

技术规格书B3/Technical Specification B3

ESC-HPB250连接器/ESC-HPB250 Connector

(基本型+A型/Basic Type + Type A)

• 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 PACK and PCS within the energy storage system.</p>	<p>优势/Advantages</p> <ul style="list-style-type: none"> ✓ 可 360°旋转对插，释放线缆应力 360° rotatable mating to release cable stress ✓ 二次锁防止意外松脱 Secondary lock prevents accidental disconnection loosening. ✓ 颜色/键位防呆 Color/key position error-proofing ✓ 一体式弯式端子，避免转接不良 One-piece right-angle terminals to prevent poor connections
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• 订货信息/Ordering information

1. 插头 Plug

订货信息/Ordering information						
序号/ No.	产品名称/ Product name	产品编号/ Product code	颜色/ Color	对插键位/ Mating key position	线规/ Cable specification	备注/ Remarks
1	ESC-HPB250-035-PY 插头/ ESC-HPB250-035-PY plug	112030107229	橙色 / Orange	40°	35mm ²	产品尺寸图及键位图详情见：产品尺寸图及安装开孔尺寸处/ For detailed product dimension drawings and key position diagrams, please refer to: Product dimension drawings & Mounting hole dimensions
2	ESC-HPB250-035-PB 插头/ ESC-HPB250-035-PB plug	112030107230	黑色 / Black	70°		
3	ESC-HPB250-050-PY 插头/ ESC-HPB250-050-PY plug	112030108371	橙色 / Orange	40°	50mm ²	
4	ESC-HPB250-050-PB 插头/ ESC-HPB250-050-PB plug	112030108372	黑色 / Black	70°		
5	ESC-HPB250-070-PY 插头/ ESC-HPB250-070-PY plug	112030106972	橙色 / Orange	40°	70mm ²	
6	ESC-HPB250-070-PB 插头/ ESC-HPB250-070-PB plug	112030106973	黑色 / Black	70°		

2.插座 Receptacle

订货信息/Ordering information						
序号/ No.	产品名称/ Product name	产品编号/ Product code	颜色/ Color	对插键位/ Mating keying	线规/ Cable specification	备注/ Remarks
7	ESC-HPB250-062-RY 插座/ ESC-HPB250-062-RY receptacle	112040107729	橙色 / Orange	40°	M6 螺纹孔/ M6 threaded hole	产品尺寸图及键位图详 情见：产品尺寸图及安 装开孔尺寸处/ For detailed product dimension drawings and key position diagrams, please refer to: Product dimension drawings & Mounting hole dimensions
8	ESC-HPB250-062-RB 插座/ ESC-HPB250-062-RB receptacle	112040107727	黑色 / Black	70°		
9	ESC-HPB250-062-RYA 插座/ ESC-HPB250-062-RYA receptacle	112040107728	橙色 / Orange	40°		
10	ESC-HPB250-062-RBA 插座/ ESC-HPB250-062-RBA receptacle	112040107726	黑色 / Black	70°		
11	ESC-HPB250-082-RY 插座/ ESC-HPB250-082-RY receptacle	112040107162	橙色 / Orange	40°	M8 螺纹孔/ M8 threaded hole	
12	ESC-HPB250-082-RB 插座/ ESC-HPB250-082-RB receptacle	112040107163	黑色 / Black	70°		
13	ESC-HPB250-082-RYA 插座/ ESC-HPB250-082-RYA receptacle	112040107419	橙色 / Orange	40°		
14	ESC-HPB250-082-RBA 插座/ ESC-HPB250-082-RBA receptacle	112040107420	黑色 / Black	70°		

• 可选配套零件Optional accessories

可选配套零件/Optional accessories					
序号/ No.	产品名称/ Product name	产品编号/ Product code	颜色/ Color	尺寸示意图/ Dimensional diagram	安装示意/ Installation diagram
1	FPEC23-20(1.0)防尘盖(红)/ FPEC23-20(1.0) dust cover (red)	501021705739	红色/ Red		
2	FPECF32.5-32.5-13.5(1.2)护套(红)/ FPECF32.5-32.5-13.5(1.2) sheath (red)	501021300722	红色/ Red		
3	FPEC29-29-11.5(1.5)护套(红)/ FPEC29-29-11.5(1.5) sheath (red)	501021300821	红色/ Red		

