TIER 1
Bloomberg
NEW ENERGY FINANCE

RESIDENTIAL ENERGY STORAGE SYSTEM SOLUTIONS

EMPOWER TOMORROW WITH TRUSTED GREEN ENERGY

RCT power

About RCT Power

Founded in Konstanz, Germany in 2015, RCT Power is a globally recognized leader in energy storage solutions and a BloombergNEF (BNEF) Tier 1 manufacturer. Drawing on Germany's renowned technology and quality standards, we are one of the earliest German brands dedicated to residential energy storage systems. Guided by our mission to "Deliver Reliable Green Energy, Power a Sustainable Future," RCT Power provides comprehensive green energy solutions worldwide for Residential (RESS), Commercial & Industrial (CESS), and Grid-Scale (GESS) Energy Storage Systems.

The company owns key patents and delivers world-class technical performance. Our innovative battery module stacking technology and system efficiency continually redefine industry benchmarks. All products meet rigorous global safety standards (including UL, IEC, and AS/NZS) and are listed by both the U.S. California Energy Commission (CEC) and Australia's Clean Energy Council (CEC).

With a vertically integrated supply chain spanning R&D, manufacturing, sales, and service, RCT Power has strategically expanded its global presence. The company operates dedicated R&D hubs and regional sales centers in Konstanz (Germany), Suzhou (China), California (USA), and Melbourne (Australia), supported by state-of-the-art manufacturing facilities in Penang (Malaysia) and Suzhou (China), enabling worldwide client support.

RCT Power's technological leadership is underscored by Six consecutive years as the #1 ranked provider in SPI Testing, "Top Energy Storage Inverter Brand" and "Top Residential ESS Brand" awards from EuPD Research.

RCT Power's technological leadership is evidenced by six consecutive years as the #1 ranked provider in SPI Testing. The company has also earned prestigious EuPD Research awards, including "Top Energy Storage Inverter Brand" and "Top Residential ESS Brand."

As a catalyst for the global energy transition, RCT Power drives innovation in energy storage technology, empowering industries and communities with scalable, sustainable solutions.

Layout

40 GWh
Planned Capacity

150000+ m^2
R&D Staff

200+
R&D Staff

10+ GWh
Cumulative ESS Shipments

100+
Successful Cases

200+
Corporate Patents

RCT power

Catalogue

POWER BATTERY

Power Battery
8.0 | 16.0 | 24.0 | 32.0

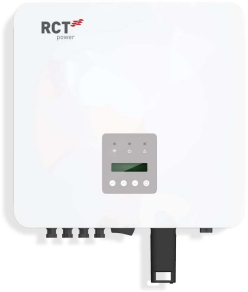
Power Battery
5.0 | 10.0 | 15.0 | 20.0

Power Battery
5.0 | 7.5 | 10.0 | 12.5 | 15.0

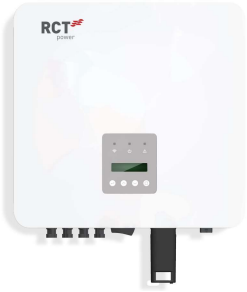
Power Battery LV
5.0

HYBRID INVERTER

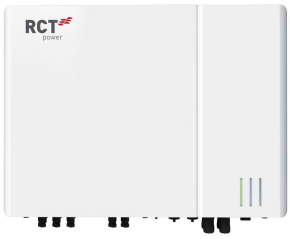
SolarWave HV Series
15K | 20K | 25K | 30K



SolarWave HV Series
5K | 6K | 8K | 10K | 12K | 15K



EnergyLink HV Series
3K | 3.6K | 4K | 4.6K | 5K |
6K | 8K | 10K | 10.5K



Power Storage DC
5.0 | 6.0 SP

Power Storage DC
US 8.0 | 8.0 Pro

Power Storage DC
US 15.0

SolarWave LV Series
3K | 3.68K | 4K | 5K | 6K

POWER SWITCH

Power Switch For
Storage DC 5.0 | 6.0 SP

Power Switch
63/25 | 63/25-3

POWER SENSOR

Power Sensor 50 | 100

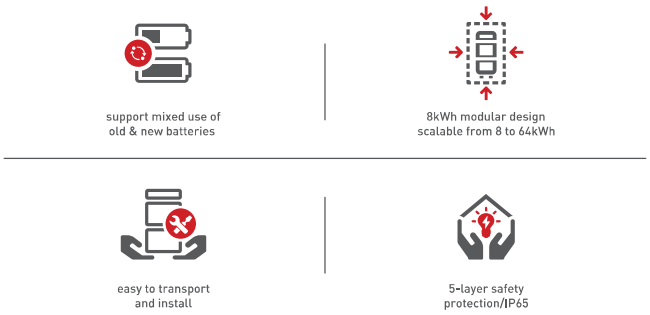
CLOUD & APP

RCT Power Cloud & APP

RCT power

POWER BATTERY
8.0 | 16.0 | 24.0 | 32.0

MODULAR HIGH VOLTAGE OUTDOOR BATTERY FOR PV STORAGE SYSTEMS



- Modular Stackable Design with pack-level optimization technology, enabling on-demand expansion and flexible adaptation for both household and commercial/industrial scenarios.
- Active Energy Balancing eliminates the "short-board" effect, supporting mixed use of old/new batteries and batteries with different SOH/SOC levels. New batteries feature plug-and-play for flexible capacity expansion, while facilitating inventory management for distributors.
- Independent Module Management: Each battery pack can charge/discharge independently, achieving fast charge/discharge power up to 4 kW. Maximum charge/discharge power per cluster system reaches 16 kW.
- Extreme Temperature Resilience: Operates from -20°C to 55°C, suitable for homes from the equator to polar regions.
- Wireless Installation with plug-and-play simplicity for effortless setup.
- 5-Layer Safety Protection for ultimate security.
- 314Ah High-Capacity Cells with high cycle life and long-term durability.
- IP65 Protection Rating to withstand harsh environments.
- One-Click System Diagnosis, real-time monitoring, and transparent visibility.
- Remotely Scheduled OTA Updates available anytime.
- Expandable Capacity up to 64kWh.

POWERCORE HV RBS-8.0-H

ELECTRICAL PARAMETERS

Battery Cell Type	$LiFePO_4$
Battery Cell capacity	314Ah
Battery Cycle	6000*
Battery usable capacity	8 kWh
Max. output power	4 kW
Nominal voltage	650 V
Operating voltage range	600~710V

COMMUNICATION

Display	SOC status indicator, LED indicator
Communication	RS485 / CAN (only for parallel operation)

GENERAL SPECIFICATION

Power module dimension	80 x 760 x 320 mm
Power module weight	20 kg
Battery module dimension	343 x 760 x 320 mm
Battery module weight	80 kg
Installation	Floor stand
Operating temperature	Charge: 0~ 55°C
	Discharge: -20 ~ 50°C
Max. operating altitude	4000 m
Relative humidity	5% - 95% RH
Cooling	Natural
IP rating	IP65
Noise emission	< 29dB
Scalability	Max. 2 systems in parallel
Compatible inverters	RCT HV Inverter**
Certificates	EN61000-6-1, EN61000-6-3, IEC 62619, IEC 60730, IEC 62477, EN/IEC 62040, UN38.3

