

**SMART ENERGY
FOR
BETTER LIFE**

RENAC

▶ About Us

RENAC Power is a leading manufacturer of Energy Storage Systems, On Grid Inverters and a Smart Energy Solutions Developer, committed to providing advanced photovoltaic, energy storage and decentralized smart energy system solutions for residential, industrial and commercial enterprises and parks. Our track record spans over more than 10 years and covers the complete value chain.

Renac Power has a dedicated Research and Development team who are proficient in PV on-grid inverter, energy storage system design, lithium battery management, smart energy management and energy IoT. Our Engineers constantly research, develop, redesign and test new products and solutions aiming at constantly improving the efficiency and performance for both the residential and commercial markets.

▶ Our Vision


Scientific and technological innovation drives the future. RENAC Power inverters consistently deliver higher yields and ROI and have become the preferred choice for customers in more than 40 countries and areas. With a clear vision and a solid range of products and solutions we remain at the forefront of Solar energy striving to support our partners addressing any commercial and business challenge.

► Our Advantages


10+
Industry experience

30% 
employees in R&D


150+
International certification

100+ 
Technical patents



On-grid Inverters

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On-grid Inverters

R1 Mini Series

1.1kW / 1.6kW / 2.2kW / 2.7kW / 3.3kW / 3.7kW
Single Phase, 1 MPPT



Natural cooling for mute operation



Compact design



Remote firmware upgrade



IP65 outdoor design



130% DC input oversizing



Built-in zero export function



Model	R1-1K1-SS	R1-1K6-SS	R1-2K2-SS	R1-2K7-SS	R1-3K3-SS	R1-3K7-SS
PV Input Data						
Recommended Max. PV Power [Wp]	1400	2400	2800	3500	4200	4800
Max. PV Input Voltage [V]	500	500	500	550	550	550
MPPT Voltage Range [V]	50 ~ 500	50 ~ 500	50 ~ 500	50 ~ 550	50 ~ 550	50 ~ 550
Rated Input Voltage [V]	360					
Start-up Voltage [V]	70					
No. of MPP Trackers	1					
No. of Input Strings per Tracker	1					
Max. PV Input Current per MPPT [A]	13.5	13.5	13.5	13.5	16	13.5
Max. Short-circuit Current per MPPT [A]	17	17	17	17	20	17
DC Switch	Optional					
AC Output Data						
Rated AC Power [W]	1100	1600	2200	2700	3300	3680
Max. Apparent Power [VA]	1100	1600	2200	2700	3300	3680
Max. AC Current [A]	4.8	7.2	9.6	12	14.4	16
Rated AC Voltage / Range [V]	220 / 230; 160 ~ 290					
Grid Frequency / Range [Hz]	50 / 60; ±5					
Adjustable Power Factor [cosφ]	0.8 leading ~ 0.8 lagging					
Output THDi [@Rated Output]	< 3%					
Efficiency						
Max. Efficiency	97.00%	97.10%	97.10%	97.30%	97.30%	97.30%
Euro Efficiency	96.50%	96.60%	96.60%	96.80%	96.80%	96.80%
General Data						
Size (Width * Height * Depth) [mm]	260 * 295 * 115					260 * 335 * 120
Weight [kg]	6.8	6.8	6.8	6.8	6.8	7.5
User Interface	LCD					
Communication	Wifi or GPRS or 4G (optional)					
Ambient Temperature Range [°C]	-25 ~ +60					
Relative Humidity	0 ~ 100%					
Operating Altitude [m]	≤ 2000					
Standby Self Consumption [W]	< 1					
Topology	Transformerless					
Cooling	Natural					
Enclosure	IP65					
Noise [dB]	< 25					
Warranty [years]	5 / 7 / 10					
Certifications & Standards						
Grid Regulation	VDE 0126-1-1, G98, EN 50549, C10 / 11, PE, MEA, AS 4777, CEI 0-21					
Safety Regulation	IEC 62109-1, IEC 62109-2, IEC 61727, IEC 62116, IEC 60068, IEC 61683					
EMC	EN 61000-3-2, EN 61000-3-3, EN 61000-6-1, EN 61000-6-3					
Protection						
	• DC Insulation Monitoring		• AC Overvoltage Protection		• Anti-island Protection	
	• Residual Current Monitoring		• AC Overvoltage Protection		• Over-heat Protection	
	• Input Reverse Polarity Protection		• AC Short-circuit Protection		• DC / AC Surge Protection	


On-grid Inverters


R1 Macro Series


4kW / 5kW / 6kW


Single Phase, 2 MPPTs




 Natural cooling for mute operation

 Up to 97.8% max. efficiency

 Remote firmware upgrade

 IP65 outdoor design

 150% DC input oversizing

 Built-in zero export function









Model	NAC4K-DS	NAC5K-DS	NAC6K-DS
PV Input Data			
Recommended Max. PV Power [Wp]	6000	7500	9000
Max. PV Power for Single MPPT [Wp]	4000	4000	4000
Max. PV Input Voltage [V]		600	
MPPT Voltage Range [V]		100 ~ 550	
Rated Input Voltage [V]		360	
Start-up Voltage [V]		120	
No. of MPP Trackers		2	
No. of Input Strings per Tracker	1 / 1	1 / 1	1 / 1
Max. Input Current per MPPT [A]	16 / 16	16 / 16	16 / 16
Max. Short-circuit Current per MPPT [A]	20 / 20	20 / 20	20 / 20
DC Switch		Optional	
AC Output Data			
Rated AC Power [W]	4000	5000	6000
Max. Apparent Power [VA]	4400	5500	6000
Max. AC Current [A]	20	25	27.3
Rated AC Voltage / Range [V]		220 / 230; 160 ~ 290	
Grid Frequency / Range [Hz]		50 / 60; ±5	
Adjustable Power Factor [cosφ]		0.8 leading ~ 0.8 lagging	
Output THDi [@Rated Output]		< 3%	
Efficiency			
Max. Efficiency	97.80%	97.80%	97.80%
Euro Efficiency	97.20%	97.20%	97.20%
General Data			
Size (Width * Height * Depth) [mm]		429 * 385 * 185	
Weight [kg]		12	
User Interface		LCD	
Communication		RS485 or Wifi or 4G (optional)	
Ambient Temperature Range [°C]		-25 ~ +60	
Relative Humidity		0 ~ 100%	
Operating Altitude [m]		≤ 2000	
Standby Self Consumption [W]		< 1	
Topology		Transformerless	
Cooling		Natural	
Enclosure		IP65	
Noise [dB]		< 25	
Warranty [years]		5 / 7 / 10	
Certifications & Standards			
Grid Regulation	VDE 0126-1-1, C10 / 11, G99, PEA, MEA, AS 4777, EN 50549, CEI 0-21, IEC 61727, IEC 62116, IEC 60068, IEC 61683, ABNT NBR 16150		
Safety Regulation	IEC 62109-1, IEC 62109-2		
EMC	EN 61000-3-2, EN 61000-3-3, EN 61000-3-11, EN 61000-3-12, EN 61000-6-2, EN 61000-6-3, IEC 61000-4-16, IEC 61000-4-18, IEC 61000-4-29		
Protection			
	<ul style="list-style-type: none"> • DC Insulation Monitoring • Residual Current Monitoring • Input Reverse Polarity Protection 	<ul style="list-style-type: none"> • AC Overvoltage Protection • AC Overcurrent Protection • AC Short-circuit Protection 	<ul style="list-style-type: none"> • Anti-island Protection • Over-heat Protection • DC / AC Surge Protection

On-grid Inverters

R1 Moto Series

8kW / 10kW / 10.5kW
Single Phase, 2 MPPTs



-  Wider MPPT voltage range (100 ~ 550V)
-  Up to 98.1% max. efficiency
-  Remote firmware upgrade
-  IP65 outdoor design
-  150% DC input oversizing
-  Built-in zero export function



