AKORSA LIMITED

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EV infrastructure solutions

Recognizing the growing need for electric vehicle (EV) infrastructure, we identified a gap in the market for affordable and reliable EV chargers.
We test each charger, both onsite and in real-world home environments, to ensure they meet our high standards before offering them to our customers.
Additionally, our team continuously researches the latest technological advancements to stay ahead in the rapidly evolving EV industry. This offer below is shaped for residential systems for private us as well as commercial and enterprise level systems.

We offer the selection of best models.
Single phase of three phase AC wallbox units, pedestal and pole mounted units

Key features
High compatibility: compatible with all electric vehicle models.
Perfect protections. Electrical protections: overcurrent; residual current; surge; ground; over/under voltage; over/under frequency; over/under temperature.

The user can control the wallbox to start and stop, other operations on the mobile phone through the APP to view the current charging status and historical charging record to provide user real-time using experience. This EV wallbox adopted most advanced ev charging technology, like Load balancing which can keep power assumption balance for the electric appliance.

Z4B-E07 Single phase (L +N + PE)

Rated power: 7.2 kW (230VAC) Maximum current: 32A Cable length: 5M. Ingress protection: IP65, RCD: Type A 30 mA + DC 6 mA.
Warranty: 2 years

Z4B-E11 3 phase (3L +N + PE)

Rated power: 11 kW (400VAC) Maximum current: 16A Cable length: 5M. Ingress protection: IP65, RCD: Type A 30 mA + DC 6 mA
Warranty: 2 years

Z4B-E22 3 phase (3L +N + PE)

Rated power: 22 kW (400VAC) Maximum current: 32A Cable length: 5M. Ingress protection: IP65, RCD: Type A 30 mA + DC 6 mA Warranty: 2 years

Z9B-E07 Single phase (L +N + PE) OCPP 1.6 controlled commercial charger

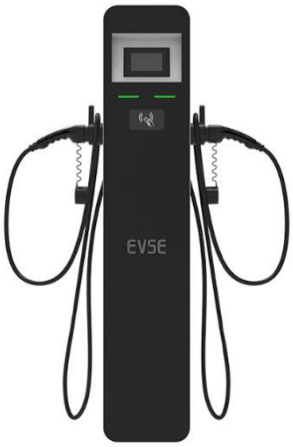
Rated power 7.2 kW (230VAC) Maximum current: 32A Cable length: 5M. Ingress protection: IP65, RCD: Type A 30 mA + DC 6 mA. Wi-Fi App Control & 4G. Warranty: 2 years

LV14K-T1 Single phase (L +N + PE) OCPP 1.6 controlled commercial charger

Rated power 14 kW (7 + 7 kW separately, 230VAC) Maximum current: 32A* 2 Cable length: 5M. Ingress protection: IP65, RCD: Type A 30 mA + DC 6 mA. Wi-Fi App Control & 4G. RFID. Warranty: 2 years

LV22K-T2 Three phase (3L +N + PE) OCPP 1.6 controlled commercial charger

Rated power 22 kW (11 + 11 kW separately, 230VAC) Maximum current: 16A *2 Cable length: 5M. Ingress protection: IP65, RCD: Type A 30 mA + DC 6 mA. Wi-Fi App Control & 4G. RFID. Warranty: 2 years



LV44K-F3 Three phase (3L +N + PE) OCPP 1.6 controlled commercial charger. Business use with intelligent app control. Vandal resistant and anti-corrosion.

Rated power 44 kW (22 + 22 kW separately, 230VAC) Maximum current: 32A *2 Cable length: 5M. Ingress protection: IP65, RCD: Type A 30 mA + DC 6 mA. Wi-Fi App Control & 4G. RFID. Warranty: 2 years

