ESY
SUNHM

TAKE THE SUN HOME

EV22 22kW V2E Bidirectional DC EV Charging Solution

Product Overview

The EV22K1000-AY1-CCS2D features 22kW bidirectional DC charging built on an advanced DC-coupled V2E (Vehicle-to-Everything) architecture. By drawing power directly from solar and battery storage, it enables 100% green charging and supports Virtual Power Plant (VPP) expansion. When paired with HM20-30/60/90 systems, the charger transforms EVs into home backup power sources and facilitates grid interaction for efficient peak shaving, valley filling, and load balancing.

Advantages

DC-Coupled V2E
- Deliver up to 22 KW stable bidirectional DC power, optimized for V2G (Vehicle-to-Grid) and V2H(Vehicle-to-Home) applications.

Extensive compatibility
- 100% green (solar energy) EV charging with 97% peak efficiency for superior energy savings;
- Universal support for a wide range of EV models with 200–1000V charging and 300–1000V discharging voltage.

Safe & Reliable
- IP65-rated protection, maintenance-free, and always reliable;
- Integrated safety features, including high-frequency transformer isolation, insulation monitoring, surge protection, and leakage current detection.

Intelligent
- Supports remote scheduling of charging and discharging, and OTA software upgrade.

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ESYsunhome CO.,LTD

Technical Parameters

Charging Mode	EV22
Input Connection	DC+/DC-/PE (Input C)
Input Voltage	240-980 VDC (22 kW at 500-980 V, 44 A constant current below 500 V)
Input Current	Max. 0~44 A
Output Voltage	200-1000 VDC (derating over 300 VDC)
Output Current	Max. 0~73.3 A
Output Power	22 kw
Efficiency	97% (peak value)

Discharging Mode	EV22
Input Voltage	300-1000 V
Input Current	Max. 76.6 A
Output Current	Max. 0~44 A
Output Voltage	240-980 VDC
Efficiency	97% (peak value)

Communication	EV22
Communication	Wi-Fi/RS485/4G
Electric Vehicle Communication Protocol	ISO15118-2, DIN 70121, ISO15118-20 (Forward Compatibility)
Backend Communication Protocol	OCPP1.6/2.0, Modbus-TCP & Modbus-RTU
Activation Method	RFID/VIN/No Authentication

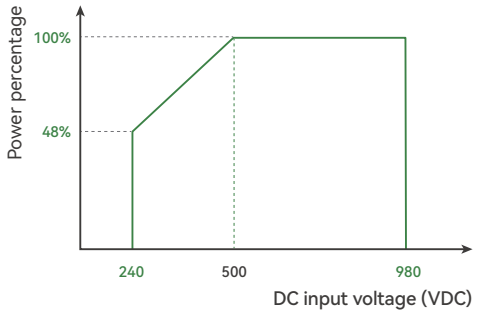
General	EV22
Dimension	660*420*185 mm (W*H*D), excluding mounting plate
Weight	47kg
Cooling Method	Independent Air Duct Cooling
Noise Level	<55dB (1 m, rated operating conditions)
Ingress Protection Rating	IP65
Mounting	Wall-mounted / Floor-standing

Others	EV22
Operating Temperature	-25 ~ +50 ℃ (derating above 50 ℃)
Humidity	<95% RH, no condensation
Altitude	2000 m, derating above 2000 m
Charging Interface	CCS1/CCS2/GBT (default 5 m)
Warning Mode	Audio and visual warning
Protection	Short-circuit protection / Overvoltage or undervoltage protection / Overload protection / Overtemperature protection /Reverse polarity protection / Welded contactor check

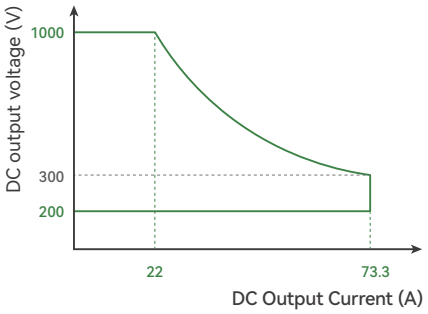
Standard Compliance

RCM, CE-RED+CB, ISO 15118-2 EIM+PNC, EN 18031-1, ROHS, REACH

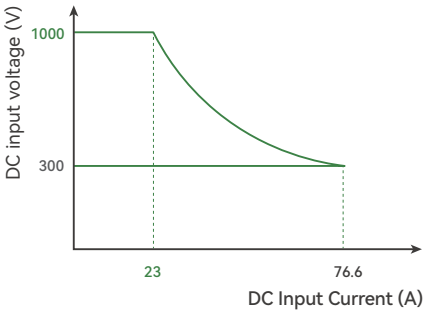
CHARACTERISTIC CURVE



Charging mode Input power limit curve



Charging mode output power limit curve



Discharging mode input power limit curve