Contact sizes and arrangements:** 12 & 16 stamped & formed crimp contacts, two insert arrangements available (24-32 & 24-48)
端子尺寸和排布: 12 & 16号冲压成型压接端子, 2种排布方式 (24-32 & 24-48)
- **Intermateable with Souriau TrimTrio, UTO, and ITT Trident Ringlock**
可与Souriau TrimTrio, UTO和ITT Trident Ringlock 产品系列互配
- **Wall mount, jam nut, and straight plug shell styles**
外壳式样: 墙装式、锁紧螺母式、直插头式
- **Plastic shell, light weight** 塑料外壳、重量轻
- **Metallic bayonet coupling, molded receptacle**
金属卡口连接、模制插座
- **Quick connect/Disconnect** 快速连接/断开
- **Multiple back shell sealing accessories**
多种尾附件/密封选择
- **ROHS compliant** 符合无铅要求

Technical Data 技术参数

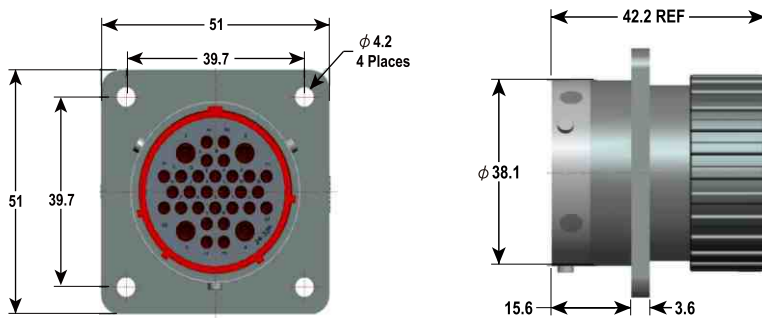
Rated Current Contact #16 16号端子额定电流	13 Amps
Rated Current Contact #12 12号端子额定电流	23 Amps
Operating Voltage 工作电压	250VAC
Withstanding Voltage 耐电压	2000V DC
Insulation Resistance 绝缘阻抗	5000 Megohms Min.
Operating Temperature 工作温度	-55°C ~ +125°C
Water Proof 防水等级	IP67(Mated)
Flammability 阻燃性	UL 94 V-0
Durability 耐插拔	500 Cycles (500次)

Front Face of Pin Illustrated

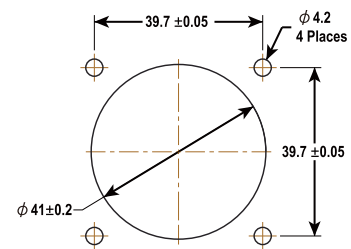
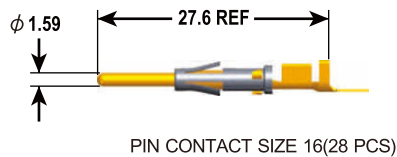
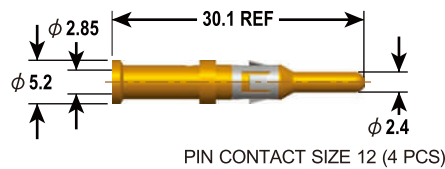
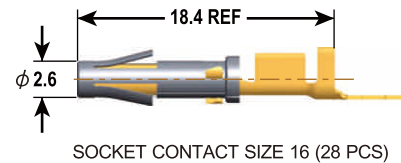
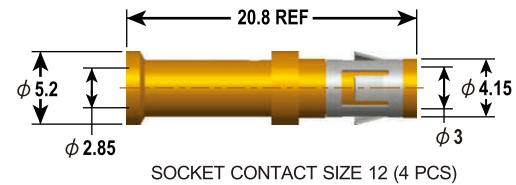
Insert Arrangement 端子排布	24-32	
Number of Contacts 端子数量	4	28
Contact Size 端子尺寸	12	16

► **UPT00D-24-32P**

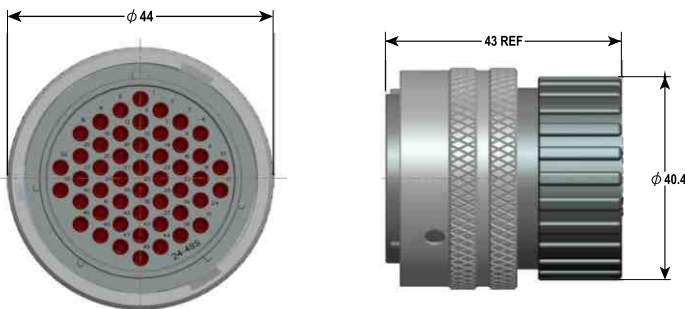
Size 24, 32 Way, Wall Mounting Receptacle
外壳#24 32芯 墙装式插座

