

C&I ESS

RENA1000 Series

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



Extreme safety

- Three level protection
- IP55 outdoor design
- Battery life cycle management



Intelligent and friendly

- Remote real-time data monitoring
- Remote control and firmware upgrade
- Realize pre-alarm and faults location



High cycle life

- Pack-level optimization
- High precision SOX algorithm
- Smart temperature management



Flexible configuration

- Smart EMS and multi-scenario operation.
- Support UPS-level switching and microgrid operation (With STS)
- PV solar and Battery Energy Storage System (BESS) highly integrated



Model

RENA1000-E

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
THDi (@Rated Output)	< 3%
Max. AC Current [A]	80
Rated AC Voltage / Range [V]	3 / N / PE, 230 / 400; 340 ~ 440
Rated Grid Frequency / Range [Hz]	50; 45 ~ 55
Isolation Transformer	Optional
Adjustable Power Factor [cos φ]	-1 leading ~ 1 lagging

AC Output Data(Off Grid)

Rated AC Output Voltage [V]	3 / N / PE, 230 / 400; ±3%
THDv	< 3% (Linear Load)
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
Capacity [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	≤0.5 C	≤0.5 C	≤ 0.5 C
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% / 0.5C
Standards	UN 38.3, IEC / EN 62619, IEC / EN 61000, EN 62477

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

System Diagram