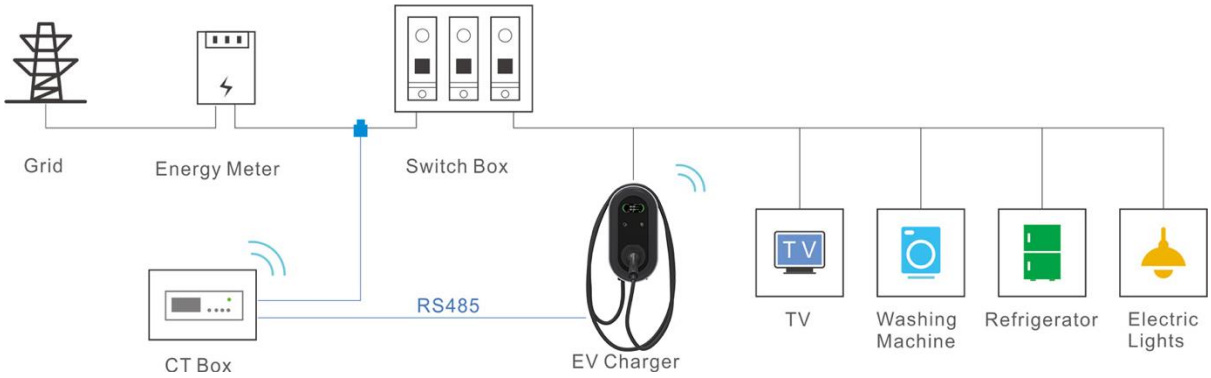
Home Charging Solution

Dynamic Load Balance

Dynamic Load Balance is a smart charging feature which balances the distribution of the total available power between chargers and other loads within the building in real time.

It not only protects appliances, but also ensures EVs are fully charged at the lowest cost.

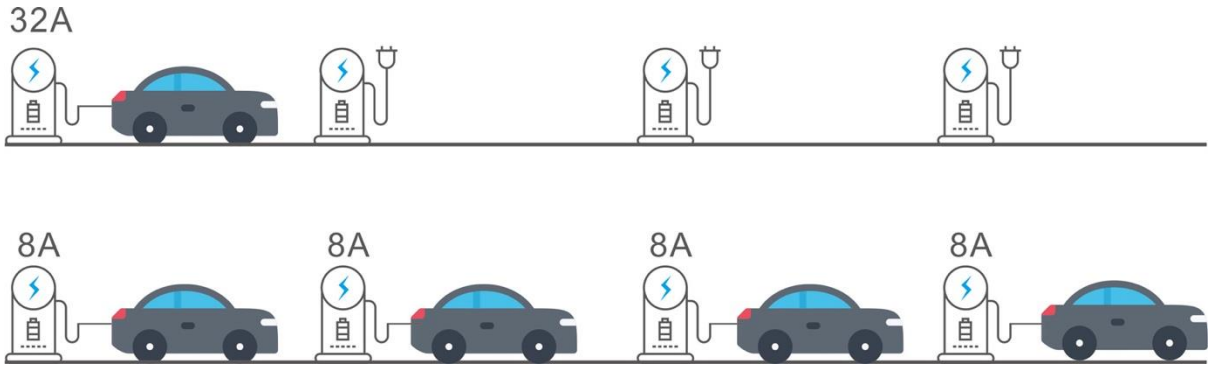
CT box monitors the total energy comsumption and reports to the management system. The system controls the charging power of each individual charger automatically to avoid overloading when
chargers and other loads are being used simulaneously.

