

**SMART ENERGY
FOR
BETTER LIFE**

RENAC


▶ About Us

Renac Power, established in 2017, is a technological innovation enterprise specializing in digital energy solutions. We integrate power electronics, Battery Management Systems (BMS), Energy Management Systems (EMS), Internet of Things (IoT), and Artificial Intelligence (AI) to develop safe, reliable, efficient, and intelligent photovoltaic (PV), energy storage, and charging products.

▶ Our Mission


"Smart Energy for Better Life" drives us to bring smarter and cleaner energy solutions into people's daily lives.

► Our Advantages


10+
Industry experience

40%+ 
R & D Staff


150+
International certification

100+ 
Technical patents



On-grid Inverter

R1 Mini Series	1.1 ~ 3.3kW, Single Phase	01
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Residential Energy Storage Product

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Residential On-grid Inverter







R1 Mini Series

1.1kW / 1.6kW / 2.2kW / 2.5kW / 2.7kW / 3kW / 3.3kW



Features

Single Phase, 1 MPPT

-  Compatible with 500W+ PV modules
-  Optional AFCI protection function
-  150% PV input oversizing
-  Low start-up voltage at 70V
-  Type II SPD for both DC and AC
-  Built-in zero export function



Model	R1-1K1	R1-1K6	R1-2K2	R1-2K5	R1-2K7	R1-3K	R1-3K3
PV Input							
Max. Recommended PV Power [Wp]	1650	2400	3300	3750	4050	4500	4950
Max. PV Input Voltage [V]	500			550			
MPPT Voltage Range [V]	45 - 500			50 - 550			
Rated PV 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 [A]				16			
Max. Short-circuit Current [A]				20			
AC Output							
Rated AC Output Power [W]	1100	1600	2200	2500	2700	3000	3300
Max. AC Output Apparent Power [VA]	1100	1600	2200	2500	2700	3000	3300
Max. AC Output Current [A]	5	7.3	10	11.4	12.3	13.6	15
Rated AC Voltage [V]	L / N / PE, 220 / 230						
Grid Frequency [Hz]	50 / 60						
Adjustable Power Factor [cosφ]	0.8 leading ~ 0.8 lagging						
Output THDi (@Rated Output)	< 3%						
Efficiency							
Max. Efficiency	97.5%	97.5%	97.5%	97.5%	97.6%	97.6%	97.6%
Euro Efficiency	96.9%	96.9%	96.9%	96.9%	97.2%	97.2%	97.2%
Protection							
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			
DC Surge Protection				Integrated (Type II)			
AC Surge Protection				Integrated (Type II)			
AFCI Protection				Optional			
DC Switch				Optional			
General Data							
Dimensions (W * H * D) [mm]	290 * 220 * 119						
Weight [kg]	5.5						
Display	LED + OLED						
Communication	RS485, USB Upgrade, Optional: WiFi, 4G, Ethernet						
Ambient Temperature Range [°C]	-25 ~ +60						
Relative Humidity	0 ~ 100%						
Operating Altitude [m]	≤ 2000						
Night Self-consumption [W]	< 1						
Topology	Transformerless						
Cooling	Natural						
Ingress Protection	IP65						
Noise [dB]	< 25						
Certifications & Standards							
Grid Regulation	VDE 0126-1-1, G98, ORDINANCE No.140						
Safety Regulation	IEC 62109-1, IEC 62109-2, EN 62919-1, EN62619-2						
EMC	EN IEC 61000-6-1, EN IEC 61000-6-3						

Residential On-grid Inverter





R1 Macro Series

3.68kW / 4kW / 5kW / 6kW



Features

Single Phase, 2 MPPTs

-  Compatible with 500W+ PV modules
-  Optional AFCI protection function
-  150% PV input oversizing
-  Remote firmware upgrade
-  Type II SPD for both DC and AC
-  Built-in zero export function



Model	R1-3.68K	R1-4K	R1-5K-A	R1-5K	R1-6K
PV Input					
Max. Recommended PV Power [Wp]	5500	6000	7500	7500	9000
Max. PV Power for single MPPT [Wp]	2800	3000	3750	3750	4500
Max. PV Input Voltage [V]	600				
MPPT Voltage Range [V]	80 – 550				
Rated PV Input Voltage [V]	360				
Start-up Voltage [V]	100				
No. of MPP Trackers	2				
No. of Input Strings per Tracker	1 / 1				
Max. PV Input Current [A]	16 / 16				
Max. Short-circuit Current [A]	20 / 20				
AC Output					
Rated AC Output Power [W]	3680	4000	5000	5000	6000
Max. AC Output Apparent Power [VA]	3680	4400	5000	5500	6000
Max. AC Output Current [A]	16	20	21.7	25	27.3
Rated AC Voltage [V]	L / N / PE, 220 / 230				
Grid Frequency [Hz]	50 / 60				
Adjustable Power Factor [cosφ]	0.8 leading ~ 0.8 lagging				
Output THDi (@Rated Output)	< 3%				
Efficiency					
Max. Efficiency	97.9%	97.9%	97.9%	97.9%	97.9%
Euro Efficiency	97.2%	97.2%	97.2%	97.2%	97.2%
Protection					
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				
DC Surge Protection	Integrated (Type II)				
AC Surge Protection	Integrated (Type II)				
AFCI Protection	Optional				
DC Switch	Optional				
General Data					
Dimensions (W * H * D) [mm]	353 * 320 * 150				
Weight [kg]	10				
Display	LED + OLED				
Communication	RS485, USB Upgrade, Optional: WiFi, 4G, Ethernet				
Ambient Temperature Range [°C]	-25 ~ +60				
Relative Humidity	0 ~ 100%				
Operating Altitude [m]	≤ 2000				
Night Self-consumption [W]	< 1				
Topology	Transformerless				
Cooling	Natural				
Ingress Protection	IP65				
Noise [dB]	< 25				
Certifications & Standards					
Grid Regulation	VDE 0126-1-1, ORDINANCE No.140, G98/G99				
Safety Regulation	IEC 62109-1, IEC 62109-2, EN 62919-1, EN 62619-2				
EMC	EN IEC 61000-6-1, EN IEC 61000-6-3				