MODEL RBS-8.0-H RBS-16.0-H RBS-24.0-H RBS-32.0-H

TECHNICAL SPECIFICATION

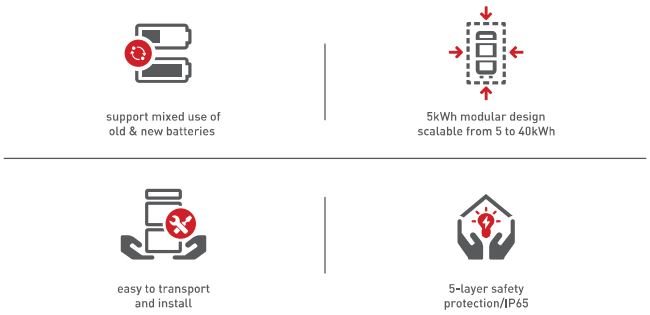
ELECTRICAL PARAMETERS

Number of battery modules	1	2	3	4
Battery usable capacity	8 kWh	16 kWh	24 kWh	32 kWh
Max. output power	4 kW	8 kW	12 kW	16 kW
Weight (Floor stand toolkit included)	100 kg	180 kg	260 kg	340 kg
Height (Floor stand and Power module included)	473 mm	816 mm	1159 mm	1502 mm
Width	760 mm			
Depth	320 mm			

* For specific details, please refer to the RCT power warranty documentation.
** For detailed information, please consult the RCT Power sales or technical support team.

POWER BATTERY
5.0 | 10.0 | 15.0 | 20.0

MODULAR HIGH VOLTAGE OUTDOOR BATTERY FOR PV STORAGE SYSTEMS



- Modular Stackable Design with pack-level optimization technology, enabling on-demand expansion and flexible adaptation for both household and commercial/industrial scenarios.
- Active Energy Balancing eliminates the "short-board" effect, supporting mixed use of old/new batteries and batteries with different SOH/SOC levels. New batteries feature plug-and-play for flexible capacity expansion, while facilitating inventory management for distributors.
- Independent Module Management: Each battery pack can charge/discharge independently, achieving fast charge/discharge power up to 2.5 kW. Maximum charge/discharge power per cluster system reaches 10 kW.
- Extreme Temperature Resilience: Operates from -20°C to 55°C, suitable for homes from the equator to polar regions.
- Wireless Installation with plug-and-play simplicity for effortless setup.
- 5-Layer Safety Protection for ultimate security.
- 314Ah High-Capacity Cells with high cycle life and long-term durability.
- IP65 Protection Rating to withstand harsh environments.
- One-Click System Diagnosis, real-time monitoring, and transparent visibility.
- Remotely Scheduled OTA Updates available anytime.
- Expandable Capacity up to 40kWh.

POWERCORE HV RBS-5.0-H

ELECTRICAL PARAMETERS

Battery Cell Type	$LiFePO_4$
Battery Cell capacity	314Ah
Battery Cycle	6000*
Battery usable capacity	5 kWh
Max. output power	2.5 kW
Nominal voltage	400 V
Operating voltage range	370~450V

COMMUNICATION

Display	SOC status indicator, LED indicator
Communication	RS485 / CAN (only for parallel operation)

GENERAL SPECIFICATION

Power module dimension	80 x 760 x 320 mm
Power module weight	20 kg
Battery module dimension	343 x 760 x 320 mm
Battery module weight	50 kg
Installation	Floor stand
Operating temperature	Charge: 0~ 55°C
	Discharge: -20 ~ 50°C
Max. operating altitude	4000 m
Relative humidity	5% - 95% RH
Cooling	Natural
IP rating	IP65
Noise emission	< 29dB
Scalability	Max. 2 systems in parallel
Compatible inverters	RCT HV Inverter**
Certificates	EN61000-6-1, EN61000-6-3, IEC 62619, IEC 60730, IEC 62477, EN/IEC 62040, UN38.3

MODEL RBS-5.0-H RBS-10.0-H RBS-15.0-H RBS-20.0-H

TECHNICAL SPECIFICATION

ELECTRICAL PARAMETERS

Number of battery modules	1	2	3	4
Battery usable capacity	5 kWh	10 kWh	15 kWh	20 kWh
Max. output power	2.5 kW	5.0 kW	7.5 kW	10.0 kW
Weight (Floor stand toolkit included)	70 kg	120 kg	170 kg	220 kg
Height (Floor stand and Power module included)	473 mm	816 mm	1159 mm	1502 mm
Width	760 mm			
Depth	320 mm			

* For specific details, please refer to the RCT power warranty documentation.
** For detailed information, please consult the RCT Power sales or technical support team.

POWER BATTERY
5.0 | 7.5 | 10.0 | 12.5 | 15.0

MODULAR HIGH VOLTAGE OUTDOOR BATTERY FOR PV STORAGE SYSTEMS

environmentally friendly and safe $LiFePO_4$ battery

modular space saving design

easy to transport and install

everything needed from one source

HIGH PERFORMANCE

- $LiFePO_4$ technology
- Max.0.7C charging/discharging rate
- Intelligent equalization
- High voltage, high efficiency, low stress operation

FLEXIBLE AND UPGRADEABLE

- Extendable capacity for lifetime use: 5-15 kWh
- Usable capacity scalable in incrementes of 2.25 kWh
- Upgradeable
- Suitable for back-up systems

EASY INSTALLATION

- Lightweight components
- Modern and space-saving design
- Modular concept and simple wiring for easy transport and installation
- Master battery management system
- Plug & play

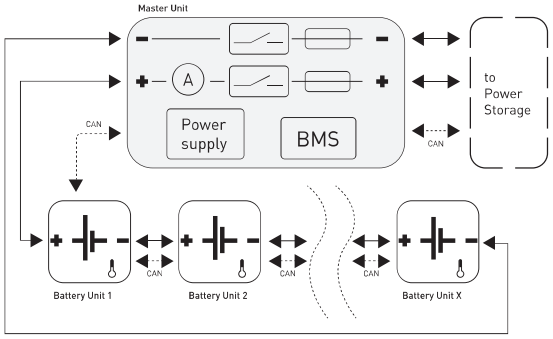
SUSTAINABLE

- Lithium-iron-phosphate cell chemistry
- 10 years time value guarantee
- IP65: Suitable for outdoor installation
- Suitable for salt water-wet locations
- Corrosion-resistant aluminum housing
- All components carry necessary UL certifications

MONITORING VIA APP

- Powerful RCT RESS App
- Full data visualization
- Monitoring from every location
- Configuration options
- One click update

