



QC45BATT

DC plug-in charging systems



CCS



CHAdeMO

Main features

- High efficiency: > 93%
- High power factor: 0.98 with half load
- TFT color display (for user interface and publicity)
- Network integration (OCPP or proprietary protocol)
- Built-in communications (3G; LAN; Wi-Fi)
- Simple plug & play installation
- Standalone or network integration
- Local and remote control and monitoring
- C4 corrosion protection
- Customizable

Patent Information

Pat.Pend. PCT/ IB2016/052726

Quick Charge Station

Overview

- Battery Storage Integration
- DC power up to 50 kW
- 20 kW grid input power + 30 kW battery power
- 38 kWh battery capacity (other on request)
- Multistandard (CHAdeMO and CCS)



Battery Storage



Fast Charging

Communication
& Management

Multi-standard

Product description

The **QC45BATT** is a Quick Charging station with a battery storage integration able to charge all EVs with CHAdeMO and CCS protocols.

To reduce the charging time, the **QC45BATT** is able to deliver power up to 50 kW. However, the power required from the grid will not be higher than 20 kW, thereby reducing costs to the charger's owner and adverse side effects caused in the grid.

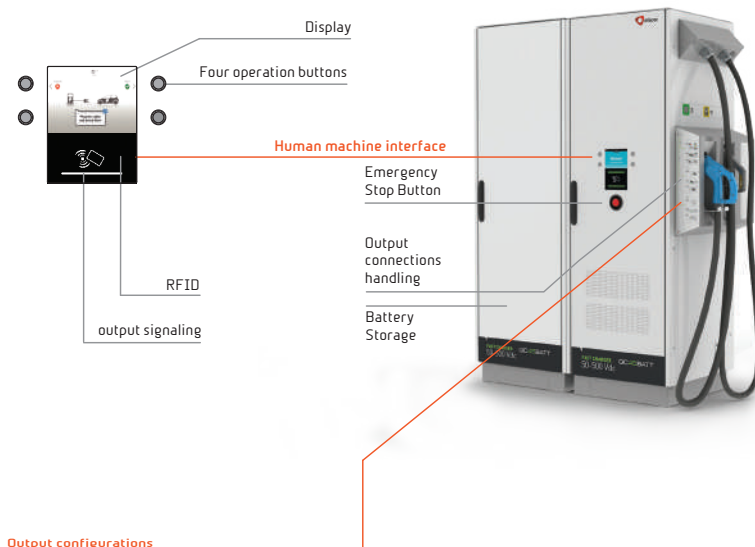
The battery of the storage system has capacity to store enough energy for two or three consecutive charges, depending on the electric vehicle, and guarantee that the power supplied to the EV can achieve 50 kW. If the battery state of charge reaches a minimum value, the charger will always be able to deliver 20 kW until the battery is recharged.

Technical data

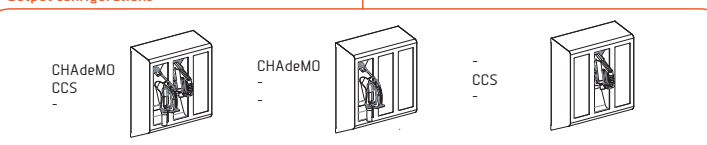
General Specifications

| | |
|-------------------------------|--|
| Phases / lines | 3 phases + N + PE / 1 phase + N + PE |
| Voltage & frequency | 400/230 V \pm 10 %; 50/60 Hz |
| Nominal input current & power | 32 A (three Phase) / 96 A (single Phase) |
| Output Power | 50 kW |
| Efficiency | > 93 % |
| Equipment | Multi-standard DC outputs (Mode-4) |
| Communication with EV | JEVS G104 (CHAdeMO) IEC61851-23 PLC (CCS / Combo-2) |
| DC Plugs | JEVS G105 (CHAdeMO) Combo T2 (CCS / Combo-2) |
| Human Machine Interface | By default |
| Display | 6.4" TFT Color screen |
| RFID system | Mifare (Classic, DesFire EV1) or others on request |
| Communication | 3G (GSM or CDMA) LAN Wi-Fi |
| Communication Protocols | OCPP (1.5 / 1.6) |
| Place of installation | Indoor/Outdoor |
| Altitude | Up to 1000 m |
| Protection degree | IP54 |
| Operating Temperature | -25 °C to 40 °C |
| Humidity | 5 % to 95 % |
| Sound noise | <55 dB in all directions |
| Dimensions (W x D x H) | 600 x 600 x 1800 mm |
| Weight | 350 Kg |
| Battery Storage | |
| Nominal battery's capacity | 38 kWh |
| Heating System | Yes |
| Cooling System | Forced air |
| Weight | 675 Kg |
| Dimensions (W x D x H) | 600 x 800 x 1800 mm |

Configurations



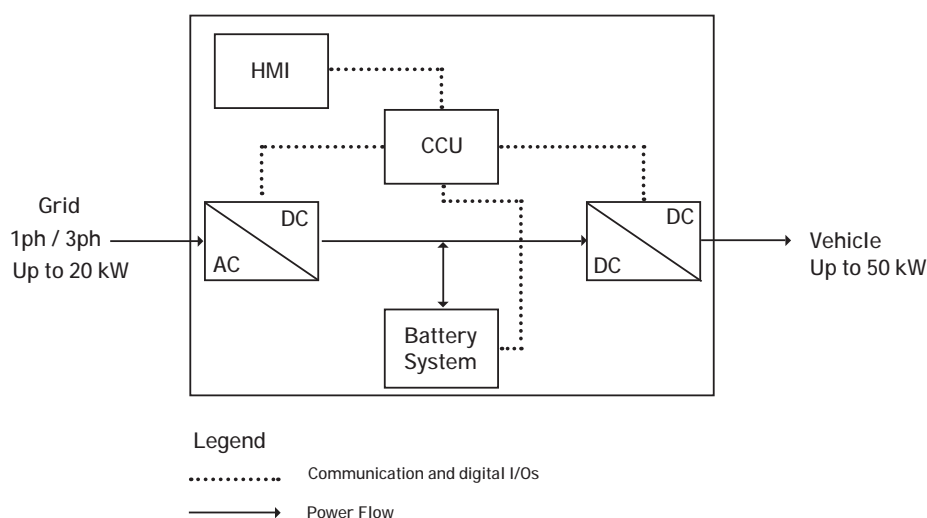
Output configurations



Applications

Whenever the grid power has limitations or power availability cost is high.

System Block Diagram



The QC45BATT is constituted by a AC/DC converter (AC/DC) compatible with single phase or 3 phase supply, a DC/DC converter (DC/DC), a battery system with BMS, a Human Machine Interface (HMI), a central control unit (CCU) the AC/DC provides galvanic isolation between grid and the combination of battery + DC/DC + EV.