PNG Solar

SOLAR + ENERGY STORAGE

(2024.07)

ABOUT PNG SOLAR

Founded in 2006, PNG SOLAR is a national high-tech enterprise specializing in the research and development and production of new energy and power electronic products. All in one optical storage integrated machine, industrial and commercial energy storage system, photovoltaic communication base station, energy storage lithium battery, smart power quality products, etc. The products comply with certification standards. SOROTEC also provides OEM and ODM services to global customers.

20 Years
Focus on energy solutions

National
National high-tech enterprise

10 TOP
Top 10 Solar Energy Enterprises in China

3A
AAA Credit Enterprise

100+
Hundreds of patent certficates and software copyright

1000+
Thousands of project cases exported to many countries around the world

Residential Energy Storage Inverter

Off Grid Inverter

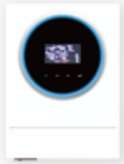
REVO VP/VM

REVO VM II PRO

REVO VM III-T

Hybrid On & Off Grid Inverter

REVO HM



REVO VM IV PRO-T

REVO VM IV

REVO HMT

Hybrid On & Off Grid IP65 EU

REVO HES

iHESS-1P EU

iHESS-3P EU

Solar Controller

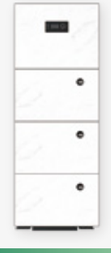
MPPT-SCC

Energy Storage ALL IN ONE

REVO HESS

REVO HESS

iHESS-M (ALL IN ONE)



iHESS-M-H (ALL IN ONE)

REVO VP/VM

OFF GRID Energy Storage Inverter

series 1~5kW

MPPT
Pure sine wave MPPT solar inverter
Bulit-in 50/65A MPPT solar charger

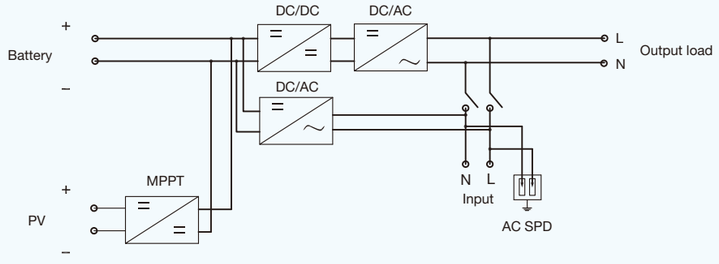
OFF-Grid
REVO VP/VM series is suitable for off-grid applications.

Battery
Battery equalization function extend lifecycle

Easy access
Equalization function

With battery connected

Schematic diagram



PNG Solar

Technical Specification	REVO VP 1000-12	REVO VM 1200-12	REVO VP 2000-24	REVO VM 2200-24	REVO VP 3000-24	REVO VM 3200-24	REVO VP 5000-48	REVO VM 5000-48
Rated Power	1000VA/W	1200VA/W	2000VA/W	2200VA/W	3000VA/W	3200VA/W	5000VA/W	
INPUT								
Voltage	230VAC							
Selectable Voltage Range	170-280VAC (For Personal Computers) ; 90-280 VAC (For Home Appliances)							
Frequency Range	50/60Hz (Auto sensing)							
OUTPUT								
AC Voltage Regulation (Battery Mode)	230VAC ± 5%							
Surge Power	2000VA		4000VA		6000VA		10000VA	
Efficiency(Peak)	93%							
Transfer Time	10ms (For Personal Computers) ; 20m (For Home Appliances)							
Wave Form	Pure sine wave							
BATTERY								
Battery Voltage	12VDC		24VDC				48VDC	
Floating Charge Voltage	13.5VDC		27VDC				54VDC	
Overcharge Protection	16VDC		31VDC		33VDC		63VDC	
SOLAR CHARGER & AC CHARGER								
Solar Charger type	PWM	MPPT	PWM	MPPT	PWM	MPPT	PWM	MPPT
Maximum PV Array Open Circuit Voltage	55VDC	102VDC	80VDC	102VDC	80VDC	102VDC	105VDC	145VDC
Maximum PV Array Power	600W	700W	1200W	1400W	1200W	1800W	2400W	3000W
MPPT Range @ Operating Voltage	N/A	15~80VDC	N/A	30~80VDC	N/A	30~80VDC	N/A	60~115VDC
Maximum Solar Charge Current	50A	50A	50A	50A	50A	65A	50A	60A
Maximum AC Charge Current	20A	20A	20A	20A	25A	25A	60A	60A
Maximum Charge Current	50A	60A	50A	60A	70A	80A	110A	120A
PHYSICAL								
Dimensions D x W x H (mm)	88*225*320	103*225*320	88*225*320	103*225*330	100*285*334	118*285*360	100*300*440	100*300*440
Net Weight(KG)	4.4	4.4	5	5	6.3	6.5	8.5	9.7
Communication Interface	Standard:RS232							
ENVIRONMENT								
Humidity	5% to 95% Relative Humidity(Non-condensing)							
Operating Temperature	-10°C to 50°C							
Storage Temperature	-15°C to 60°C							

REVO VM II PRO

Hybrid Solar Energy Storage Inverter

series 1.6/3.2/4/6kW

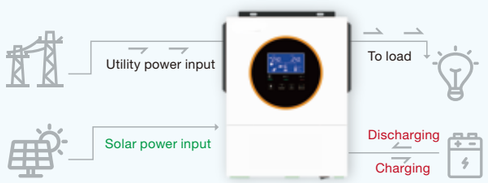
MPPT
Pure sine wave MPPT solar inverter
Bulit-in 80/120A MPPT solar charger

Hybrid
REVO VM II PRO series is suitable for
off-grid and on grid(optional) applications.

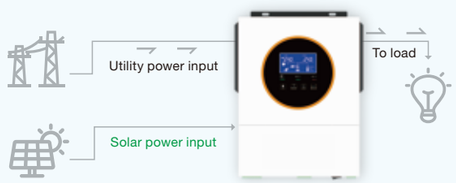
Battery
Battery equalization function extend life cycle
Reserved communication port(RS485,CAN)for BMS

Easy access
High PV input voltage range
With touch buttons
Two outputs for smart load management (4/6KW OPT)

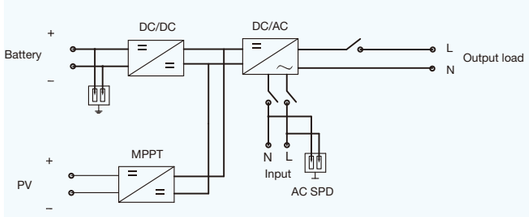
With battery connected



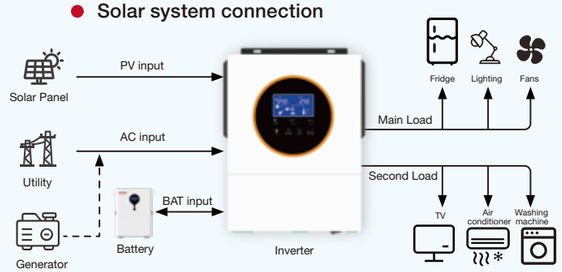
Without battery connected



Schematic diagram



Solar system connection



PNG Solar

Technical Specification	REVO VM II PRO series			
Rated Power	1600VA/1600W	3200VA/3200W	4000VA/4000W	6000VA/6000W
AC INPUT				
AC Voltage	230VAC			
Voltage Range	170-280VAC (For Personal Computers) ; 90-280 VAC (For Home Appliances)			
Frequency Range	50/60Hz (Auto sensing)			
AC OUTPUT				
Surge Power	3200VA	6400VA	8000VA	12000VA
AC Voltage Regulation (Battery Mode)	230VAC ± 5%			
Rated frequency	50/60Hz			
Efficiency (Peak)	93%			
Transfer Time	10ms (For Personal Computers) ; 20ms (For Home Appliances)			
BATTERY				
Battery Voltage	12VDC	24VDC		48VDC
Floating Charge Voltage	13.5VDC	27VDC		54VDC
Overcharge Protection	16VDC	33VDC		63VDC
Battery type	Lithium/Lead-acid			
SOLAR CHARGER & AC CHARGER				
Maximum PV Array Open Voltage(V)	500VDC			
Maximum PV Array Power	2000W	3500W	5000W	6000W
MPPT voltage range(V)	30~450VDC		60~450VDC	
Maximum input current	15A		27A	
MPPT tracker/strings	1			
Maximum solar charge current	80A		120A	
Maximum AC charge current	60A		100A	
Maximum charge current	80A		120A	
PROTECTION & FEATURE				
AC overcurrent	Yes			
AC overvoltage	Yes			
Over temperature protection	Yes			
Smart load management	NO		Yes(optional)	
On Grid	Yes (optional)			
GENERAL PARAMETERS				
Operation temperature	-10°C ~ 50°C			
Relative humidity	5% ~ 95% (Non-condensing)			
Altitude	(2000m Derating)			
Dimensions DxWxH(mm)	348*270*95		400*300*115	
Net Weight(KG)	5	5.5	8.5	9
COMMUNICATION				
Interface	Standard:RS232,USB; CAN&RS485; Optional:WiFi,Bluetooth			
Safety standard	EN/IEC62109-1,EN/IEC62109-2			