BLOCK DIAGRAM



POWER BATTERY	5.0	7.5	10.0	12.5	15.0
ELECTRICAL PARAMETERS					
Nominal capacity	5 kWh	7.5 kWh	10 kWh	12.5 kWh	15 kWh
Usable capacity (90% DoD)	4.5 kWh	6.75 kWh	9 kWh	11.25 kWh	13.5 kWh
Cycle Life	6000				
Voltage range	145 V...166 V	218 V ... 248 V	291 V ... 331 V	364 V ... 414 V	436 V ... 497 V
Nominal voltage	154 V	230 V	307 V	384 V	461 V
Maximum charge / discharge current	25 A / 25 A	25 A / 25 A	25 A / 25 A	25 A / 25 A	25 A / 25 A
Standby consumption	< 5 W				
INTERFACES					
Power Storage interface	CAN				
GENERAL					
Battery technology	$LiFePO_4$				
Dimensions (height x width x depth)	1.96'x1.13'x1.13'	2.72'x1.13'x1.13'	3.47'x1.13'x1.13´	4.23'x1.13'x1.13'	4.98'x1.13'x1.13'
Weight (single stack 25.2 kg(55.5 lb))	56.4kg (124.3 lb)	81.6kg (179.9 lb)	106.8kg (235.5 lb)	132kg (291.0 lb)	157.2kg (346.6 lb)
Number of battery units	2	3	4	5	6
IP degree of protection	IP65				
Type of installation	floor stand / indoor / outdoor				
Operating temperature range	-0.4 °F~ 131°F				
Connector type	Quick Contact MC4 - Evo 2				
SAFETY / STANDARDS					
Safety class	I				
Certificates	UN 38.3, UL1973, UL60730-1, UL9540A				
EMC	FCC Part 15B, ICES-003				
Safety	UL1973, UL60730-1, UL9540A				
WARRANTY					
Warranty	10 years*				

* Test condition of 77±35.6°F, 0.3C charge and discharge rate and SOH=70%

POWER BATTERY LV

LOW VOLTAGE OUTDOOR BATTERY FOR PV STORAGE SYSTEMS

environmentally friendly and safe $LiFePO_4$ battery

modular space saving design

easy to transport and install

everything needed from one source

HIGH SAFETY

- Adopting circuit breakers and an intelligent BMS with automatic disconnection
- Ensuring dual protection mechanisms

HIGH COMPATIBILITY

- Capable of communicating with mainstream inverters available in the market

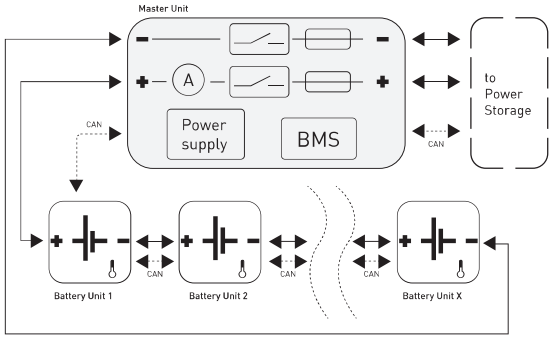
HIGH INTELLIGENCE

- Equipped with Bluetooth and WIFI functions
- A customized intelligent app
- Supports remote upgrades, reducing after-sales maintenance costs

HIGH AESTHETIC APPEAL

- Featuring an ultra-thin design of just 153 mm
- Supports wall mounting and vertical stacking,
- saving space

BLOCK DIAGRAM



POWER BATTERY LV — RBS-5.0-L

ELECTRICAL PARAMETERS

Nominal capacity	5.12 kWh
Usable capacity (90% DoD)	4.61 kWh
Rated voltage	51.2 V
Cycle life	6000
Standard charge/discharge current	50 A / 50 A
Max. constant charge/discharge current	95 A / 100 A
Standardby consumption	< 5 W

INTERFACES

Communication	RS485/CAN

GENERAL SPECIFICATION

Battery technology	$LiFePO_4$
Dimensions (D x W x H)	153 x 490 x 625 mm
Weight	52 kg
Humidity Range	5% - 85% RH
IP rating	IP65
Type of installation	Wall-mounted
Operating temperature	Charge: 0 ℃ ~ 60 ℃
	Discharge: -20 ℃ ~ 60 ℃
Max. operating altitude	3000 m
Connector type	Quick Connect plug: ESC-HP120-025-PB, socket: ESC-HP120-052,
	communication: YGC583-RJ45RG
Scalability	Max. 5 systems in parallel

SAFETY / STANDARDS

Certificates	UN38.3, IEC62619, IEC63056, IEC62040, IEC62477, IEC61000-6-1, IEC61000-6-3

WARRANTY

Warranty	10 years

SOLARWAVE HV SERIES

THREE-PHASE HYBRID INVERTER FOR RESIDENTIAL AND COMMERCIAL PV SYSTEMS

high efficiency

back-up power supply

up to 3 roof orientations

modular space saving design

quick and easy installation

everything needed from one source

HIGH PERFORMANCE

- < 10ms UPS-level switching
- Three MPPTs, Max.36A input per MPPT
- Up to 98.1% operating efficiency
- Optimized for high-power solar panel
- Max.150% PV oversizing
- 150% Peak backup power for 10 seconds

UNIQUE FLEXIBILITY

- Support 100% unbalanced loads
- Supports microgrid and generator functions
- Supports up to two high-voltage battery groups per inverter

USER FRIENDLY

- Convenient remote monitoring via App and Cloud
- Flexible configuration, time-efficient and labor-saving
- Remote diagnosis & update

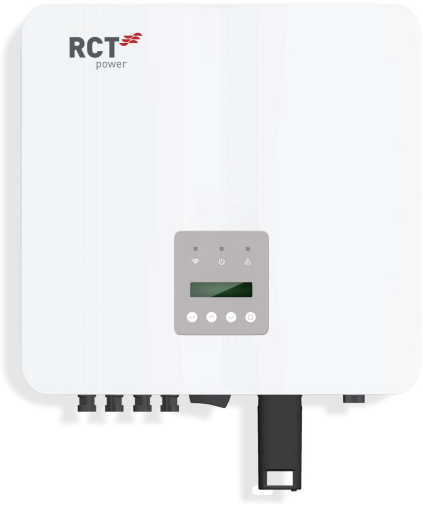
PREMIUM DESIGN

- Compact and lightweight hardware design
- IP66 Design: suitable for indoor and outdoor
- Optional AFCI & RSD function

