

RENAC

PRODUCT BROCHURE

Solar&Energy Storage





Hybrid Inverter

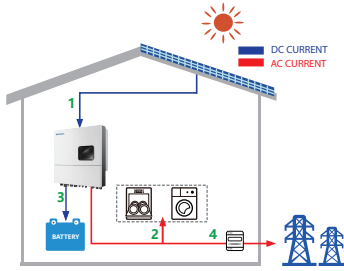
ESC3000-DS / ESC4000-DS / ESC5000-DS

"Make The Intelligent Energy Serve The Public"

Hybrid Inverter

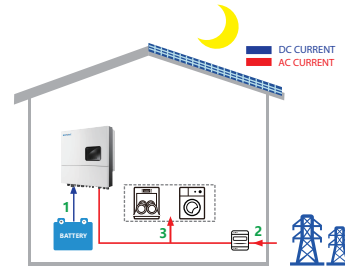
► Self-Use Mode

Self-use (with PV power)
Priority: Load>battery>grid



- Generated solar energy
- Load consumption
- Storage in Battery
- Feed the remaining solar energy into the grid

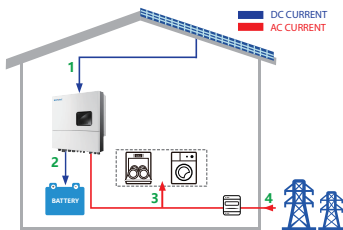
Self-use (without PV power)



- Battery discharge for load
- Grid supply power when the battery capacity is not enough
- Load consumption

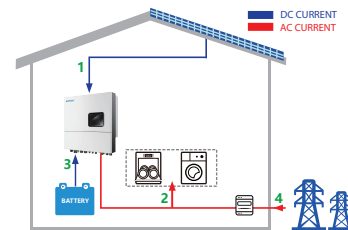
► Force time use

Priority: battery>load>grid(when charging)



- Generated solar energy
- Storage in battery
- Load consumption
- Grid supply power when the battery capacity is not enough

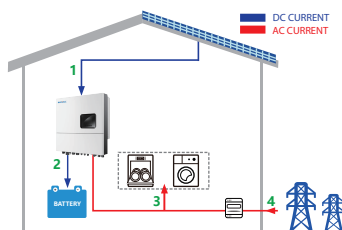
Priority: load>battery>grid(when discharging)



- Generated solar energy
- Load consumption
- Self-use from battery
- Grid supply power when the battery capacity is not enough

