

ESC-HPB450连接器/ ESC-HPB450 Connector

技术规格书A3/Technical Specification A3

• 产品概述/Product instruction

 <p>应用场景/Application</p> <p>主要应用于箱式大储能、工商业储能、户用储能等领域，为储能系统的电池PACK、PCS等器件提供功率传输。</p> <p>Primarily used in fields such as large containerized energy storage, commercial & industrial energy storage, and residential energy storage, providing power transmission for components like battery PACKs and PCS within the energy storage system.</p>	<p>优势/Advantages</p> <ul style="list-style-type: none"> ✓ 头插座可360°多角度插合，插合后可360°旋转 Plug and receptacle support 360° mating with rotation after mating. ✓ 二次锁结构确保连接可靠，防止意外松脱 Secondary locking structure ensures reliable mating and prevents loosening. ✓ 对插/安装均采用颜色和键位防呆 Color coding and mechanical keying and applied for mis-mating prevention during mating and installation. ✓ 插头端接方式可选压接或超声波焊接 Termination options include crimping or ultrasonic welding.
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• 订货信息/Ordering information

成品订货编码

Finnish product ordering code

订货信息/Ordering information						
序号/ No.	类别/ Type	产品名称/ Product name	产品编号/ Product code	防呆键/ Keying	颜色/ Color	备注/ Remarks
1	插头/ Plug	ESC-HPB450-150Y-PYX插头/ ESC-HPB450-150Y-PYX plug	112030109343	X	橙色/ Orange	压接150mm ² 线缆 (外径22.5±0.5mm) / Supports crimping of 150 mm ² cable (outer diameter : 22.5±0.5mm)
2		ESC-HPB450-150Y-PBY插头/ ESC-HPB450-150Y-PBY plug	112030109344	Y	黑色/ Black	
3		ESC-HPB450-150Y-PYZ插头/ ESC-HPB450-150Y-PYZ plug	112030109345	Z	橙色/ Orange	
4		ESC-HPB450-150Y-PBW插头/ ESC-HPB450-150Y-PBW plug	112030109346	W	黑色/ Black	
5		ESC-HPB450-120Y-PYX插头/ ESC-HPB450-120Y-PYX plug	112030109647	X	橙色/ Orange	压接120mm ² 线缆 (外径20.5±0.5mm) / Supports crimping of 120 mm ² cable (outer diameter : 20.5±0.5mm)
6		ESC-HPB450-120Y-PBY插头/ ESC-HPB450-120Y-PBY plug	112030109648	Y	黑色/ Black	
7		ESC-HPB450-120Y-PYZ插头/ ESC-HPB450-120Y-PYZ plug	112030109649	Z	橙色/ Orange	
8		ESC-HPB450-120Y-PBW插头/ ESC-HPB450-120Y-PBW plug	112030109650	W	黑色/ Black	

9		ESC-HPB450-150H-PYX插头/ ESC-HPB450-150H-PYX plug	112030109364	X	橙色/ Orange	超声波焊接150mm ² 线缆 (外径22.5±0.5mm) / Supports ultrasound welding of 150 mm ² cable (outer diameter : 22.5±0.5mm)
10		ESC-HPB450-150H-PBY插头/ ESC-HPB450-150H-PBY plug	112030109365	Y	黑色/ Black	
11		ESC-HPB450-150H-PYZ插头/ ESC-HPB450-150H-PYZ plug	112030109366	Z	橙色/ Orange	
12		ESC-HPB450-150H-PBW插头/ ESC-HPB450-150H-PBW plug	112030109367	W	黑色/ Black	
13		ESC-HPB450-120H-PYX插头/ ESC-HPB450-120H-PYX plug	112030109651	X	橙色/ Orange	超声波焊接120mm ² 线缆 (外径20.5±0.5mm) / Supports ultrasound welding of 120 mm ² cable (outer diameter : 20.5±0.5mm)
14		ESC-HPB450-120H-PBY插头/ ESC-HPB450-120H-PBY plug	112030109652	Y	黑色/ Black	
15		ESC-HPB450-120H-PYZ插头/ ESC-HPB450-120H-PYZ plug	112030109653	Z	橙色/ Orange	
16		ESC-HPB450-120H-PBW插头/ ESC-HPB450-120H-PBW plug	112030109654	W	黑色/ Black	
17	插座/ Receptacle	ESC-HPB450-262-RYX插座/ ESC-HPB450-262-RYX receptacle	112040110009	X	橙色/ Orange	插座铜排接双M6螺钉/ Receptacle busbar connection with two M6 screw.
18		ESC-HPB450-262-RBY插座/ ESC-HPB450-262-RBY receptacle	112040110010	Y	黑色/ Black	
19		ESC-HPB450-262-RYZ插座/ ESC-HPB450-262-RYZ receptacle	112040110011	Z	橙色/ Orange	
20		ESC-HPB450-262-RBW插座/ ESC-HPB450-262-RBW receptacle	112040110012	W	黑色/ Black	