REVO VM III-T

OFF GRID Energy Storage Inverter

series 4/6kW

Max PV input current 27A
Designed with 27A PV input current compatible to the market trend of increased Imp of solar panel

Interface
Global cloud platform mobile APP anytime and anywhere open APP,support power internet applications

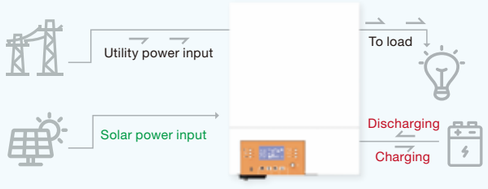
OFF-Grid
REVO VM III-T series is suitable for off-grid applications.

Battery
Battery equalization function extend life cycle
Reserved communication port(RS485,CAN)for BMS

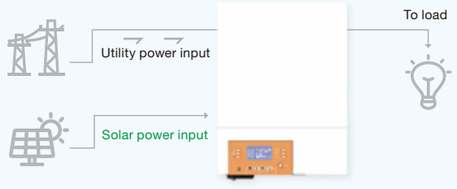
Easy access
Two outputs for smart load management
The second output can be scheduled on & off based on setting point of battery transfer to utility

Move
Detachable LCD control module with various communications

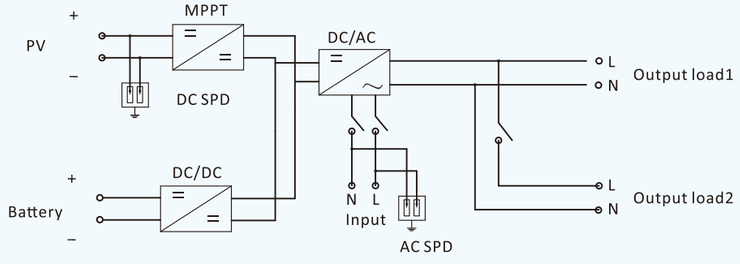
With battery connected



Without battery connected



Schematic diagram



Technical Specification	REVO VM III-T series	
Rated Power	4000VA/4000W	6000VA/6000W
AC INPUT		
AC Voltage	230VAC	
Voltage Range	170-280VAC (For Personal Computers) ; 90-280 VAC (For Home Appliances)	
Frequency Range	50/60Hz (Auto sensing)	
AC OUTPUT		
Surge Power	8000VA	12000VA
AC Voltage Regulation (Battery Mode)	230VAC ± 5%	
Rated frequency	50/60Hz	
Efficiency (Peak)	93%	
Transfer Time	10ms (For Personal Computers) ; 20ms (For Home Appliances)	
BATTERY		
Battery Voltage	24VDC	48VDC
Floating Charge Voltage	27VDC	54VDC
Overcharge Protection	33VDC	63VDC
Battery type	Lithium/Lead-acid	
SOLAR CHARGER & AC CHARGER		
Maximum PV Array Open Circuit Voltage	500VDC	
Maximum PV Array Power	5000W	7000W
MPPT voltage range(V)	60~450VDC	
Maximum input current	27A	
MPPT tracker/strings	1	
Maximum solar charge current	120A	
Maximum AC charge current	100A	
Maximum charge current	120A	
PROTECTION & FEATURE		
AC overcurrent	Yes	
AC overvoltage	Yes	
Over temperature protection	Yes	
Smart load management	Yes	
GENERAL PARAMETERS		
Operation temperature	0°C ~ 50°C	
Relative humidity	5% ~ 95% (Non-condensing)	
Altitude	(>2000m Derating)	
Dimensions D x W x H(mm)	434*311*126.5	
Net Weight(KG)	8.5	9
DISPLAY AND COMMUNICATION		
Display	Touch buttons	
Interface	Standard: RS232; Optional: WiFi,Bluetooth	
Safety standard	EN/IEC62109-1,EN/IEC62109-2	

REVO HM

Hybrid On & Off Grid Energy Storage Inverter

series 4/6kW

Max PV input current 27A
Designed with 27A PV input current compatible to the market trend of increased Imp of solar panel

Interface
Global cloud platform mobile APP anytime and anywhere open APP,support power internet applications

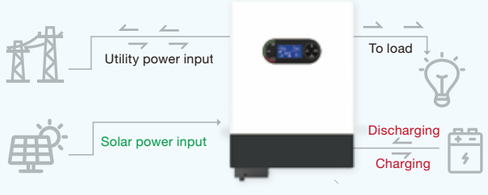
On and Off-Grid
REVO HM series is suitable for on-grid and off-grid applications

Battery
Battery equalization function extend life cycle
Reserved communication port(RS485,CAN)for BMS

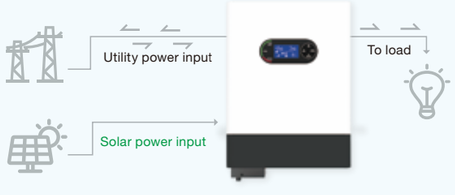
Easy access
Two outputs for smart load management
The second output can be scheduled on & off based on setting point of battery transfer to utility

Protect
Built-in anti-dust kit for harsh environment
AC overcurrent,AC overvoltage,over temperature protection

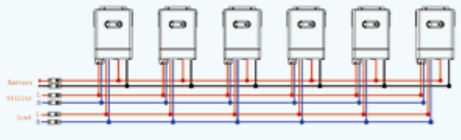
With battery connected



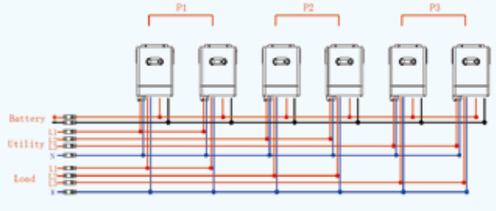
Without battery connected



Single phase output up to 36KW using 6 units



Three phase output using either 3 units(18kw)or max 6 units(36kw)



PNG Solar

Technical Specification	REVO HM series	
Rated Power	4000VA/4000W	6000VA/6000W
AC INPUT		
AC Voltage	230VAC	
Voltage Range	170-280VAC (For Personal Computers) ; 90-280 VAC (For Home Appliances)	
Frequency Range	50/60Hz (Auto sensing)	
AC OUTPUT		
Surge Power	8000VA	12000VA
AC Voltage Regulation (Battery Mode)	230VAC ± 5%	
Rated frequency	50/60Hz	
Efficiency (Peak)	93%	
Transfer Time	10ms (For Personal Computers) ; 20ms (For Home Appliances)	
BATTERY		
Battery Voltage	24VDC	48VDC
Floating Charge Voltage	27VDC	54VDC
Overcharge Protection	33VDC	63VDC
Battery type	Lithium/Lead-acid	
SOLAR CHARGER & AC CHARGER		
Maximum PV Array Open Voltage(V)	500VDC	
Maximum PV Array Power	5000W	7000W
MPPT voltage range(V)	60~450VDC	
Maximum input current	27A	
MPPT tracker/strings	1	
Maximum solar charge current	120A	
Maximum AC charge current	100A	
Maximum charge current	120A	
PROTECTION & FEATURE		
AC overcurrent	Yes	
AC overvoltage	Yes	
Over temperature protection	Yes	
Smart load management	Yes	
On Grid	Yes	
Parallel Function	Yes (optional)	
GENERAL PARAMETERS		
Operation temperature	-10°C ~ 50°C	
Relative humidity	5% ~ 95% (Non-condensing)	
Altitude	(2000m Derating)	
Dimensions DxWxH(mm)	466*313*136.5	
Net Weight(KG)	8.5	9
DISPLAY AND COMMUNICATION		
Display	Touch buttons	
Interface	Standard:RS232,USB; CAN&RS485; Optional:WiFi,Bluetooth	
Safety standard	EN/IEC62109-1,EN/IEC62109-2	

