

All-in-one C&I Hybrid ESS

RENA1000 Series

RENA1000-E (50kW | 83.6kWh / 94kWh / 104.4kWh)

Features



Highly Integrated

All-in-one PV&ESS highly integrated
Compact design, space occupation <math>< 2\text{m}^2</math>
Fast installation, easy O&M



Extreme Safety

Cell / Module / Cluster / System Level Protection
IP55 outdoor design
Intelligent battery module temperature management



Flexible Application

Support <math>< 5\text{ms}</math> UPS-level switchover (With STS100)
Support diesel generator connection (With STS100)
Support up to 5 units on-grid parallel connection



Smart Energy

Smart EMS and multi-scenario operation
Hundred milliseconds level security detection and response
Support profit calculation and report export



Model	RENA1000-E		
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PV Input		
Max. PV Input Voltage [V]		1000
MPPT Voltage Range [V]		350 ~ 800
No. of MPP Tracker		3
No. of Input Strings per Tracker		2 / 2 / 2
Max. PV Input Current [A]		36 / 36 / 36

AC Output (On-grid)		
Rated AC Output Power [kW]		50
Max. AC Power [kVA]		55
Output THDi (@Rated Output)		< 3%
Max. AC Current [A]		80
Rated AC Voltage [V]		3 / N / PE, 230 / 400
Rated Grid Frequency [Hz]		50
Isolation Transformer		Optional
Adjustable Power Factor [cosφ]		-1 leading ~ 1 lagging

AC Output (Off-grid)		
Rated AC Output Voltage [V]		3 / N / PE, 230 / 400
Output THDv (@Linear Load)		< 3%
Rated Grid Frequency [Hz]		50 / 60
Rated AC Output Power [kW]		50
Max. AC Output Power [kVA]		55

Battery	BS80-E	BS90-E	BS100-E
Cell Type	LF100LA / 102Ah	LF100LA / 102Ah	LF100LA / 102Ah
System Battery Configuration Capacity	16S2P * 8	16S2P * 9	16S2P * 10
Nominal Energy [kWh]	83.6	94	104.4
Normal Voltage [V]	409.6	460.8	512
Voltage Range [V]	358.4 ~ 467.2	403.2 ~ 525.6	448 ~ 584
Charge / Discharge Rate	≤ 0.5C	≤ 0.5C	≤ 0.5C
DOD	95%	95%	95%
Dimensions (W * H * D) [mm]	1000 * 1950 * 1425	1000 * 1950 * 1425	1000 * 1950 * 1425
Weight [kg]	1152	1238.5	1325

General Data	
Ingress Protection	IP55
Cooling	Air-conditioner
BMS Communication Port	CAN
Operation Temperature Range [°C]	-20 ~ 55
Operation Humidity	0 ~ 95%
Operation Altitude [m]	≤ 2000
Cycle Life	6000 @90% DOD / 25°C / 0.5C

Certifications & Standards	
Grid Regulation	EN 50549-1, CEI 0-21, VDE4105, NRS 097-2-1
Safety Regulation	IEC 62619, EN 62477-1, IEC 62109-1, IEC 62109-2, IEC62477-1, EN 62109-1, EN 62109-2
EMC	EN / IEC 61000-6-2, EN / IEC 61000-6-4, EN IEC 61000-3-11, EN 61000-3-12