Model	R1-8K-DS	R1-10K-DS	R1-10K5-DS
PV Input Data			
Recommended Max. PV Power [Wp]	12000	15000	16000
Max. PV Power for Single MPPT [Wp]	7500 / 6000	7500 / 7500	7500 / 7500
Max. PV Input Voltage [V]		600	
MPPT Voltage Range [V]		100 ~ 550	
Rated Input Voltage [V]		360	
Start-up Voltage [V]		120	
No. of MPP Trackers		2	
No. of Input Strings per Tracker	2 / 1	2 / 2	2 / 2
Max. Input Current per MPPT [A]	26 / 20	26 / 26	26 / 26
Max. Short-circuit Current per MPPT [A]	33 / 25	33 / 25	33 / 25
DC Switch		Optional	
AC Output Data			
Rated AC Power [W]	8000	10000	10440
Max. Apparent Power [VA]	8800	10000	9570@220V; 10005@230V; 10440@240V
Max. AC Current [A]	38.5	43.5	43.5
Rated AC Voltage / Range [V]		220 / 230; 160 ~ 290	
Grid Frequency / Range [Hz]		50 / 60; ±5	
Adjustable Power Factor [cosφ]		0.8 leading ~ 0.8 lagging	
Output THDi [@Rated Output]		≤2%	
Efficiency			
Max. Efficiency	98.10%	98.10%	98.10%
Euro Efficiency	97.50%	97.50%	97.50%
General Data			
Size (Width * Height * Depth) [mm]		395 * 330 * 185	
Weight [kg]		16	
User Interface		LCD	
Communication		RS485 or Wifi or 4G (optional)	
Ambient Temperature Range [°C]		-25 ~ +60	
Relative Humidity		0 ~ 100%	
Operating Altitude [m]		≤2000	
Standby Self Consumption [W]		<1	
Topology		Transformerless	
Cooling	Natural	Fan	Fan
Enclosure		IP65	
Noise [dB]	<25	<40	<40
Warranty [years]		5 / 7 / 10	
Certifications & Standards			
Grid Regulation		IEC 61727, IEC 62116, IEC 60068, IEC 61683, ABNT NBR 16150	
Safety Regulation		IEC 62109-1, IEC 62109-2	
EMC	EN 61000-3-2, EN 61000-3-3, EN 61000-3-11, EN 61000-3-12, EN 61000-6-2, EN 61000-6-3, IEC 61000-4-16, IEC 61000-4-18, IEC 61000-4-29		
Protection			
	• DC Insulation Monitoring	• AC Overvoltage Protection	• Anti-island Protection
	• Residual Current Monitoring	• AC Overcurrent Protection	• Over-heat Protection
	• Input Reverse Polarity Protection	• AC Short-circuit Protection	• DC / AC Surge Protection

On-grid Inverters

R3 Note Series

4kW / 5kW / 6kW / 8kW / 10kW / 12kW / 15kW
Three Phase, 2 MPPTs



-  Natural cooling for mute operation
-  Wider MPPT voltage range (140 ~ 950V)
-  Remote firmware upgrade
-  IP65 outdoor design
-  150% DC input oversizing
-  Built-in zero export function




Model	R3-4K-DT	R3-5K-DT	R3-6K-DT	R3-8K-DT	R3-10K-DT	R3-12K-DT	R3-15K-DT
PV Input Data							
Recommended Max. PV Power [Wp]	6000	7500	9000	12000	15000	18000	22500
Max. PV Power for Single MPPT [Wp]	3000	3750	4500	6000	7500	9000	15000 / 7500
Max. PV Input Voltage [V]	1000						
MPPT Voltage Range [V]	140 ~ 950						
Rated Input Voltage [V]	630						
Start-up Voltage [V]	160						
No. of MPP Trackers	2						
No. of Input Strings per Tracker	1 / 1	1 / 1	1 / 1	1 / 1	1 / 1	1 / 1	2 / 1
Max. Input Current per MPPT	16 / 16	16 / 16	16 / 16	16 / 16	16 / 16	16 / 16	20 / 16
Max. Short-circuit Current per MPPT [A]	20 / 20	20 / 20	20 / 20	20 / 20	20 / 20	20 / 20	25 / 20
DC Switch	Integrated						
AC Output Data							
Rated AC Power [W]	4000	5000	6000	8000	10000	12000	15000
Max. Apparent Power [VA]	4400	5500	6600	8800	11000	13200	15000
Max. AC Current [A]	6.7	8.3	10	13.3	16.7	20	22.7
Rated AC Voltage / Range [V]	3 / N / PE, 380, 400; ±20%						
Grid Frequency / Range [Hz]	50 / 60; ±5						
Adjustable Power Factor [cosφ]	0.8 leading ~ 0.8 lagging						
Output THDi [@Rated Output]	< 3%						
Efficiency							
Max. Efficiency	98.40%	98.40%	98.40%	98.50%	98.50%	98.50%	98.50%
Euro Efficiency	97.80%	97.80%	97.80%	98.00%	98.00%	98.00%	98.00%
General Data							
Size (Width * Height * Depth) [mm]	455 * 390 * 160			455 * 390 * 175			455 * 390 * 190
Weight [kg]	16.3			18.3			21.6
User Interface	LCD						
Communication	RS485 or Wifi or 4G (optional)						
Ambient Temperature Range [°C]	-25 ~ +60						
Relative Humidity	0 ~ 100%						
Operating Altitude [m]	≤ 2000						
Standby Self Consumption [W]	< 1						
Topology	Transformerless						
Cooling	Natural						
Enclosure	IP65						
Noise [dB]	< 30						
Warranty [years]	5 / 7 / 10						
Certifications & Standards							
Grid Regulation	C10 / 11, PEA, MEA, G98, G99, EN 50549, CEI 0-21, CEI 0-16, IEC 61727, IEC 62116, IEC 60068, IEC 61683						
Safety Regulation	IEC 62109-1, IEC 62109-2						
EMC	EN 61000-3-2, EN 61000-3-3, EN 61000-6-2, EN 61000-6-3, EN 61000-3-11, EN 61000-3-12, IEC 61000-4-16, IEC 61000-4-18, IEC 61000-4-29						
Protection							
	• DC Insulation Monitoring		• AC Overvoltage Protection		• Anti-island Protection		
	• Residual Current Monitoring		• AC Overcurrent Protection		• Over-heat Protection		
	• Input Reverse Polarity Protection		• AC Short-circuit Protection		• DC / AC Surge Protection		