REVO VM IV PRO-T

Hybrid On & Off Grid Energy Storage Inverter

series 4/6kW

Max PV input current 27A
Designed with 27A PV input current compatible to the market trend of increased Imp of solar panel

Easy access
Two outputs for smart load management
The second output can be scheduled on & off based on setting point of battery transfer to utility

Hybrid On & Off Grid
REVO VM IV PRO-T series is suitable for Hybrid On & Off Grid applications

Battery
Battery equalization function extend life cycle
Reserved communication port(RS485,CAN)for BMS

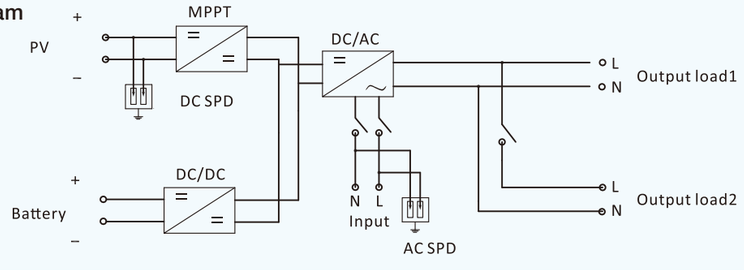
Interface
Global cloud platform mobile APP anytime and anywhere open APP,support power internet applications

Lights
Customizable status LED ring with RGB lights

With battery connected

Without battery connected

schematic diagram



Technical Specification	REVO VM IV PRO-T series	
Rated Power	4000VA/4000W	6000VA/6000W
AC INPUT		
AC Voltage	230VAC	
Voltage Range	170-280VAC (For Personal Computers) ; 90-280 VAC (For Home Appliances)	
Frequency Range	50/60Hz (Auto sensing)	
AC OUTPUT		
Surge Power	8000VA	12000VA
AC Voltage Regulation (Battery Mode)	230VAC ± 5%	
Efficiency (Peak)	93%	
Transfer Time	10ms (For Personal Computers) ; 20ms (For Home Appliances)	
BATTERY		
Battery Voltage	24VDC	48VDC
Floating Charge Voltage	27VDC	54VDC
Overcharge Protection	33VDC	63VDC
Battery type	Lithium/Lead-acid	
SOLAR CHARGER & AC CHARGER		
Maximum PV Array Open Circuit Voltage	500VDC	
Maximum PV Array Power	5000W	7000W
MPPT voltage range(V)	60~450VDC	
Maximum input current	27A	
MPPT tracker/strings	1	
Maximum solar charge current	120A	
Maximum AC charge current	100A	
Maximum charge current	120A	
PROTECTION & FEATURE		
AC overcurrent	Yes	
AC overvoltage	Yes	
Over temperature protection	Yes	
Smart load management	Yes	
GENERAL PARAMETERS		
Operation temperature	0°C ~ 50°C	
Relative humidity	5% ~ 95% (Non-condensing)	
Altitude	(>2000m Derating)	
Dimensions DxWxH(mm)	434*311*126.5	
Net Weight(KG)	8.5	9
DISPLAY AND COMMUNICATION		
Display	Touch buttons	
Interface	Standard:RS232; CAN&RS485; Optional:WiFi,Bluetooth	
Safety standard	EN/IEC62109-1,EN/IEC62109-2	

REVO VM IV

Hybrid On & Off Grid Energy Storage Inverter

series 4/6/8/11kW

MPPT
Built-in two MPPT(6KW-11KW),with wide PV input range:60~450VDC

Easy to use
Configurable AC/PV output usage time and prioritization

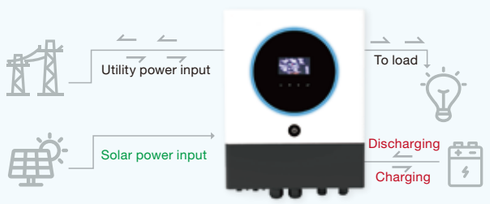
On & Off-Grid
REVO VM IV series is suitable for on & off-grid applications

Battery
Battery equalization function extend life cycle
Reserved communication port(RS485,CAN)for BMS

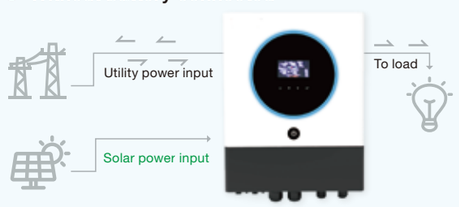
Parallel function
Parallel operation up to 6 units

Easy access
Communication WiFi or bluetooth
Touchable button with large 5" colorful LCD

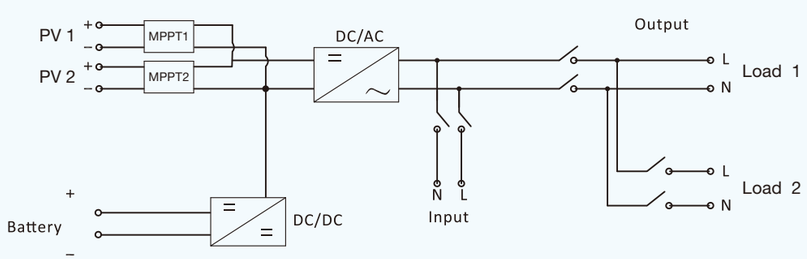
● With battery connected



● Without battery connected



● Schematic diagram



PNG Solar

Technical Specification	REVO VM IV series				
Rated Power(W)	4000VA/4000W	6000VA/6000W	6000VA/6000W	8000VA/8000W	11000VA/11000W
AC INPUT					
Nominal Voltage(VAC)	230VAC				
Voltage range(VAC)	170~280VAC / 90~280VAC				
Frequency range(Hz)	50/60Hz				
AC OUTPUT					
Surge power	8000	12000		16000	22000
Output voltage(VAC)	220/230/240				
Output wave form	Pure sine wave				
Rated Frequency(Hz)	50/60				
Efficiency	93% max				
Transfer time	10ms typical(narrow range);20ms typical (wide range)				
BATTERY					
Nominal DC voltage(VDC)	24	48			
Floating charge voltage(VDC)	27	54			
Overcharge protection(VDC)	31	63			
Battery type	Lithium & Lead-acid				
SOLAR CHARGER & AC CHARGER					
Max.PV array open circuit voltage(VDC)	500				
Max.PV array power(W)	5000W	7000W	8000W (4000*2)	11000W(5500*2)	13000W(6500*2)
MPPT input voltage range@operating(VDC)	60-450				
Max.input current(A)	27		15*2	27*2(Max 40A)	
Max.solar charging current(A)	120			120	150
Max.AC charging current(A)	100			120	150
Max.charging current(A)	120			120	150
DISPLAY INTERFACE					
Parallel function	up to 6 units				
Communication	Standard:RS232,CAN&RS485;Optional:WiFi,Bluetooth				
Display	5"colorful LCD				
ENVIRONMENT					
Humidity	5~90%RH (No Condensing)				
Operating Temperature	-10°C to 50°C				
Net Weight(KG)	9	10	18	18.8	20
Dimensions D x W x H(mm)	434*311*126.5		500*440*136	420*561.6*152.4	

REVO HMT

Hybrid On & Off Grid Energy Storage Inverter

series 4/6/8/11kW

On-Grid and Off-Grid
REVO HMT series is suitable for on-grid and off-grid applications.