EXPANDABLE SOLUTION

- Support AC retrofit application
- Support up to 3 units parallel connection

MODEL	RHT-15K-H-C01	RHT-20K-H-C01	RHT-25K-H-C01	RHT-30K-H-C01
PV INPUT				
Max. Recommended DC Power [W]	30,000	40,000	45,000	45,000
Max. DC Voltage [V]	1,000			
Max. Input Current [A]	36 / 36 / 36			
Max. Short Circuit Current [A]	46 / 46 / 46			
MPPT Voltage Range [V]	180 - 960			
Start-up Voltage [V]	200			
No. of MPP Trackers	3			
Strings Per MPP Tracker	2			
PV Over Management	200%	200%	180%	150%
BATTERY				
Battery Type	$LiFePO_4$			
Battery Voltage [V]	180 - 800			
Max. Charge/ Discharge Power [W]	30,000 / 15,000	30,000 / 20,000	30,000 / 25,000	30,000 / 30,000
Max. Charge/ Discharge Current [A]	50 / 50			
Communication Interface	CAN			
AC OUTPUT				
Max. AC Output Apparent Power [VA]	16,500	22,000	27,500	33,000
Rated AC Output Power [W]	15,000	20,000	25,000	30,000
Max. AC Output Current [A]	25.0	33.4	41.7	50
Rated AC Output Current [A]	22.8	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]	30,000	40,000	41,500	41,500
Max. AC Input Current [A]	45.5	60.3	63.0	63.0
Rated AC Voltage [V]	3 / N / PE, 220 / 380, 230 / 400			
Grid Frequency [Hz]	50 / 60			
BACKUP OUTPUT (WITH BATTERY)				
Rated Power [W]	15,000	20,000	25,000	30,000
Rated Voltage[V]	3 / N / PE, 220 / 380, 230 / 400			
Rated Frequency [Hz]	50 / 60			
Rated Current [A]	22.8	30.3	37.9	45.5
Output THDv (@Linear Load)	< 3%			
Automatic Switch Time [ms]	< 10			
Peak Apparent Power, Duration [VA, 10s]	22,500	30,000	37,500	45,000
EFFICIENCY				
Max. Efficiency	98.10%			
Euro-Efficiency [%]	97.70%			
Max. Battery Charge/Discharge Efficiency	97.60%			
GENERAL DATA				
Dimensions (W*H*D) [mm]	630 x 514 x 239			
Weight [kg]	45.32	45.32	47.00	47.00
Display	LED + LCD			
Communication	RS485, USB Update, 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	Non-isolated			
Cooling	Natural	Natural	Fan	Fan
Ingress Protection	IP66			
CERTIFICATIONS & STANDARDS				
Grid Regulation	IEC61727/IEC62116, EN50549-1/EN50549-10, EN50549-PL, EN50549-CZ, VDE-AR-N 4105, CEI 0-21			
Safety Regulation	IEC 62109-1, IEC 62109-2, EN 62109-1, EN 62109-2			
EMC	EN / IEC 61000-6-1, EN / IEC 61000-6-2, EN / IEC 61000-6-3, EN / IEC 61000-6-4			



SOLARWAVE HV SERIES

THREE-PHASE HYBRID INVERTER FOR RESIDENTIAL AND COMMERCIAL PV SYSTEMS

high efficiency

back-up power supply

up to 3 roof orientations

modular space saving design

quick and easy installation

everything needed from one source

HIGH PERFORMANCE

- < 10ms UPS-level switching
- Three MPPTs, Max.20A input per MPPT
- Up to 98.8% operating efficiency
- Optimized for high-power solar panel
- Max.200% PV oversizing
- 200% Peak backup power for 60 seconds

UNIQUE FLEXIBILITY

- Support 100% unbalanced loads
- Supports microgrid and generator functions
- Supports up to two high-voltage battery groups per inverter

USER FRIENDLY

- Convenient remote monitoring via App and Cloud
- Flexible configuration, time-efficient and labor-saving
- Remote diagnosis & update

PREMIUM DESIGN

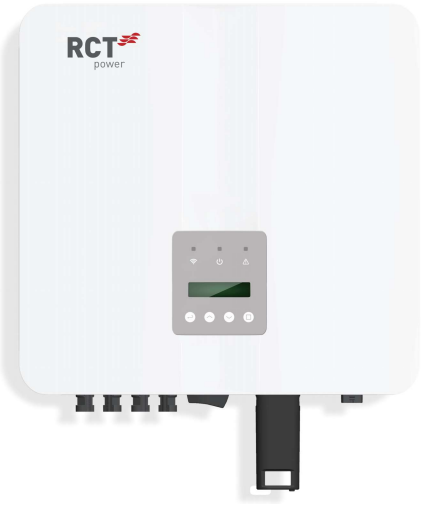
- Compact and lightweight hardware design
- IP66 Design: suitable for indoor and outdoor
- Optional AFCI & RSD function

EXPANDABLE SOLUTION

- Support AC retrofit application
- Support up to 10 units parallel connection

MODEL	RHT-5K-H-C02	RHT-6K-H-C02	RHT-8K-H-C02	RHT-10K-H-C02	RHT-12K-H-C02	RHT-15K-H-C02
PV INPUT						
Max. Recommended DC Power [W]	10,000	12,000	16,000	20,000	24,000	30,000
Max. DC Voltage [V]	1,000					
Max. Input Current [A]	20 / 20 / 20	20 / 20 / 20	20 / 20 / 20	20 / 20 / 40	20 / 20 / 40	20 / 20 / 40
Max. Short Circuit Current [A]	30 / 30 / 30	30 / 30 / 30	30 / 30 / 30	30 / 30 / 60	30 / 30 / 60	30 / 30 / 60
MPPT Voltage Range [V]	100 - 900					
Start-up Voltage [V]	50					
No. of MPP Trackers	3					
Strings Per MPP Tracker	1 / 1 / 1	1 / 1 / 1	1 / 1 / 1	1 / 1 / 2	1 / 1 / 2	1 / 1 / 2
PV Over Management	200%					
BATTERY						
Battery Type	$LiFePO_4$					
Battery Voltage [V]	80 - 800					
Rated. Charge/ Discharge Current [A]	50 / 50					
Max. Charge/ Discharge Current [A]	60 / 60					
Communication Interface	RS485, CAN					
AC OUTPUT (On-Grid Side)						
Max. AC Output Apparent Power [VA]	5,000	6,000	8,000	10,000	12,000	15,000
Rated AC Output Power [W]	5,000	6,000	8,000	10,000	12,000	15,000
Max. AC Output Current [A]	7.2	8.7	11.6	14.5	17.4	21.7
Rated AC Output Current [A]	7.2	8.7	11.6	14.5	17.4	21.7
Rated AC Voltage [V]	3 / N / PE, 220 / 380, 230 / 400, 240 / 415, 312 ~ 520					
Grid Frequency [Hz]	50 / 60					
Adjustable Power Factor [cosφ]	> 0.99, 0.8 leading ~ 0.8 lagging					
Output THDi (@Rated Output)	< 3%					
AC OUTPUT (Back-Up)						
Rated Power [W]	5,000	6,000	8,000	10,000	12,000	15,000
Peak Apparent Power for 60s [W]	10,000	12,000	16,000	20,000	24,000	30,000
Rated Voltage[V]	3 / N / PE, 220 / 380, 230 / 400, 240 / 415, 312 ~ 520					
Rated output current[A]	7.2	8.7	11.6	14.5	17.4	21.7
Rated Frequency [Hz]	50 / 60					
Output THDv (@Linear Load)	< 3%					
Automatic Switch Time [ms]	< 10					
EFFICIENCY						
Max. Efficiency	98.80%					
Euro-Efficiency [%]	98.30%					
GENERAL DATA						
Dimensions (W*H*D) [mm]	507 x 522 x 194					
Weight [kg]	26					
Communication	WiFi, 4G, GPRS, Bluetooth, RS485, CAN					
Ambient Temperature Range [°C]	-25 ~ +60					
Relative Humidity	0 ~ 100%					
Operating Altitude [m]	< 3000					
Topology	Non-isolated					
Cooling	Fan					
Ingress Protection	IP66					
CERTIFICATIONS & STANDARDS						
Grid Regulation	AS/NZS4777:2020, EN50549-10:2022, G98:2021, G99:2021, NC RFG, ABNT NBR 16150, VDE-AR-N 4105, CEI0-21, CEI0-16, RD1699, NA/EEA, C10:2019, PPDS:2021, Tor+R25, IEC61683, IEC61727&621611727/IEC62116, EN50549-1/EN50549-10, EN50549-PL, EN50549-CZ, CEI 0-21					
Safety / EMC Regulation	IEC-62109-1/-2, IEC-61000-6-1/-2/-3, NB/T32004					

