



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 5 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

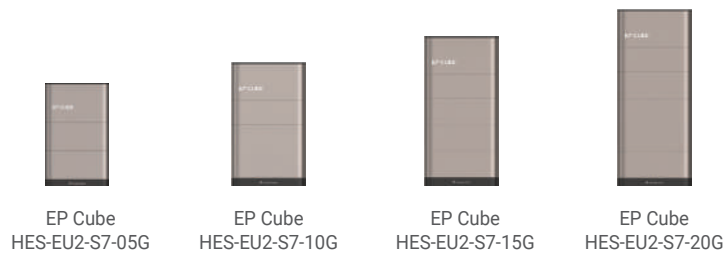
- LFP technology.
- Meets highest certification standards.
- IP67 protection.



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



System components

Type of inverter	Hybrid bidirectional			
Number of inverters (EP-Cube PCS-EU1-7G)	1			
Number of battery modules (EP Cube B2-5G2)	1	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	450 V _{DC}	600 V _{DC}
MPPT voltage range	90 V _{DC} - 400 V _{DC}	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)	7.6 kVA ¹			
Max continuous current (battery + PV)	33 A ²			
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-up³

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	< 30ms ⁴			

Battery module

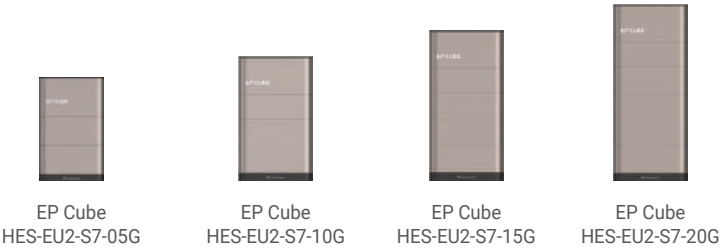
Cell technology	LiFePO ₄			
Number of battery modules	1	2	3	4
Nominal capacity ⁵	5 kWh	10 kWh	15 kWh	20 kWh
Max continuous power (battery only)	2.5 kW	5 kW	7.6 kW	7.6 kW
DOD	100% ⁶			
Voltage range	43.2 V _{DC} ~ 58.4 V _{DC}			
Nominal voltage	51.2 V _{DC}			
Weight	< 42 kg			
Dimensions (WxHxD)	600 x 266x 200 mm	600 x 532 x 200mm	600 x 798 x 200 mm	600 x 1064x 200 mm
IP Rating	IP 67 (stacked together)			

EP CUBE TECHNICAL SPECIFICATION



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 842 x 243 mm	600 x 1111 x 243 mm	600 x 1378 x 243 mm	600 x 1645 x 243 mm
System weight	82 kg	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 ⁷			
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 ⁸			
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 ⁹		> 80% capacity, up to 10 years or 6,000 cycles		
Accessories ¹⁰		2 years		

EP CUBE TECHNICAL SPECIFICATION



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	NTS 2.1 Type(A); UNE 217001, UNE 217002, RD 244, CEI 0-21, G99 typeA, G100, UKCA, 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. Rated AC output power is adjustable according to the grid code of each country. (6kW for CEI 0-21; 4.6kW for NRS097-2-1; 7.3kW for G99)
2. Rated AC output current is according to the grid code of each country. (26.1A for CEI 0-21; 19.5A for NRS097-2-1; 31.7A for G99)
3. Only in back-up mode in case of grid outage.
4. For reactive loads; time will be shorter for active loads.
5. Test conditions: 100% depth of discharge (DOD), 0.2C rate charge and discharge at 25°C, at the beginning of life.
6. EP Cube will maintain a minimum SOC of 10% during off-grid operation.
7. Performance may be de-rated at extreme operating temperatures.
8. Refer to the installation manual and follow the storage requirements and guidelines.
9. Battery capacity warranty up to 10 years or 6,000 cycles, (whichever occurs first).
10. As per Limited Warranty Statement.

This datasheet is only for products certified in specific countries. Specifications are subject to change without prior notice.
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