On-grid Inverters

R3 LV Series


10kW / 12kW / 15kW
Three Phase, 2 MPPTs




 Compatible with 500W+ PV modules

 Support LVRT and OVRT

 Remote firmware upgrade

 IP65 outdoor design

 150% DC input oversizing

 Built-in zero export function









Model	R3-10K-LV	R3-12K-LV	R3-15K-LV
PV Input Data			
Recommended Max. PV Power [Wp]	15000	18000	22500
Max. PV Power for Single MPPT [Wp]	7500	9000	11250
Max. PV Input Voltage [V]		800	
MPPT Voltage Range [V]		150 ~ 650	
Rated Input Voltage [V]		380	
Start-up Voltage [V]		165	
No. of MPP Trackers		2	
No. of Input Strings per Tracker	2 / 2	2 / 2	2 / 2
Max. Input Current Per MPPT [A]	30 / 30	30 / 30	30 / 30
Max. Short-circuit Current per MPPT [A]	39 / 39	39 / 39	39 / 39
DC Switch		Integrated	
AC Output Data			
Rated AC Power [W]	9000@208 Vac 10000@220 Vac 11000@240 Vac	11000@208 Vac 12000@220 Vac 13000@240 Vac	14000@208 Vac 15000@220 Vac 16000@240 Vac
Max. Apparent Power [VA]	11000	13000	16000
Max. AC Current [A]	27.1	31.9	40
Rated AC Voltage / Range [V]		150 ~ 300	
Grid Frequency / Range [Hz]		50 / 60; ±5	
Adjustable Power Factor [cosφ]		0.8 leading ~ 0.8 lagging	
Output THDi [@Rated Output]		< 3%	
Efficiency			
Max. Efficiency	98.40%	98.40%	98.50%
Euro Efficiency	98.10%	98.20%	98.20%
General Data			
Size (Width * Height * Depth) [mm]		506 * 386 * 185	
Weight [kg]		23	
User Interface		LCD	
Communication		RS485 or Wifi or 4G (optional)	
Ambient Temperature Range [°C]		-25 ~ +60	
Relative Humidity		0 ~ 100%	
Operating Altitude [m]		≤ 2000	
Standby Self Consumption [W]		< 1	
Topology		Transformerless	
Cooling		Fan	
Enclosure		IP65	
Noise [dB]		< 45	
Warranty [years]		5 / 7 / 10	
Certifications & Standards			
Safety Regulation		IEC 62109-1, IEC 62109-2	
EMC		EN 61000-1, EN 61000-2, EN 61000-3, EN 61000-4, EN 61000-4-16, EN 61000-4-18, EN 61000-4-29	
Protection			
	• DC Insulation Monitoring	• AC Overvoltage Protection	• Anti-island Protection
	• Residual Current Monitoring	• AC Overcurrent Protection	• Over-heat Protection
	• Input Reverse Polarity Protection	• AC Short-circuit Protection	• DC / AC Surge Protection

On-grid Inverters

R3 Pre Series

15kW / 17kW / 20kW / 25kW
Three Phase, 2 MPPTs



-  Compatible with 600W+ PV modules
-  Wider MPPT voltage range (180 ~ 1000V)
-  Maximum DC input voltage 1100V
-  Remote firmware upgrade
-  150% DC input oversizing
-  Built-in zero export function





Model	R3-15K	R3-17K	R3-20K	R3-25K
PV Input Data				
Recommended Max. PV Power [Wp]	22500	25500	30000	37500
Max. PV Power for Single MPPT [Wp]	8000	10000	12000	15000
Max. PV Input Voltage [V]	1100			
MPPT Voltage Range [V]	180 – 1000			
Rated Input Voltage [V]	600			
Start-up Voltage [V]	200			
No. of MPP Trackers	2			
No. of Input Strings per Tracker	2 / 2			
Max. Input Current per MPPT [A]	40 / 40			
Max. Short-circuit Current per MPPT [A]	50 / 50			
AC Output Data				
Rated AC Power [W]	15000	17000	20000	25000
Max. Apparent Power [VA]	16500	18700	22000	27500
Max. AC Current [A]	25	28.3	33.4	41.7
Rated AC Voltage / Range [V]	3 / N / PE, 380, 400; ±20%			
Grid Frequency / Range [Hz]	50 / 60; ±5			
Adjustable Power Factor [cosφ]	0.8 leading ~ 0.8 lagging			
Output THDi [@Rated Output]	< 3%			
Efficiency				
Max. Efficiency	98.60%	98.60%	98.60%	98.60%
Euro Efficiency	98.20%	98.20%	98.20%	98.20%
Protection				
DC Switch	Integrated			
DC Insulation Monitoring	Integrated			
Input Reverse Polarity Protection	Integrated			
Anti-island Protection	Integrated			
Residual Current Monitoring	Integrated			
AC Overcurrent Protection	Integrated			
AC Short-circuit Protection	Integrated			
AFCI Protection	Optional			
PID recovery function	Optional			
DC Surge Protection	Integrated (Type II)			
AC Surge Protection	Integrated (Type II)			
General Data				
Size (Width * Height * Depth) [mm]	520 * 412 * 200			
Weight [kg]	22			
User Interface	LED + OLED			
Communication	RS485 and USB (Standard), Wifi or 4G or Ethernet (Optional)			
Ambient Temperature Range [°C]	-25~ +60			
Relative Humidity	0 ~ 100%			
Operating Altitude [m]	≤ 2000			
Standby Self Consumption [W]	< 1			
Topology	Transformerless			
Cooling	Fan			
Enclosure	IP65			
Warranty [years]	5 / 7 / 10			
Certifications & Standards				
Grid Regulation	NB / T 32004-2018, VDE V 0124-100, VDE V 0126-1-1, VDE-AR-N 4015, UNE 217001, UNE 206007, PO 12.2, UTE C15-712, ABNT NBR 16149, ABNT NBR 16150, ABNT NBR 62116, EN 50549, IEC 61727, IEC 62116			
Safety Regulation	IEC 62109-1, IEC 62109-2			
EMC	EN 61000-1, EN 61000-2, EN 61000-3, EN 61000-4			

On-grid Inverters

R3 Navo Series

30kW / 36kW / 40kW / 50kW
Three Phase, 3 / 4 MPPTs



-  Compatible with 600W+ PV modules
-  150% DC input oversizing & 110% AC overloading
-  Remote firmware upgrade
-  Optional AFCI & Smart PID recovery function
-  Low start-up voltage at 200V
-  Type II SPD for both DC and AC

Model	R3-30K	R3-36K	R3-40K	R3-50K
PV Input Data				
Recommended Max. PV Power [Wp]	45000	54000	60000	75000
Max. PV Power for Single MPPT [Wp]	20000	20000	20000	20000
Max. PV Input Voltage [V]	1100			
MPPT Voltage Range [V]	180 – 1000			
Rated Input Voltage [V]	600			
Start-up Voltage [V]	200			
No. of MPP Trackers	3	3	4	4
No. of Input Strings per Tracker	2 / 2 / 2	2 / 2 / 2	2 / 2 / 2 / 2	2 / 2 / 2 / 2
Max. Input Current per MPPT [A]	40 / 40 / 40	40 / 40 / 40	40 / 40 / 40 / 40	40 / 40 / 40 / 40
Max. Short-circuit Current per MPPT [A]	50 / 50 / 50	50 / 50 / 50	50 / 50 / 50 / 50	50 / 50 / 50 / 50
AC Output Data				
Rated AC Power [W]	30000	36000	40000	50000
Max. Apparent Power [VA]	33000	39600	44000	55000
Max. AC Current [A]	50	60	66.6	83.3
Rated AC Voltage / Range [V]	3 / N / PE, 220 / 380			
Grid Frequency / Range [Hz]	50 / 60 ; ±5			
Adjustable Power Factor [cosφ]	0.8 leading ~ 0.8 lagging			
Output THDi [@Rated Output]	< 3%			
Efficiency				
Max. Efficiency	98.60%	98.80%	98.80%	98.80%
Euro Efficiency	97.80%	98.00%	98.00%	98.00%
Protection				
DC Switch	Integrated			
DC Insulation Monitoring	Integrated			
Input Reverse Polarity Protection	Integrated			
Anti-island Protection	Integrated			
Residual Current Monitoring	Integrated			
AC Overcurrent Protection	Integrated			
AC Short-circuit Protection	Integrated			
AFCI Protection	Optional			
PID recovery function	Optional			
DC Surge Protection	Integrated (Type II)			
AC Surge Protection	Integrated (Type II)			
General Data				
Size (Width * Height * Depth) [mm]	585 * 480 * 220			
Weight [kg]	37			
User Interface	LED + OLED			
Communication	RS485 and USB (Standard), Wifi or 4G or Ethernet (Optional)			
Ambient Temperature Range [°C]	-25 ~ +60			
Relative Humidity	0 ~ 100%			
Operating Altitude [m]	≤ 2000			
Standby Self Consumption [W]	< 1			
Topology	Transformerless			
Cooling	Fan			
Enclosure	IP65			
Warranty [years]	5 / 7 / 10			
Certifications & Standards				
Grid Regulation	NB / T32004, ORDINANCE 140, VDE 4105, VDE 0126, UNE 217002, EN 50549-1, EN 50549-GR, EN 50549-CZ			
Safety Regulation	IEC 62109-1, IEC 62109-2			
EMC	EN / IEC 61000-6-1, EN / IEC 61000-6-3			