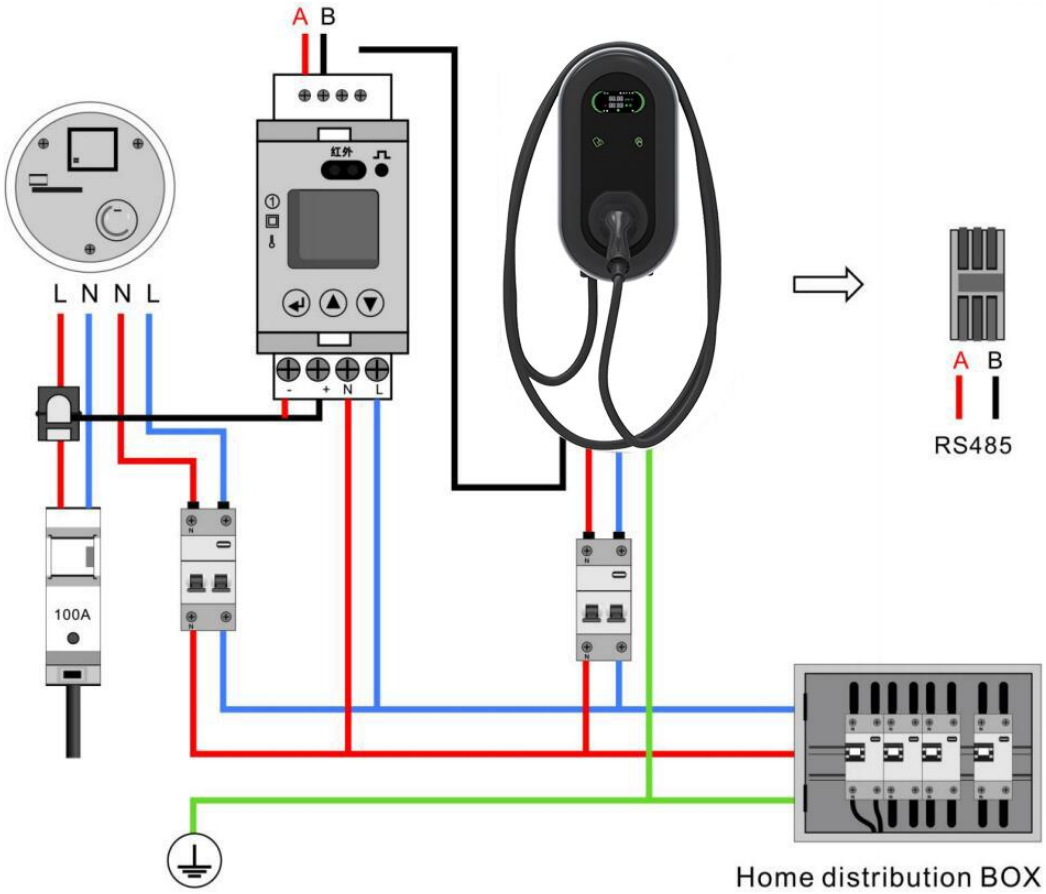


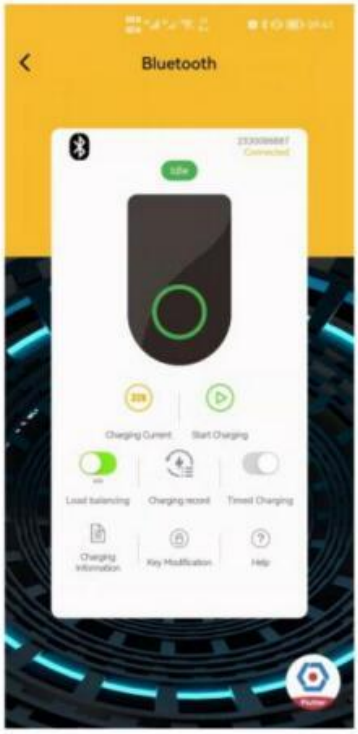
Static Load Balance

Static Load Balance is a smart charging feature which balances the distribution of the total available power for multiply chargers at a specific loacation. It enables you to set a maximum power
for multiple chargers in the management system and distribute the charging power evenly between the individual active chargers.

Load balance helps you to protect the local grid within the capacity limit in peak hours of electricity consumption. EVs can charge with maximum power when possible, but the charging power will
be distributed evenly over the EVs.