ENERGYLINK HV SERIES



SINGLE-PHASE HYBRID INVERTER FOR RESIDENTIAL AND COMMERCIAL PV SYSTEMS

high efficiency

back-up power supply

up to 2 roof orientations

modular space saving design

quick and easy installation

everything needed from one source

HIGH PERFORMANCE

- Premium grid peak shaving capabilities, friendly to grid
- 100% full load charge and discharge
- Max. 200% back-up output overloading @60S

FULLY COMPATIBILITY

- Lithium batteries voltage range 80-500V
- Max. PV input current per string 18A
- Enhanced compatibility with 2 MPPTs

UNIQUE FLEXIBILITY

- Supports diesel generators in off-grid locations
- Max. charging/discharging current 60A

SMART SYSTEM

- Intelligent EMS function, improving battery's reliability
- Longevity and almost no derating at high temperature
- Settable charge and discharge time

EASY TO USE

- Plug-and-play installation
- Easy anytime, anywhere monitoring

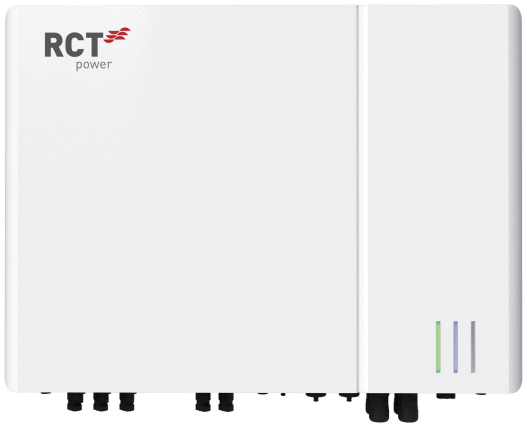
PREMIUM DESIGN

- IP66 protection for indoor and outdoor use
- Optional AFCI protection

EXPANDABLE SOLUTION

- Support AC retrofit application
- Support up to 4 units parallel connection

MODEL	RHS-3K -H-C02	RHS-3.6K -H-C02	RHS-4K -H-C02	RHS-4.6K -H-C02	RHS-5K -H-C02	RHS-6K -H-C02	RHS-8K -H-C02	RHS-10K -H-C02	RHS-10.5K -H-C02
PV INPUT									
Max. Recommended DC Power [W]	3900	4680	5200	5980	6500	7800	10400	13000	13650
Max. DC Voltage [V]	600								
Max. Input Current [A]	36 / 36 / 36								
Max. Short Circuit Current [A]	46 / 46 / 46								
MPPT Voltage Range [V]	80 - 580								
Start-up Voltage [V]	40								
No. of MPP Trackers	2								
Strings Per MPP Tracker	1 / 2								
PV Over Management	130%								
BATTERY									
Battery Type	$LiFePO_4$								
Battery Voltage [V]	80 - 500								
Max. Charge/ Discharge Current [A]	60 / 60								
Communication Interface	RS485,CAN								
AC OUTPUT									
Max. AC Output Apparent Power [VA]	3,000	3,600	4,000	4,600	5,000	6,000	8,000	10,000	10,500
Rated AC Output Power [W]	3,000	3,600	4,000	4,600	5,000	6,000	8,000	10,000	10,500
Max. AC Output Current [A]	13.0	15.7	17.4	20.0	21.7	26.1	34.8	43.5	45.6
Rated AC Output Current [A]	13.0	15.7	17.4	20.0	21.7	26.1	34.8	43.5	45.6
Rated AC Voltage [V]	220 / 230 / 240 (180~300)								
Grid Frequency [Hz]	50 / 60								
Adjustable Power Factor [cosφ]	0.8 leading ~ 0.8 lagging								
Output THDi (@Rated Output)	< 3%								
BACKUP OUTPUT (WITH BATTERY)									
Rated Power [W]	3,000	3,600	4,000	4,600	5,000	6,000	8,000	10,000	10,500
Rated Voltage[V]	220 / 230 / 240 (180~300)								
Rated Frequency [Hz]	50 / 60								
Rated Current [A]	13.0	15.7	17.4	20.0	21.7	26.1	34.8	43.5	45.6
Adjustable Power Factor [cosφ]	0.8 leading ~ 0.8 lagging								
Output THDv (@Linear Load)	< 3%								
EFFICIENCY									
Max. Efficiency	98.60%								
Euro-Efficiency [%]	98.10%								
GENERAL DATA									
Dimensions (W*H*D) [mm]	411 x 401 x 166								
Weight [kg]	17.7								
Communication	Wifi, 4G, GPRS, Bluetooth, RS485, CAN								
Max. operation altitude(m)	3,000								
Ambient Temperature Range [°C]	-25 ~ +60								
Topology	transformerless								
Cooling	Natural cooling	Natural cooling	Natural cooling	Natural cooling	Natural cooling	Smart Fan	Smart Fan	Smart Fan	Smart Fan
Ingress Protection	IP66								
Grid Regulation	AS/NZS4777:2020, EN50549-10:2022, G98:2021, G99:2021, NC RFG, ABNT NBR 16150, VDE-AR-N 4105,								
Grid Regulation	CEI0-21, CEI0-16, RD1699, NA/EEA, C10:2019, PPDS:2021, Tor+R25, IEC61683, IEC61727&62161								
Safety/EMC Regulation	IEC-62109-1/-2, IEC-61000-6-1/-2/-3, NB/T32004								



POWER STORAGE DC 5.0 | 6.0 SP

SINGLE-PHASE HYBRID OUTDOOR INVERTER FOR RESIDENTIAL AND COMMERCIAL PV SYSTEMS

high efficiency

up to 3 roof orientations

quick and easy installation

everything needed from one source

HIGH EFFICIENCY

- Three independent MPP-trackers
- Input for high voltage battery
- Suitable for dynamic power adjustment
- Intelligent energy storage management with forecast based charging
- Exact and fast control behaviour

UNIQUE FLEXIBILITY

- DC & AC Coupling compatible
- 1-phase feed-in
- Up to 2 high voltage batteries per inverter
- Wide MPP range for flexible string planning and easy repowering
- Max-Power Control - self-learning shade management
- Cascadable, expandable and combinable with existing PV-systems
- Hybrid-ready charging of the battery also with external AC sources
- Emergency power capability in conjunction with the RCT Power Switch

EASY INSTALLATION

- DC and AC connection with plug & play
- Integrated RCT RESS App solution

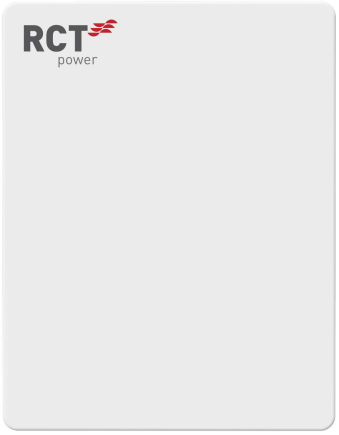
USER FRIENDLY COMMUNICATION

- LAN and WLAN
- RCT Power Portal for user-friendly system monitoring
- Suitable for wallbox chargers, heating elements, heat pumps and energy management systems