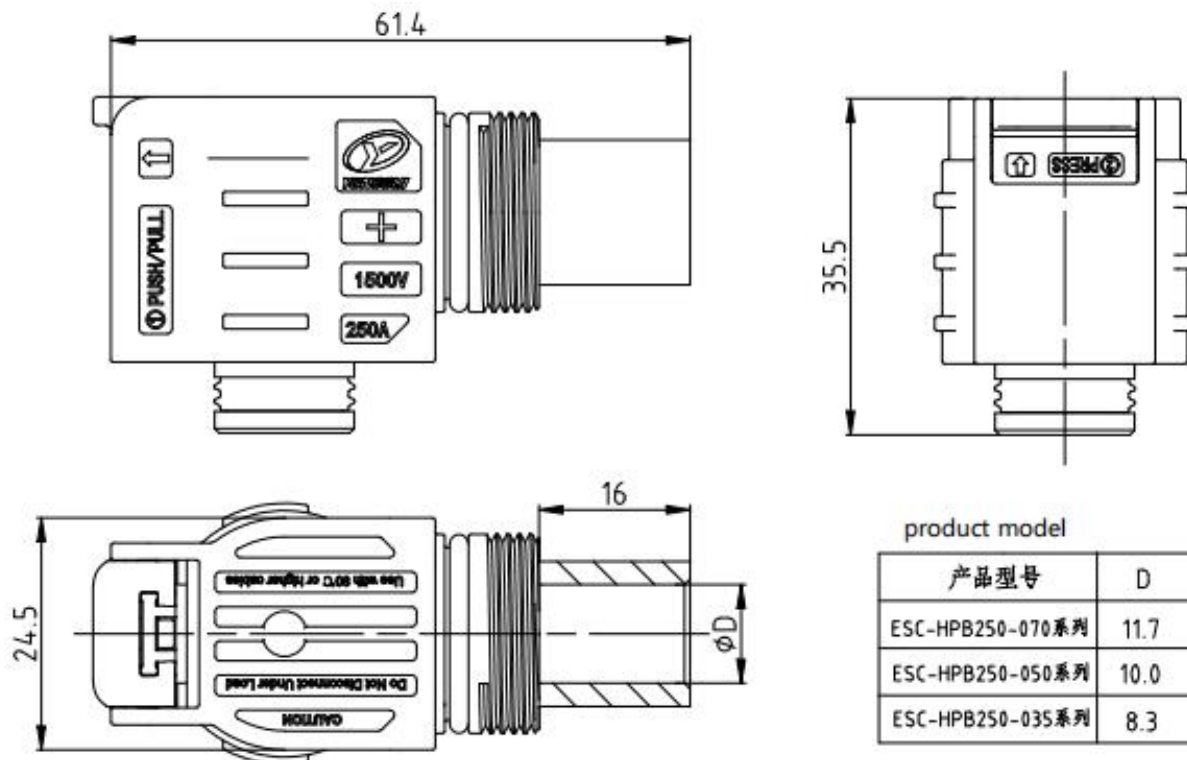
• 技术数据/Technical data

基本信息/Basic information	
芯数/Numbers of pins	1
端子规格/Terminal specifications	φ8mm
电气性能/Electrical specification	
额定电压/Rated voltage	1500V DC
额定电流/Rated current	150A(35mm ² 、2AWG)/ 200A(50mm ² 、1/0AWG)/ 250A (70mm ² 、2/0AWG)
绝缘电阻/Insulation resistance	≥100MΩ
耐电压/Withstand voltage	6800V AC 50Hz
接触电阻/Contact resistance	≤0.3mΩ
温升/Temperature rise	≤45K
端接方式 /Termination method	
端接方式/Termination method	插头: 双 B 型压接或六方压接/ 插座: 螺纹锁紧 M6 扭矩 5.5N•m-6N•m 螺纹锁紧 M8 扭矩 10N•m-12N•m/ Plug: Double B-type crimp or hexagonal crimp Receptacle: Threaded locking M6, Torque 5.5N•m - 6N•m Threaded locking M8, Torque 10N•m-12N•m;
线缆规格/Cable specifications	35mm ² 、2AWG; 50mm ² 、1/0AWG; 70mm ² 、2/0AWG
线缆外径 OD/Cable outer diameter	11.50±0.2mm; 13.50±0.3mm; 15.50±0.3mm
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°C ~ +125°C
相对湿度/Humidity range	5% ~ 95%
盐雾/Salt spray	96H(5% NaCl 溶液 插合安装后)/ 96H (5% NaCl solution, after insertion and installation)
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/Copper alloy 镀银/ Silver-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
产品认证/certification	CE、UL4128、TUV
参考标准 /Reference standard	UL4128、QC/T 1067.1-2017