A B
L N N L
100A
A B
RS485
Home distribution BOX

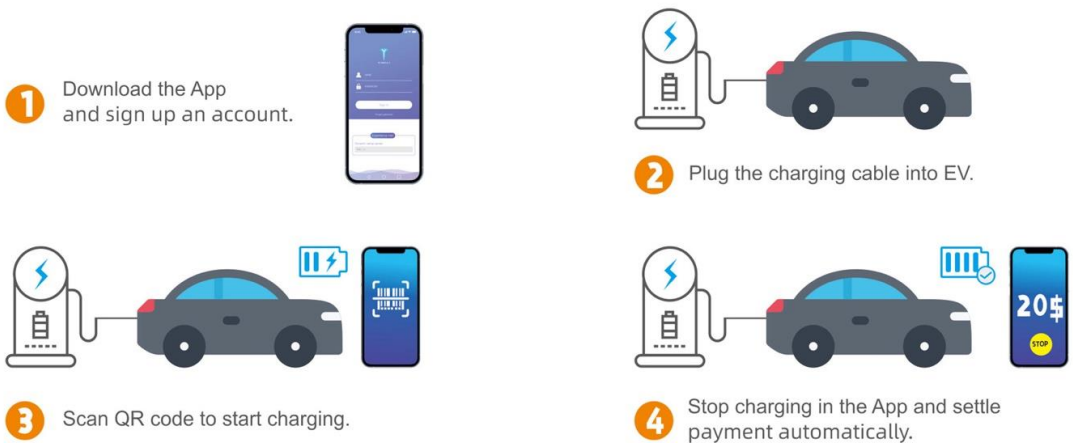

Bluetooth
Idle
Charging Current
Start Charging
Load balancing
Charging record
Timed Charging
Charging Information
Key Modification
Help


Bluetooth
Gun Inserted
32A
40A
60A
Confirm
Cancel

OCPP1.6 commercial EV charger

A commercial EV (Electric Vehicle) charging solution refers to a comprehensive infrastructure designed to support the charging needs of electric vehicles at businesses, public locations, fleet operations, or other commercial settings. This can range from a few charging stations to large networks supporting numerous vehicles. A good solution typically includes hardware, software, installation, maintenance, and management services.

Key Components of a Commercial EV Charging Solution:



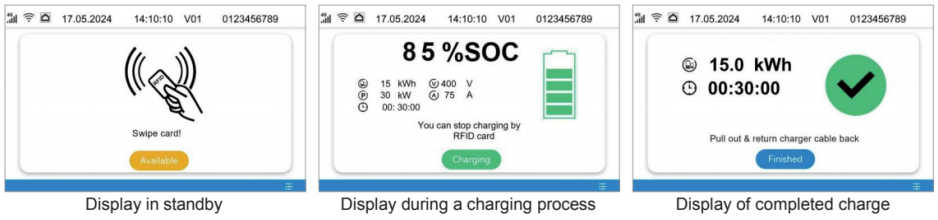
1. **Charging Stations (Hardware):**

1. **Level 2 Chargers or Type2:** The most common type for commercial use, offering a charging speed of around 25–30 miles of range per hour of charging.
2. **DC CCS2 /CCS1/Chademo/G/BT connector Fast chargers:** Provide rapid charging, ideal for high-traffic areas, but are more expensive and require special electrical infrastructure.
3. **Smart Charging Stations:** These stations come with connectivity features, allowing for remote monitoring, maintenance, and management.

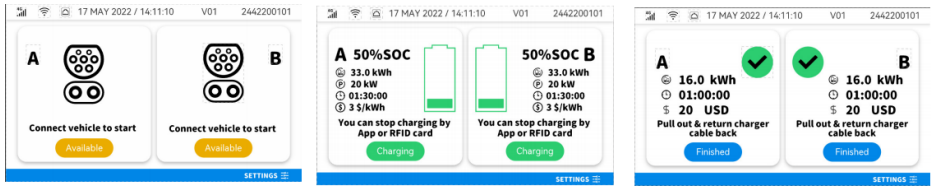
2. **Software and Management Platform:**
    1. **Load Management:** Ensures that the electrical grid or facility doesn't overload by balancing the load across multiple chargers.
    2. **Billing and Payment Solutions:** Allows businesses to monetize their charging stations by setting up pricing structures and offering payment methods like credit cards, mobile apps, or subscription-based services.
    3. **Fleet Management Integration:** For companies that operate electric fleets, software can integrate with existing fleet management tools to schedule, track, and manage vehicle charging.
    4. **User Interface (UI) / Mobile App:** For customers or employees to locate charging stations, reserve a slot, and pay for services.

Touchscreen

The charging station is equipped with a 5-inch touchscreen. Among other things, the following information is displayed.



Display in standby | Display during a charging process | Display of completed charge



3. **Installation and Infrastructure:**
    1. **Site Assessment:** Determines the location and type of chargers that are most suitable for the business's needs.
    2. **Electrical Upgrades:** Commercial chargers often require specialized electrical equipment to handle higher loads. Some businesses may need to upgrade their electrical panels or install additional transformers to support multiple chargers.
    3. **Parking Layout:** Efficiently integrates charging stations into existing parking spaces with clear signage and space management.
4. **Maintenance and Support:**

1. **Ongoing Maintenance:** Routine checks to ensure that the stations are working correctly, including software updates and hardware repairs.
2. **24/7 Customer Support:** For any issues customers or businesses encounter while using the charging infrastructure.
3. **Remote Diagnostics:** Many systems offer remote monitoring to help detect faults and even resolve minor issues remotely.