Residential On-grid Inverter

R1 Moto Series

8kW / 10kW / 10.5kW



Features

Single Phase, 2 MPPTs

-  Compatible with 500W+ PV modules
-  Optional AFCI protection function
-  150% PV input oversizing
-  Remote firmware upgrade
-  Type II SPD for both DC and AC
-  Built-in zero export function



Model	R1-8K	R1-10K	R1-10K5
PV Input			
Max. Recommended PV Power [Wp]	12000	15000	16000
Max. PV Power for single MPPT [Wp]	6000	7500	7500
Max. PV Input Voltage [V]		600	
MPPT Voltage Range [V]		80 ~ 550	
Rated PV Input Voltage [V]		360	
Start-up Voltage [V]		100	
No. of MPP Trackers	2	2	2
No. of Input Strings per Tracker	2 / 2	2 / 2	2 / 2
Max. PV Input Current [A]	32 / 32	32 / 32	32 / 32
Max. Short-circuit Current [A]	40 / 40	40 / 40	40 / 40
AC Output			
Rated AC Output Power [W]	8000	10000	10500
Max. AC Output Apparent Power [VA]	8800	10000	10500
Max. AC Output Current [A]	40	45.5	45.5
Rated AC Voltage [V]		L / N / PE, 220 / 230	
Grid Frequency [Hz]		50 / 60	
Adjustable Power Factor [cosφ]		0.8 leading ~ 0.8 lagging	
Output THDi (@Rated Output)		< 3%	
Efficiency			
Max. Efficiency	98.1%	98.1%	98.1%
Euro Efficiency	97.5%	97.5%	97.5%
Protection			
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	
DC Surge Protection		Integrated (Type II)	
AC Surge Protection		Integrated (Type II)	
AFCI Protection		Optional	
DC Switch		Optional	
General Data			
Dimensions (W * H * D) [mm]		428 * 385 * 185	
Weight [kg]		17	
Display		LED + OLED	
Communication		RS485, USB Upgrade, Optional: Wifi, 4G, Ethernet	
Ambient Temperature Range [°C]		-25 ~ +60	
Relative Humidity		0 ~ 100%	
Operating Altitude [m]		≤ 2000	
Night Self-consumption [W]		< 1	
Topology		Transformerless	
Cooling		Natural	
Ingress Protection		IP65	
Noise [dB]		< 35	
Certifications & Standards			
Grid Regulation		ORDINANCE No.140	
Safety Regulation		IEC 62109-1, IEC 62109-2, EN 62919-1, EN 62619-2	
EMC		EN IEC 61000-6-1, EN IEC 61000-6-3	

Residential On-grid Inverter

R3 Note Series

4kW / 5kW / 6kW / 8kW / 10kW / 12kW



Features

Three Phase, 2 MPPTs

-  Compatible with 500W+ PV modules
-  Optional AFCI & Smart PID recovery function
-  150% PV input oversizing & 110% AC overloading
-  Wider MPPT voltage range (140 ~ 1000V)
-  Remote firmware upgrade
-  Type II SPD for both DC and AC



Model	R3-4K	R3-5K	R3-6K	R3-8K	R3-10K-A	R3-10K	R3-12K
PV Input							
Max. Recommended PV Power [Wp]	6000	7500	9000	12000	15000	15000	18000
Max. PV Power for Single MPPT [Wp]	3000	3750	4500	6000	7500	7500	9000
Max. PV Input Voltage [V]	1100						
MPPT Voltage Range [V]	140 ~ 1000						
Rated PV Input Voltage [V]	600						
Start-up Voltage [V]	160						
No. of MPP Trackers	2						
No. of Input Strings per Tracker	1 / 1						
Max. PV Input Current [A]	16 / 16						
Max. Short-circuit Current [A]	20 / 20						
AC Output							
Rated AC Output Power [W]	4000	5000	6000	8000	10000	10000	12000
Max. AC Output Apparent Power [VA]	4400	5500	6600	8800	10000	11000	13200
Max. AC Output Current [A]	6.7	8.4	10	13.4	15.2	16.7	20
Rated AC Voltage [V]	3 / N / PE, 220 / 380, 230 / 400						
Grid Frequency [Hz]	50 / 60						
Adjustable Power Factor [cosφ]	0.8 leading ~ 0.8 lagging						
Output THDi (@Rated Output)	< 3%						
Efficiency							
Max. Efficiency	98.4%	98.4%	98.4%	98.5%	98.5%	98.5%	98.5%
Euro Efficiency	97.5%	97.5%	97.5%	98.0%	98.0%	98.0%	98.0%
Protection							
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 Recovery Function	Optional						
DC Switch	Integrated						
General Data							
Dimensions (W * H * D) [mm]	428 * 385 * 185						
Weight [kg]	15						
Display	LED + OLED						
Communication	RS485, USB Upgrade, Optional: WiFi, 4G, Ethernet						
Ambient Temperature Range [°C]	-25 ~ +60						
Relative Humidity	0 ~ 100%						
Operating Altitude [m]	≤ 2000						
Night Self-consumption [W]	< 1						
Topology	Transformerless						
Cooling	Natural						
Ingress Protection	IP65						
Noise [dB]	< 35						
Certifications & Standards							
Grid Regulation	NB/T 32004, ORDINANCE No.140, EN50549-1, EN50549-PL, IEC61727/IEC62116						
Safety Regulation	EN 62919-1, EN 62619-2						
EMC	EN IEC 61000-6-1, EN IEC 61000-6-2, EN IEC 61000-6-3, EN IEC 61000-6-4						

