

SmartCube ESS Series

RTHY(80~125)KWP3-RTL(197~233)kwh

Versatile Application

- ▶ Ideal for factories, hotels, and farms with DC-coupled solar-storage
- ▶ On/off-grid switching < 20 ms with genset support

Safe & Reliable

- ▶ CATL cells ensure safety and long life
- ▶ Fire safety: alarms, valves, smoke / CO sensors, UL9540A certified (Cell, Module)

Smart Energy

- ▶ Supports self-consumption, peak shifting, time-of-use, and battery backup
- ▶ Integrated BMS / EMS for flexibility

High Performance

- ▶ Smart air-cooling for efficiency
- ▶ Long-lasting battery cycle life

Easy Operation

- ▶ Compact design saves space
- ▶ Cloud control with 24 / 7 monitoring



Outdoor Battery Cabinet Parameters

Technical Parameters	RTL197kwh	RTL215kwh	RTL233kwh
Battery Type	LFP		
Battery Module Capacity	17.92 kWh		
Number of Modules	11	12	13
Total Battery Capacity	197.12 kWh	215 kWh	233 kWh
Nominal Voltage	704 V	768 V	832 V
Operating Voltage Range	627 ~ 792 V	682 ~ 864 V	741 ~ 936 V
Charge / Discharge Rate	0.5 C		
DoD	90%		
General Parameters			
Dimensions (W x H x D)	1300 x 2380 x 1442 mm		
Weight	< 2.5 T		
Installation Site	Outdoor		
IP Protection	IP54		
Anti Corrosion Level	C4		
Operation Humidity	5% ~ 95% (No Condensing)		
Operation Temperature	-30°C ~ +50°C		
Max. Operation Altitude	≤ 3000 m		
Communication Port	Ethernet; CAN		
Communication Protocol	CAN; TCP		
Cooling Method	Air Conditioner		
Certificates	UN38.3; MSDS; IEC 62040; IEC 62477; IEC 62619; IEC 63056; IEC 61000-6-2/4		

Hybrid Inverter Parameters

Product Specifications	RTHY80KWP3	RTHY100KWP3	RTHY125KWP3
PV Side			
MPPT Voltage Range	250 ~ 950 V (Max. 1000 V)		
MPPT Rated Voltage	720 V		
MPPT Rated Voltage (Full Load)	450 ~ 800 V	550 ~ 800 V	700 ~ 800 V
Max. PV Power	160 kWp	200 kWp	250 kWp
Number of MPPT / Strings per MPPT	8 / 2		
Max. Current per MPPT	45 A		
Battery Side			
Battery Voltage Range	250 ~ 900 V		
Battery Rated Voltage Range	250 ~ 800 V		
Max. DC Current	160 A (80 A x 2)		
Max. DC Power	88 kW	110 kW	125 kW
Number of DC Inputs	2		
AC Side (On Grid)			
Nominal AC Output Power	80 kW	100 kW	125 kW
Max. AC Output Power	88 kVA	110 kVA	125 kVA
Rated AC Current	116 A	144 A	181 A
Max. AC Current	240 A	250 A	250 A
AC Rated Voltage / Voltage Range	230 / 400 Vac; 220 / 380 Vac; 3L+PE+N; -15% ~ +10%		
Nominal Grid Frequency / Frequency Range	50 Hz / 60 Hz (±5 Hz)		
THDi	< 3% (100% Load)		
Adjustable PF Range	-0.8 (Lagging) ~ 0.8 (Leading)		
Backup Output			
Nominal AC Voltage	230 / 400 V; 220 / 380 Vac; 3L+PE+N		
THDv	< 3% (Rated Power)		
Nominal Grid Frequency / Frequency Range	50 Hz / 60 Hz		
Nominal AC Output Power	80 kW	100 kW	125 kW
Max. AC Output Power (Single-phase)	50 kW		
Max. Output Current	220 A		
Genset Input			
Max. Input Current	220 A		
Efficiency			
Max. Efficiency	98%		
Protection			
Reverse DC Connection Protection	Yes		
Anti-Islanding Protection	Yes		
Over-Temperature Protection	Yes		
Grid Monitoring / Earthing Fault Detection	Yes		
Insulation Monitoring	Yes		
DC / AC Surge Protection	DC Type II; AC Type II		
AFCI	Optional		
General Parameters			
Dimensions (W x H x D)	635 x 1100 x 330 mm		
Weight	> 95 kg		
Topology	Transformerless		
IP Protection	IP65		
Operation Temperature Range	-25 ~ 60°C (> 45°C Derating)		
Operation Humidity Range	0 ~ 100% (No Condensing)		
Cooling Method	Intelligent Air Cooling		
Max. Operation Altitude	4000 m (> 3000 m Derating)		
Communication Port	RS-485 / CAN		