Remote Monitoring
Control and monitor your smart system on the move via our monitoring App and website

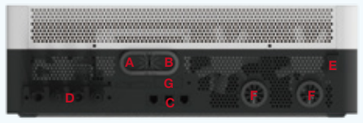
BMS
BMS Communication for lithium battery

Easy access
Accessible through a LCD touch screen and through the web. Two outputs for smart load management

Safe
Built-in anti-dust kit for harsh environment AC overcurrent,AC overvoltage,over temperature protection

Flexible Rate Tariff
Charge from the grid at off-peak time when energy is cheaper and discharge at peak time when energy is more expensive.

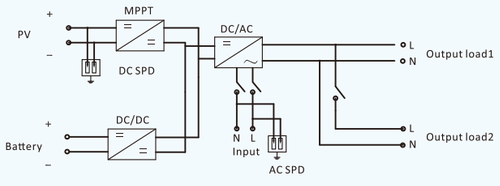
Product characteristics



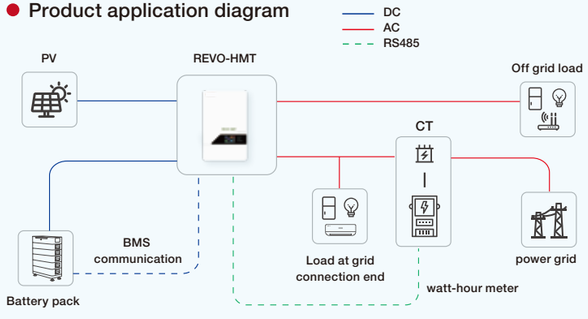
A:AC OUTPUT
B:AC INPUT
C:COM
D:PV INPUT
E:ON/OFF
F:DC INPUT
G:PARALLEL CONNECTION

LCD touch screen

Circuit block diagram



Product application diagram

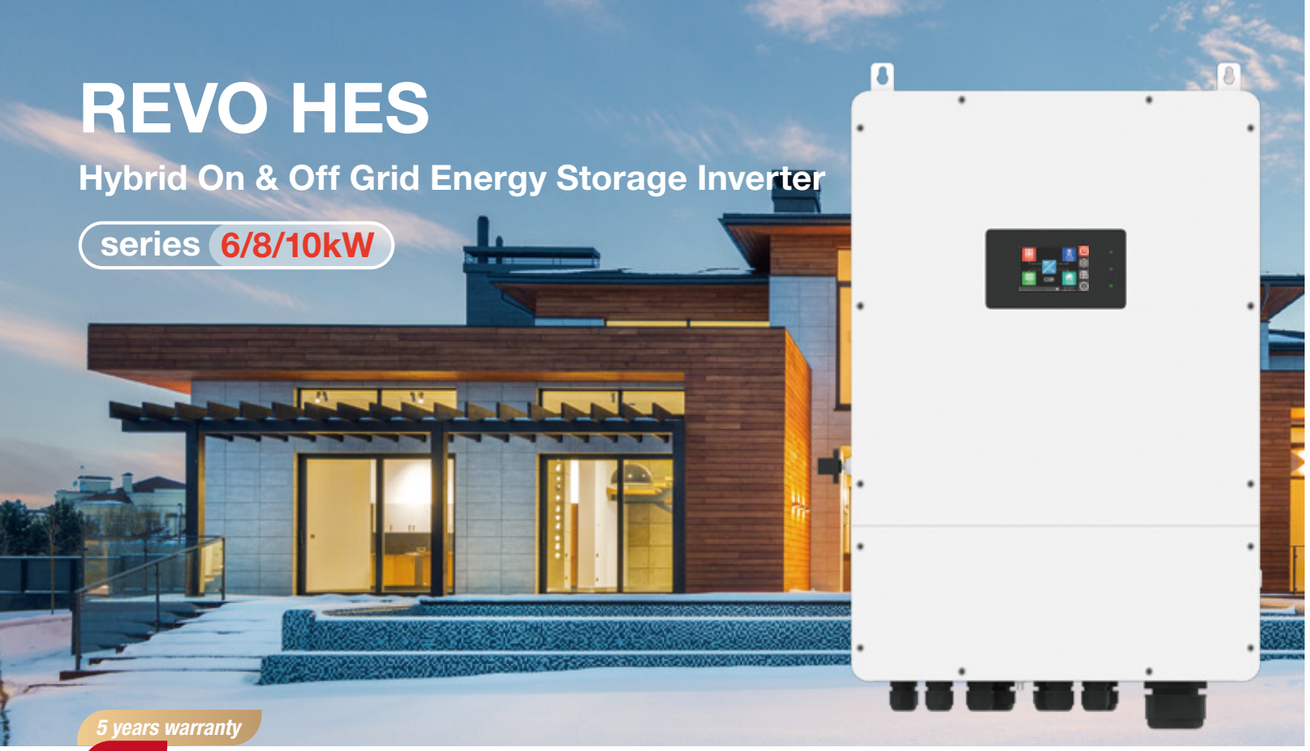


Technical Specification	REVO HMT series				
Rated Power	4000VA/4000W	6000VA/6000W	6000VA/6000W	8000VA/8000W	11000VA/11000W
AC INPUT					
AC Voltage	220/230/240VAC				
Voltage Range	170-280VAC (For Personal Computers) ; 90-280 VAC (For Home Appliances)				
Frequency Range	50/60Hz (Auto sensing)				
AC OUTPUT					
Surge Power	8000VA	12000VA	12000VA	16000VA	22000VA
Voltage Regulation (Battery Mode)	220VAC/230VAC/240VAC ± 5%				
Rated frequency	50/60Hz				
Efficiency (Peak)	93%				
Transfer Time	10ms (For Personal Computers) ; 20ms (For Home Appliances)				
BATTERY					
Battery Voltage	48VDC				
Floating Charge Voltage	54VDC				
Overcharge Protection	63VDC				
Battery type	Lithium/Lead-acid				
SOLAR CHARGER & AC CHARGER					
Maximum PV Array Open Circuit Voltage	500VDC				
Maximum PV Array Power	5000W		8000W (4000*2)	11000W(5500W*2)	
MPPT voltage range(V)	90~450VDC		60~450VDC		
Maximum input current	27A		27A*2(MAX 40A)		
MPPT tracker/strings	1		2		
Maximum solar charge current	80A	120A		120A	150A
Maximum AC charge current	60A	100A		120A	150A
Maximum charge current	80A	120A		120A	150A
PROTECTION & FEATURE					
AC overcurrent	Yes				
AC overvoltage	Yes				
Over temperature protection	Yes				
Smart load management	Yes				
On Grid	Yes				
Parallel function	Yes,6 units				
GENERAL PARAMETERS					
Operation temperature	-10°C ~ 50°C				
Relative humidity	5% ~ 95% (Non-condensing)				
Altitude	(>2000m Derating)				
Dimensions D x W x H(mm)	315*134*516		134*390*516	147.4*432.5*553.6	
Net Weight(KG)	9	10.5	16.5	18	18.4
DISPLAY AND COMMUNICATION					
Display	Touch screen				
Interface	Standard:RS232,CAN&RS485; Optional: WiFi,Bluetooth,CT				
Safety standard	EN/IEC 62109-1,EN/IEC 62109-2				

REVO HES

Hybrid On & Off Grid Energy Storage Inverter

series 6/8/10kW



5 years warranty

IP65

Easy access
Accessible through a LCD touch screen and through the web

ON-Grid and OFF-Grid
REVO HES series is suitable for on-grid and off-grid applications.

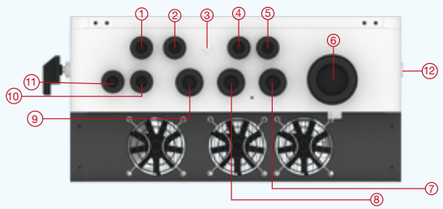
Remote Monitoring
Control and monitor your smart system on the move via our monitoring App and website

BMS
Battery Communication for lithium battery

Safe
Physical and electrical dual isolation,Earth Leakage Current Monitoring,Anti-island protection,Insulation detection and so on

Flexible Rate Tariff
Charge from the grid at off-peak time when energy is cheaper,and discharge at peak tme when energy is more expensive.