订货说明:

- (1)本系列所有头座均有连接防呆及插座安装防呆结构, 相同防呆键位的插头插座可适配连接, 请客户按对应规格选购。
- (2)上述表中仅列举了部分通用产品的订货信息, 本系列产品也可按客户需求定制规格。

Ordering information

- (1)All plugs and receptacles in this series feature mis-mating prevention for both connection and receptacle installation. Only plus and receptacles with matching keying configurations can be mated. Customers are advised to select products according to the corresponding specification.
- (2)The above table lists only part of the standard product for reference. Products in this series can also be customized according to customer requirements.

插头配套发货物料表/Plug accessories:

订货信息/Ordering information		配套信息/Accessories			
产品名称/ Product name	产品编号/ Product code	螺钉组件/ Screw assembly	封线体/ Cable seal	端子/ Terminal	尾盖/ Rear cover
ESC-HPB450-150Y-PYX插头/ ESC-HPB450-150Y-PYX plug	112030109343				
ESC-HPB450-150Y-PBY插头/ ESC-HPB450-150Y-PBY plug	112030109344				
ESC-HPB450-150Y-PYZ插头/ ESC-HPB450-150Y-PYZ plug	112030109345				
ESC-HPB450-150Y-PBW插头/ ESC-HPB450-150Y-PBW plug	112030109346				

ESC-HPB450-120Y-PYX插头/ ESC-HPB450-120Y-PYX plug	112030109647				
ESC-HPB450-120Y-PBY插头/ ESC-HPB450-120Y-PBY plug	112030109648				
ESC-HPB450-120Y-PYZ插头/ ESC-HPB450-120Y-PYZ plug	112030109649				
ESC-HPB450-120Y-PBW插头/ ESC-HPB450-120Y-PBW plug	112030109650				
ESC-HPB450-150H-PYX插头/ ESC-HPB450-150H-PYX plug	112030109364				
ESC-HPB450-150H-PBY插头/ ESC-HPB450-150H-PBY plug	112030109365				
ESC-HPB450-150H-PYZ插头/ ESC-HPB450-150H-PYZ plug	112030109366				
ESC-HPB450-150H-PBW插头/ ESC-HPB450-150H-PBW plug	112030109367				
ESC-HPB450-120H-PYX插头/ ESC-HPB450-120H-PYX plug	112030109651				
ESC-HPB450-120H-PBY插头/ ESC-HPB450-120H-PBY plug	112030109652				
ESC-HPB450-120H-PYZ插头/ ESC-HPB450-120H-PYZ plug	112030109653				
ESC-HPB450-120H-PBW插头/ ESC-HPB450-120H-PBW plug	112030109654				

• 技术数据/Technical data

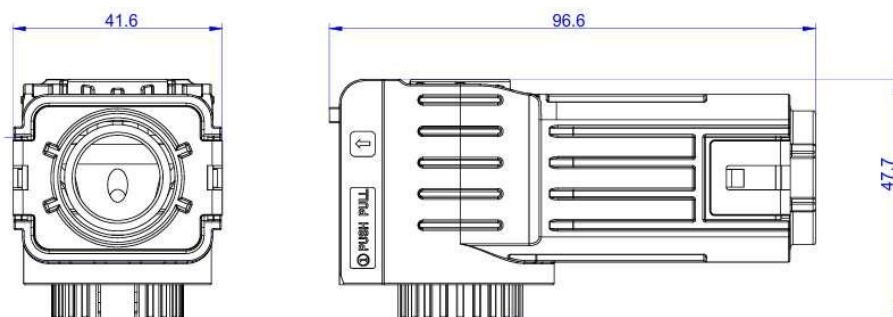
基本信息/Basic information	
芯数/Numbers of pins	1
端子规格/Terminal specifications	Φ14
电气性能/Electrical specification	
额定电压/Rated voltage	1500V DC
额定电流/Rated current	400A(120mm ²)、450A(150mm ²)
绝缘电阻/Insulation resistance	≥100MΩ
耐电压/Withstand voltage	6800V AC 50Hz
接触电阻/Contact resistance	≤0.1mΩ
温升/Temperature rise	≤45K
端接方式 /Termination method	
端接方式/Termination method	插头: 双B型压接/六方压接、超声波焊接, M8螺钉扭矩15±0.5N•m/ Plug: Double B-crimp or hex crimp, ultrasonic welding, M8screw tightening torque 插座: 螺纹锁紧M6 扭矩5N•m-5.5N•m/ Receptacle: Threaded locking M6, torque 5 N•m - 5.5 N•m
线缆规格/Cable specifications	120mm ² 、150mm ²
线缆外径OD/Cable outer diameter	20.5±0.5mm、22.5±0.5mm
机械性能/Mechanical specification	
机械寿命/Life cycle	≥100 次/cycles
振动/冲击 /Vibration and shock	QC/T 1067.1-2017 Vibration level V1