• 产品尺寸图及安装开孔尺寸/Product size & mounting hole dimension

1. 弯式插头外形尺寸

Right-angled plug outline dimension

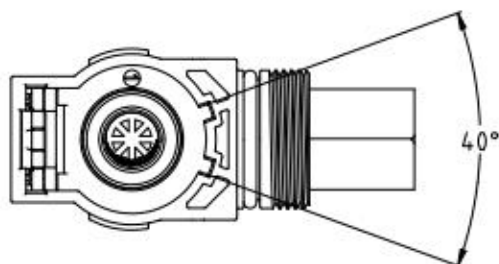


2. 弯式插头对插键位尺寸

Right-angled plug mating keying dimension

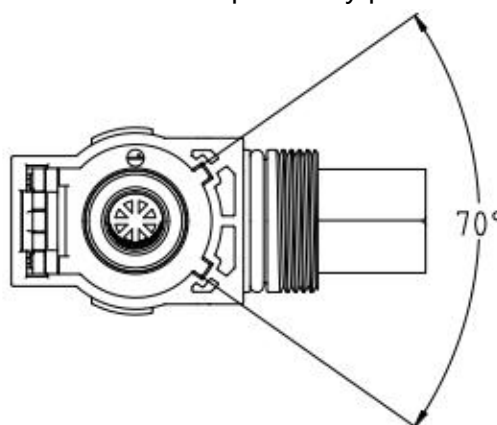
(1) 橙色插头键位 40°

Orange plug key position 40°



(2) 黑色插头键位 70°

Black receptacle key position 40°

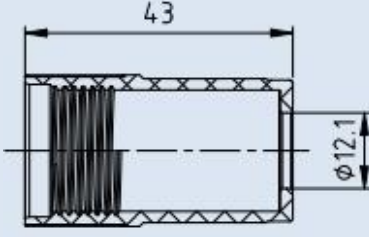
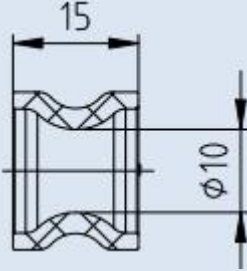
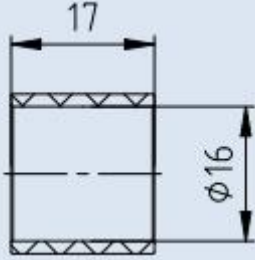
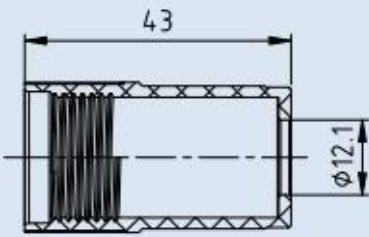
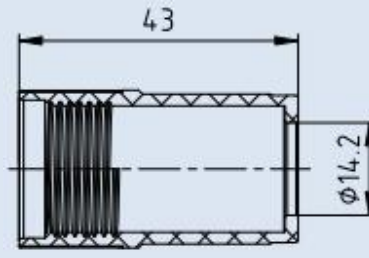
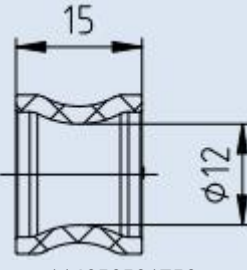
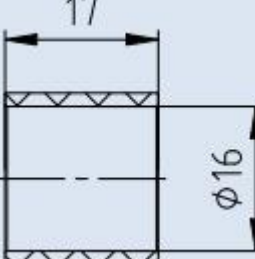
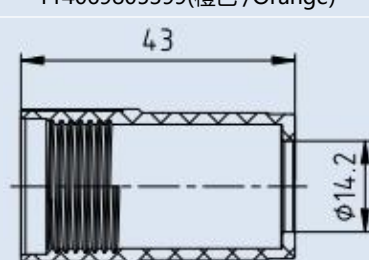
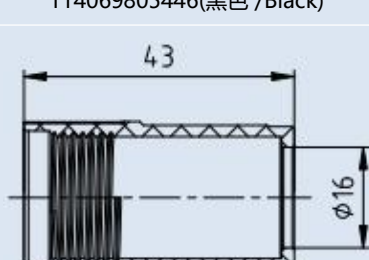
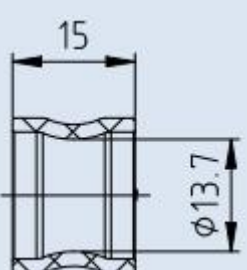
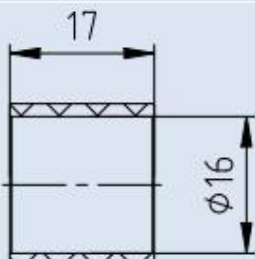
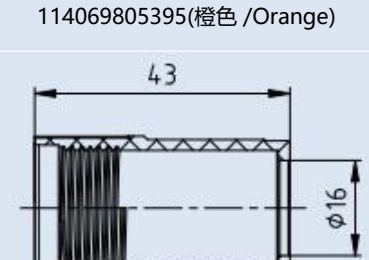