5. **Energy Management and Sustainability:**
    1. **Renewable Energy Integration:** Businesses can pair EV charging stations with on-site renewable energy sources like solar power to reduce the carbon footprint of charging.
    2. **Energy Storage:** Some systems incorporate batteries to store excess energy and manage peak demand periods efficiently.

Benefits of Commercial EV Charging Solutions:

1. **Revenue Generation:** Commercial charging stations can generate revenue through pay-per-use models, subscriptions, or even offering charging as a value-added service to customers or employees.
2. **Customer Satisfaction & Loyalty:** Offering EV charging can be a competitive advantage, especially in areas with a high number of electric vehicle owners. It enhances the customer experience by providing convenience and supporting sustainability goals.
3. **Sustainability Goals:** Supporting the transition to electric vehicles helps businesses meet sustainability objectives and reduce their carbon footprint.
4. **Fleet Electrification:** Companies transitioning to electric fleets can integrate their charging infrastructure with fleet management software to streamline operations, optimize charging schedules, and reduce fleet operating costs.
5. **Government Incentives & Grants:** Many regions offer financial incentives, grants, or tax credits for businesses that install EV chargers, helping offset the upfront investment.

Example Use Cases:

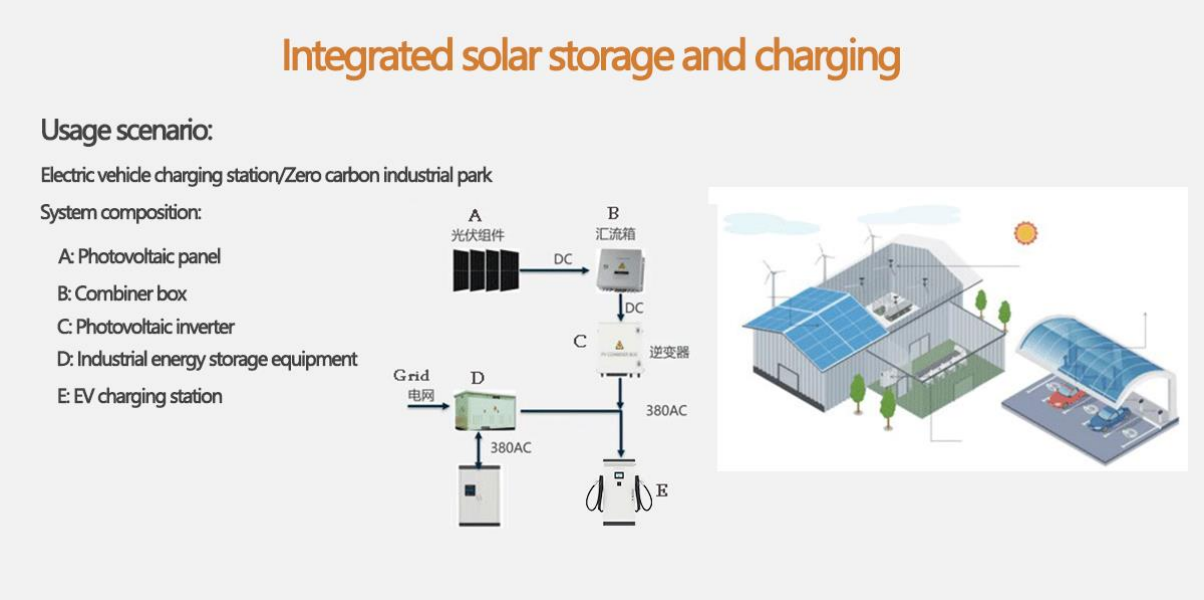
1. **Retail Locations & Shopping Centers:**
    1. EV charging stations can attract more customers who drive electric vehicles, while also providing a green, sustainable image.
2. **Office Buildings & Commercial Properties:**
    1. For employees, providing EV charging stations can be an attractive perk. Also, these locations might be eligible for tax breaks or rebates.
3. **Hotel & Hospitality:**
    1. Hotels offering EV charging stations provide convenience to travelers with electric vehicles, increasing the hotel's appeal to eco-conscious guests.
4. **Public Transit Depots & Municipalities:**
    1. Cities can provide public charging stations to support the adoption of electric public transport and taxis, or for local residents to charge their vehicles in high-traffic areas.
5. **Fleet Charging for Businesses:**
    1. Companies with electric delivery or service vehicles can create a dedicated charging network to keep their fleets operational, reduce downtime, and track energy consumption.