耐环境性能/Environmental resistance specification	
工作温度/Ambient temperature	-40℃ ~ +125℃
相对湿度/Humidity range	5% ~ 95%
盐雾/Salt spray	96 H
防护等级/IP rating	IP67(对插后/after mating)
材料/涂覆/外观/Materials/Finish/Outline	
绝缘体/Insulator	工程塑料/ Engineering plastic
橡胶件/Rubber part	硅橡胶/Silicone rubber
接触件 /Contacts	铜合金 镀银/锡 Copper alloy Silver-plated/Tin-plated
标准及认证/Standards and certifications	
阻燃等级/Flame retardant rating	UL94 V0 (主体材料)/ UL94 V0 (main material)
环保要求/Environment requirements	RoHS 2.0

• 产品尺寸图及安装开孔尺寸/Product size & mounting hole dimension
(未注尺寸公差按GB/T1804-C/Tolerance shall comply with GB/T1804-C)

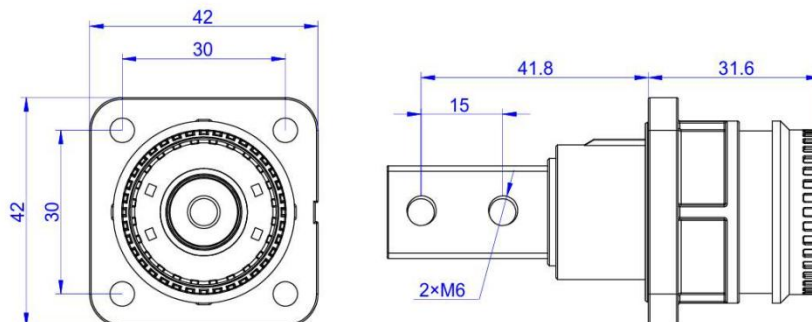
插头外形尺寸:

Plug outline dimensions:



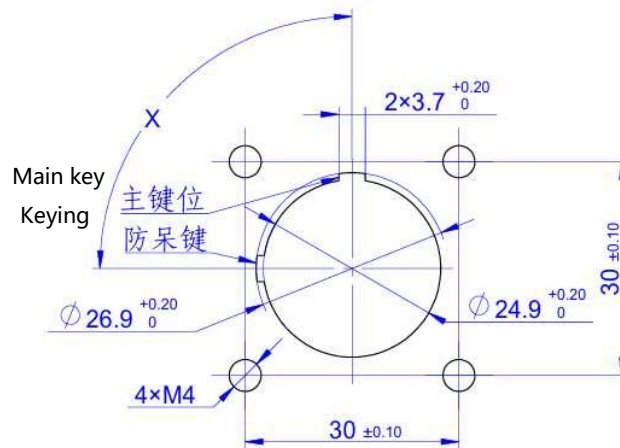
插座外形尺寸:

Receptacle outline dimension:



插座安装开孔尺寸:

Receptacle mounting hole dimension:



注：视角方向为插座对插面 → 安装法兰面

Note: view direction is from the mating face of receptacle → the mounting face

主键-防呆键角度对照表				
Main key - keying angle reference table				
型号 Model	X	Y	Z	W
颜色 Color	橙色 Orange	黑色 Black	橙色 Orange	黑色 Black
防呆键角度X Keying angle X	90°	225°	135°	315°

• 包装/储存/使用/Packaging/Storage/Usage

包装储存说明 /Instructions for packaging and storage	
包装方式/ Packaging method	纸箱包装, 防潮处理. Carton packaging, moisture-proof treatment
存放要求/ Storage requirements	包装成箱的产品应在环境温度-10°C ~ +40°C, 相对湿度80%以下, 周围空气中无酸性, 碱性或其它腐蚀性气体的库房里贮存, 贮存期自生产日期不超过1年, 注意尾数使用后请及时封存。 Products packed in boxes should be stored in a warehouse with an ambient temperature of -10°C ~ +40°C, a relative humidity of less than 80%, and no acidic, alkaline or other corrosive gases in the surrounding air. The storage period shall not exceed 1 year from the date of production. Please note that the remaining products should be sealed in time after use.
使用说明/ Instructions for use	连接器应在提供的技术参数范围内使用, 并严格遵照产品使用说明书, 对产品进行安装、使用、维护。 Connectors should be used within the provided technical parameter range and strictly in accordance with the product instruction manual for installation, use, and maintenance of the product.