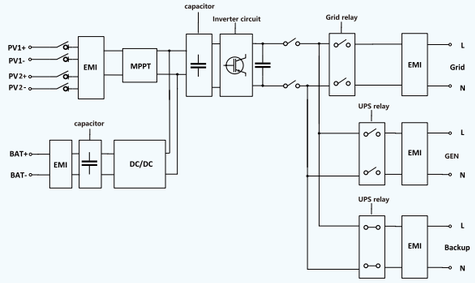
Product characteristics



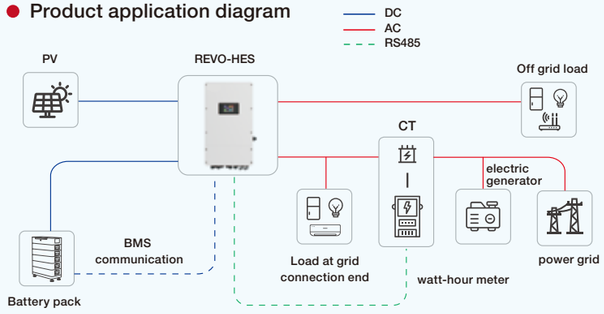
1. PARALLEL
2. CT
3. WIFI
4. BMS
5. RS232/Dry
6. BAT
7. GEN
8. AC OUTPUT
9. AC INPUT
10. PV1
11. PV2
12. Battery switch

LCD touch screen

Circuit block diagram



Product application diagram



Technical Specification	REVO HES series		
Rated Power	6000VA/6000W	8000VA/8000W	10000VA/10000W
PV INPUT			
Max.power(kW)	7	11	13
Max.DC voltage(V)	500		
MPPT voltage range(V)	90~450		
Max.input current(A)	30	20+20	
MPPT number/Max.input strings number	1/2	2/2	
AC OUTPUT(GRID-TIED)			
Grid voltage/range(V)	230/90-280(For Personal Computers);170~280(For Home Appliances)		
Frequency(Hz)	50/60		
PF	0.8lagging-0.8leading		
THDi	<3%		
AC output topology	L+N+PE		
BATTERY			
Battery voltage range(V)	40~63		
Max.charging voltage(V)	63		
Max.charge/discharge current(A)	120/140	150/190	150/220
Battery type	Lithium /Lead-acid		
UPS OUTPUT			
Rated power (kw)	6	8	10
Rated output voltage(V)	220/230/240		
Rated output current(A)	27.2/27/25	36.3/34.7/33.3	45.4/43.5/41.7
Rated frequency (Hz)	50/60		
Transfer Time(ms)	<10		
THDu	<10%		
Overload capacity	5s≥110%load;10s≥101%~110%load		
PROTECTION & FEATURE			
Anti-island protection	Yes		
Insulation monitoring	Yes		
Residual current monitoring	Yes		
Arc fault protection	Yes(Optional)		
Parallel function	Yes,6 units		
Other protection	AC overcurrent,AC overvoltage,Over temperature protection		
GENERAL PARAMETER			
Efficiency(Peak)	93%		
Degree of protection	IP65		
Operation temperature	-25℃~50℃,>45℃ derating		
Cooling	smart cooling		
Relative humidity	5~95%(non-condensing)		
Altitude	(>2000m Derating)		
Dimensions W x D x H(mm)	360*192*630	437*218*630	
Net Weight(KG)	22.5	38	38.2
Isolation transformer	No		
Self-consumption(W)	<5		
DISPLAY AND COMMUNICATION			
Display	Touch screen		
Interface	Standard:RS232,CAN&RS485; Optional:WiFi,CT		
Safety standard	EN/IEC62109-1,EN/IEC62109-2		

iHESS 1P

Hybrid On & Off Grid Energy Storage Inverter

series 3.6/4.6/5/6kW

5 years warranty

IP65

Easy access

Accessible through a LCD touch screen and through the web

Quick backup

Provides backup load with a transfer time less than 10ms.

Remote Monitoring

Control and monitor your smart system on the move via our monitoring App and website

Multiple working modes

iHESS series supports four working modes 1.Self Use 2.Time of Use 3.Backup Power 4.Grid Priority

Safe

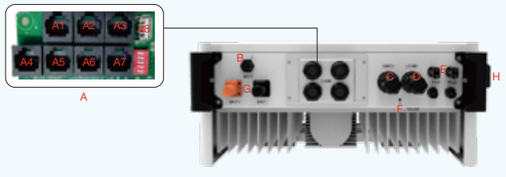
Physical and electrical dual isolation AFCI function integration AC overcurrent,AC overvoltage, Over temperature protection

Flexible Rate Tariff

Charge from the grid at off-peak time when energy is cheaper,and discharge at peak time when energy is more expensive.

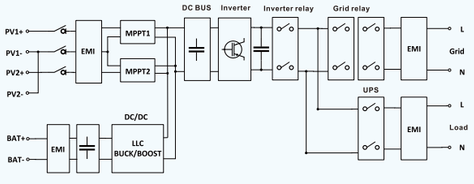
Product characteristics

A1: EPO/AFCI port
A2: BMS port
A3: Meter/CT port
A4: Dry contact
A5: DRM port
A6: Parallel port
A7: Parallel port
A8: USB port

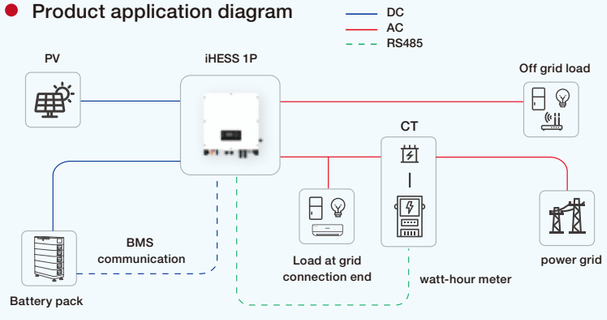


B: WIFI port
C: GRID port
D: LOAD port
E: PV port
F: Breather valve
G: Battery port
H: PV Switch(optional)

Circuit block diagram



Product application diagram



Solar

Technical Specification	iHESS 1P series			
Rated power (kW)	3.6	4.6	5	6
EFFICIENCY				
DC Max.efficiency	97.50%			
Europe efficiency	97%			
PV INPUT				
Max.power(kW)	5.4	6.9	7.5	9
Max.DC voltage(V)	500			
MPPT voltage range(V)	120~500			
Max.input current of single MPPT(A)	15/15			
MPPT tracker/strings	2/1			
AC OUTPUT(GRID-TIED)				
Grid voltage/range(V)	230/176~270			
Frequency(Hz)	50/60			
PF	0.8lagging-0.8leading			
THDi	<3%			
AC output topology	L+N+PE			
BATTERY				
Battery voltage range(V)	40~58			
Max.charging voltage(V)	58			
Max.charge/discharge current(A)	100/110			
Battery type	Lithium /Lead-acid			
UPS OUTPUT				
Rated output voltage(V)	220/230/240			
Rated output current(A)	16.3/16/15	20.9/20/19.1	22.7/21.7/20.8	27.2/26/25
Rated frequency (Hz)	50/60			
Transfer Time(ms)	<10			
THDu	<2%			
Overload capacity	5s≥110%load;10s≥101%~110%load			
PROTECTION & FEATURE				
Anti-Island protection	Yes			
Insulation monitoring	Yes			
Residual current monitoring	Yes			
Arc fault protection	Yes(Optional)			
Other protection	AC overcurrent,AC overvoltage,Over temperature protection			
GENERAL PARAMETER				
Degree of protection	IP65			
Operation temperature	-25°C~60°C			
Cooling	Natural			
Relatve humidity	0~95%(non-condensing)			
Altitude	(>2,000m Derating)			
Dimensions W x D x H(mm)	480*210*495			
Net Weight(KG)	25		25	
Isolation transformer	No			
Self-consumption(W)	<5			
DISPLAY AND COMMUNICATION				
Display	LCD			
Interface	Standard:RS485,CAN,DRM; Optional:WiFi,Bluetooth			
Safety standard	CE-EMC/ENIEC61000-6-3:2021,EN1EC61000-6-1:2019;CEV0C/1EC62109-1:2010,IEC62109-2:2011,IEC62477-1:2022 COCVDE4105:2018,VDE0124:2020;COC/CE10-21:2022;COC/TORTvpeA/B:2022,0VER25:2020;G98:2022,G99:2022			

MPPT SCC
Solar Controller

series 40A/60A/80A/100A

MPPT
Advanced MPPT technology,fast and stable track the Maximum Power Point, tracking accuracy 99.00%.

