	product name	ESC-HPB 30 0 Connector	File No	/
	product code	/	Version	A2


# ESC-HPB 300 Connector Technical Specification

Preparation/Date Zhang Heng 2024. 2. 28

Review/Date Yu Zonghai 2024. 2. 28

Approval/Date Wu Hong 2024. 2. 28

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### Changes and Revisions

<input type="checkbox"/> Change <input type="checkbox"/> Revision	date	Change or revision of major matters	Modified/revised	Approver
<input type="checkbox"/> Change <input checked="" type="checkbox"/> Revision	2023. 11. 14	Increase the torque requirements for Receptacle termination	Zhang Heng	Wu Hong
<input type="checkbox"/> Change <input checked="" type="checkbox"/> revision	2024. 1. 16	Add new model ESC-HPB-050-PY/PB and related	Zhang Heng	Wu Hong
<input type="checkbox"/> Change <input checked="" type="checkbox"/> revision	2024. 2. 28	Installation opening: change the through hole into a threaded hole (blind hole)	Zhang Heng	Wu Hong

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serial	Name	department	Position	Contact information
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### 1. Product model and code ( Model and Order No )

No.	Product Model	Order No.	Cable specification	Insert key position	Note
1	ESC-HPB 300- 050 -PY plug	112030107648	50mm <sup>2</sup>		Positive-Orange
2	ESC-HPB 300- 070 -PY plug	112030107412	70mm <sup>2</sup>		
3	ESC-HPB 300- 095 -PY plug	11203010741 4	95mm <sup>2</sup>		
4	ESC-HPB 300- 050 -PB plug	112030107647	50mm <sup>2</sup>		Negative-Black
5	ESC-HPB 300- 070 -PB plug	112030107411	70mm <sup>2</sup>		
6	ESC-HPB 300- 095 -PB plug	112030107413	95mm <sup>2</sup>		
7	ESC-HPB 300- 082-RY receptacle	112040107682	M8 threaded hole		Positive-Orange
8	ESC-HPB 300 - 082 - RB receptacle	112040107681	M8 threaded hole		Negative-Black

Note: The thread specifications of the receptacle tail can be customized.

### 2. Specification

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### 2.1. Electrical Characteristics:

Number of Pins	1
Terminal specifications	∅ 10.5 mm
Rated Current	200A(50 mm <sup>2</sup> )/25 0 A( 70 mm <sup>2</sup> ) / 30 0 A( 95 mm <sup>2</sup> )
Rated Voltage	1500VDC
Voltage Proof	6800V AC 50Hz
Contact Resistance	≤0.25 mΩ
Insulation Resistance	≥100MΩ
Temperature Rise	≤45K

### 2.2. Mechanical Characteristics:

Mechanical life Durability	≥10 0 cycles
Protection Class	IP67(Mated)
Flame Rating	UL94 V0 (Bulk Material)


### 2.3. Material and Finish:

Material	Insulator:Engineering plastics Rubber parts: Silicon rubber Contact: Copper alloy
Surface Treatment	Silver / Tin

### 2.4. Working environment (Environmental data):

Operating Temperature	-40℃~+125℃
Relative Humidity	5%~95%
Vibration/Shock	QC/T 1067.1-2017 Vibration level VI

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### 3. Material Introduction(Introduction)

Cable specification	50mm <sup>2</sup> / 70 mm <sup>2</sup> / 95 mm <sup>2</sup>
Cable Diameter OD	13.5 ± 0.3 mm / 15.5 ± 0.3 mm / 18.7 ± 0.5 mm
Termination Method	Plug: Double B type crimping / hexagonal crimping Double B-type crimping / Hexagonal crimping Receptacle: Thread locking M 8 Thread termination Torque: 10 N•m -12 N•m
Installation Method	Screw M4 Screw
Installation Torque	M4:1.8-2.2N•m
Locking Method	CPA (Connector Position Assurance)
Preventing Misinsertion	Color Preventing Mechanical Preventing

3.1.Application: Power transmission of energy storage system (battery pack)

3.2.According To Standards: UL4128, QC/T 1067.1-2017

3.3.Environmental Protect Data: RoHS 2.0

3.4.Security Authentication: CE, UL4128 , TUV


### 4. Outline Dimension

4.1.Product Outline:

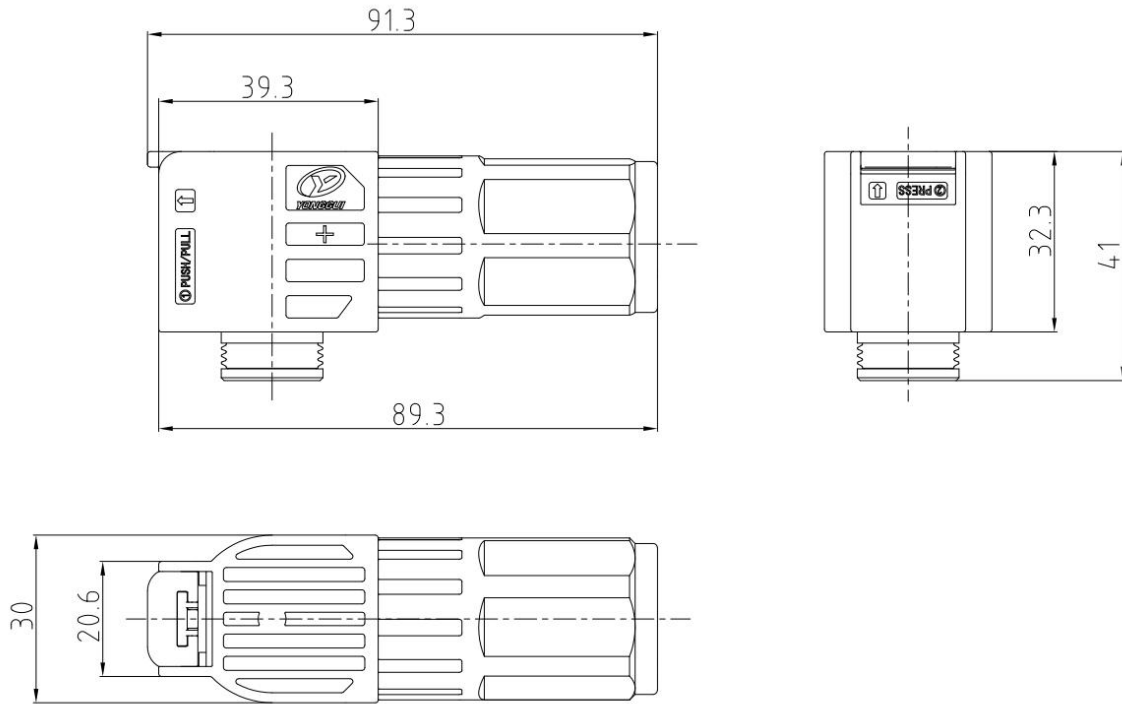


4.2. Product Outline Dimension:


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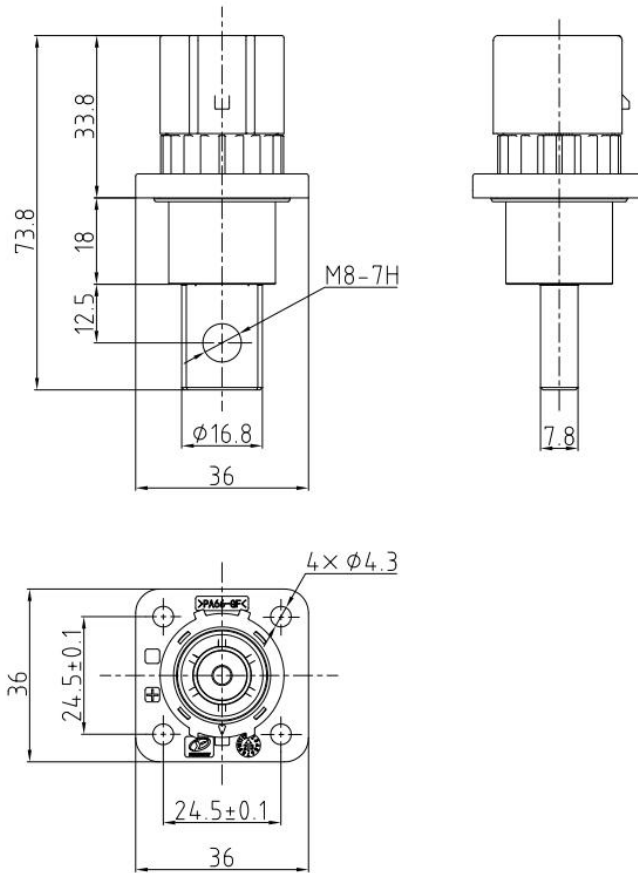
4.2.1. Plug Outline Dimension :



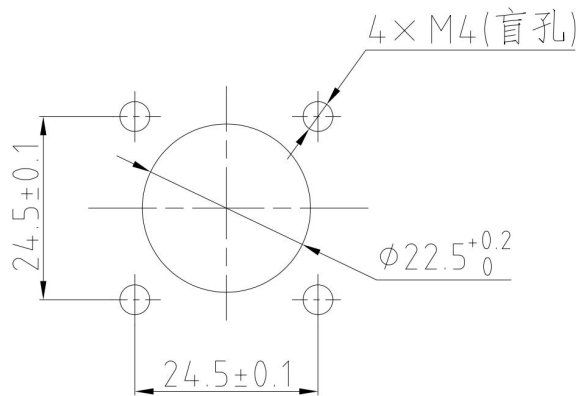
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#### 4.2.2 Receptacle Outline Dimension



#### 4.2.3 Installing Holes Dimension



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## 5. Description and Packaging Storage

5.1. The connector should be used within the provided technical parameters, and the product should be installed, used and maintained in strict accordance with the product instruction manual.

Connectors should be used within the specification that provided, Install, use and maintain the products according to the documents.

5.2. Package: Carton packing, moisture-proof treatment.

5.3 Storage Spec:

Products packaged in boxes should be stored in a warehouse with an ambient temperature of  $-10^{\circ}\text{C}\sim+40^{\circ}\text{C}$ , relative humidity below 80%, and no acidic, alkaline or other corrosive gases in the surrounding air. The storage period shall not exceed two years from the date of production.

The packaged products shall be stored in the warehouse within the temperature of  $-10^{\circ}\text{C}\sim+40^{\circ}\text{C}$ , relative humidity less than 80%, and no acid, alkaline or other corrosive gases in the surrounding air. The storage period shall not exceed two years from the production date.

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