On-grid Inverters

R3 Plus Series

75kW

Three Phase, 8 / 9 MPPTs



170% DC input oversizing



IP66 outdoor design



String monitoring and shorter O&M time



Optional AFCI & Smart PID recovery function



Remote firmware upgrade



Type II SPD for both DC and AC



Model	R3-75KL	R3-75K
DC Input Data		
Max. Recommended PV Power [Wp]	127500	127500
Max. PV Input Voltage [V]	800	1100
MPPT Voltage Range [V]	200 – 800	200 – 1000
Rated Input Voltage [V]	370	650
Start-up Voltage [V]	200	200
No. of MPP Trackers	9	8
No. of Input Strings per Tracker	2	2
Max. PV Input Current per MPPT [A]	45	40 (40A@550V, 45A@600V)
Max. Short-circuit Current per MPPT [A]	60	60
AC Output Data		
Rated AC Power [W]	75000	75000
Max. Apparent Power [VA]	75000	75000
Rated AC Current [A]	196.9	113.7
Max. AC Current [A]	196.9	113.7
Rated AC Voltage / Range [V]	3 / PE, 220; ±20%; 3 / N / PE, 220; ±20%	3 / PE, 380; ±20%; 3 / N / PE, 380; ±20%
Grid Frequency / Range [Hz]	50 / 60; ±5	50 / 60; ±5
Adjustable Power Factor [cos φ]	0.8 leading ~ 0.8 lagging	0.8 leading ~ 0.8 lagging
Output THDi [@Rated Output]	< 3% (Rated Power)	< 3% (Rated Power)
Efficiency		
Max. Efficiency	98.7%	98.7%
Euro Efficiency	98.3%	98.3%
Protection		
DC Switch	Integrated	
DC Insulation Monitoring	Integrated	
Input Reverse Polarity Protection	Integrated	
Anti-island Protection	Integrated	
Residual Current Monitoring	Integrated	
AC Overcurrent Protection	Integrated	
AC Short-circuit Protection	Integrated	
String Current Monitoring	Integrated	
DC Surge Protection	Integrated (Type II)	
AC Surge Protection	Integrated (Type II)	
AFCI Protection	Optional	
PID function	Optional	
General Data		
Size (Width * Height * Depth) [mm]	965 * 700 * 355	
Weight [kg]	85	84
User Interface	LED + LCD	
Communication	RS485 (Standard), Wifi or GPRS (Optional)	
Ambient Temperature Range [°C]	-30 ~ +60	
Relative Humidity	0 ~ 100%	
Operating Altitude [m]	≤ 4000	
Standby Self Consumption [W]	< 1	
Topology	Transformerless	
Cooling	Fan	
Protection Grades	IP66	
Noise [dB]	≤ 75	
Warranty [years]	5 / 7 / 10	

Residential ESS

N1 HV Series

3kW / 3.68kW / 5kW / 6kW

Single Phase, 2 MPPTs

High Voltage Hybrid Inverter



150% DC input oversizing



Charging / discharging efficiency >97%



Support VPP / FFR function



Up to 6000W charging / discharging rate



Remote firmware upgrade & work mode setting



EU standard certified by TÜV Rheinland



Model	N1-HV-3.0	N1-HV-3.68	N1-HV-5.0	N1-HV-6.0
PV Input Data				
Recommended Max. PV Power [Wp]	4500	5500	7500	9000
Max. PV Input Voltage [V]	600			
MPPT Voltage Range [V]	120 ~ 550			
Rated PV Input Voltage [V]	360			
Start-up Voltage [V]	150			
No. of MPP Trackers	2			
No. of Input Strings per Tracker	1			
Max. Input Current per MPPT [A]	27 (13.5 / 13.5)			
Max. Short-circuit Current per MPPT [A]	34 (17 / 17)			
DC Switch	Integrated			
AC Input / Output Data (On-grid)				
Maximum Apparent Power [VA]	3000	3680	5000 ^[1]	6000
Rated AC Power [W]	3000	3680	5000 ^[1]	6000
Rated AC Current [A]	13	16	21.7 ^[1]	26.1
Rated AC Voltage / Range [V]	220 / 230; 160 ~ 290			
Grid Frequency / Range [Hz]	50 / 60; ±5			
Adjustable Power Factor [cosφ]	0.8 leading ~ 0.8 lagging			
Output THDi [@Rated Output]	< 2%			
Battery Data				
Battery Type	Lithium			
Battery Voltage Range [V]	80 ~ 450			
Max. Charging / Discharging Current [A]	25			
Max. Charging / Discharging Power [W]	4500 / 3000	5500 / 3680	6000 / 5000	6000 / 6000
Communication Interface	CAN			
EPS Output Data (With Battery)				
EPS Rated Power [W]	3000	3680	5000	6000
EPS Rated Voltage [V]	220 / 230			
EPS Rated Frequency [Hz]	50 / 60			
EPS Rated Current [A]	13	16	21.7	26.1
Output THDi [@Rated Output]	< 3%			
Automatic Switch Time [s]	< 0.5			
Peak Apparent Power, Duration [VA, s]	4500, 10	5520, 10	7500, 10	9000, 10
Efficiency				
Max. Efficiency	97.42%	97.45%	97.50%	97.50%
Euro Efficiency	97.15%	97.17%	97.20%	97.20%
Battery Charge / Discharge Efficiency	97.15%	97.17%	97.20%	97.20%
Protection				
DC Insulation Monitoring	Integrated			
Input Reverse Polarity Protection	Integrated			
Anti-island Protection	Integrated			
Residual Current Monitoring	Integrated			
Over-heat Protection	Integrated			
AC Overcurrent Protection	Integrated			
AC Short-circuit Protection	Integrated			
AC Overvoltage Protection	Integrated			
DC Surge Protection	Integrated			
AC Surge Protection	Integrated			
General Data				
Size (Width * Height * Depth) [mm]	520 * 412 * 172			
Weight [kg]	20			
User Interface	LED + OLED			
Communication	RS485 and USB (Standard), Wifi or 4G (Optional) or Ethernet (Optional)			
Ambient Temperature Range [°C]	-30 ~ +60			
Relative Humidity	0 ~ 100%			
Operating Altitude [m]	≤ 2000			
Standby Self Consumption [W]	< 15			
Topology	Transformerless			
Cooling	Natural			
Enclosure	IP65			
Noise [dB]	< 35			
Warranty [years]	5 / 7 / 10			
Certifications & Standards				
Grid Regulation	AS 4777, EN 50549-1, EN 50549-PL, EN 50549-GR, IEC 61727, CEI 0-21, IEC 62116, C10 / C11, VDE0126, ORDINANCE 140			
Safety Regulation	IEC 62109-1, IEC 62109-2			
EMC	EN / IEC 61000-6-1, EN / IEC 61000-6-3			







[1]: The AC output power for VDE-AR-N 4105, VDE 0126 and NRS 097-2-1 is limited to 4600VA&20A, for AS / NZS 4777.2 is limited to 4999VA & 21.7A.