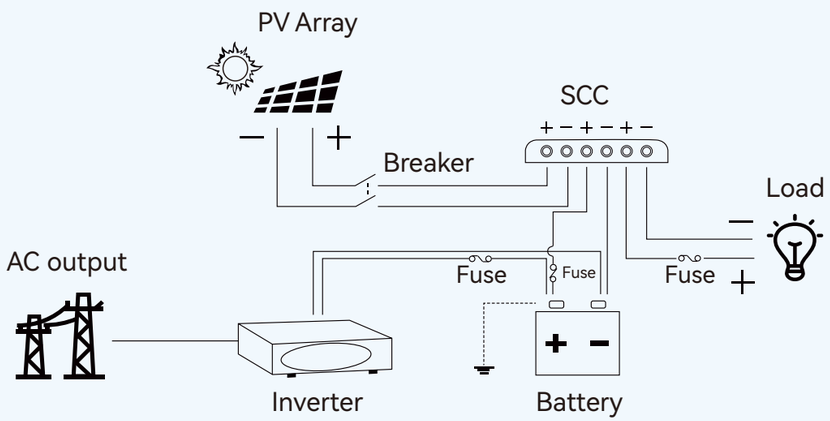
Synchronous
Adopt Synchronous Rectifier Technology,signifi-cantly improve the transfer efficiency of circuit,maximum 97.00%.

Voltage identification
12/24/48VDC system voltage automatic recognition.

LCD displaying
Humanized LCD displaying,dynamic display operation data and working state.

Temperature compensation
Temperature Compensation Function.

● Solar Energy System Wiring Diagram



MODELS	SCC40A 100V	SCC60A 150V	SCC80A 200V	SCC100A 200V
Battery Type	GEL(default),FLD,LIO and USE			
Battery Input Voltage Range	9~15VDC/18~30VDC	9~15VDC/18~30VDC/36~60VDC		
Reted Charge Current	40A	60A	80A	100A
Reted Output Current	20A	20A	40A	40A
Display	LCD			
Max PV Voc	<100V	<150V	<200V	
Nominal System Voltage	12V/24V(auto)	12V/24V/48V(auto)		
Max efficiency	97.00%			
MPPT Efficiency	99.00%			
Cooling	Natural(without Fan)			
Self-consumption	≤200mA(12v) ≤100mA(24v)	≤300mA(12v); ≤150mA(24v); ≤100mA (48V)		
Temperature compensation	-3mv/°C/2v(Default)		-4mv/°C/2v(Default)	
Rlative Humidity	≤90%, N.C			
Enclosure	IP20			
Communication Interface	RS232			
Grounding	Positive			
Operating Temperature	-20~55°C(environment 50°C Max current 2 hours no derating)			
Dimension	230*78*128	251*83*228		
Netweight	2.0Kg	4.0Kg		
Warranty	3 Years			
Optional accessories	Wi-Fi/Bluetooth			
VOLTAGE				
MPPT Voltage Range	15~80VDC/30~80VDC	15~130;30~130;60~130/VDC	15~170VDC/30~170VDC/60~170VDC	
Equliztion Voltage	15V/30V	15V/30V/60V		
Boost Voltage	14.4V/28.8V	14.4V/28.8V/57.6V		
Float Voltage	13.9V,/27.8V	13.9V,/27.8V/55.6V		
Reconnect voltage	12.5V,/25.0V	12.5V,/25.0V./50.0V		
Disconnect voltage	11.5V,/23.0V	11.5V,/23.0V/46.0V		

iHESS-3P

Hybrid On & Off Grid Energy Storage Inverter

series 5-12kW

5 years warranty

IP65

Easy access
Accessible through a LCD touch screen and through the web

Quick backup
Provides backup load with a transfer time less than 10ms.

Remote Monitoring
Control and monitor your smart system on the move via our monitoring App and website

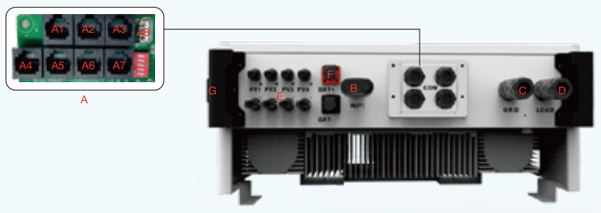
Multiple working modes
iHESS series supports four working modes
1.Self Use 2.Time of Use 3.Backup Power 4.Grid Priority

Safe
Physical and electrical dual isolation AFCI function integration AC overcurrent,AC overvoltage, Over temperature protection

Flexible Rate Tariff
Charge from the grid at off-peak times when energy is cheaper,and discharge at peak time when energy is more expensive.

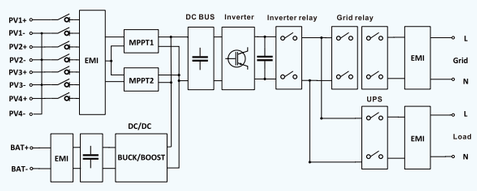
Product characteristics

A1: EPO/AFCI port
A2: BMS port
A3: Meter/CT port
A4: Dry contact
A5: DRM port
A6: Parallel port
A7: Parallel port
A8: USB port

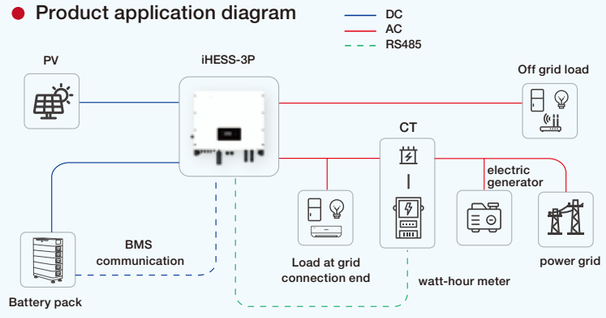


B: WIFI port
C: GRID port
D: LOAD port
E: PV port
F: Battery port
G: PV Switch(optional)

Circuit block diagram



Product application diagram



Technical Specification	iHESS 3P series				
Rated power (kW)	5	6	8	10	12
EFFICIENCY					
DC Max.efficiency	98.00%				
Europe efficiency	98%				
PV INPUT					
Max.power(kW)	7.5	9	12	15	18
Max.DC voltage(V)	1000				
MPPT voltage range(V)	120~900				
Max.input current of single MPPT(A)	16/16				
MPPT tracker/strings	2/1				
AC OUTPUT(GRID-TIED)					
Rated output power(kW)	5	6	8	10	12
Max.output current(A)	8	6.8	12.7	15.9	19.1
Grid voltage/range(V)	400/360~400				
Frequency(Hz)	50/60				
PF	0.8lagging-0.8leading				
THDi	<3%				
AC output topology	3W+N+PE				
BATTERY					
Battery voltage range(V)	125~600				
Max.charging voltage(V)	600				
Rated battery voltage(V)	300				
Max.charge/discharge current(A)	40				
Battery type	Lithium /Lead-acid				
UPS OUTPUT					
Rated output voltage(V)	380/400/415				
Rated output current(A)	13.1/12.5/12	15.8/15/14.4	21/20/19.2	26.3/25/24	31.5/30/28.9
Rated frequency (Hz)	50/60				
Transfer Time(ms)	<10				
THDu	<2%				
Overload capacity	110%,30s / 120%,10s / 150%,0.02s				
PROTECTION & FEATURE					
Anti-Island protection	Yes				
DC Over curent protection	Yes				
Insulation monitoring	Yes				
Residual current monitoring	Yes				
Arc fault protection	Yes				
Other protection	AC overcurrent,AC overvoltage,Over temperature protection				
GENERAL PARAMETER					
Degree of protection	IP65				
Operation temperature	-25°C~60°C				
Cooling	Natural				
Relatve humidity	0~95%(non-condensing)				
Altitude	(>2,000m Derating)				
Dimensions W x D x H(mm)	570*210*475				
Net Weight(KG)	28.5				
Isolation transformer	No				
Self-consumption(W)	<5				
DISPLAY AND COMMUNICATION					
Display	LCD				
Interface	Standard:RS485,CAN,DRM; Optional:WiFi,Bluetooth				
Safety standard	CE-EMC/ENIEC61000-6-3:2021,EN1EC61000-6-1:2019;CEV0C/1EC62109-1:2010,IEC62109-2:2011,IEC62477-1:2022 COCVDE4105:2018,VDE0124:2020;COC/CE10-21:2022;COC/TORTvpeA/B:2022,OVER25:2020;G98:2022,G99:2022				

