

WEIPU SOLUTION

# E-Mobility & Battery

*"We see great progress here."*



## Your Partner for E-Mobility & Battery development

With environmental awareness on the rise, reducing greenhouse gas emissions and air pollution have become a common target. This brings an increasing demand for cleaner transportation options, and a trend of a global shift to electric mobility. For this sector, the main consideration is to secure the battery, the heart of electric mobility, can function well even in a hostile working environment. To ensure safe functioning of batteries at any time is now a priority, and connectors play a pivot role as they provide safe power transmission for the output of energy of the battery.

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 **WEiPU<sup>®</sup> Connector**





## Challenge

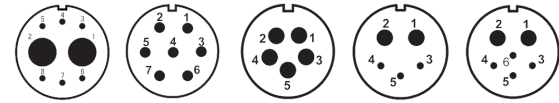
**As one of the most expensive components of electric mobility, the battery is also the most fragile. To keep the battery working well for a long period of time is a must yet also a challenge for most battery-related application designers. There is a main pain point for the battery sector - safety issue. With the rising demand for fast charging, many battery designers are pursuing the target of consistent charging from 0% to 100% in a short time. However, danger may occur as this model creates potentially problematic high heat inevitably. Thus, fast, affordable, and consistent safe charging has been a priority.**

### Choosing a high-quality and solid connector is critical

Components of battery-related applications are the crucial factor that can influence the stable operation of the battery. Connector, the role of a vital component, is used to attach batteries in a formation rectifier circuit. It acts as a bridge that joins electric circuits together. Its function is simple, but if not used or designed correctly, it can have devastating effects. A poor connection may cause high resistance, an electrical circuit short circuit, high heat condition, and even make explode the battery. Thus, choosing a high-quality and solid connector is critical.

Meanwhile, the hostile environment is a concern, battery related-applications such as e-bikes, e-scooters, cargo bikes, and battery chargers that must be operated outdoors need to have certain water, dust, and UV resistance. Vibration and shock to a battery can lead to a shortened life or damage the battery pack structure, thus, a robust design with an anti-vibration connector is also necessary.

# Solution



In view of the challenge of the battery of the e-mobility sector, WEIPU is committed to designing connectors to meet the requirements. With a robust design, WEIPU connectors are heavily used for battery applications especially on e-bike, e-cargo, e-motor, e-car, electric boat, and battery management system (BMS). Our connectors can withstand a wide temperature range down to  $-40^{\circ}\text{C}$  and up to  $85^{\circ}\text{C}$  and are totally sealed offering an up to IP68 protection rating. This makes them resistant to humidity, water, and dust. Bayonet coupling design connectors can best offer an anti-vibration function. Besides regular high power connectors, WEIPU has also developed hybrid circular waterproof connectors. The most popular 8-pin connector (  $2*60\text{A}+6*5\text{A}$  ) can bring power and signal to applications and is perfectly suited for EV battery projects. Moreover, to maximize protection, we design and offer robust plastic, rubber, and waterproof metal caps options. Those caps help the connectors stay in up to IP68 rated condition even while dis-mated.



## Weipu's Feature

- Operation temperature -40°C~+85°C
- Lightweight and Space-saving sizes available
- Mating cycle up to 500 times
- V-0 Flame-Retardant plastic material
- Industry-leading anti-vibration performance
- Rated current up to 60A for battery connecting
- Up to IP 68 sealed cap options

## Application

- Electric Vehicle
- Electrical Industrial Vehicle (EIV)
- Automated Guided Vehicle
- E-Scooter
- E-Bus
- Electric Cargo Bike
- Hybrid Electric Vehicle
- Battery Management System
- Battery Charger
- Lithium-ion Battery Pack

## Product Line

- WY
- SF
- SA
- SY
- SP
- ST