Residential ESS

N3 HV Series

5kW / 6kW / 8kW / 10kW
Three Phase, 2 MPPTs
High Voltage Hybrid Inverter



-  Compatible with 600W+ PV modules
-  Support 100% unbalanced loads
-  ≤20ms backup power switching
-  Support up to 10 units parallel connections
-  Remote firmware upgrade & work mode setting
-  Support VPP / FFR function




Model	N3-HV-5.0	N3-HV-6.0	N3-HV-8.0	N3-HV-10.0-A	N3-HV-10.0
PV Input Data					
Recommended Max. PV Power [Wp]	7500	9000	12000	15000	15000
Max. PV Input Voltage [V]			1000		
MPPT Voltage Range [V]			160 ~ 950		
Rated PV Input voltage [V]			600		
Start-up Voltage [V]			160		
No. of MPP Trackers			2		
No. of Input Strings per Tracker			1		
Max. Input Current per MPPT [A]			36 (18 / 18)		
Max. Short-circuit Current per MPPT [A]			46 (23 / 23)		
DC Switch			Integrated		
AC Output Data					
Maximum Apparent Power [VA]	5500	6600	8800	10000	11000
Rated AC Power [W]	5000	6000	8000	10000	10000
Maximum AC Current [A]	7.6	9.1	12.2	14.4	15.2
Rated AC Current [A]	7.2	8.7	11.5	14.4	14.4
Rated AC Voltage / Range [V]			3 / N / PE, 220 / 380, 230 / 400; ±20%		
Grid Frequency / Range [Hz]			50 / 60; ±5		
Adjustable Power Factor [cosφ]			0.8 leading ~ 0.8 lagging		
Output THDi [@Rated Output]			< 3%		
AC Input Data					
Max. apparent AC Power [VA]	10000	12000	16000	20000	20000
Max. AC Current [A]	15.2	18.2	24.3	28.8	30.4
Rated AC Voltage / Range [V]			3 / N / PE, 220 / 380, 230 / 400; ±20%		
Grid Frequency / Range [Hz]			50 / 60; ±5		
Battery Data					
Battery Type			Lithium		
Battery Voltage Range [V]			160 ~ 700		
Max. Charging / Discharging Current [A]			30 / 30		
Communication Interface			CAN		
EPS Output Data (With Battery)					
EPS Rated Power [W]	5000	6000	8000	10000	10000
EPS Rated Voltage [V]			3 / N / PE, 220 / 380, 230 / 400		
EPS Rated Frequency [Hz]			50 / 60		
EPS Rated Current [A]	7.6	9.1	12.2	14.4	15.2
Output THDi [@Rated Output]			< 3%		
Automatic Switch Time [ms]			≤ 20		
Peak Apparent Power, Duration [VA, s]	7500, 60	9000, 60	12000, 60	15000, 60	15000, 60
Efficiency					
Max. Efficiency	98.00%	98.00%	98.00%	98.00%	98.00%
Euro Efficiency	97.70%	97.70%	97.70%	97.70%	97.70%
Max. Battery Charge / Discharge Efficiency	97.60%	97.60%	97.60%	97.60%	97.60%
Protection					
DC Insulation Monitoring			Integrated		
Input Reverse Polarity Protection			Integrated		
Anti-island Protection			Integrated		
Residual Current Monitoring			Integrated		
Over-heat Protection			Integrated		
AC Overcurrent Protection			Integrated		
AC Short-circuit Protection			Integrated		
AC Overvoltage Protection			Integrated		
DC Surge Protection			Integrated (Type II)		
AC Surge Protection			Integrated (Type II)		
General Data					
Size (Width * Height * Depth) [mm]			520 * 412 * 186		
Weight [kg]			27		
User Interface			LED + OLED		
Communication			RS485 and USB (Standard), Wifi or 4G (Optional) or Ethernet (Optional)		
Operating Temperature Range [°C]			-25 ~ +60		
Relative Humidity			0 ~ 100%		
Operating Altitude [m]			≤ 2000		
Standby Self Consumption [W]			< 15		
Topology			Transformerless		
Cooling			Natural		
Enclosure			IP65		
Noise [dB]			< 35		
Warranty [years]			5		
Certifications & Standards					
Grid Regulation	VDE 4105, EN 50549-1, VDE 0126, CEI 0-21, EN 50549-GR, EN 50549-PL, TOR Erzeuger, EN 50549-CZ, AS 4777, UNE 217002				
Safety Regulation	IEC 62109-1, IEC 62109-2				
EMC	EN / IEC 61000-6-1, EN / IEC 61000-6-3				


Residential ESS


N1 HL Series


3kW / 3.68kW / 5kW
Single Phase, 2 MPPTs
Low Voltage Hybrid Inverter




 Compatible with lithium & lead-acid battery (48V)

 Emergency power supply

 Remote work mode setting

 IP65 outdoor design

 EMS integrated

 Support VPP / FFR function









Model	ESC3000-DS	ESC3680-DS	ESC5000-DS
PV Input Data			
Recommended Max. PV Power [Wp]	6600	6600	8000
Max. PV Input Voltage [V]		580	
MPPT Voltage Range [V]		100 ~ 550	
Start-up Voltage [V]		110	
No. of MPP Trackers		2	
No. of Input Strings per Tracker		1	
Max. Input Current per MPPT [A]		27 (13.5 / 13.5)	
Max. Short-circuit Current per MPPT [A]		34 (17 / 17)	
DC Switch		Integrated	
AC Output Data (On-grid)			
Rated AC Power [W]	3000	3680	5000 ⁽¹⁾
Max. Apparent Power [VA]	3000	3680	5000 ⁽¹⁾
Max. AC Current [A]	13	16	21.7
Rated AC Voltage / Range [V]		220 / 230; 180 ~ 270	
Grid Frequency / Range [Hz]		50 / 60; ±5	
Adjustable Power Factor [cosφ]		0.8 leading ~ 0.8 lagging	
Output THDi [@Rated Output]		< 3%	
Battery Data			
Battery Type		Lithium / Lead-acid	
Recommended Battery Voltage [V]		48	
Battery Voltage Range [V]		40 ~ 60	
Max. Charging / Discharging Power [W]		3000	
Max. Charging / Discharging Current [A]		60	
Communication Interface		CAN	
EPS Output Data (With Battery)			
EPS Rated Power [W]		3000	
EPS Rated Voltage [V]		220 / 230	
EPS Rated Frequency [Hz]		50 / 60	
EPS Rated Current [A]		13	
Output THDi [@Rated Output]		< 3%	
Automatic Switch Time [s]		< 5	
PeakPower, Duration [VA.s]		4500, 10	
Efficiency			
Max. Efficiency	97.60%	97.60%	97.60%
Euro Efficiency	97.00%	97.00%	97.00%
Battery Charge / Discharge Efficiency	94.00%	94.00%	94.00%
General Data			
Size (Width * Height * Depth) [mm]		528 * 526 * 193	
Weight [kg]		29.5	
User Interface		LCD	
Communication		RS485 or Wifi or 4G (Optional)	
Ambient Temperature Range [°C]		-25 ~ +60	
Relative Humidity		0 ~ 100%	
Operating Altitude [m]		≤ 4000	
Standby Self Consumption [W]		< 1	
Topology		Transformerless	
Cooling		Natural	
Enclosure		IP65	
Noise [dB]		< 35	
Warranty [years]		5 / 7 / 10	
Certifications & Standards			
Grid Regulation	G98, G99, NRS-097, MEA, PEA, AS 4777, EN 50438, CEI-021, EN 50549, IEC 61727, IEC 62116, IEC 60068, IEC 61683, C10 / 11		
Safety Regulation	IEC 62109-1, IEC 62109-2, IEC 62040		
EMC	EN 61000-6-2, EN 61000-6-3, EN 61000-4-16, EN 61000-4-18, EN 61000-4-29		
Protection			
	<ul style="list-style-type: none"> DC Insulation Monitoring Residual Current Monitoring Input Reverse Polarity Protection 	<ul style="list-style-type: none"> AC Overvoltage Protection AC Overcurrent Protection AC Short-circuit Protection 	<ul style="list-style-type: none"> Anti-island Protection Over-heat Protection DC / AC Surge Protection

Residential ESS

01 HF Series

3.6kW / 5kW
Single Phase, 1 MPPT
Off-grid Inverter



-  Compatible with lithium & lead-acid battery (48V)
-  Support up to 6 units parallel connections
-  Work with or without batteries
-  MPPT charge controller and AC charger integrated
-  Double rating of surge power suitable for motor loads
-  UPS-level switching