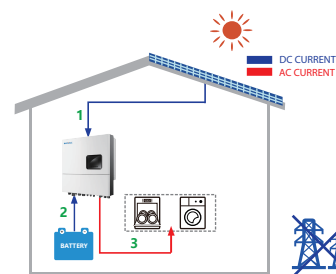
► Back up mode

Priority: battery>load>grid

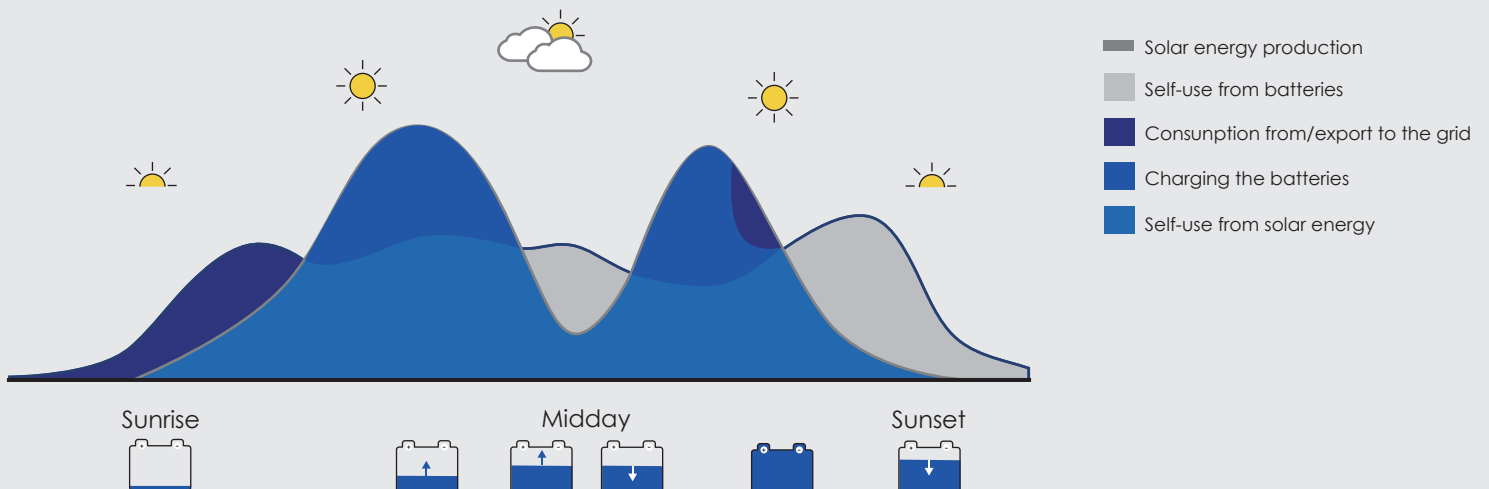


- Generated solar energy
- Storage in Battery
- Load consumption
- Grid supply power

► EPS Status



- Generated solar energy
- Self-use from battery
- Load consumption



Features:



Simple installation as per on-grid inverter



Compatible with both lithium and acid-lead batteries



Programmable software with app control and remote cloud monitoring



Very high IP65 weather rating (can be installed outdoors)



Can be configured to operate as a back-up supply



Battery temperature monitoring for longer battery life



Supports 3 phase function with 3-phase meter



On-Grid (3-6kW) , Charging(3kW) and discharging(2.7kW), Backup(3kW)

Basic Specifications:

- Solar Array Size (Solar input): 3kW, 4kW, 5kW, 6.5kW
- Sizes available(power output): 3kW, 3.68kW, 4.6kW, 6kW (3kW in backup mode)
- Battery System Voltage: 48V
- Use modes: back-up, self-use, off-grid, force time use



Hybrid Inverter

ESC3000-DS / ESC4000-DS / ESC5000-DS

Technical Data

ESC3000-DS / ESC4000-DS / ESC5000-DS

Type	ESC3000-DS	ESC4000-DS	ESC5000-DS
PV input data			
Max. PV-generator power	3300 W	4000 W	5000 W
Max. DC Voltage		580V	
MPPT Voltage Range		100~550V	
Start-up Voltage		110 V	
Min. DC Voltage		75V	
Max. DC current		12A /12A	
Numbers of MPPT		2	
Strings per MPPT		1	
Type of DC Connector		MC4	
AC Output data(On-gird)			
Norminal AC power	3000 W	3680 W	4600 W
Max. AC Power	3000 W	3680 W	4600 W
Max. AC Current	13 A	16 A	21.7 A
Nominal AC Voltage/ Range		230V/180-270V	
Grid frequency/ range		50HZ/60HZ 45~55HZ/55~65HZ	
Output Power factor		0.8leading ~0.8lagging (full load)	
Output THDi(@Nominal Output)		<3%	
AC Output data(Back-up)			
Max.Output Apparent Power		3000 W	
Nominal Output Voltage		230 V	
Nominal Output Frequency		50 / 60 Hz	
Max.Output Current		10 A	
Harmonic distortion [THD] at rated output		<3%	
Automatic Switch Time		<5s	
Peak power[W],Duration		3500 W, 10 s	
Battery Input Data			
Battery Type		Lead-acid battery/lithium battery	
Norminal Battery Voltage		48 V	
Battery Voltage range		40~60 V	
Max.Charging/Discharging Current		60 A	
Communnication interfaces		Can	
Efficiency			
Max. efficiency	97.60%	97.60%	97.60%
Euro efficiency	97.00%	97.00%	97.00%
MPPT adaptation efficiency	99.90%	99.90%	99.90%
General data			
Dimension[W*H*D]		526*528*178 mm	
Weight		29.5 kg	
Mounting		Wall Hangings	
User Interface		LCD	
Communication		Ethernet(standard), RS485(Optional), Wifi(Optional)	
Operating Temperature Range		-25 C ~ 60 C (> 45 C Derating operation)	
Relative Humidity		0-98% (No condensation)	
Operating Altitude		4000m (>2000m derating Operation)	
Standby Self Consumption		<1W	
Topology		Transformerless	
Cooling		Natural Convection	
Protection Grades		IP65	
Noise		<35db	
Warranty		5 year(Standard), 10/15/20/25 year(Optional)	
Certifications	IEC 62109-1, IEC 62109-2,AS/NZS 3100,VDE-AR-N-4105, VDE 0126-1-1+A1, CE, G59/3, UTE C15-712-1,MEA, PEA, AS4777, EN50438,NB/T 32004-2013,CEI-021 EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4, EN 61000-4-16, EN 61000-4-18, EN 61000-4-29		