3. 插头配套发货零件及其尺寸

Plug accessory dimensions

订货信息/
Ordering information

配套信息/
Supporting information

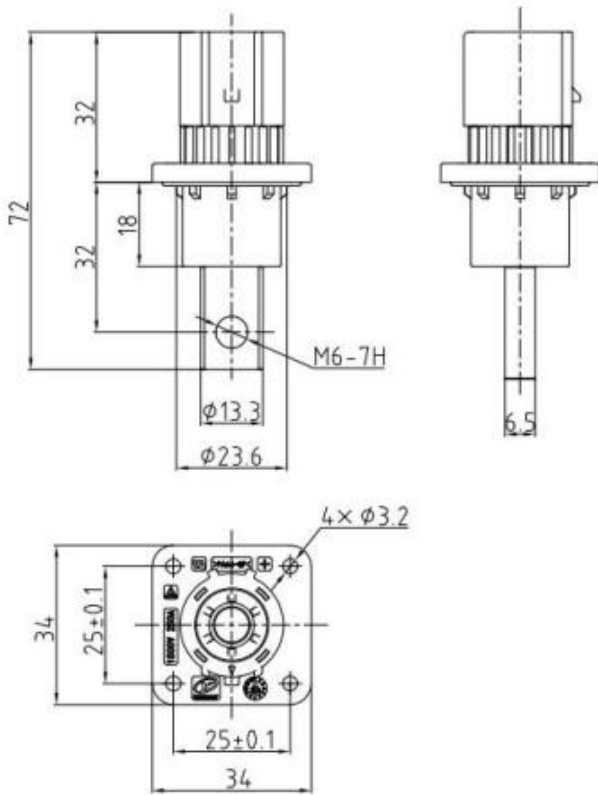
产品名称/产品编号 Product name/Product code	M21 尾螺母 M21 Tail nut	封线体 Cable seal	Φ16 尾盖(黑)/ Φ16 Tail cover (black)
ESC-HPB250-035-PY 插头/ ESC-HPB250-035-PY plug 112030107229	 <p>114069805400(橙色 /Orange)</p>	 <p>114050501753</p>	 <p>114069805396</p>
ESC-HPB250-035-PB 插头/ ESC-HPB250-035-PB plug 112030107230	 <p>114069805445(黑色 /Black)</p>		
ESC-HPB250-050-PY 插头/ ESC-HPB250-050-PY plug 112030108371	 <p>114069805399(橙色 /Orange)</p>	 <p>114050501750</p>	 <p>114069805396</p>
ESC-HPB250-050-PB 插头/ ESC-HPB250-050-PB plug 112030108372	 <p>114069805446(黑色 /Black)</p>		
ESC-HPB250-070-PY 插头/ ESC-HPB250-070-PY plug 112030106972	 <p>114069805395(橙色 /Orange)</p>	 <p>114050501744</p>	 <p>114069805396</p>
ESC-HPB250-070-PB 插头/ ESC-HPB250-070-PB plug 112030106973	 <p>114069805447(黑色 /Black)</p>		

4.插座外形尺寸:

Receptacle outline dimension:

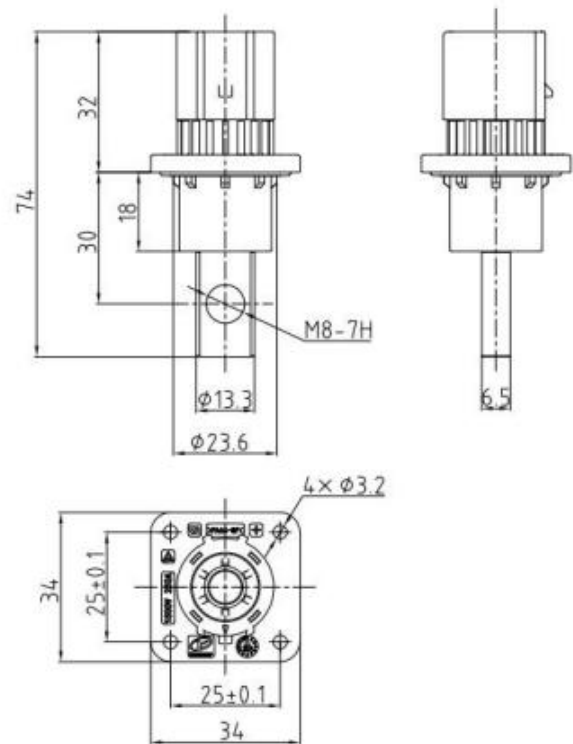
(1).ESC-HPB250-062 插座系列

ESC-HPB250-062 receptacle series



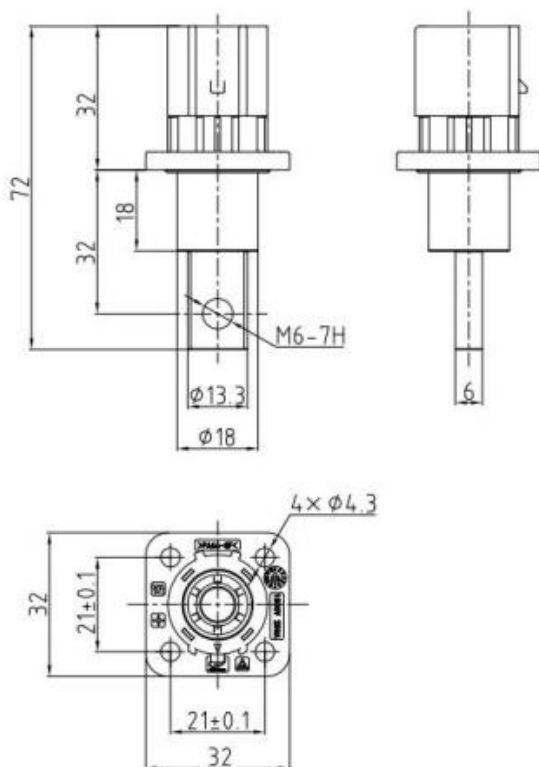
(2).ESC-HPB250-082 插座系列

ESC-HPB250-082 receptacle series



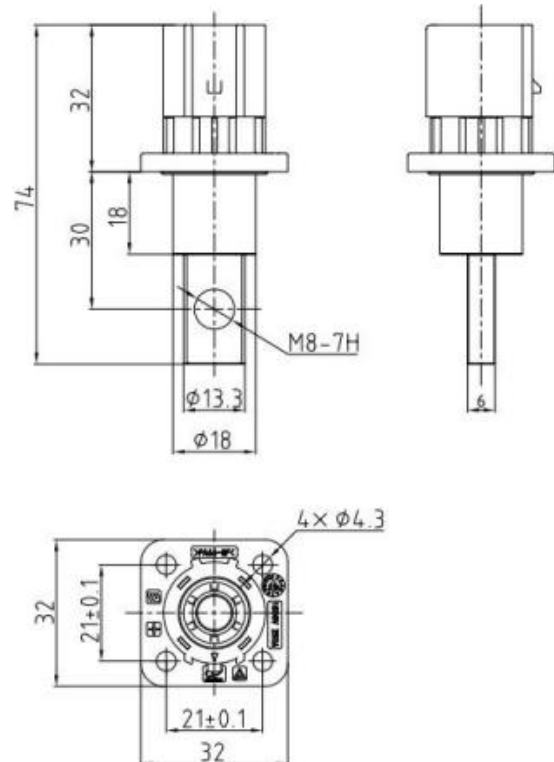
(3)ESC-HPB250-062-A 插座系列

ESC-HPB250-062-A receptacle series



(4).ESC-HPB250-082-A 插座系列

ESC-HPB250-082-A receptacle series

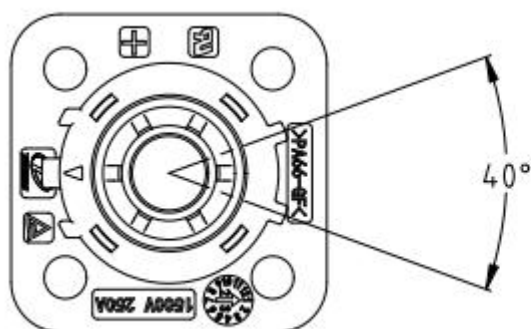


5.插座对插键位尺寸:

Receptacle mating key position dimension

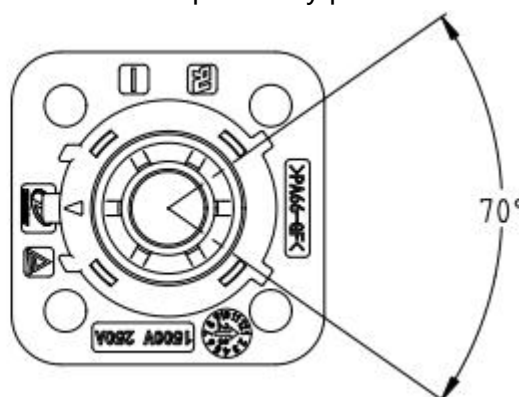
(1)橙色插座键位 40°

Orange receptacle key position 40°



(2)黑色插座键位 70°

Black receptacle key position 70°

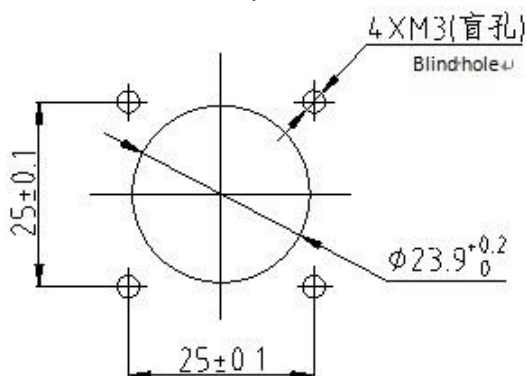


6.安装开孔尺寸:

Mounting hole dimension

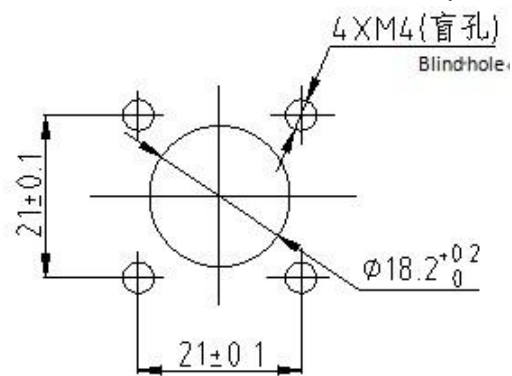
(1)ESC-HPB250-062/082 插座系列

ESC-HPB250-062/082 receptacle series



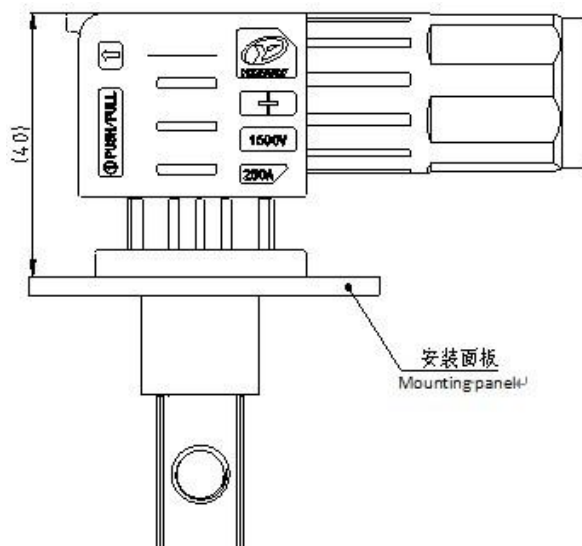
(2)ESC-HPB250-062/082-A 插座系列

ESC-HPB250-062/082-A receptacle series



7.安装后高度尺寸: 插座为 ESC-HPB250 系列插座(匹配对插键位)

Installed height dimension: ESC-HPB250 series receptacle (with matched mating key position).



• 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.