INNOVATIVE DESIGN

- Silent, maintenance free cooling
- Durable aluminium housing
- With 22 kg a lightweight in its category
- IP65 protection: Suitable for outdoor installation

POWER STORAGE DC	5.0 SP	6.0 SP
DC INPUT		
Max. recommended DC power	9300 W	
MPPT	3	
Input per MPPT	1	
Max. DC current per MPPT	16 A	
Max. Short circuit current PV input (Iscmax)	20 A	
Rated DC voltage	360 V	
DC start up voltage / power	120 V / 50W	
MPP voltage range	90 V ... 580 V	
Max. voltage DC	600 V	
Connector type	Phoenix XLIX	
BATTERY INPUT		
DC Voltage range	120 V ... 520 V	
Max. charge / discharge current	25 A / 25 A	
Number of battery input	2	
Connector-type	MC4 Evo2	
AC OUTPUT (GRID-MODE)		
Gird connection	1 phase	
Real AC output power	5000 W	6000 W
Max. active power	5000 W	6000 W
Max. apparent power	5000 VA	6000 VA
Max. AC input apparent power from grid	5000 VA	6000 VA
Nominal AC current per phase	21,7 A	26,1 A
Max. AC current per phase	21,7 A	26,1 A
Rated frequency	50 Hz	
Frequency range	45 Hz ... 55 Hz	
Rated AC voltage	230 V, L/N/PE	
AC voltage range	184 ... 265 V	
Total harmonic distortion (THD)	< 3 %	
Reactive power factor (cos phi)	1 (adjustable range 0,8 cap....0,8 ind)	
Earth fault protection	RCD	
Type of AC connection	quick connection plug	
AC OUTPUT (BACK-UP MODE)*		
Max. AC output apparent power	5000 VA	6000 VA
Rated AC voltage	230 V, L/N/PE	
Max. AC output current	21,7 A	26,1 A
Rated frequency	50 Hz	
PERFORMANCE		
Stand-by consumption	< 5 W	
Max. efficiency (PV2AC)	97,1 %	
Max. efficiency (Battery2Grid)	97,1 %	
European weighted efficiency	96,6 %	
Topology	transformerless	
OTHERS		
Dark start function	yes	
PV disconnect switch	integrated	
Data interface	BAT/CAN, WLAN, LAN, RS485	
Display	LED indicator	
Cooling	convection	
IP degree of protection	IP 65	
Max. operating altitude	4000 m	
Max. relative humidity	0 - 100 %	
Typical noise	< 30 dB	
Operating temperature range	-25°C ... 60°C (derating above 45°C)	
Dimensions (height x width x depth)	445 x 605 x 165 mm	
Weight	22 kg	
SAFETY / STANDARDS		
Safety	EN/IEC 62109-1, EN/IEC 62109-2	
Grid support regulation	EN 50549-1, EN 50549-10, RD 647/UNE 217001/UNE 217002/NTS 631 Type A, G99, CEI 0-21, AS/NZS4777.2	
EMC	IEC/EN 61000-6-1/2/3/4	
WARRANTY		
Warranty	10 years	



POWER SWITCH FOR STORAGE DC 5.0 | 6.0 SP

SAFE SUPPLY OF HOUSEHOLD AND FUNCTIONAL RELIABILITY OF PV SYSTEM IN CASE OF GRID FAILURE

high efficiency

back-up power supply

quick and easy installation

everything needed from one source

BACKUP POWER SUPPLY

- Provision of backup grid
- 1-phase supply
- Automatic switching in case of power failure
- Switch-on delay less than 20 ms
- Battery and PV system can be used as energy source

EASY INSTALLATION

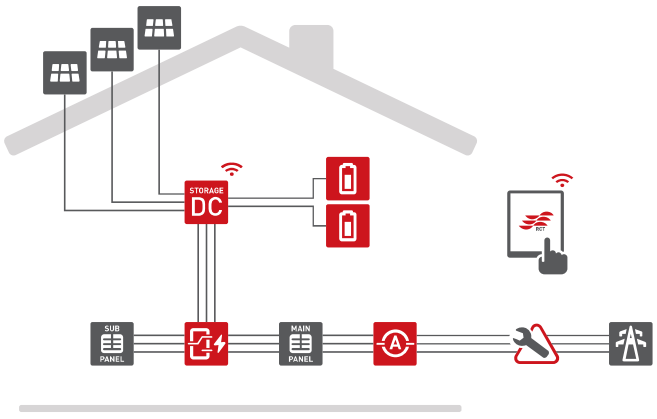
- Compact and lightweight housing
- Wall mounting
- Upgradeable

EFFICIENT

- Up to 6 kVA for single phase Storage DC 6.0 SP
- Fast switching

WHAT IS RCT BACKUP POWER?

In the event of a power failure, the RCT Power Switch ensures that the PV system and connected battery storage unit keep operational. The RCT Power Switch all-pole disconnects the domestic network from the mains supply. It then creates a stand-alone grid in combination with the DC-connected RCT Power storage system.



POWER SWITCH BOX-SP

RAL-8.0K-230-01

AC OUT (ON GRID)

Grid connection	1-phase
Rated voltage	230 V
AC frequency	50 Hz
AC output voltage range	184 ~265 V
Rated current	50 A

AC OUT (BACK UP)

Load connection	1-phase
Rated voltage	230 V
AC frequency	50 Hz
Rated apparent power	8000 VA
Rated output current	34.8 A
Switch over time	< 20 ms

AC INPUT (INVERTER)

Rated voltage	230 V
AC frequency	50 Hz

OTHERS

Operating temperature range	-25°C...+60°C
Relative humidity	0 % - 100 %
Type of installation	wall mounting
Dimensions (height x width x depth)	450 x 350 x 110 mm
Weight	6.2 kg

SAFETY / STANDARDS

IP-class	IP65
Standards	IEC/EN 61439-1/2

WARRANTY

Warranty	10 years

POWER STORAGE DC
US 8.0 | 8.0 PRO

DC-COUPLED HYBRID INVERTER FOR RESIDENTIAL AND COMMERCIAL PV SYSTEMS

high efficiency

back-up power supply

up to 3 roof orientations

modular spae saving design

quick and easy installation

everything needed from one source

HIGH EFFICIENCY

- Intelligent energy storage management
- 3 independent MPP-trackers, switchable to parallel mode
- Transformerless topology
- Fanless cooling
- Dynamic power adjustment (1- 100%)
- Forecast based battery charging
- Back-up power supply

UNIQUE FLEXIBILITY

- Possible input voltage range between 120 V and 520 V
- Up to 2 high voltage batteries per inverter
- Modular and space saving design

EASY INSTALLATION

- Plug and play installation
- Quick commissioning with wizard via RCT Power App
- Integrated auto-transformer
- Separate Power Switch installation possible