Residential On-grid Inverter







R3 Pre Series

15kW / 17kW / 20kW / 25kW



Features

Three Phase, 2 MPPTs

-  Compatible with 600W+ PV modules
-  Optional AFCI & Smart PID recovery function
-  150% PV input oversizing & 110% AC overloading
-  Wider MPPT voltage range (180 ~ 1000V)
-  Remote firmware upgrade
-  Type II SPD for both DC and AC



Model	R3-15K	R3-17K	R3-20K	R3-25K
PV Input				
Max. Recommended 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 PV Input Voltage [V]	600			
Start-up Voltage [V]	200			
No. of MPP Trackers	2			
No. of Input Strings per Tracker	2 / 2			
Max. PV Input Current [A]	40 / 40			
Max. Short-circuit Current [A]	50 / 50			
AC Output				
Rated AC Output Power [W]	15000	17000	20000	25000
Max. AC Output Apparent Power [VA]	16500	18700	22000	27500
Max. AC Output Current [A]	25	28.3	33.4	41.7
Rated AC Voltage [V]	3 / N / PE, 220 / 380, 230 / 400			
Grid Frequency [Hz]	50 / 60			
Adjustable Power Factor [cosφ]	0.8 leading ~ 0.8 lagging			
Output THDi (@Rated Output)	< 3%			
Efficiency				
Max. Efficiency	98.6%	98.6%	98.6%	98.6%
Euro Efficiency	98.2%	98.2%	98.2%	98.2%
Protection				
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 Recovery Function	Optional			
DC Switch	Integrated			
General Data				
Dimensions (W * H * D) [mm]	520 * 412 * 200			
Weight [kg]	22			
Display	LED + OLED			
Communication	RS485, USB Upgrade, Optional: WiFi, 4G, Ethernet			
Ambient Temperature Range [°C]	-25~ +60			
Relative Humidity	0 ~ 100%			
Operating Altitude [m]	≤ 2000			
Night Self-consumption [W]	< 1			
Topology	Transformerless			
Cooling	Fan			
Ingress Protection	IP65			
Certifications & Standards				
Grid Regulation	NB/T 32004, ORDINANCE No.140, EN50549-1, EN50549-PL, IEC61727/IEC62116			
Safety Regulation	EN 62919-1, EN 62619-2			
EMC	EN IEC 61000-6-1, EN IEC 61000-6-3, EN 62920, EN IEC61000-3-11, EN IEC61000-3-12			

C&I On-grid Inverter

R3 Navo Series

30kW / 36kW / 40kW / 50kW



Features

Three Phase, 3 / 4 MPPTs

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

Model	R3-30K	R3-36K	R3-40K	R3-50K
PV Input				
Max. Recommended 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 PV 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. PV Input Current [A]	40 / 40 / 40	40 / 40 / 40	40 / 40 / 40 / 40	40 / 40 / 40 / 40
Max. Short-circuit Current [A]	50 / 50 / 50	50 / 50 / 50	50 / 50 / 50 / 50	50 / 50 / 50 / 50
AC Output				
Rated AC Output Power [W]	30000	36000	40000	50000
Max. AC Output Apparent Power [VA]	33000	39600	44000	55000
Max. AC Output Current [A]	50	60	66.6	83.3
Rated AC Voltage [V]	3 / N / PE, 220 / 380, 230 / 400			
Grid Frequency [Hz]	50 / 60			
Adjustable Power Factor [cosφ]	0.8 leading ~ 0.8 lagging			
Output THDi (@Rated Output)	< 3%			
Efficiency				
Max. Efficiency	98.6%	98.7%	98.8%	98.8%
Euro Efficiency	97.8%	98.0%	98.0%	98.0%
Protection				
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 Recovery Function	Optional			
DC Switch	Integrated			
General Data				
Dimensions (W * H * D) [mm]	585 * 480 * 220			
Weight [kg]	37			
Display	LED + OLED			
Communication	RS485, USB Upgrade, Optional: WiFi, 4G, Ethernet			
Ambient Temperature Range [°C]	-25 ~ +60			
Relative Humidity	0 ~ 100%			
Operating Altitude [m]	≤ 2000			
Night Self-consumption [W]	< 1			
Topology	Transformerless			
Cooling	Fan			
Ingress Protection	IP65			
Certifications & Standards				
Grid Regulation	NB/T 32004, ORDINANCE No.140, EN50549-1, EN50549-PL, EN50549-CZ, EN50549-GR, UNE217002/RD647, IEC61727/IEC62116, VDE0126, VDE4105			
Safety Regulation	EN 62919-1, EN 62619-2			
EMC	EN IEC 61000-6-1, EN IEC 61000-6-3, IEC 62920			