Model	O1-HF-3.6	O1-HF-5.0
Battery		
Nominal Battery Voltage [V]	48	
Battery Voltage Range [V]	40 ~ 60	
Battery Type	Lithium / Lead-acid	
Solar Charger		
Max. PV Input Power [Wp]	4500	6000
Max. PV Input Voltage [V]	450	
Max. PV Input Current [A]	18	
MPPT Range [V]	120 ~ 430	
MPP Trackers / String per Tracker	1 / 1	
Max Charging Current [A]	80	100
Max. Efficiency	93%	93%
AC Charger		
Nominal AC Input Voltage [V]	220 / 230 / 240	
Max. AC Charge Current [A]	60	80
AC Voltage Range [V]	180 ~ 275	
Frequency Range [Hz]	50 / 60; ±5	
Inverter Output		
Rated Output Power [W / VA]	3600 / 3600	5000 / 5000
Parallel Capacity	NA	Up to 6
Nominal Output Voltage [V]	220 / 230 / 240	
Nominal Output Frequency [Hz]	50 / 60	
Surge Power [W]	7200	10000
Max. Efficiency	93%	
THDi	5%	
Automatic Switch Time	10ms (For Personal Computers); 20ms (For Home Appliances)	
General Parameters		
Protection Degree	IP20	
Size (Width * Height * Depth) [mm]	330 * 485 * 135	
Weight [kg]	11.5	12
Ambient Temperature Range [°C]	0 ~ +50	
Storage Temperature Range [°C]	-15 ~ +60	
Communication	Wifi or 4G (optional)	

Residential ESS

A1 HV Series

3kW / 3.68kW / 5kW / 6kW

All-in-one Energy Storage System



'Plug & Play' design



Up to 6000W charging / discharging rate



Remote firmware upgrade & work mode setting



IP65 outdoor design



Charging / discharging efficiency >97%



Support VPP / FFR function



Model	A1-HV-3.0	A1-HV-3.68	A1-HV-5.0	A1-HV-6.0
PV Input Data				
Recommended Max. PV Power [Wp]	4500	5500	7500	9000
Max. PV Input Voltage [V]	600			
MPPT Voltage Range [V]	120 ~ 550			
Start-up Voltage [V]	150			
No. of MPP Trackers	2			
No. of Input Strings per Tracker	1			
Max. Input Current per MPPT [A]	27 (13.5 / 13.5)			
Max. Short-circuit Current per MPPT [A]	34 (17 / 17)			
DC Switch	Integrated			
Battery Data				
Battery Type	LiFePO ₄			
Recommended Battery Voltage [V]	300			
Battery Voltage Range [V]	85 ~ 450			
Max. Charging / Discharging Power [W]	4500 / 3000	5500 / 3680	6000 / 5000	6000 / 6000
Max. Charging / Discharging Current [A]	25			
Communication Interface	CAN, RS485			
AC Input Data / AC Output Data				
Rated AC Power [W]	3000	3680	4600	6000
Max. Apparent Power [VA]	3000	3680	5000	6000
Max. AC Current [A]	13	16	21.7	26.1
Rated AC Voltage / Range [V]	220 / 230; 180 ~ 270			
Grid Frequency / Range [Hz]	50 / 60; ±5			
Adjustable Power Factor [cosφ]	0.8 leading ~ 0.8 lagging			
Output THDi [@Rated Output]	< 2%			
EPS Output Data (With Battery)				
EPS Rated Power [VA]	3000	3680	5000	6000
EPS Rated Voltage [V]	220 / 230			
EPS Rated Frequency [Hz]	50 / 60			
Max. Output Current [A]	13	16	21.7	26.1
Output THDi [@Rated Output]	< 3 %			
Automatic Switch Time [s]	< 0.5			
Peak Apparent Power, Duration [VA,s]	3600, 600	4416, 600	6000, 600	7200, 600
Efficiency				
Max. Efficiency	97.42%	97.45%	97.50%	97.50%
Euro Efficiency	97.15%	97.17%	97.20%	97.20%
Max. Battery Discharge Efficiency (BAT to AC)	97.15%	97.17%	97.20%	97.20%
General Data				
Size (Width * Height * Depth) [mm]	561 * (855 + N * 325) * 237 (N ^[1] = 1 ~ 4)			
Weight [kg]	33 + N * 38.7 (N = 1 ~ 4)			
User Interface	LED + OLED			
Communication	RS485 and USB or Wifi or 4G (optional)			
Ambient Temperature Range ^[2] [°C]	-10 ~ +50			
Relative Humidity	0 ~ 100%			
Operating Altitude [m]	≤ 2000			
Standby Self Consumption [W]	< 15			
Topology	Transformerless			
Cooling	Natural			
Enclosure	IP65			
Noise [dB]	< 35			
Warranty [years]	5 / 7 / 10			
Certifications & Standards				
Grid Regulation	AS 4777, EN 50549-1, EN 50549-PL, EN 50549-GR, IEC 61727, CEI 0-21, IEC 62116, C10 / C11, VDE 0126, ORDINANCE 140			
Safety Regulation	IEC 62109-1, IEC 62109-2, IEC 62619, IEC 62040, IEC 62477			
EMC	EN / IEC 61000-6-1, EN / IEC 61000-6-3			
Protection				
	<ul style="list-style-type: none"> DC Insulation Monitoring Residual Current Monitoring Input Reverse Polarity Protection 	<ul style="list-style-type: none"> AC Overvoltage Protection AC Overcurrent Protection AC Short-circuit Protection 	<ul style="list-style-type: none"> Anti-island Protection Over-heat Protection DC / AC Surge Protection 	

[1] Number of battery modules.

[2] Operating temperature range: charging (0 ~ +40°C), discharging (-10 ~ +50°C)

Residential ESS

Turbo H1 Series

3.74kWh / 7.48kWh / 11.23kWh / 14.97kWh / 18.7kWh
High Voltage Battery



Modular & 'Plug & Play' design



Safety upgrade with world class LiFePO₄ battery technology



Remote firmware upgrade and online diagnosis



IP65 outdoor design



Support up to 5 battery sets parallel connection



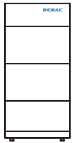




EU standard certified by TÜV Rheinland



Model	TB-H1-3.74	TB-H1-7.48	TB-H1-11.23	TB-H1-14.97	TB-H1-18.7
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Electrical Parameters

System Demo					
Number of Modules	1	2	3	4	5
Nominal Energy ^[1] [kWh]	3.74	7.48	11.23	14.97	18.7
Nominal Voltage [V]	96	192	288	384	480
Voltage Range [V]	81 – 108	162 – 216	243 – 324	324 – 432	405 – 540
Maximum Charge / Discharge Current ^[2] [A]	30 / 30				
Depth of Discharge	90%				
Cooling	Natural				

General

Battery Technology	LiFePO ₄				
Size (Width * Height * Depth) [mm]	561 * 576 * 217	561 * 902 * 217	561 * 1228 * 217	561 * 1554 * 217	561 * 1880 * 217
Weight [kg]	49.5	86.8	124.1	161.4	198.7
Number of Battery Units	1	2	3	4	5
Enclosure	IP65 (Indoor or Outdoor)				
Installation Type	Floor Stand				
Operating Temperature Range ^[3] [°C]	-10 ~ +50				
Communication	CAN, RS485				
Cycle Life	6000@ 80% DOD / 25°C / 0.2C / 60% EOL				
Warranty ^[4] [years]	10				
Operating Altitude [m]	≤ 2000				

Certification

Certificates	UN38.3, EN / IEC 62619, IEC 62040, EN 62477, EN 61000-6-1 / -3
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[1] Nominal Energy: 100% DOD, 0.2C charge & discharge at +25°C (test conditions).