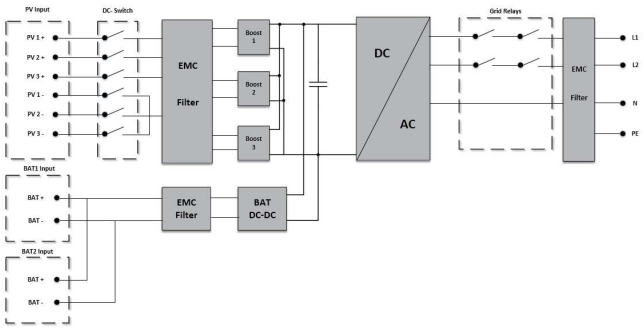
USER FRIENDLY COMMUNICATION

- Multicolor LED light path display
- Comfortable remote monitoring via App and Cloud
- Multifunction relay for connecting consumers

PREMIUM DESIGN

- German technology
- Flexible and sophisticated design
- Durable aluminium housing

BLOCK DIAGRAM

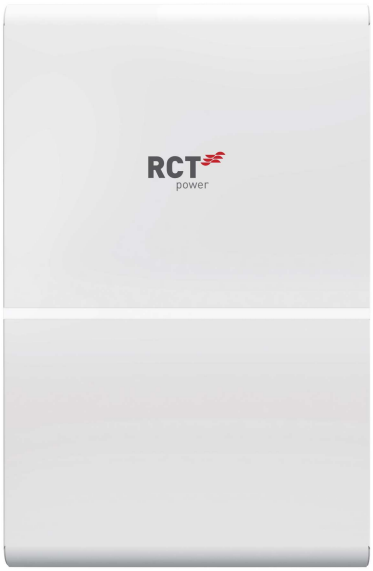


POWER STORAGE DC	US 8.0	US 8.0 PRO
DC INPUT		
Max. recommended DC power	12000 W	
MPPT	3	
Input per MPPT	1	
Maximum DC current per MPPT	14 A	
Rated DC voltage	360	
DC start up voltage	125 V	
MPP voltage range	120 V ~ 500 V	
Maximum Voltage DC	520 V	
Connector type	Quick Contact MC1-Evo 2	
BATTERY INPUT		
DC Voltage Range	120 V ~ 520 V	
Maximum charge / Discharge current	25 A	
Maximum charge / Discharge power	11550 W / 8000 W	
Connector-type	Wiring box	
AC OUTPUT (GRID-MODE)		
Real AC output power	8000 W	
Nominal AC current	34 A	
Frequency range	58 Hz to 62 Hz	
Grounding fault protection current	30 mA, 60 mA, 150 mA	
Rated AC voltage	240 Vac	
AC voltage range	211 V ~ 264 V	
Total harmonic distortion	< 3%	
Reactive power factor	Adjustable range 0.80 cap. . .0.80 ind	
Anti-islanding operation	YES	
Earth fault protection	RCD	
Type of AC connection	Wiring box	
AC OUTPUT (BACK-UP MODE)		
Maximum output power	8000 W*	
Rated AC voltage	120 / 240ZVac (Split Phase)	
Nominal AC current	34 A	
Nominal AC output frequency	60 Hz	
Total harmonic distortion	< 5 %	
Type of AC connection	Wiring box	
PERFORMANCE		
Stand-by consumption	< 4 W	
Maximum efficiency (PV-Grid)	97.94 %	
Maximum efficiency (Battery-Grid)	97.48 %	
CEC efficiency	97.5 %	
Topology	Transformerless	
OTHERS		
Dark Start Function	Yes	
PV Disconnect switch	Integrated in wiring box	
Data interface	BAT/CAN, WLAN, LAN, RS485	
Display	LED Light	
Cooling	Convection	
Max. operating altitude	6500 ft	
Max. relative humidity	5 - 95 % (non condensing)	
Typical noise	< 35 dB	
Operating temperature	-13 °F ~ 140 °F	
Enclosure type	NEMA Type 1	NEMA Type 3R
Size Power Inverter (HxWxD)	2.79' x 1.90' x 0.67'	
Size Power Switch (HxWxD)	2.79' x 1.05' x 0.67'	
Weight Power Inverter	75 lb	
Weight Power Switch	45 lb	

SAFETY / STANDARDS

Safety	UL1741 , CSA-C22.2 No. 107.1-16	AFCI	UL1699B (TYPE 1)
Grouding fault protection	UL1741 CRD	Grid support regulation	UL1741 SB , IEEE1547, California Rule 21
Software approval	UL1998	Storage system	UL9540
Anti-islanding protection	IEEE1547, IEEE1547.1	EMC	FCC part 15 Class B

* Need to use 3~6 pcs power battery stacks



POWER STORAGE DC US 15.0

SPLIT-PHASE HYBRID INVERTER FOR RESIDENTIAL AND COMMERCIAL PV SYSTEMS

high efficiency

back-up power supply

up to 3 roof orientations

modular space saving design

quick and easy installation

everything needed from one source

HIGH PERFORMANCE

- Dynamic power adjustment (1- 100%)
- Input for high voltage battery
- 200% DC/AC ratio for higher yields
- Three MPPTs, Max.30A input per MPPT
- 160% peak backup power for 10 seconds
- Up to 96.5% operating efficiency

UNIQUE FLEXIBILITY

- Compatible with DC or AC Coupling applications
- Compatible with 120/240V and 120/208V voltage systems
- Supports microgrid and generator functions
- 200A AC passthrough current for whole-home backup
- Supports up to two high-voltage batteries per inverter
- UL 9540 Available
- External RSD, built-in transmitter

USER FRIENDLY

- Multicolor LED light path display
- Convenient remote monitoring via App and Cloud
- Flexible configuration, time-efficient and labor-saving
- Seamless switching on or off grid Installation

PREMIUM DESIGN

- German technology
- Combination of aesthetics and functionality design
- Corrosion-resistant aluminum housing
- NEMA 3R Design:suitable for indoor and outdoor

EXPANDABLE SOLUTION

- Modular 15kW hybrid inverter
- Add up to (6) 15kW hybrid inverters in parallel (90kW max)

POWER STORAGE DC US-15.0

BATTERY INPUT DATA

Battery Type	Lithium-ion
Battery Voltage Range(V)	120-520
Max. Charging Current(A)	50
Max. Discharging Current(A)	50
Number of battery input	2

PV STRING INPUT DATA

Max DC Input Power(W)	30,000
Max DC Input Voltage(V)	600
Start-up Voltage(V)	150
MPPT Voltage Range(V)	120-520
Rated DC Input Voltage(V)	380
Max Input Short-Circuit Current(A)	45/45/45
Max Operating PV Input Current(A)	30/30/30
No. of MPP Trackers	3
No. of String Per MPP Tracker	2

AC INPUT/OUTPUT DATA

Rated AC Input/Output Active Power(W)	15,000
Max AC Input/Output Apparent Power (VA)	15,000
Peak Power (off-grid) (W)	24,000, 10s
Rated AC Input/Output Current(A)	62.5
Max AC Input/Output Current(A)	200
Max Continuous AC Passthrough (grid to load) (A)	200
Rated Input/Output Voltage/Range(V)	120/240, 120/208, 0.88Un-1.1Un
Grid Connection Form	2L+ N + PE
Rated Input/Output Grid Frequency/Range	60Hz / 58.8-61.2Hz / 57-63Hz(HECO)
Power Factor Adjustment Range	0.8 leading - 0.8 lagging
Total Current Harmonic Distortion THDi	<3% (of nominal power)
DC Injection Current	< 0.5% In
Backup Transfer Time	< 10ms
Stackable	Up to 6 in parallel