“Make The Intelligent Energy Serve The Public”

Homebank (ESS) Energy Storage System



Homebank is an All-In-One Energy Storage System which consists of one ESC series Hybrid inverter and 1- 6 (Li-Ion) batteries.

Easy to install

The Homebank Energy Storage System comes pre-wired and factory tested to enable quick installation.

Expandable Storage

The battery cabinet allows you to add individual battery modules up to 6 pcs (14.4kWh).

Technical Data

Battery

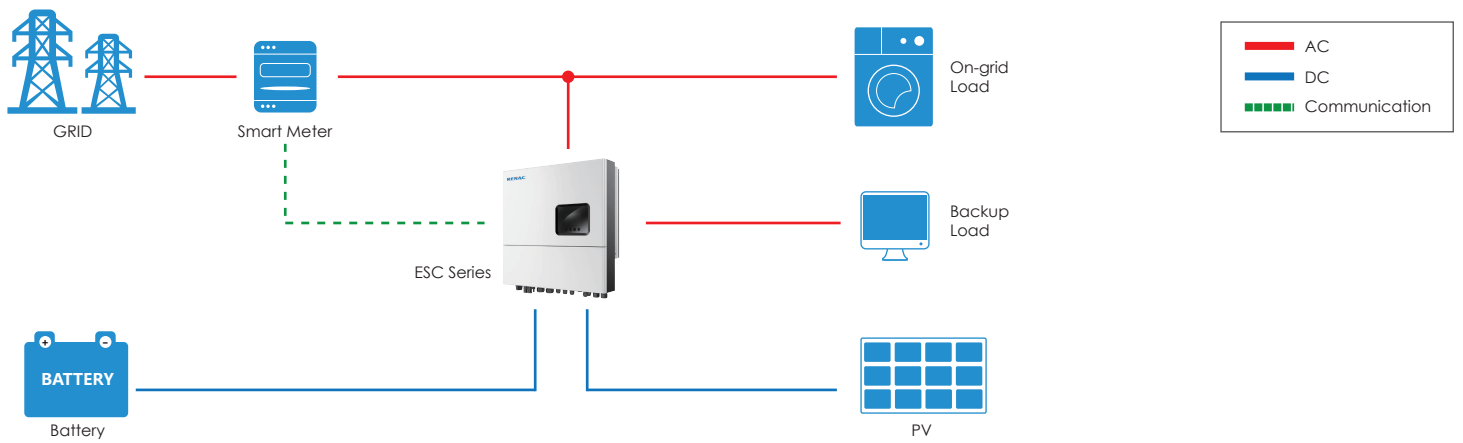
Battery Type	Li-Ion
Nominal Capacity per Unit	48V 60Ah
Nominal Energy per Unit	2.4KWh
Depth of Discharge	90%
Max. Battery Quantity	6(14.4KWh)
Max. Charge/Discharge Power	3kW/2.7kW
Operation Temperature	0 C - 50 C Charge, -10 C - 50 C Discharge
Certification	TUV/CE/UN38.3/TLC
Battery Weight	24Kg/per unit