REVO HESS

Hybrid ALL-IN-ONE

series 6/8kWh

Simple
All-in-one design modular installation
Quick plug connector battery module removable

On-Grid and Off-Grid
REVO HESS series is suitable for on-grid and off-grid applications

Safe
Physical and electrical dual isolation
BMS communication for lithium battery
With short circuit protection,over-voltage protection,over load protection

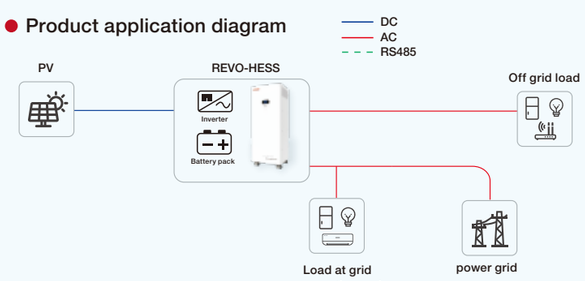
Remote Monitoring
Control and monitor your smart system on the move via our monitoring App and website

Product characteristics

Circuit block diagram

1.PV Input
2.AC Input
3.AC Output
4.Battery Switch
5.Communication
6.Battery connection terminal
7.Battery Room

Product application diagram



PNG Solar

Technical Specification	REVO HESS series	
Rated Power	6000VA/6000W	8000VA/8000W
AC INPUT		
AC Voltage	230VAC	
Selectable Voltage Range	170-280VAC (For Personal Computers) ; 90-280VAC (For Home Appliances)	
Frequency Range	50/60Hz (Auto sensing)	
AC OUTPUT		
Surge Power	12000VA	16000VA
Voltage Regulation (Battery Mode)	230VAC ± 5%	
Efficiency (Peak)	93%	
Transfer Time	10ms (For Personal Computers) ; 20ms (For Home Appliances)	
Wave Form	Purs Sine Wave	
No Load Power Consumption	>75W	
BATTERY		
Capacity	5000Wh x 2	
Nominal Voltage	51.2VDC	
Full Charge Voltage(FC)	56V	
Full Discharge Voltage(FD)	42V	
Typical Capacity	100Ah x 2	
Max Continuous Discharging Current	100A x 2	
Max Discharging Current	192A at 1 min	
Protection	BMS,breaker	
Charge Voltage	56V	
Charge Current	20A(0.2C)	
Maximum Charge Current	50A(0.5C)	
Standard Charge Method	0.2C CC(Constant current)charge to FC,CV(Constant voltage FC) charge till charge current decline to,0.05C	
Inner Resistance	>20m ohm	
SOLAR CHARGER & AC CHARGER		
Solar Charger type	MPPT	
Maximum PV Array Power	6000W	8000W(4000W x 2)
MPPT Range Operating Voltage	90~450VDC	
Maximum PV Array Open Circuit Voltage	500VDC	
Maximum Solar Charge Current	120A	120A
Maximum AC Charge Current	100A	120A
Maximum Charge Current	120A	120A
GENERAL PARAMETER		
Dimensions W x D x H(mm)	552*452*1420	
Net Weight(KG)	55	

iHESS-M 1P

Residential Energy Storage System

ALL-IN ONE

Easy access
Accessible through a LCD touch screen and through the web

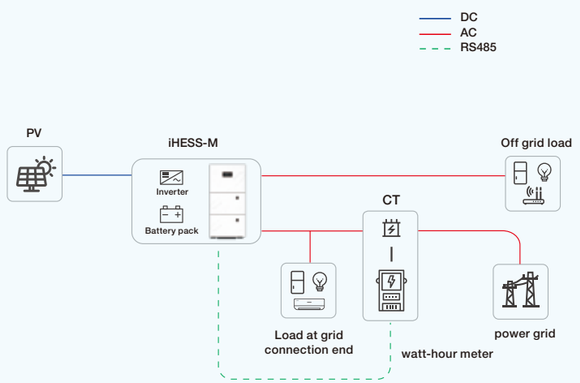
Simple
All-in-one design
Modular installation & Quick plug connector

BMS
More available battery energy with pack optimization Batteries flexible expansion in stages

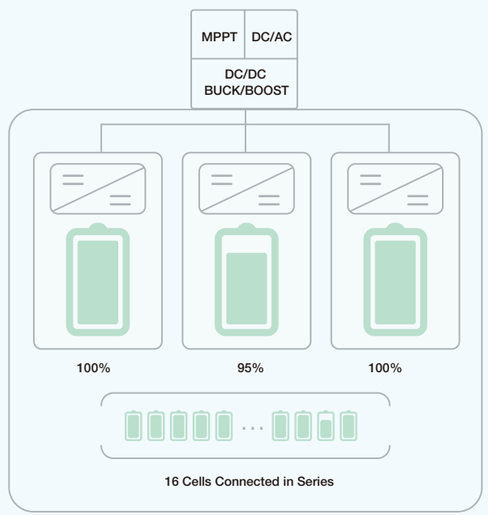
Safe
Sleep-class silence
Long battery life

Modular
Modular and integrated design for easy transportation and installation

Product application diagram



Schematic diagram



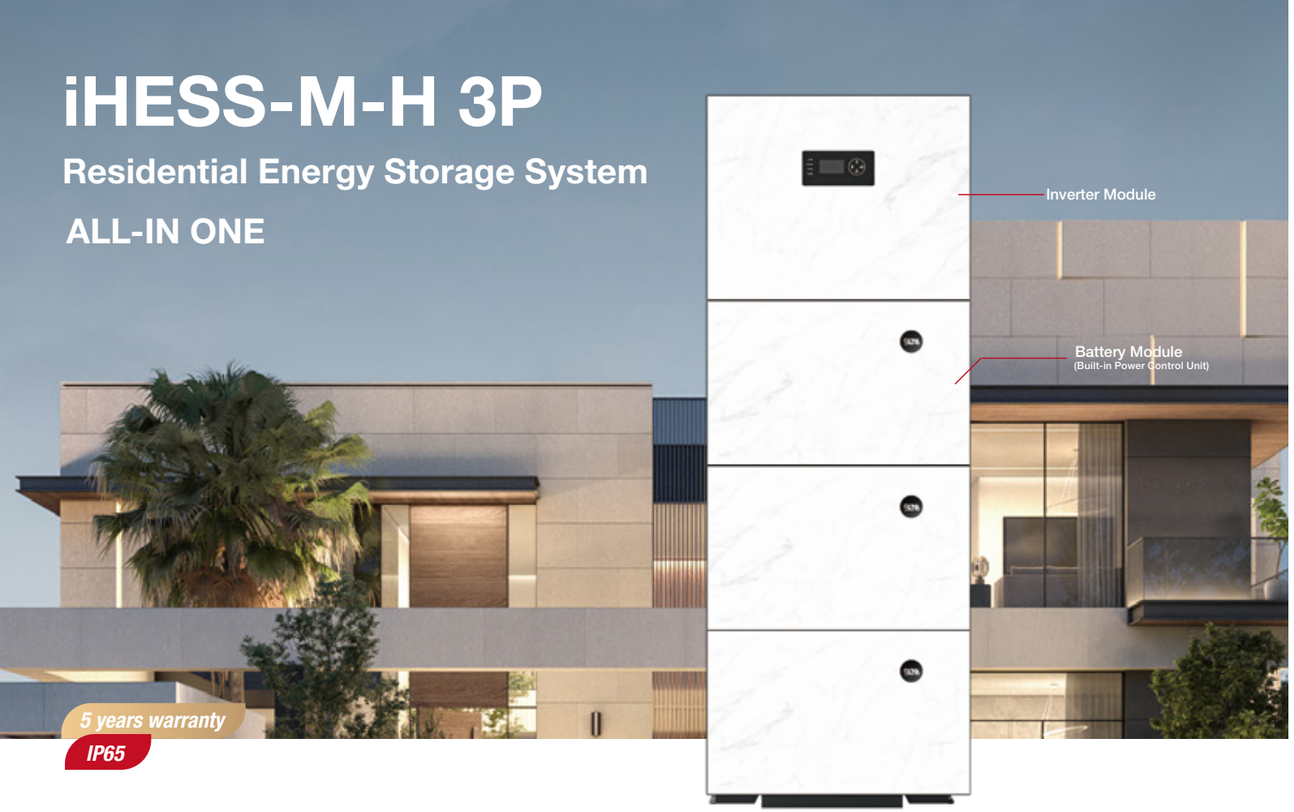
Technical Specification	iHESS-M 1P
EFFICIENCY	
DC Max.efficiency	97.50%
Europe efficiency	97%
INPUT(PV)	
Max.power(kW)	9.6
Max.DC voltage(V)	550
MPPT voltage range(V)	90~500
Max.input current of single MPPT(A)	16/16
MPPT tracker/strings	2/1
AC OUTPUT	
Rated output power(kW)	6
Max.output current(A)	26
Grid voltage/range(V)	230/176270
Frequency(Hz)	50/60
PF	0.8lagging-0.8leading
THDi	<3%
AC output topology	L+N+PE
BATTERY	
Battery voltage range(V)	40~58
Max.charging voltage(V)	58
Max.charge/discharge current(A)	100/110
Battery type	Lithium /Lead-acid
EPS OUTPUT	
Rated power(kW)	6
Rated output voltage(V)	230
Rated output current(A)	26
Rated frequency(Hz)	50/60
Transfer Time(ms)	<10
THDi	<2%
Overload capacity	110%,30S / 120%,10S / 150%,0.02S
PROTECTION & FEATURE	
Anti-Island protection	Yes
DC overcurrent protection	Yes
Insulation monitoring	Yes
Residual current monitoring	Yes
Arc fault protection	Optional
Battery reverse polarity protection	Yes
Other protection	AC overcurrent,AC overvoltage,Over temperature protection