EFFICIENCY

Max Efficiency	97.60%
CEC Efficiency	96.50%
MPPT Efficiency	> 99%

EQUIPMENT PROTECTION

PV Reverse Polarity Protection	Yes
AC Output Overcurrent Protection	Yes
AC Output Overvoltage Protection	Yes
AC Output Short Circuit Protection	Yes
DC Terminal Insulation Impedance Monitoring	Yes
Ground Fault Detection — NEC 690.5	Yes
Anti-islanding Protection	Yes
PV DC Disconnect Switch — NEC 240.15	Yes
Residual Current (RCD) Detection	Yes
PV Rapid Shutdown Control (RSD) — NEC 690.12	Yes
PV Arc Fault Detection (AFCI) — NEC 690.11	Yes
Surge Protection Level	Type II(DC), Type II(AC)

INTERFACE

Communication Interface	WIFI, RS485, CAN, Ethernet

GENERAL DATA

Operating Temperature	-13 °F ~ 140 °F
Permissible Ambient Humidity	0 - 100%
Permissible Altitude	6561.68 ft
Noise	≤ 45 dB (A) (3.28 ft)
Ingress Protection (IP) Rating	IP65 / TYPE 3R
Inverter Topology	Non-Isolated
Dimensions (HxWxD)	2.79' x 1.77' x 0.99'
Weight (lb)	132 lb

CERTIFICATIONS

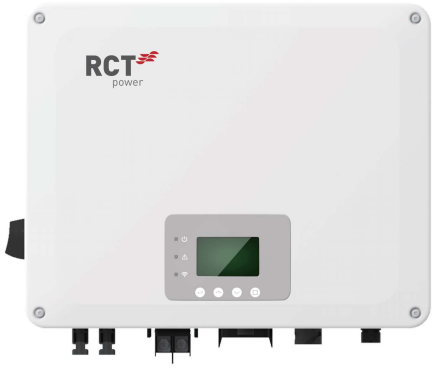
Certifications and Listings	UL1741-3rd & CSA C22.2 No.107.1-16, UL1998, UL1699B, IEEE1547-2018 & IEEE1547.1-2020, UL1741 SB, FCC 15 Part B, UL1741 CRD PCS, UL3141, CA Rule 21, HECO Rule 14H(SRD-V2.0)

WARRANTY

Warranty	12 Years*

* The ambient temperature during the operation of the products shall not fall below-13°F or exceed 140°F.
Inverter need to connect to RCT power cloud and generation data been successfully uploaded to RCT power server.
See the warranty document for specific test conditions.

SOLARWAVE LV SERIES



SINGLE-PHASE HYBRID INVERTER FOR RESIDENTIAL AND COMMERCIAL PV SYSTEMS

high efficiency

back-up power supply

up to 2 roof orientations

modular space saving design

quick and easy installation

everything needed from one source

HIGH EFFICIENCY

- Maximum 16 A DC input current per string
- Compatible with 650W+ PV module
- Dual MPPT input, more flexible configuration
- Shadow scan without optimizer

FLEXIBLE AND CONVENIENT

- Peak shaving
- Multiple periods for battery charging/discharging
- Support both lithium-ion and lead-acid batteries

SAFE AND RELIABLE

- UPS function to ensure stable operation of critical loads
- Switchover time less than 10 ms
- Support 2 times peak power for more energy
- Battery terminal temp protection

SMART CONTROL

- Smart load control via dry contact
- Zero export with CT or Meter
- 24/7 Online Monitoring

MODEL	RHS-3.0K-L -C03-01	RHS-3.68K-L -C03-01	RHS-4.0K-L -C03-01	RHS-5.0K-L -C03-01	RHS-6.0K-L -C03-01
PV INPUT					
Max. Recommended DC Power [W]	6,000	7,360	8,000	10,000	12,000
Max. DC Voltage [V]	600				
Max. Input Current [A]	16 / 16				
Max. Short Circuit Current [A]	20 / 20				
MPPT Voltage Range [V]	80 - 550				
Start-up Voltage [V]	70				
No. of MPP Trackers	2				
Strings Per MPP Tracker	1				
PV Over Management	200%				
BATTERY					
Battery Type	Lithium-ion/Lead-Acid				
Rated Battery Voltage [V]	48				
Battery Voltage [V]	40 ~ 60				
Max. Charge/ Discharge Current [A]	70 / 70	70 / 70	80 / 80	120 / 120	120 / 120
Communication Interface	RS485, CAN				
Charging strategy for Li-ion battery	Self Adaption to BMS				
Charging strategy for lead-acid battery	3 Stages Curve				
AC OUTPUT (On-Grid Side)					
Max. AC Output Apparent Power [VA]	3,300	4,048	4,400	5,500	6,600
Rated AC Output Power [W]	3,000	3,680	4,000	5,000	6,000
Max. AC Output Current [A]	14.3	17.6	19.1	23.9	28.7
Rated AC Output Current [A]	13	16	17.4	21.7	26.1
Max. AC Input Current [A]	28.7	35.2	38.3	40	40
Rated AC Voltage [V]	220 / 230 / 240 V				
Grid Frequency [Hz]	50 / 60				
Adjustable Power Factor [cosφ]	0.8 ind - 0.8 cap				
Output THDi (@Rated Output)	< 3%				
AC OUTPUT (Back-Up)					
Rated Power [W]	3,000	3,680	4,000	5,000	6,000
Peak Apparent Power for 10s [W]	6,000	7,360	8,000	7,500	9,000
Rated Voltage [V]	230				
Rated output current [A]	13	16	17.4	21.7	26.1
Rated Frequency [Hz]	50 / 60				
Output THDv (@Rated Power)	< 2%				
Automatic Switch Time [ms]	< 10				
AC Grid Bypass	/				
EFFICIENCY					
Max. Efficiency	98.00%				
Euro-Efficiency [%]	97.60%				
GENERAL DATA					
Dimensions (W*H*D) [mm]	455 x 365 x 182				
Weight [kg]	18.4				
Communication with Meter	RS485				
Communication with Cloud	RS485 / WIFI / 4G / LAN (option)				
CT Connection Type	Plug-in Connector				
Battery Connection Type	Plug-in				
PV Connection Type	MC4				
AC Connection Type	OT Terminal + Shell				
Operating Ambient Temperature Range [℃]	-30 ~ +60				
Relative Humidity	0 ~ 100%				
Operating Altitude [m]	3000 m (> 3000m Derating)				
Topology	Transformerless				
Cooling	Natural				
Ingress Protection	IP65				
CERTIFICATIONS & STANDARDS					
Grid Regulation	EU: EN50549-1, EN50549-10; SP: RD1699, RD661, RD413, RD244, UNE217001, UNE217002, NTS V2.1;				
	IT: CEI 0-21; SA:NRS 097-2-1;INT: IEC61727, IEC62116, IEC61683, IEC60068-2-1/-2/-14/-30, IEC50530				
Safety	IEC62109-1/-2, EN62109-1/-2				
EMC Regulation	IEC/EN 61000-6-1/-3, EN 62920, EN 55011				

www.rct-power.com.cn
info@rct-power.com.cn