General

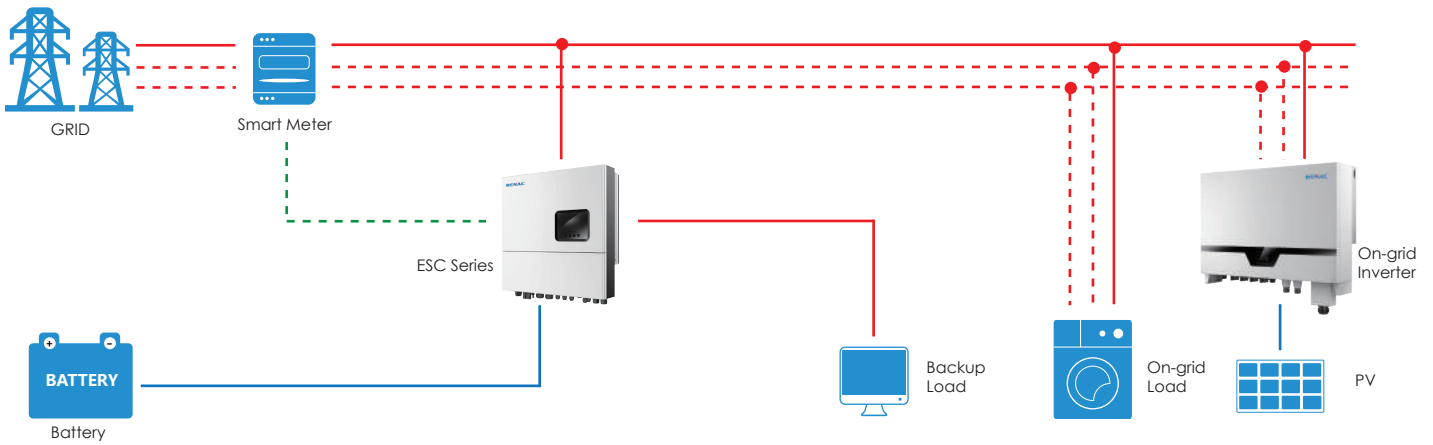
Dimension(Cabinet)	600*750*1164mm
Weight(Cabinet without battery)	80Kg
Protect Class	IP20



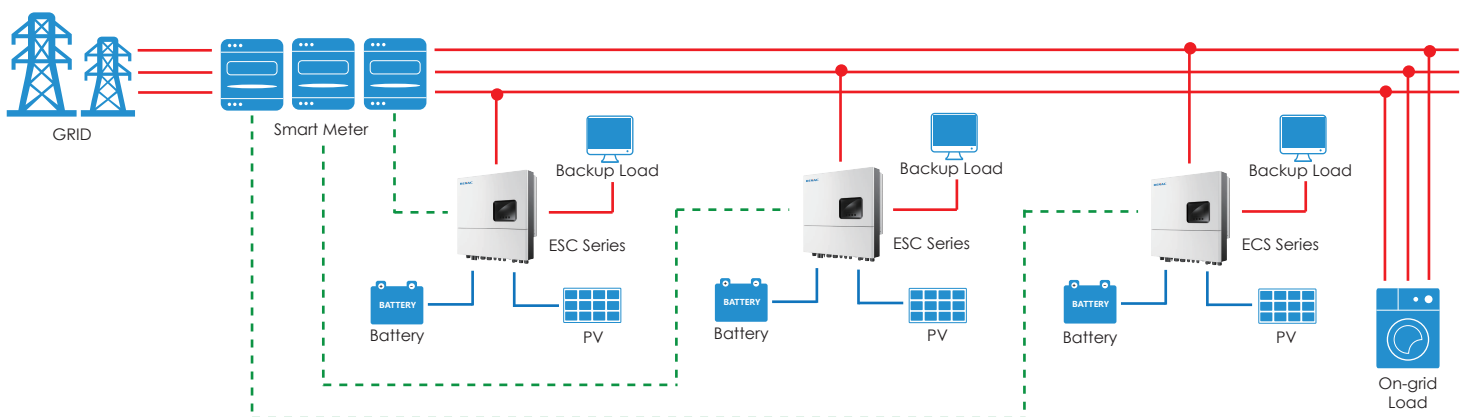
► Basic Application



► Retrofitting storage solution for PV power system



► Storage solution for Three-phase Application



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