[2] The recommended charging and discharging current is 25 / 30A.







[3] Ambient temperature charging (0 ~ +40°C), discharging (-10 ~ +50°C).

[4] Conditions apply: refer to Renac Power Battery Warranty Policy.

Residential ESS

Turbo H3 Series

7.1kWh / 9.5kWh
High Voltage Battery

-  Powered by **CATL** LiFePO₄ battery cells
-  The Lowest charging temperature (-17°C) in the market
-  Support up to 6 units parallel connections
-  IP65 outdoor design
-  Module auto recognition
-  Remote firmware upgrade and online diagnosis



Model	TB-H3-7.1			TB-H3-9.5		
Electrical Parameters						
Nominal Voltage [V]	307.2			409.6		
Nominal Capacity [Ah]	23			23		
Nominal Energy [kWh] ^[1]	7.1			9.5		
Voltage Range [V]	259.2 ~ 345.6			345.6 ~ 460.8		
Max. Continuous Charging / Discharging Current [A]	18.4			18.4		
Peak Current [A]	23			23		
Peak Power [kW]	7.5			10		
General						
Battery Type	LiFePO ₄					
Size (Width * Height * Depth) [mm]	530 * 886 * 245			530 * 1000 * 245		
Net Weight [kg]	95			125		
Scalable	1	2	3	1	2	3
	7.1kWh	14.2kWh	21.3kWh	9.5kWh	19kWh	28.5kWh
	4	5	6	4	5	6
	28.4kWh	35.5kWh	42.6kWh	38kWh	47.5kWh	57kWh
Enclosure	IP65 (Indoor or Outdoor)					
Installation Type	Wall - mounted / Floor - mounted					
Cooling Type	Natural					
Communication Port	CAN, RS485					
Ambient Temperature Range [°C] ^[2]	-20 ~ +55					
Operation Humidity	5 ~ 95%					
Altitude [m]	≤ 2000					
Warranty ^[3] [years]	10					
Cycle Life	6000@ 85% DOD / 25°C / 0.33C / 60% EOL					
Certification						
Certificates	IEC 62619, IEC 62040-1, IEC 62477-1, IEC 61000-6-1 / 3, UN38.3					

[1] Nominal Energy: 100% DOD, 0.33C charge & discharge at +25°C (test conditions).

[2] Ambient temperature: charging (-17 ~ +53°C). discharge (-17 ~ +53°C).

[3] Condition apply: refer to Renac Power Battery Warranty Policy.

Residential ESS

Turbo L1 Series

5.3 kWh

Low Voltage Battery



'Plug & Play' design



Wall-mounted or floor-mounted installation



Support up to 6 units parallel connections



IP65 outdoor design



Higher charge / discharge power



Remote diagnosis and real-time data monitoring



Model	TB-L1-5.3
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Electrical Parameters

Nominal Voltage [V]	51.2
Nominal Capacity [Ah]	105
Nominal Energy [kWh] ^[1]	5.3
Usable Energy (90%DOD) [kWh]	4.8
Voltage Range [V]	43.2 ~ 57.6
Max. Continuous Charging Current [A]	60
Max. Continuous Discharging Current [A]	60

General

Battery Type	LiFePO ₄					
Size (Width * Height * Depth) [mm]	360 * 652 * 198.5					
Net Weight [kg]	57					
Scalable	1	2	3	4	5	6
	5.3kWh	10.6kWh	15.9kWh	21.2kWh	26.5kWh	31.8kWh
Enclosure	IP65 (Indoor or Outdoor)					
Installation Type	Wall - mounted / Floor - mounted					
Cooling	Natural					
Communication Port	CAN, RS485					
Operation Temperature Range [°C] ^[2]	-10 ~ +55					
Operation Humidity	5 ~ 95%					
Altitude [m]	≤ 2000					
Warranty ^[3] [years]	10					
Cycle Life	6000@ 80% DOD / 25°C / 0.33C / 60% EOL					

Certification

Certificates	IEC 61000-6-1 / 3, IEC 62619, UN38.3
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[1] Nominal Energy: 100% DOD 0.33C charge & discharge at +25°C (test conditions).

[2] Ambient temperature: charging (0 ~ +50°C), discharge (-10 ~ +55°C).

[3] Condition apply: refer to Renac Power Battery Warranty Policy.

C&I ESS

RENA1000 Series

RENA1000-E (50kW / 104.4kWh)



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 EPS-level switching and microgrid operation
PV solar and Battery Energy Storage System (BESS)
highly integrated.



Model

RENA1000-E

PV Input Data

Max. Input Voltage	1000V
MPPT Voltage Range	350 ~ 800V
No. of MPPT Trackers	3
No. of Input Strings per Tracker	2 / 2 / 2
Max. Input Current	36A / 36A / 36A

AC Output Data(On Grid)

Rated AC Power	50kW
Max. AC Power	55kVA
THDI	< 3% (Rated Power)
Max. AC Current	80A
Rated AC Voltage/Voltage Range	3L + N + PE, 230 / 400V; 340 ~ 440V
Rated Grid Frequency/Frequency Range	50Hz; 45 ~ 55Hz
Isolation Transformer	Optional
Power Factor	-1 ~ 1

AC Output Data(Off Grid)

Rated AC Voltage	230 / 400 ±3%; 3L + N + PE
THDv	< 3% (Linear Load)
Rated Grid Frequency	50 / 60Hz
Rated AC Power	50kW
Max. AC Power	55kVA

Battery Data

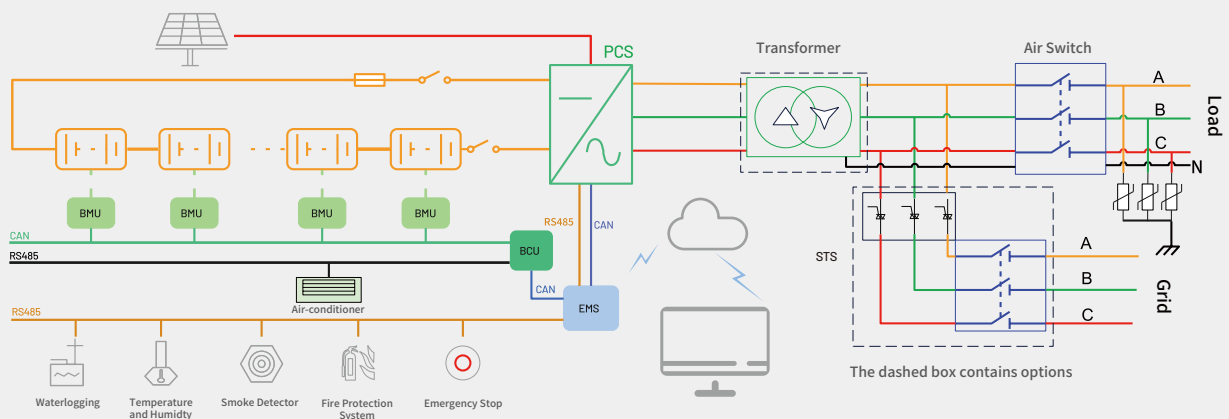
BS100-E

Cell Type	LF100LA / 102Ah
System Battery Configuration	16S2P*10
Capacity	104.4kWh
Normal Voltage	512V
Voltage Range	448~584V
Charge/Discharge Rate	≤ 0.5C
DOD	95%
Size (Width*Hight*Depth)	1000 * 1950 *1425mm
Weight	1325kg

General Parameters

Enclosure	IP55
Cooling	Air-conditioner
BMS Communication Port	CAN
Operation Temperature Range	-20 ~ +55°C
Operation Humidity	0 ~ 95%
Operation Altitude	≤ 2000
Cycle Life	6000@90% DOD / 25% / 0.5C
Standards	UN38.3, IEC / EN 62619, IEC / EN 61000, EN 62477