C&I On-grid Inverter

R3 Plus Series

75kW



Features

Three Phase, 8 / 9 MPPTs



170% PV input oversizing



Optional AFCI & Smart PID recovery function



String monitoring and shorter O&M time



IP66 outdoor design



Remote firmware upgrade



Type II SPD for both DC and AC

Model	R3-75KL	R3-75K
PV Input		
Max. Recommended PV Power [Wp]	127500	127500
Max. PV Input Voltage [V]	800	1100
MPPT Voltage Range [V]	200 – 800	200 – 1000
Rated PV 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	45
Max. Short-circuit Current per MPPT [A]	60	60
AC Output		
Rated AC Output Power [W]	75000	75000
Max. AC Output Apparent Power [VA]	75000	75000
Max. AC Output Current [A]	196.9	113.7
Rated AC Voltage [V]	3 / N / PE, 127 / 220	3 / N / PE, 220 / 380, 230 / 400
Grid Frequency [Hz]	50 / 60	50 / 60
Adjustable Power Factor [cosφ]	0.8 leading ~ 0.8 lagging	0.8 leading ~ 0.8 lagging
Output THDi (@Rated Output)	< 3%	< 3%
Efficiency		
Max. Efficiency	98.7%	98.7%
Euro Efficiency	98.3%	98.3%
Protection		
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 Recovery Function	Optional	
DC Switch	Integrated	
General Data		
Dimensions (W * H * D) [mm]	965 * 700 * 355	
Weight [kg]	88	87
Display	LED	
Communication	RS485 (Standard), WiFi	
Ambient Temperature Range [°C]	-30 ~ +60	
Relative Humidity	0 ~ 100%	
Operating Altitude [m]	≤ 4000	
Night Self-consumption [W]	< 1	
Topology	Transformerless	
Cooling	Fan	
Ingress Protection	IP66	
Certifications & Standards		
Grid Regulation	IEC 61727, IEC 62116, ORDINANCE No.140	
Safety Regulation	IEC 62109-1/2	
EMC	IEC 61000-6/2, IEC 61000-6/4	

Residential Hybrid Inverter







N1 HV Series

3kW / 3.68kW / 5kW / 6kW



Features

Single Phase, 2 MPPTs

-  150% PV input oversizing
-  Up to 6000W charging / discharging rate
-  Charging / discharging efficiency >97%
-  Remote firmware upgrade & setting
-  Support AC retrofit application
-  Virtual Power Plant integrated



Model	N1-HV-3.0	N1-HV-3.68	N1-HV-5.0	N1-HV-6.0
PV Input				
Max. Recommended PV Power [Wp]	4500	5500	7500	9000
Max. PV Power for Single MPPT [Wp]			4500	
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. PV Input Current [A]			13.5 / 13.5	
Max. Short-circuit Current [A]			17 / 17	
AC Output				
Max. AC Output Apparent Power [VA]	3000	3680	5000 ^[1]	6000
Rated AC Output Power [W]	3000	3680	5000 ^[1]	6000
Max. AC Output Current [A]	13	16	21.7 ^[1]	26.1
Rated AC Output Current [A]	13	16	21.7 ^[1]	26.1
Rated AC Voltage [V]			220 / 230 / 240	
Grid Frequency [Hz]			50 / 60	
Adjustable Power Factor [cosφ]			0.8 leading ~ 0.8 lagging	
Output THDi (@Rated Output)			< 2%	
AC Input				
Max. AC Input Apparent Power [VA]	3000	3680	5000	6000
Max. AC Input Current [A]	13	16	21.7	26.1
Rated AC Voltage [V]			220 / 230 / 240	
Grid Frequency [Hz]			50 / 60	
Battery				
Battery Type			Lithium	
Battery Voltage Range [V]			80 ~ 450	
Max. Charging / Discharging Current [A]			25 / 25	
Max. Charging / Discharging Power [W]	4500 / 3000	5500 / 3680	6000 / 5000	6000 / 6000
Communication Interface			CAN	
Backup Output (With Battery)				
Rated Output Power [W]	3000	3680	5000	6000
Rated Output Voltage [V]			220 / 230	
Rated Frequency [Hz]			50 / 60	
Rated Output Current [A]	13	16	21.7	26.1
Output THDv (@Linear Load)			< 3%	
Automatic Switch Time [s]			< 0.5	
Peak Apparent Power, Duration [VA, s]	4500, 10	5520, 10	7500, 10	9000, 10
Efficiency				
Max. Efficiency	97.4%	97.5%	97.5%	97.5%
Euro Efficiency	97.2%	97.2%	97.2%	97.2%
Max. Battery Charge / Discharge Efficiency	97.2%	97.2%	97.2%	97.2%
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	
DC Switch			Integrated	
General Data				
Dimensions (W * H * D) [mm]			520 * 412 * 172	
Weight [kg]			20	
Display			LED + OLED	
Communication			CAN, RS485, USB Upgrade, Optional: WiFi, 4G, Ethernet	
Ambient Temperature Range [°C]			-30 ~ +60	
Relative Humidity			0 ~ 100%	
Operating Altitude [m]			≤ 2000	
Standby Self-consumption [W]			< 15	
Topology			Transformerless	
Cooling			Natural	
Ingress Protection			IP65	
Noise [dB]			< 35	
Certifications & Standards				
Grid Regulation	AS 4777, EN 50549-1, EN 50549-GR, EN 50549-PL, EN 50549-IE, IEC 61727/IEC 62116, VDE 0126, UNE 217002/RD647, CEI 0-21, C10/C11, ORDINANCE No.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 Hybrid Inverter

N3 HV Series

5kW / 6kW / 8kW / 10kW



Features

Three Phase, 2 MPPTs

-  Compatible with 600W+ PV modules
-  Support up to 10 units on-grid parallel connection
-  Support 100% unbalanced loads
-  Remote firmware upgrade & setting
-  ≤ 20ms switchover time
-  Virtual Power Plant integrated