Considerations When Implementing a Commercial EV Charging Solution:

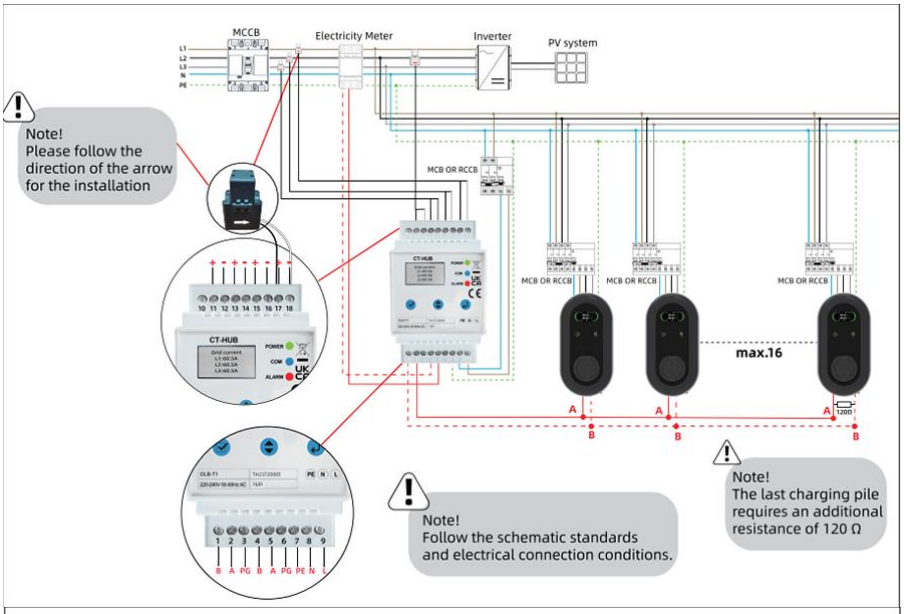
- **Electrical Infrastructure:** It's crucial to understand the current capacity of the electrical system and whether it needs upgrades to support the chargers.
- **Scalability:** Choose solutions that can grow with the business's needs (e.g., adding more chargers or integrating with future technology).
- **User Experience:** Ensure that the charging process is simple and user-friendly for employees, customers, or fleet drivers.
- **Security and Payment Systems:** Incorporate secure payment methods and user authentication to avoid unauthorized access to the charging stations.

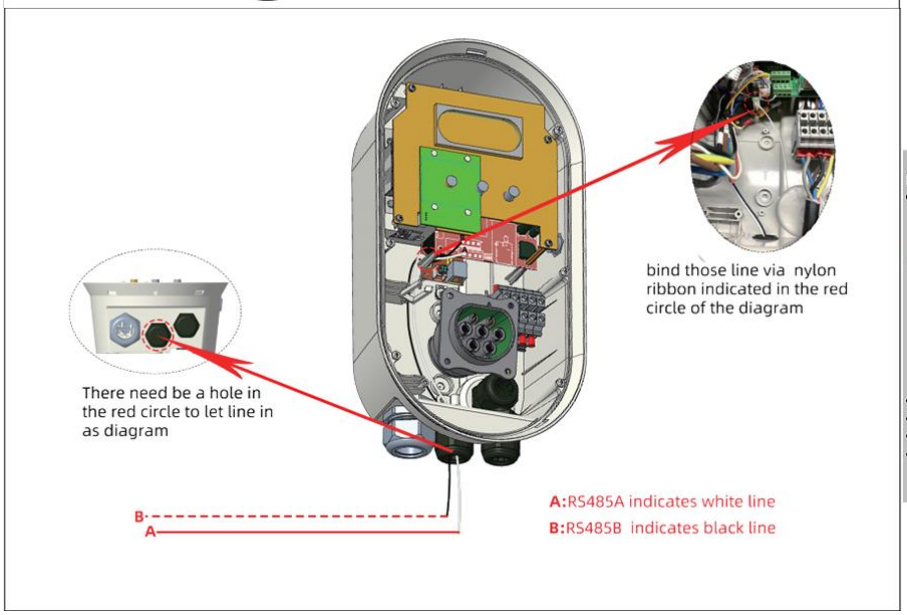
Future Trends:

In conclusion, commercial EV charging solutions are an essential component of the growing electric vehicle ecosystem. They offer both business opportunities and environmental benefits, and as the adoption of electric vehicles continues to rise, the need for reliable, efficient, and scalable charging infrastructure will only increase.



DC solar EV charging solution





AC solar EV charging solution (One CT hub could connect 16 units AC EV charger)

A **solar EV (Electric Vehicle) charging solution** combines solar power generation with EV charging infrastructure to create a sustainable and cost-effective way to charge electric vehicles. This solution uses solar eA solar photovoltaic EV charger is a device that uses solar power to charge electric vehicles.

It is mainly composed of solar panels, inverters, EV chargers and other parts. Solar panels can convert solar energy into electrical energy. The controller can manage the charging process to ensure safe and efficient charging. The EV charger is connected to the electric

vehicle and transmits electrical energy to the car battery. This kind of EV charger is energy-saving and environmentally friendly. It can generate electricity as long as there is sunlight, which reduces the dependence on the traditional power grid to a certain extent.

1. Solar Panel System

- **Solar Panels**: The first step is to install a solar panel array that can generate enough power to meet your EV charging needs. The size of the solar system depends on factors like the average energy consumption of your EV, the amount of sunlight your location receives, and the desired charging speed.
- **Energy Calculation**: An average EV consumes about 30 kWh per 100 miles. If you drive 1,000 miles per month, you'll need roughly 300 kWh per month to charge your EV. You'll need a solar system capable of generating at least that much power, depending on the efficiency of your panels and the local climate.

2. Inverter

- **Grid-Tied or Off-Grid Inverter**: If you want to use your solar system to power both the grid and your EV, a **grid-tied inverter** is typically used. This inverter converts the DC power generated by the solar panels into AC power for the EV charger and household use.
- If you want to charge without being connected to the grid, you would need an **off-grid inverter** with a battery storage system.

3. EV Charger

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- **Level 2 (240V) /Type2 Charger**: This is a faster charger, typically installed at homes or public charging stations. It can add 10–60 miles of range per hour and is more practical for regular use with a solar system.
- **Solar-Powered Charger**: Some companies offer chargers specifically designed to integrate with solar systems, optimizing the use of solar power for EVs.

4. Energy Storage (Optional)

- If you have unreliable sunlight or want to charge your EV at night, a **battery storage system** (e.g., Tesla Powerwall, LG Chem, Huawei, Growatt) can store excess solar energy for later use. This allows you to charge your EV even when the sun isn't shining.
- Without a battery system, excess solar energy may be fed back into the grid, depending on the setup.

5. Smart Monitoring and Energy Management

- **Energy Management Systems**: To optimize energy use and prevent overcharging of your EV, smart energy management systems can monitor solar energy generation, consumption, and battery storage. This ensures the charging process is efficient, and you can adjust the charging schedule to match available solar generation.
- Some systems can automatically adjust the amount of energy flowing into your EV depending on the solar output, optimizing the system's performance.

6. Integration with Grid (Optional)

- If you have a grid-tied solar system, excess power generated by the solar panels can be fed back into the grid. This can offset your energy costs, and with net metering plan, where you are compensated for the excess energy.
- **Bidirectional Charging**: In some cases, advanced EVs and charging systems allow bidirectional charging (V2G – Vehicle-to-Grid), which enables the EV to not only receive power from the grid or solar system but also send power back to the grid during peak times.

Conclusion:

A solar-powered EV charging solution is an excellent way to reduce your energy costs, minimize your environmental impact, and promote energy independence. The solar-powered EV charging solution is an ideal solution for the family that has a house that install this system, and the cost will be going down.