



Smart home system

Energy management and EV charging

2023

EV-GP
Electric Vehicle - Green Power



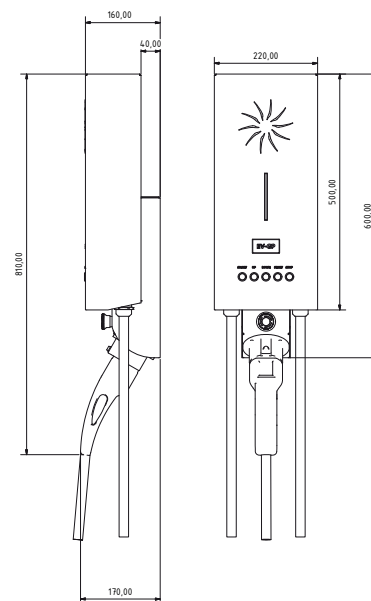
EV-GP Wallbox AC charger 22 kW

The smart and powerful AC home EV charger

Features

- The compact AC charger for electric and plug-in hybrid cars
- Integration of green energy via the Smart IQ function
- Smart energy management: Dynamic Load Balancing, dynamic load balancing of the total household current and ensuring the safety of electricity to avoid home overload
- Charging time optimization: depending on the availability of electricity and requirements, charge current settings from 6 to 32 A in steps of 1 A
- Real measurement of supplied electricity by a digital watt meter
- The HDO function regulates charging when the tariff is low
- Adjustable charging power: 1 phase maximum 7,4 kW and 3 phase maximum 22 kW, charging mode 3
- OLED display 2,4 "
- Protection TYPE A + DC6 mA leakage sensor built-in
- Control buttons: Start, Stop, Up, Down, and SMART
- Stop button with lock for safety shutdown
- 5 m cable with TYPE2 connector included
- Input power: 3 x 400 V, 50 Hz, 32 A
- Durable construction for outdoor use, IP54
- Standard: CE, EMC, EN/STN 61851-1