Model	N3-HV-5.0	N3-HV-6.0	N3-HV-8.0	N3-HV-10.0-A	N3-HV-10.0
PV Input					
Max. Recommended PV Power [Wp]	7500	9000	12000	15000	15000
Max. PV Power for Single MPPT [Wp]	7500	9000	9000	9000	9000
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. PV Input Current [A]			18 / 18		
Max. Short-circuit Current [A]			23 / 23		
AC Output					
Max. AC Output Apparent Power [VA]	5500	6600	8800	10000	11000
Rated AC Output Power [W]	5000	6000	8000	10000	10000
Max. AC Output Current [A]	7.6	9.1	12.2	14.4	15.2
Rated AC Output Current [A]	7.2	8.7	11.5	14.4	14.4
Rated AC Voltage [V]			3 / N / PE, 220 / 380, 230 / 400		
Grid Frequency [Hz]			50 / 60		
Adjustable Power Factor [cosφ]			0.8 leading - 0.8 lagging		
Output THDi (@Rated Output)			< 3%		
AC Input					
Max. AC Input Apparent Power [VA]	10000	12000	16000	20000	20000
Max. AC Input Current [A]	15.2	18.2	24.3	28.8	30.4
Rated AC Voltage [V]			3 / N / PE, 220 / 380, 230 / 400		
Grid Frequency [Hz]			50 / 60		
Battery					
Battery Type			Lithium		
Battery Voltage Range [V]			160 - 700		
Max. Charging / Discharging Current [A]			30 / 30		
Max. Charging / Discharging Power [W]	10000 / 5000	10000 / 6000	10000 / 8000	10000 / 10000	10000 / 10000
Communication Interface			CAN		
Backup Output (With Battery)					
Rated Output Power [W]	5000	6000	8000	10000	10000
Rated Output Voltage [V]			3 / N / PE, 220 / 380, 230 / 400		
Rated Frequency [Hz]			50 / 60		
Rated Output Current [A]	7.6	9.1	12.2	14.4	15.2
Output THDv (@Linear Load)			< 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	98.0%	98.0%	98.0%	98.0%	98.0%
Euro Efficiency	97.7%	97.7%	97.7%	97.7%	97.7%
Max. Battery Charge / Discharge Efficiency	97.6%	97.6%	97.6%	97.6%	97.6%
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)		
DC Switch			Integrated		
General Data					
Dimensions (W * H * D) [mm]			520 * 412 * 186		
Weight [kg]			27		
Display			LED + OLED		
Communication			CAN, RS485, USB Upgrade, Optional: WiFi, 4G, Ethernet		
Operating Temperature Range [°C]			-25 ~ +60		
Relative Humidity			0 ~ 100%		
Operating Altitude [m]			≤ 2000		
Standby Self-consumption [W]			< 15		
Topology			Transformerless		
Cooling			Natural		
Ingress Protection			IP65		
Noise [dB]			< 35		
Certifications & Standards					
Grid Regulation	AS 4777, EN 50549-1, EN 50549-PL, EN 50549-GR, EN 50549-CZ, TOR Erzeuger, CEI 0-21, C10 / C11, VDE0126, UNE 217002/RD647				
Safety Regulation	IEC 62109-1, IEC 62109-2, EN 62109-1, EN 62109-2				
EMC	EN / IEC 61000-6-1, EN / IEC 61000-6-3				

Residential Hybrid Inverter

N3 Plus Series

15kW / 19.9kW / 20kW / 25kW / 30kW



Features

Three Phase, 3 MPPTs

-  Compatible with 600W+ PV modules
-  Optional AFCI & RSD function
-  Support 100% unbalanced loads
-  Remote firmware upgrade & setting
-  < 10ms switchover time
-  Support up to 5 units parallel connection



Model	N3-15K	N3-19.9K	N3-20K	N3-25K	N3-30K
PV Input					
Max. Recommended PV Power [Wp]	22500	30000	30000	37500	45000
Max. PV Power for Single MPPT [Wp]	15000	15000	15000	15000	15000
Max. PV Input Voltage [V]	1000				
MPPT Voltage Range [V]	180 ~ 960				
Rated PV Input voltage [V]	700				
Start-up Voltage [V]	200				
No. of MPP Trackers	3				
No. of Input Strings per Tracker	2 / 2 / 2				
Max. PV Input Current [A]	36 / 36 / 36				
Max. Short-circuit Current [A]	46 / 46 / 46				
AC Output					
Max. AC Output Apparent Power [VA]	16500 ^[1]	19900	22000	27500	33000 ^[2]
Rated AC Output Power [W]	15000 ^[1]	19900	20000	25000	30000 ^[2]
Max. AC Output Current [A]	25	30.2	33.4	41.7	50
Rated AC Output Current [A]	22.8	30.2	30.3	37.9	45.5
Rated AC Voltage [V]	3 / N / PE, 220 / 380, 230 / 400				
Grid Frequency [Hz]	50 / 60				
Adjustable Power Factor [cosφ]	0.8 leading ~ 0.8 lagging				
Output THDi (@Rated Output)	< 3%				
AC Input					
Max. AC Input Power [VA]	30000	40000	40000	41500	41500
Max. AC Input Current [A]	45.5	60.6	60.6	63.0	63.0
Rated AC Voltage [V]	3 / N / PE, 220 / 380, 230 / 400				
Grid Frequency [Hz]	50 / 60				
Battery					
Battery Type	Lithium				
Battery Voltage Range [V]	180 ~ 800				
Max. Charging / Discharging Current [A]	50 / 50				
Max. Charging / Discharging Power [W]	30000 / 15000	30000 / 19900	30000 / 20000	30000 / 25000	30000 / 30000
Communication Interface	CAN				
Backup Output (With Battery)					
Rated Power [W]	15000	19900	20000	25000	30000
Rated Voltage[V]	3 / N / PE, 220 / 380, 230 / 400				
Rated Frequency [Hz]	50 / 60				
Rated Current [A]	22.8	30.2	30.3	37.9	45.5
Output THDv (@Linear Load)	< 3%				
Automatic Switch Time [ms]	< 10				
Peak Apparent Power, Duration [VA, s]	22500, 10	30000, 10	30000, 10	37500, 10	45000, 10
Efficiency					
Max. Efficiency	98.1%	98.1%	98.1%	98.1%	98.1%
Euro Efficiency	97.7%	97.7%	97.7%	97.7%	97.7%
Max. Battery Charge / Discharge Efficiency	97.6%	97.6%	97.6%	97.6%	97.6%
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)				
RSD	Optional				
AFCI Protection	Optional				
DC Switch	Integrated				
General Data					
Dimensions (W * H * D) [mm]	620 * 500 * 220				
Weight [kg]	48				
Display	LED + LCD				
Communication	RS485, USB Upgrade, 4 × DI, 2 × DO, Optional: WiFi or 4G or Ethernet				
Ambient Temperature Range [°C]	-30 ~ +60				
Relative Humidity	0 ~ 100%				
Operating Altitude [m]	≤ 2000				
Night Self-consumption [W]	< 15				
Topology	Transformerless				
Cooling	Natural			Fan	
Ingress Protection	IP66				

