EP CUBE

More Flexible, More Intelligent Residential Energy Storage System NEW

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EP CUBE PRODUCT INTRODUCTION

EP Cube is a flexible and intelligent residential energy storage system intended for the smart management of solar power generation and residential electricity consumption. Easy to install and small in size, the EP Cube is safe and reliable and comes with remote control for managing energy capacity at your discretion.

FEATURES

Flexible and convenient

Modular battery system makes transport and installation easy.
Capacity options from 6.6 kWh to 19.9 kWh.

Cost-saving

All-in-one design saves installation time and cost.
Automates generation and consumption.

Power guarantee

Automated power supply during grid outage.
High-power electrical appliances continue to function normally in case of grid blackout.

Safe and reliable

Lithium iron phosphate batteries.
Meets highest certification standards.
IP 65 Enclosure.

Compatible

Compatible with existing and newly installed PV systems.
Allows up to 16A DC PV input per MPPT.
Compatible with maximum 7.4 kW EV chargers.

Intelligent management

Monitors generation, storage and consumption of electricity in real time.
Automatic weather alerts help actively manage stored capacity.
OTA (Over-The-Air) firmware upgrade.

EP CUBE TECHNICAL SPECIFICATION

EP Cube HES-EU1-706G | EP Cube HES-EU1-710G | EP Cube HES-EU1-713G | EP Cube HES-EU1-716G | EP Cube HES-EU1-720G

SYSTEM SPECIFICATION

System components					
Type of inverter	Hybrid bidirectional				
Number of inverters	1				
Number of battery modules	2	3	4	5	6
Base	1				

HYBRID INVERTER

DC Input (PV)					
Max PV input power	10 kWp				
MPPTs	2				
Number of inputs per MPPT	1				
Max input power per MPPT	5 kWp				
Max PV input voltage	600 V_{DC}				
MPPT voltage range	90 V_{DC} - 550 V_{DC}				
Max MPPT input current	16 A				
Max MPPT short current	20 A				
MPPT start-up voltage	120 V_{DC}				
AC On-grid					
Rated AC output voltage	Single phase / L+N+PE / 230 V_{AC}				
Rated grid frequency	50 Hz				
Max continuous power (battery + PV)	7.6 kW[1]				
Max continuous current (battery + PV)	33.0 A[1a]				
Output power factor	~1 (adjustable from 0.8 leading to 0.8 lagging)				
Total harmonic distortion @7.6 kW	< 3% (rated power)				
AC-Boost (back-up)[2]					
Rated AC output voltage	Single Phase / L+N+PE / 230 V_{AC}				
Rated output frequency	50 Hz				
Max continuous power (battery + PV)	7.6 kVA				
Max continuous current (battery + PV)	33.0 A				
Switching-time	< 30ms[3]				

LITHIUM-ION BATTERY MODULE

General					
Cell technology	LiFePO4				
Number of battery modules	2	3	4	5	6
Nominal capacity[4]	6.6 kWh	9.9 kWh	13.3 kWh	16.6 kWh	19.9 kWh
Max continuous power (battery only)	3 kVA	5 kVA	6.5 kVA	7.6 kVA	7.6 kVA
DOD	100%[5]				
Voltage range	30 V_{DC}~ 43.8 V_{DC}				
Nominal voltage	38.4 V_{DC}				
Dimensions (WxHxD)	600 x 215 x 165 mm				
Weight	< 35 kg				

EP CUBE TECHNICAL SPECIFICATION

GENERAL PARAMETERS

System	
Applications	Self consumption / TOU / Backup
Type of inverter	Hybrid bidirectional
Inverter dimension (WxHxD)	600 x 505 x 243 mm
Inverter weight	< 38 kg
Inverter topology	Transformerless

GENERAL PARAMETERS

System					
DC battery protection	Fuse holder incl. fuses (+/-)				
Dimensions (WxHxD)	600 x 1006 x 243 mm	600 x 1221 x 243 mm	600 x 1436 x 243 mm	600 x 1651 x 243 mm	600 x 1866 x 243 mm
System weight	111.5 kg	146.5 kg	181.5 kg	216.5 kg	251.5 kg
Noise	< 30dB				
Enclosure type	IP 65				
Cooling type	Natural cooling				
Operating altitude	3,000 m				
Operating relative humidity	95% non-condensing				
Operating temperature range	- 20°C to 50°C[6]				
Recommended operating temperature	0°C to 30°C				
Storage temperature	-20°C ~ 0°C and/or 35°C ~ 50°C less than 1 month / 0°C ~ 35°C up to 1 year[7]				
Display	LED & APP				
Installation method	Floor mounted (optional: wall mounted)				
Communication interface	WiFi, ethernet[8], RS485, CAN, IO, API				
Warranty					
Inverter	10 years				
Battery[9]	> 80 % capacity, up to 10 years or 6,000 cycles				
Accessories[10]	2 years				
Certifications					
Safety	IEC / EN 62109-1, IEC / EN 62109-2, IEC / EN 62477-1, IEC / EN 62619-1, IEC 60730 Annex H, IEC 60529, VDE 2510-50, UN 38.3				
EMC	IEC 61000-6-3, IEC / EN 61000-6-1				
Energy efficiency	IEC 61683				
Grid standards	NTS 2.1 Type (A), UNE 217001, UNE 217002, RD 244, CEI 0-21, VDE-AR-N 4105, DIN VDE V 0124-100, G99 type A, UKCA				

ACCESSORIES

Items	Model
EP Cube AC Switch Box	EP CUBE ASB1-40
EP Cube Smart Meter	EP Cube 1PHM1
EP Cube Wall-mount Kit	EP Cube Wall-mount Kit1

Notes

1. Rated AC output power is adjustable according to the grid code of each country. (6kW for CEI 0-21; 4.6kWA for VDE-AR-N 4105)
1a. Rated AC output current is according to the grid code of each country. (26.1A for CEI 0-21; 19.5A for VDE-AR-N 4105)
2. Only in back-up mode in case of grid outage.
3. For reactive loads; time will be shorter for active loads.
4. Test conditions: 100% depth of discharge (DOD), 0.2C rate charge and discharge at 25°C, at the beginning of life.
5. EP Cube will maintain a minimum SOC of 15% during off-grid operation.
6. Performance may be de-rated at extreme operating temperatures.
7. Refer to the installation manual and follow the storage requirements and guidelines.
8. Being developed, available in 2024.
9. Battery capacity warranty up to 10 years or 6000 cycles, (whichever occurs first).
10. As per Limited Warranty Statement

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