► **Recommended Cut-Out**

推荐面板开口尺寸

► **24 Size, 32 Way** 外壳#24, 32芯公端子► **24 Size, 32 Way** 外壳#24, 32芯母端子► **UPT06D-24-48S**

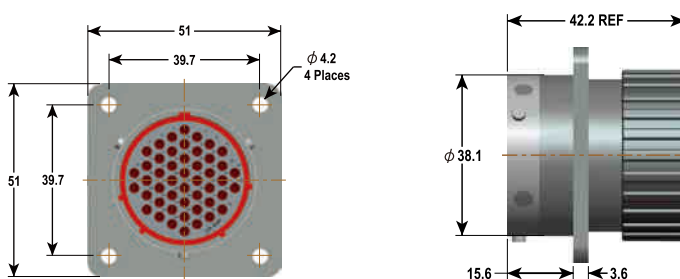
Size 24, 48 Way, Plug 外壳#24, 48芯, 插头



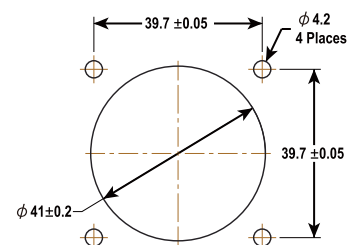
Front Face of Pin Illustrated	
Insert Arrangement 端子排布	24-48
Number of Contacts 端子数量	48
Contact Size 端子尺寸	16

► **UPT00D-24-48P**

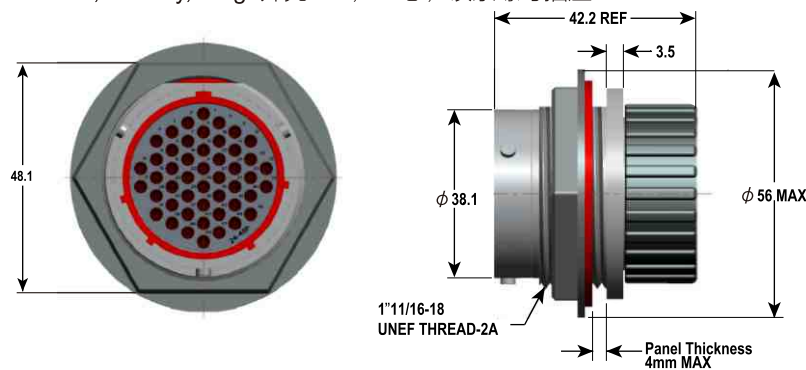
Size 24, 48 Way, Wall Mounting Receptacle
外壳#24, 48芯, 墙装式插座

► **Recommended Cut-out**

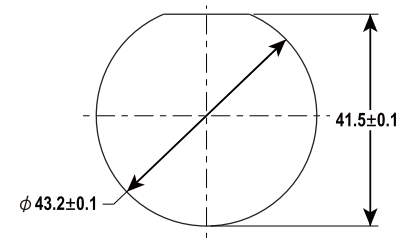
推荐面板开口尺寸



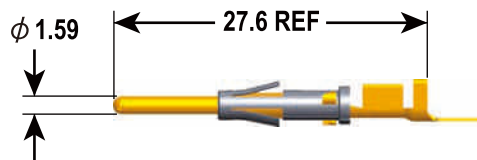
► | UPT07D-24-48P
Size 24, 48 Way, Plug 外壳#24, 48芯, 锁紧螺母插座



► | Recommended Cut-out
推荐面板开口尺寸

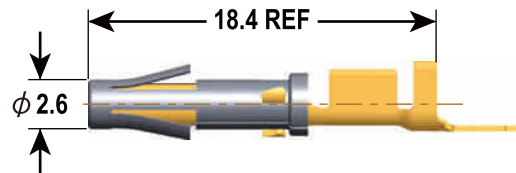


► | 24 Size, 48 Way 外壳#24, 48芯
Pin Contact 公端子



PIN CONTACT SIZE 16 (48 pcs)