[1]: The AC output power for AS 4777 is limited to 14900VA.

[2]: The AC output power for AS 4777 is limited to 29900VA.

Residential Hybrid Inverter







N1 HL Series

3kW / 3.68kW / 5kW



Features

Single Phase, 2 MPPTs

-  Compatible with lithium & lead-acid battery (48V)
-  IP65 outdoor design
-  Emergency power supply
-  EMS integrated
-  Remote work mode setting
-  Virtual Power Plant integrated



Model	ESC3000-DS	ESC3680-DS	ESC5000-DS
PV Input			
Max. Recommended PV Power [Wp]	3900	4600	6500
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. PV Input Current [A]		13.5 / 13.5	
Max. Short-circuit Current [A]		17 / 17	
DC Switch		Integrated	
AC Output (On-grid)			
Rated AC Output Power [W]	3000	3680	5000 ⁽¹⁾
Max. AC Output Apparent Power [VA]	3000	3680	5000 ⁽¹⁾
Max. AC Output Current [A]	13	16	21.7
Rated AC Voltage [V]		220 / 230	
Grid Frequency [Hz]		50 / 60	
Adjustable Power Factor [cosφ]		0.8 leading ~ 0.8 lagging	
Output THDi (@Rated Output)		< 3%	
Battery			
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	
Backup Output (With Battery)			
Rated Output Power [W]		3000	
Rated Output Voltage [V]		220 / 230	
Rated Frequency [Hz]		50 / 60	
Rated Output Current [A]		13	
Output THDv (@Linear Load)		< 3%	
Automatic Switch Time [s]		< 5	
PeakPower, Duration [VA.s]		4500, 10	
Efficiency			
Max. Efficiency	97.6%	97.6%	97.6%
Euro Efficiency	97.0%	97.0%	97.0%
Max. Battery Charge / Discharge Efficiency	94.0%	94.0%	94.0%
General Data			
Dimensions (W * H * D) [mm]		528 * 526 * 193	
Weight [kg]		29.5	
Display		LCD	
Communication		RS485, WiFi	
Ambient Temperature Range [°C]		-25 ~ +60	
Relative Humidity		0 ~ 100%	
Operating Altitude [m]		≤ 4000	
Night Self-consumption [W]		< 1	
Topology		Transformerless	
Cooling		Natural	
Ingress Protection		IP65	
Noise [dB]		< 35	
Certifications & Standards			
Grid Regulation	G98, G99, NRS-097, MEA, PEA, AS 4777, EN 50438, CEI 0-21, 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 Energy Storage Battery

Turbo H1 Series

3.74kWh / 7.48kWh / 11.23kWh / 14.97kWh / 18.7kWh

Features



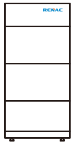


Stackable High Voltage Battery

-  Modular and plug & play design
-  Flexible capacity options, 3.74kWh to 18.7kWh
-  Support up to 5 clusters(93.5kWh) parallel connection
-  IP65 outdoor design
-  High charging / discharging rate
-  Remote firmware upgrade and diagnosis via inverter



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
Max. Continuous Charging / Discharging Current ^[2] [A]	30 / 30				
Depth of Discharge	90%				
Cooling	Natural				

General Data

Battery Technology	LiFePO ₄				
Dimensions (W * H * D) [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 Modules	1	2	3	4	5
Ingress Protection	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 62040-1, EN 62477-1, EN IEC 61000-6-1 / -3, Annex I of Regulation (EU) 2023/1542, Annex XVII of REACH Regulation
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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 Energy Storage Battery

Turbo H3 Series

7.1kWh / 9.5kWh

Features

Integrated High Voltage Battery

-  Powered by **CATL** LiFePO₄ battery cells
-  Low charging temperature at -17 °C
-  Support up to 6 units parallel connection
-  IP65 outdoor design
-  Module auto recognition
-  Remote firmware upgrade and diagnosis via inverter



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 ^[1] [kWh]	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					
Peak Power [kW]	7.5			10		
General Data						
Battery Type	LiFePO ₄					
Dimensions (W * H * D) [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
Ingress Protection	IP65 (Indoor or Outdoor)					
Installation Type	Wall - mounted / Floor - mounted					
Cooling Type	Natural					
Communication Port	CAN, RS485					
Operating Temperature Range ^[2] [°C]	-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	UN38.3, EN / IEC 62619, IEC 62040-1, IEC/EN 62477-1, EN IEC 61000-6-1/ -3, Annex I of Regulation (EU) 2023/1542, Annex XVII of REACH Regulation					

[1] Nominal Energy: 100% DOD, 0.2C charge & discharge at +25°C (test conditions).

