



The EP Cube is a flexible and intelligent all-in-one home energy storage solution for new and existing solar installations. With unrivalled flexibility and intelligent software management, it is designed to offer a quick and easy installation, simplified logistics, and cost-savings all round to make life easier for homeowners and installers.

FEATURES



Flexible and convenient

- Modular battery makes transport and installation easy.
- Capacity options from 10 kWh to 20 kWh.



Power guarantee

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



Perfect compatibility

- 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.



Cost-saving

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



Safe and reliable battery

- LFP technology.
- Meets highest certification standards.
- IP67 protection.



Intelligent management

- Monitors generation, storage and consumption of electricity in real time.
- Integrated Eskom API, to automatically backup batteries based on grid-scheduled outages(Only for South Africa).
- OTA (Over-The-Air) firmware upgrade.

EP CUBE TECHNICAL SPECIFICATION



EP Cube
HES-EU2-S7-10G



EP Cube
HES-EU2-S7-15G



EP Cube
HES-EU2-S7-20G

System components

Type of inverter	Hybrid bidirectional		
Number of inverters (EP-Cube PCS-EU1-7G)	1		
Number of battery modules (EP Cube B2-5G2)	2	3	4
Base (EP Cube Base2-G2)	1		

Hybrid inverter - DC Input (PV)

Max PV input power	10 kW _p
MPPTs	2
Number of inputs per MPPT	1
Max input power per MPPT	5 kW _p
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}

Hybrid inverter - 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)	4.6 kVA
Max continuous current (battery + PV)	19.5 A
Output power factor	~1 (adjustable from 0.8 leading to 0.8 lagging)
Total harmonic distortion @7.6 kW	< 3% (rated power)

Hybrid inverter - AC Back-up ¹

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 A
Switching-time	< 20ms ²

Battery module

Cell technology	LiFePO ₄		
Number of battery modules	2	3	4
Nominal capacity ³	10 kWh	15 kWh	20 kWh
Max continuous power (battery only)	5 kW	7.6 kW	7.6 kW
DOD	100% ⁴		
Voltage range	43.2 V _{DC} ~ 58.4 V _{DC}		
Nominal voltage	51.2 V _{DC}		
Weight	< 42 kg		
Dimensions (WxHxD)	600 x 532 x 200 mm	600 x 798 x 200 mm	600 x 1064x 200 mm
IP Rating	IP 67 (stacked together)		

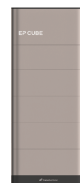
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System

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		
DC battery protection	Fuse holder incl. fuses (+/-)		
Dimensions (WXHxD)	600 x 1111 x 243 mm	600 x 1378 x 243 mm	600 x 1645 x 243 mm
System weight	122 kg	164 kg	206 kg
Noise	< 30 dB		
IP Rating	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 ⁵		
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 ⁶		
Display	LED & APP		
Installation method	Floor mounted (optional: wall mounted)		
Communication interface	WiFi, ethernet, RS485, CAN, IO, Integrated Eskom API		

Protection

Battery Input Reverse / Polarity Protection	Integrated
Over load Protection (DC-AC side)	Integrated
AC Short Circuit Current Protection /Output Short Circuit Protection	Integrated
Output Over Current Protection	Integrated
DC (PV+Battery) Short Circuit Current Protection	Integrated
AC Surge Protection: Grid and Back-up (SPD Type II)	Integrated
Anti-islanding Protection	Integrated
PV String Input Reverse Polarity Protection	Integrated
Ground Fault Monitoring	Integrated
Temperature Protection (Inverter + Battery)	Integrated
Integrated DC Switch (PV - Disconnecter)	Integrated
Remote stop	Integrated

Warranty

Inverter	10 years
Battery ⁷	> 80% capacity, up to 10 years or 6,000 cycles; > 70% capacity, up to 15 years or 6,000 cycles (Optional)
Accessories ⁸	2 years

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Certifications	
Safety	IEC / EN 62109-1, IEC / EN 62109-2, IEC / EN 62477-1, IEC / EN 62619-1, ISO 13849, IEC 60529, UN 38.3
EMC	IEC 61000-6-3, IEC / EN 61000-6-1
Grid Standards	NRS097-2-1
Accessories	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. Only in back-up mode in case of grid outage.
2. For normal working condition.
3. Test conditions: 100% depth of discharge (DOD), 0.2C rate charge and discharge at 25°C, at the beginning of life.
4. EP Cube will maintain a minimum SOC of 10% during off-grid operation.
5. Performance may be de-rated at extreme operating temperatures.
6. Refer to the installation manual and follow the storage requirements and guidelines.
7. Battery capacity warranty up to 10 years/15 years or 6,000 cycles, (whichever occurs first).
8. As per Limited Warranty Statement.

This datasheet applies to South Africa only. Specifications are subject to change without prior notice.
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