BATTERY MODULE	
Model	SL-M48100
Battery type	LiFePo4
Battery module energy	5.12KWh
Max charge current&discharge current	100A
Dimensions W*D*H(mm)	640*243*400
Net Weight(KG)	54
GENERAL PARAMETER	
Degree of protection	IP65
Operation temperature	-25°C~60°C
Cooling	Natural
Relative humidity	0~95%(non-condensing)
Altitude	(>2,000m Derating)
Dimensions W*D*H(mm)	640*243*497
Net Weight(KG)	25
Isolation transformer	No
Self-consumption(W)	<5
DISPLAY AND COMMUNICATION	
Display	LCD
Interface	Standard:RS485,CAN,DRM Optional:Wifi,Bluetooth
Safety standard	CE-EMC/ENIEC61000-6-3:2021,EN1EC61000-6-1:2019;CEV0C/1EC62109-1:2010,IEC62109-2:2011,IEC62477-1:2022 COCVDE4105:2018,VDE0124:2020;COC/CE10-21:2022;COC/TORTvpeA/B:2022,OVER25:2020;G98:2022,G99:2022

iHESS-M-H 3P

Residential Energy Storage System

ALL-IN ONE



Easy access
Accessible through a LCD touch screen and through the web

Simple
All-in-one design
Modular installation &Quick plug connector

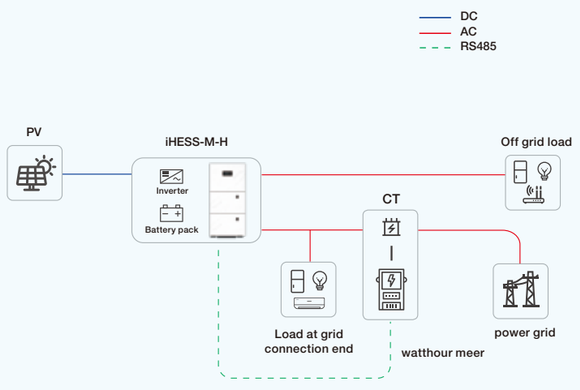
Modular
Modular and integrated design for easy transportation and installation

BMS
More available battery energy with pack optimization
Batteries flexible expansion in stages

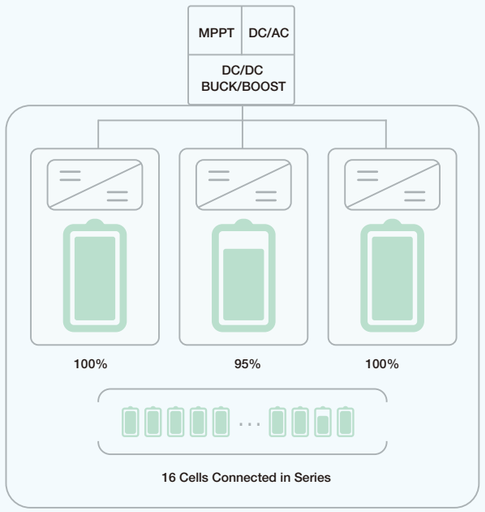
Safe
Support connction with BMS an EMS systems

Independent
Real uninterruptible power supply,transfer time<10ms

Product application diagram



Schematic diagram



Solar

Technical Specification	iHESS-M-H 3P				
Rated output power	5/6/8/10/12kW				
Quantity of batteries	1-6				
Battery total energy	5.12kWh~30.72kWh				
Usable Energy	4.75kWh~28.5kWh				
Degree of protection	IP65				
Ambient temperature range	-10℃+45℃				
Allowable relative humidity range	5%~95%				
Max.operating altitude	4000m				
Cooling type	Natural cooling				
Installation method	Floor or Wall-mounted (optional)				
Display	LCD APP+Bluetooh				
Noise	<25dB				
Communication	RS485/Bluetooth/Ethernet,Optional:WiFi/4G/GPRS				
INVERTER MODULE					
Model	5kW	6kW	8kw	10kW	12kW
Battery voltage range	300-435VDC				
Rated battery voltage	384V				
Max.charge/discharge current	40A				
Recommended Max.PV input power	8000wp	9600wp	12800wp	16000wp	19200wp
Max.input voltage	1000V				
MPPT operating voltage range	180~900V				
Number of MPPT trackers	2				
Max.input current per MPPT	13A/13A				
Rated grid voltage	400V 3W/N/PE,50Hz/60Hz				
Grid voltage range	360-440V				
Rated AC power	5kW	6kW	8kW	10kW	12kW
Max.AC power output to utility grid	5kW	6kW	8kW	10kW	12kW
Rated voltage,Frequency(Off-grid)	400V 3W/N/PE,50Hz/60Hz				
Max.apparent power(Off-grid)	5000VA	6000VA	8000VA	6000VA	12000VA
Transfer time	<10ms				
Max efficiency of solar inverter	98.00%				
European efficiency of solar inverter	98.00%				
Topology	Transformerless				
Dimensions Wx Dx H(mm)	640*200*595				
Net Weight(KG)	28.5				
BATTERY MODULE					
Model	SL-HM 100				
Voltage range	300~435VDC				
Battery Type	$LiFePO_4$				
Battery module energy	5.12kWh				
Depth of discharge(DOD)	0~90% adjustable				
Rated Power	3000W				
Topology	Transformer isolation				
Dimensions W x Dx H(mm)	640*200*400				
Net Weight(KG)	55				
STANDARD					
EMC	EN61000-6-2,EN61000-6-3,EN61000-3-2,EN61000-3-3,EN61000-3-11,EN61000-3-12				
Safety standards	CE-EMC/ENIEC61000-6-3:2021,EN1EC61000-6-1:2019;CEV0C/1EC62109-1:2010,IEC62109-2:2011,IEC62477-1:2022 COCVDE4105:2018,VDE0124:2020;COC/CE10-21:2022;COC/TORTvpeA/B:2022,OVER25:2020;G98:2022,G99:2022				
Grid standards	VDE-AR-N4105,VDEV0126-1-1,CEI 0-21,G98/G99,EN 50438/EN50549				