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

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

Residential Energy Storage Battery

Turbo H4 Series

5kWh / 10kWh / 15kWh / 20kWh / 25kWh / 30kWh

Features

Stackable High Voltage Battery



Plug & play, no cable design between battery modules



Flexible capacity options, 5kWh to 30kWh



Reliable LFP technology with high cycle stability



IP65 outdoor design






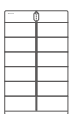


Battery module level fire protection



Remote firmware upgrade and diagnosis via inverter



Model	TB-H4-5	TB-H4-10	TB-H4-15	TB-H4-20	TB-H4-25	TB-H4-30
Electrical Parameters						
System Demo						
Number of Modules	1	2	3	4	5	6
Nominal Energy ^[1] [kWh]	5	10	15	20	25	30
Nominal Power [kW]	2.88	5.76	8.64	11.52	14.4	17.28
Nominal Voltage [V]	96	192	288	384	480	576
Voltage Range [V]	81 – 108	162 – 216	243 – 324	324 – 432	405 – 540	486 – 648
Max. Continuous Charging / Discharging Current [A]	30 / 30					
Depth of Discharge	90%					
Cooling	Natural					
General Data						
Battery Technology	LiFePO ₄					
Dimensions (W * H * D) [mm]	600 * 289 * 385	600 * 428 * 385	600 * 567 * 385	600 * 706 * 385	600 * 845 * 385	600 * 984 * 385
Weight [kg]	61.6	107.1	152.6	198.1	243.6	289.1
Ingress Protection	IP65 (Indoor or Outdoor)					
Installation Type	Floor Stand					
Operating Temperature Range ^[2] [°C]	-10 ~ +55					
Communication	CAN, RS485					
Cycle Life	6000 @80% DOD / 25°C / 0.2C / 60% EOL					
Warranty ^[3] [years]	10					
Operating Altitude [m]	≤2000					
Certification						
Certificates	UN38.3, EN / IEC 62619, IEC 63056, EN 62477, EN 61000-6-1 / -3, Annex I of Regulation (EU) 2023/1542, Annex XVII of REACH Regulation					

[1] Nominal Energy: 100% DOD, 0.2C charge & discharge at +25°C (test conditions).

[2] Ambient temperature charging (0 ~ +53°C), discharging (-10 ~ +53°C)

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

Residential Energy Storage Battery

Turbo H5 Series

30kWh / 35kWh / 40kWh / 45kWh / 50kWh / 55kWh / 60kWh

Features

Stackable High Voltage Battery



Plug & play, no cable design between battery modules



Flexible capacity options up to 60kWh



Support max. 50A continuous charging / discharging current



IP65 outdoor design



Battery module level fire protection










Remote firmware upgrade and diagnosis via inverter



Model	TB-H5-30	TB-H5-35	TB-H5-40	TB-H5-45	TB-H5-50	TB-H5-55	TB-H5-60
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Electrical Parameters

System Demo							
Number of Modules	6	7	8	9	10	11	12
Nominal Energy ^[1] [kWh]	30.72	35.84	40.96	46.08	51.2	56.32	61.44
Nominal Power [kW]	15	17.5	20	22.5	25	27.5	30
Nominal Voltage [V]	307.2	358.4	409.6	460.8	512	563.2	614.4
Voltage Range [V]	259.2 ~ 345.6	302.4 ~ 403.2	345.6 ~ 460.8	388.8 ~ 518.4	432 ~ 576	475.2 ~ 633.6	518.4 ~ 691.2
Max. Continuous Charging / Discharging Current [A]	50 / 50						
Depth of Discharge	90%						
Cooling	Natural						

General Data

Battery Technology	LiFePO ₄						
Dimensions (W * H * D) [mm]	600 * 984 * 385	600 * 1123 * 385	600 * 1262 * 385	600 * 1401 * 385	600 * 1540 * 385	600 * 1679 * 385	600 * 1818 * 385
Weight [kg]	310	360	410	460	510	560	610
Ingress Protection	IP65 (Indoor or Outdoor)						
Installation Type	Floor Stand						
Operating Temperature Range ^[2] [°C]	-10 ~ +55						
Communication	CAN, RS485						
Cycle Life	6000 @80% DOD / 25°C / 0.2C / 60% EOL						
Warranty ^[3] [years]	10						
Operating Altitude [m]	≤ 2000						

Certification

Certificates	UN38.3, EN / IEC 62619, IEC 63056, EN 62477, EN 61000-6-1 / -3, Annex I of Regulation (EU) 2023/1542, Annex XVII of REACH Regulation
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[1] Nominal Energy: 100% DOD, 0.2C charge & discharge at +25°C (test conditions).

[2] Ambient temperature charging (0 ~ +53°C), discharging (-10 ~ +53°C).