Technical drawing



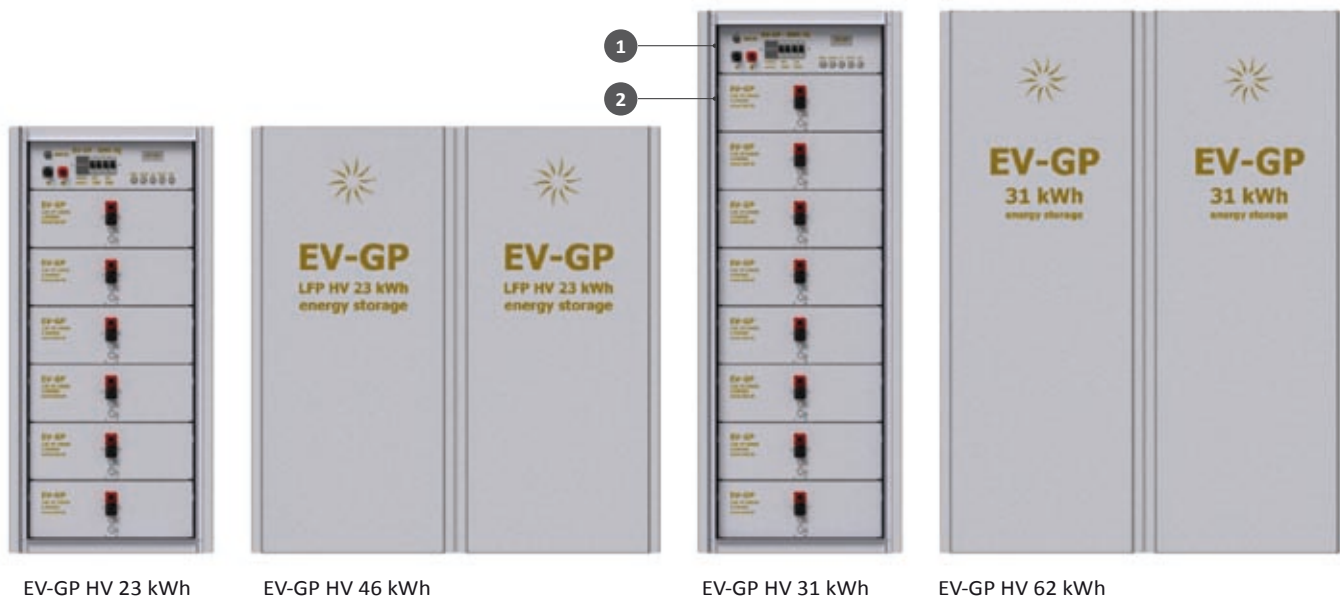
Type 2
Mennekes

EV-GP battery energy storage

The best Lifepo4 battery energy storage for the home

EV-GP HV 23/ 31/ 46/ 62 kWh is a compact battery storage system with advanced LiFePo4 battery technology. The real lifespan of batteries is more than 15 years. It is used to store electrical energy generated by solar photovoltaic panels, as backup power supply systems in On-Grid and Off-Grid installations, or as island power supply system.

It contains BMS with individual control and balancing of each cell, including security protection. The communication with the inverter or the higher-level control system is by RS485 or CAN bus communication.



Features

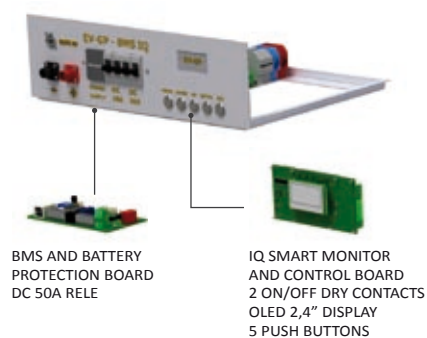
- Energy battery storage concept with measuring, balancing, and unique cooling system for each LiFePo4 battery cell
- Communication standard RS485/ CAN bus as an optional function at extra cost
- 2 RS485 outputs for connection to the EV-GP 22kW IQ charger, heat pump, air conditioning, etc.
- 2 dry On/ Off contacts
- Real-time current and battery cycle monitoring
- High output power and wide range of stored energy use
- Modular concept: the optimal setting of battery storage capacity, extension by modules
- Long service life: more than 15 years
- High battery safety: indoor use
- Easy installation – all-in-one system

Optional

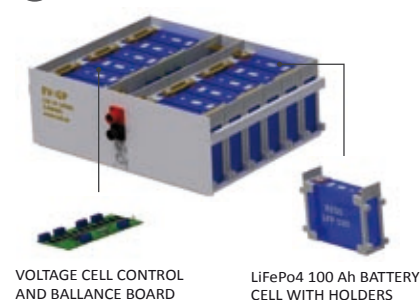
- V2L connection module
- External power generator connection
- IP 65 protection

Composition

1 BMS AND IQ MODULE



2 BATTERY PACK 3,84 kWh





EV-GP IQ Smart Home System

IQ energy system and EV charging at home

The IQ Smart home system includes a power source, a three-phase hybrid inverter with EPS output of up to 20 kW, battery energy storage, an IQ Smart control unit and EV AC charger.

The Smart IQ control unit ensures:

- **The sun provides more than enough energy:** the excess energy will begin to heat hot water, or will turn on a heat pump, air conditioning, an electric car charger, or other devices that can use the excess. The control unit has two RS-485 (or CAN bus) outputs and two switching contacts, which enable integration into intelligent control systems in households or small companies.
- **There is not enough energy:** automatically transforms an electric vehicle with V2L or another external source (LPG, gasoline, diesel, or a hydrogen generator) into a power source for the home.

Electric cars can be charged in 2 ways:

- **IQ charging from excess:** The control unit continuously controls the power to the charger in the range of 6–32 A. In the case of a lack of solar energy, it does not stop the charging, it just interrupts it. It ensures long-term charging without the need to monitor the charger.
- **Timed charging:** manual adjustment of the charging power as needed, from 6 A to 32 A in 1 A steps. The charger prepares the electric car for driving at the specified time.

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