► | Socket Contact
母端子



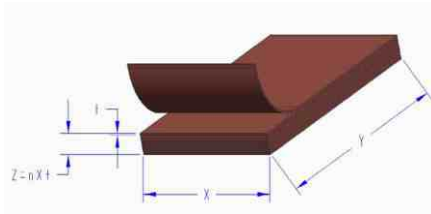
SOCKET CONTACT SIZE 16 (48 pcs)

► | Ordering Information 订购选型指南

Product Series 产品系列	Connector Type 连接器 类型	Shell Type 外壳类型	Insert Pattern 胶芯模式		Contact 端子	Cross Mating Proof 防误配键位	Shell Plating 外壳电镀		Back Shell 尾附件	
			Shell Size 外壳尺寸	Contact Arrangement 端子排布						
UPT	06 Plug 插头	M MetalShell 金属外壳	10	4 Size 16 Contacts	P Pin (公端)	Omit Normal key	Omit	Nickel Plating 48H salt spray 镀镍耐48小时盐雾	Omit	With grommet and nut 带密封垫圈和螺母
		D Dielectric Shell (Plastic) 绝缘 外壳 (塑料)	12	8 Size 16 Contacts	S Socket (母端)	W Key/W	1	Black Zinc plating 96H salt spray 镀黑锌耐96小时盐雾	N	No rear accessory 无后附件
			14	12 Size 16 Contacts		X Key/X	2	Tin plating 720H salt spray for die casting 压铸件镀锡耐720小时盐雾		
			16	19 Size 16 Contacts		Y Key/Y		(Zinc-Nickel plating only for aluminum alloy coupling nut) 电镀镍仅用于铝合金连接螺母		
			18	23 Size 16 Contacts		Z Key/Z				
			22	35 Size 16 Contacts						
			24	48 Size 16 Contacts						
			24	32(4 Size 12 + 28 Size 16 Contacts)						

Product Series 产品系列	Connector Type 连接器 类型	Shell Type 外壳类型	Insert Pattern 胶芯模式		Contact 端子	Cross Mating Proof 防误插键位	Shell Plating 外壳电镀		Back Shell 尾附件	
			Shell Size 外壳尺寸	Contact Arrangement 端子排布						
UPT	00 Wall Mounting Receptacle 墙装式插座	M MetalShell 金属外壳	10	4 Size 16 Contacts	P Pin (公端)	Omit Normal key	Omit	Nickel Plating 48H salt spray 镀镍耐48小时盐雾	Omit	With grommet and nut 带密封垫圈和螺母
	07 Jam Nut Receptacle 安全螺母式 插座	D Dielectric Shell (Plastic) 绝缘 外壳 (塑料)	12	8 Size 16 Contacts	S Socket (母端)	W Key/W	1	Black Zinc plating 96H salt spray 镀黑锌耐96小时盐雾	N	No rear accessory 无后附件
			14	12 Size 16 Contacts		X Key/X	2	Tin plating 720H salt spray for die casting 压铸件镀锡耐720小时盐雾		
			16	19 Size 16 Contacts		Y Key/Y		(Zinc-Nickel plating only for aluminum alloy coupling nut) 电镀镍仅用于铝合金连接螺母		
			18	23 Size 16 Contacts		Z Key/Z				
			22	35 Size 16 Contacts						
			24	48 Size 16 Contacts						
			24	32(4 Size 12 + 28 Size 16 Contacts)						

Flexible Busbars 柔性母排(汇流排)