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







Residential Energy Storage Battery

Turbo L1 Series

5.3kWh

Features

Integrated Low Voltage Battery

-  Plug & play design
-  Wall-mounted or floor-mounted installation
-  Support up to 6 units parallel connection
-  IP65 outdoor design
-  Higher charging / discharging power
-  Remote diagnosis and real-time data monitoring



Model	TB-L1-5.3					
Electrical Parameters						
Nominal Voltage [V]	51.2					
Nominal Capacity [Ah]	105					
Nominal Energy ^[1] [kWh]	5.3					
Voltage Range [V]	43.2 ~ 57.6					
Max. Continuous Charging Current [A]	60					
Max. Continuous Discharging Current [A]	60					
General Data						
Battery Type	LiFePO ₄					
Dimensions (W * H * D) [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
Ingress Protection	IP65 (Indoor or Outdoor)					
Installation Type	Wall - mounted / Floor - mounted					
Cooling	Natural					
Communication Port	CAN, RS485					
Operation Temperature Range ^[2] [°C]	-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					

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

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

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

AC Smart Wallbox

Wallbox Series

7kW / 11kW / 22kW

Features



Charge EV with 100% renewable energy by surplus solar power



Support dynamic load balance function



Support intelligent valley price charging to save cost



IP65 outdoor design for plug version



Able to work with all branded EV



Remote firmware upgrade & work mode setting



Model	EV-AC1P-7K	EV-AC1S-7K	EV-AC3P-11K	EV-AC3S-11K	EV-AC3P-22K	EV-AC3S-22K
AC Input						
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					
AC Output						
Rated AC Output Voltage [V]	230		400		400	
Rated AC Output Power [W]	7000		11000		22000	
Max. AC Output Current [A]	32		16		32	
Grid Frequency [Hz]	50 / 60					
Charging Interface Type	IEC 62196-2, Type 2					
Connection	Plug	Socket	Plug	Socket	Plug	Socket
Cable Length [m]	5 / 7.5	/	5 / 7.5	/	5 / 7.5	/
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						
Dimensions (W * H * D) [mm]	248 * 400 * 135					
Weight [kg]	3.92	2.36	5	2.6	5	2.6
Ambient Temperature Range [°C]	-20 ~ +50					
Relative Humidity	0 ~ 95%					
Operating Altitude [m]	≤ 2000					
Cooling	Natural					
Ingress Protection	IP65	IP54	IP65	IP54	IP65	IP54
Certifications & Standards						
Safety Regulation	EN / IEC 61851-1, EN300328, EN300330, EN301489-1, EN301489-3, EN301489-17, EN IEC 61851-21-2, EN IEC 61000-6-1, EN62479, EN IEC 61000-6-3, EN IEC 61851-1, EN IEC 62311					

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

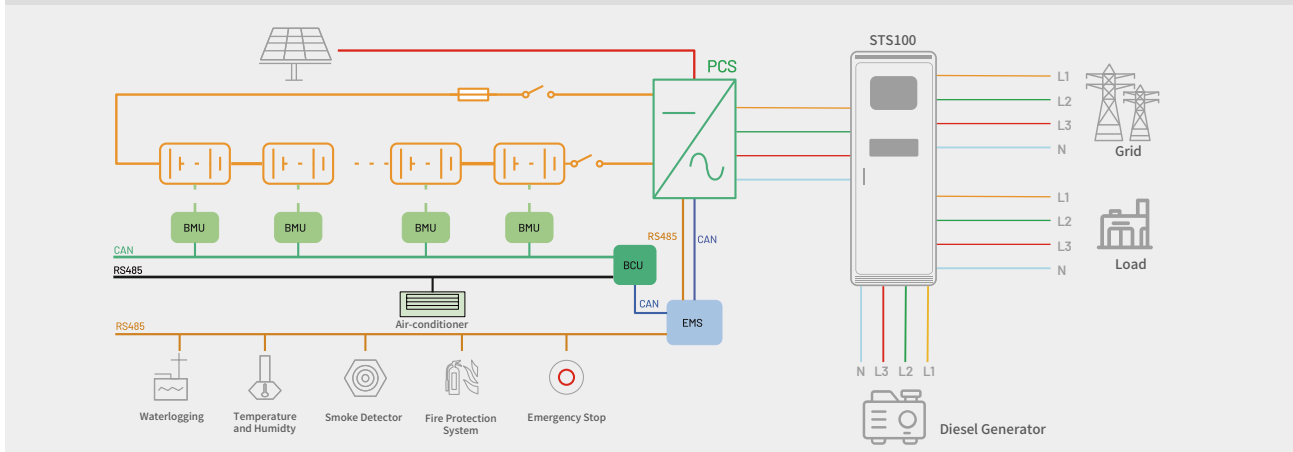
AC Output (Off-grid)	
Rated AC Output Voltage [V]	3 / N / PE, 230 / 400
Output THDv (@Linear Load)	< 3%
Rated Grid Frequency [Hz]	50 / 60
Rated AC Output Power [kW]	50
Max. AC Output Power [kVA]	55

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

System Diagram



▶ Smart Monitoring Platform

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



RENAC SEC APP/Web



Systematic Solutions



Provide APP & Web Version



Centralized management



Real time monitoring



Intelligent O & M



Provide visual graphs and history data



▶ Accessories



ST-Wifi-G2

Easy & Quick setup via bluetooth. Supporting breakpoint retransmission.



ST-4G-G1

Provide 4G for customer to set up the monitoring easily.



ST-LAN-G1

Provide ethernet connectivity by network cable for customers to set up the monitoring easily.



RT-WIFI

Able to connect up to 8 inverters.



3ph Smart Meter

SDM630MCT 40mA and SDM630Modbus V2 three phase smart meters are the one-on-one solution for R3-4~50K on-grid inverters to do export limitation. Also are compatible with N3-HV-5.0~10.0 three phase hybrid inverter.



1ph Smart Meter

SDM230-Modbus single phase smart meter is designed with high-precision small-scale dimensions, and convenient operation and installation. Available for N1-HV-3.0~6.0 single phase hybrid inverter.



EPS Box

EPS Box(EPS-100-G2) is an accessory to manage EPS output of single-phase hybrid inverters.



EPS Parallel Box

EPS Parallel Box(PB-50) is an accessory to realize on / off-grid switchover of the multiple N3-HV-5.0~10.0 three phase hybrid inverters in parallel.



Combiner Box

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



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MinebeaMitsumi
Passion to Create Value through Difference

Panasonic



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