System Diagram



Wallbox

Wallbox

7kW / 11kW / 22kW



Charge EVs with 100% renewable energy by surplus solar power



Support dynamic load balance function



Remote firmware upgrade & work mode setting



IP65 outdoor design for plug version



Able to work with all branded EVs



Support intelligent valley price charging to save cost



Model	EV-AC1P-7K	EV-AC1S-7K	EV-AC3P-11K	EV-AC3S-11K	EV-AC3P-22K	EV-AC3S-22K
AC Input & Output Data						
Phase / Lines	Single Phase / L + N + PE		Three Phase / 3 + N + PE		Three Phase / 3 + N + PE	
Rated AC Input Voltage [V]	230		400		400	
Grid Frequency [Hz]	50 / 60					
Rated AC Output Voltage [V]	230		400		400	
Rated AC Output Power [W]	7000		11000		22000	
Max. AC Output Current [A]	32		16		32	
Charging interface type	IEC 62196-2, Type 2					
Connection	Plug	Socket	Plug	Socket	Plug	Socket
Cable Length [m]	5 / 7	/	5 / 7	/	5 / 7	/
Interface						
Ethernet	Optional (OCPP1.6)					
RS485	Yes					
Wifi, Bluetooth and RFID	Optional					
CT Clamps	Yes					
Meter	Optional					
Protection						
AC Overvoltage Protection	Integrated					
AC Undervoltage Protection	Integrated					
AC Overcurrent Protection	Integrated					
Surge Protection	Integrated					
Grounding Protection	Integrated					
Current leakage Protection	Integrated					
Over Temperature Protection	Integrated					
RCD	Type A + 6mA DC fault current protection (Equivalent to Type B)					
General Data						
Size (Width * Height * Depth) [mm]	248 * 400 * 135					
Weight [kg]	3.92	2.36	5.0	2.6	5.0	2.6
Ambient Temperature Range [°C]	-20 ~ +50					
Relative Humidity	0 ~ 95%					
Operating Altitude [m]	≤ 2000					
Cooling	Natural					
Protection Grades	IP65	IP54	IP65	IP54	IP65	IP54
Certifications & Standards						
Safety Regulation	EN / IEC 61851-1, EN 62955, EN 61008, CE, RED & EMC, Anatel					

▶ Smart Energy Cloud

Renac energy management cloud

Based on technology of Internet, cloud service and big data, RENAC energy management cloud provides systematic power station monitoring, data analysis and O&M for different energy systems to realize the maximum ROI.



Systematic Solutions

RENAC energy cloud realizes comprehensive data collection, data monitoring on solar plant, energy storage system, gas power station, EV chargers and wind projects as well as data analysis and fault diagnosis. For industrial parks, it provides analysis on energy consumption, energy distribution, energy flow and system income analysis.



Intelligent Operation and Maintenance

This platform realizes centralized O&M, fault intelligent diagnosis, fault automatic positioning and close-cycle O&M, etc.



Customized Function

We could provide customized function development according to specific projects and maximize benefits on various energy management.



▶ Accessories



ST-Wifi-G2

Support easy and fast setup by WiFi or app



ST-4G-G1

Supports easy and fast setup by 4G



ST-LAN-G1

Supports easy and fast setup by network cable



RT-GPRS / RT-WIFI

Input voltage: AC 220V
Communication with inverter: RS485



3ph Smart Meter

RENAC three-phase smart meter is a meter for a three-phase inverter that collects data and transmits it to the inverter



1ph Smart Meter

RENAC single-phase smart meter is a meter for a single-phase inverter that collects data and transmits it to the inverter



EPS Box

RENAC EPS Box is an accessory to manage EPS output of single-phase hybrid inverters



EPS Parallel Box

RENAC EPS Parallel Box is an accessory to manage EPS output of three-phase hybrid inverters in parallel



Combiner Box

RENAC Combiner Box is an accessory to support up to 5 Turbo H1 battery clusters connected in parallel



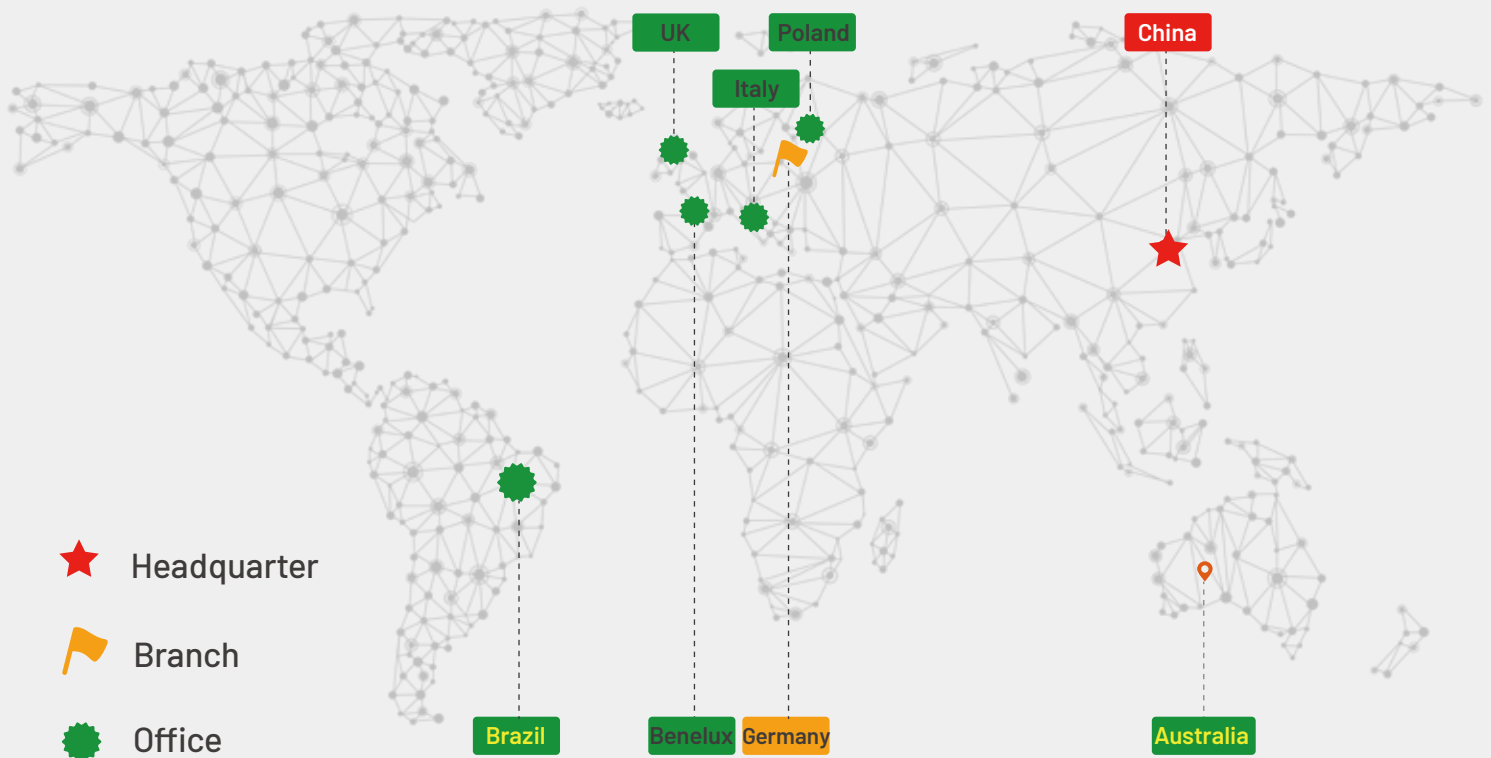
EMB-100

Support remote monitoring, online diagnosis, and export controlling for multiple three-phase on-grid inverters

▶ Project Cases



▶ Global Layout



Our Partners ◀



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