A	零件编号	t		
		n	X	t
125 A	01	8	x	6 x 0.5
	02	3	x	9 x 0.8
	03	6	x	9 x 0.8
	04	3	x	13 x 0.5
	05	2	x	15.5 x 0.8
250 A	06	9	x	9 x 0.8
	07	6	x	13 x 0.5
	08	4	x	15.5 x 0.8
	09	2	x	20 x 1
	10	3	x	20 x 1
400 A	11	2	x	24 x 1
	12	6	x	15.5 x 0.8
	13	10	x	15.5 x 0.8
	14	4	x	20 x 1
	15	5	x	20 x 1
500 A	16	6	x	20 x 1
	17	3	x	24 x 1
	18	4	x	24 x 1
	19	2	x	32 x 1
	20	3	x	32 x 1
630 A	21	2	x	40 x 1
	22	5	x	24 x 1
	23	6	x	24 x 1
	24	4	x	32 x 1
	25	3	x	40 x 1
800 A	26	4	x	40 x 1
	27	3	x	50 x 1
	28	10	x	20 x 1
	29	8	x	24 x 1
	30	5	x	32 x 1
1000 A	31	6	x	32 x 1
	32	5	x	40 x 1
	33	4	x	50 x 1
	34	10	x	24 x 1
	35	8	x	32 x 1
1250 A	36	6	x	40 x 1
	37	5	x	50 x 1
	38	4	x	63 x 1
	39	3	x	80 x 1
	40	10	x	32 x 1
1600 A	41	8	x	40 x 1
	42	10	x	40 x 1
	43	6	x	50 x 1
	44	8	x	50 x 1
	45	5	x	63 x 1
	46	6	x	63 x 1
	47	4	x	80 x 1
	48	5	x	80 x 1
	49	10	x	50 x 1
	50	8	x	63 x 1
	51	6	x	80 x 1
	52	5	x	100 x 1
	53	6	x	100 x 1
	54	10	x	63 x 1
	55	8	x	80 x 1
	56	10	x	80 x 1
	57	8	x	100 x 1
	58	10	x	100 x 1
	59	12	x	100 x 1
	60	10	x	120 x 1



Application 应用



How to Order

1		2		3		4		5
R	Rigid busbar	T	With shrink tube	BK	Black	D	ODM	Serial Number
F	Flexible busbar	NT	No shrink tube	RD	Red	E	OEM-need customer's drawing	01
				BU	Blue			02
				YE	Yellow			03
				GN	Green			...
				WH	White			60
				SP	Special colors			
				NA	None			

North America

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Asia

安费诺科技（珠海）有限公司

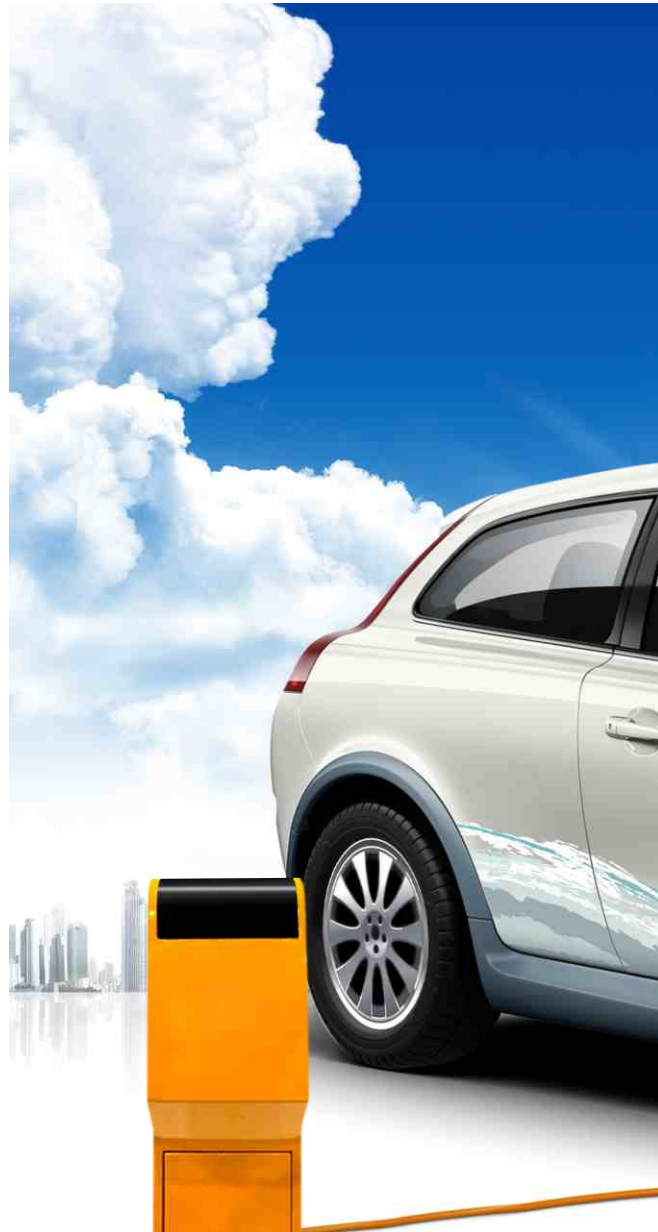
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www.amphenol-industrial.com



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