



HINAESS

Together For A Blue Future

HINAESS COMMERCIAL 0.5C RATE

0.5C

Continuous Power

10

Year Warranty

**Indoor /
Outdoor**

Stackable

Flexible size

Handy

Quick install

280Ah

6000 cycles





IP54
OUTDOOR
CABINET



**Container
Solution**



40kW/60kWh

Inverter 40kW

- Luxpower TriP 20k*2
- PV up to 60kW,1000V
- System current up to 100A,100~700V
- UPS 40kW



Battery 60kWh

- HINAESS PowerStack
- 70.4V/72Ah, 5.069kWh, 0.7C
- 30kWh*2 Stack
- Voltage range 369.6-481.8V
- 736*382*1209mm/290Kg*2
- IP65 Protection



60kW/90kWh

Inverter 60kW

- Luxpower TriP 20k*3
- PV up to 90kW,1000V
- System current up to 150A,100~700V
- UPS 60kW



Battery 90kWh

- HINAESS PowerStack
- 70.4V/72Ah, 5.069kWh, 0.7C
- **30kWh*3 Stack**
- Voltage range 369.6-481.8V
- 736*382*1209mm/290Kg*3
- **IP65 Protection**



80kW/120kWh

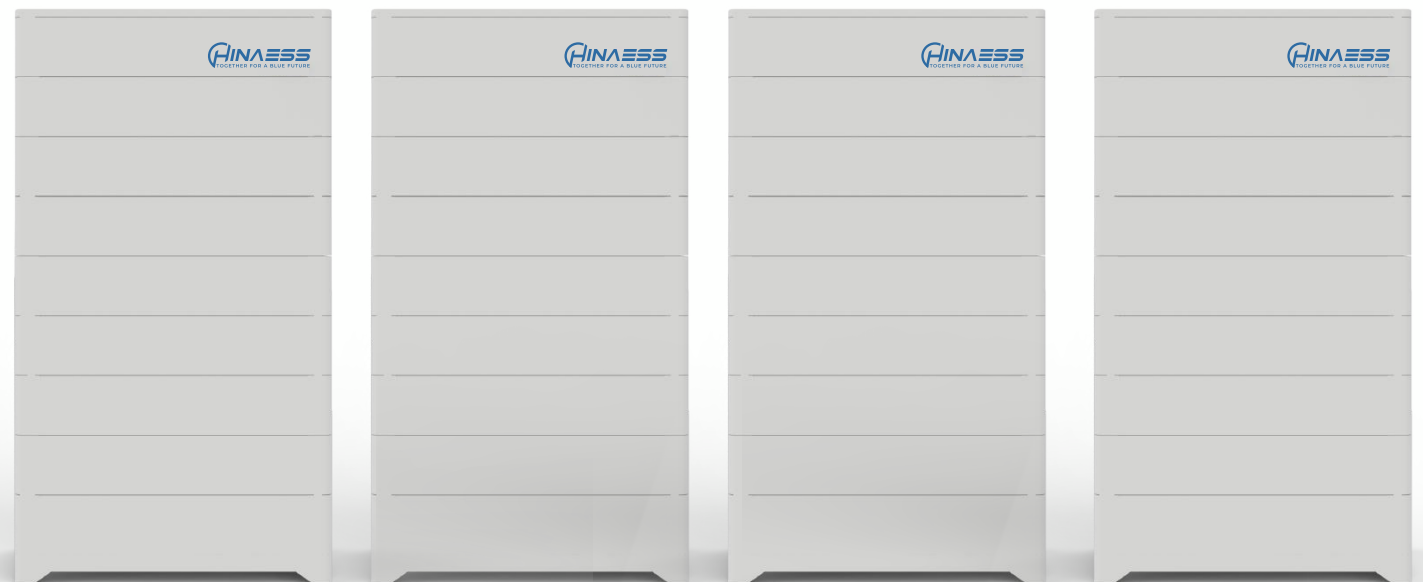
Inverter 80kW

- Luxpower TriP 20k*4
- PV up to 90kW,1000V
- System current up to 200A,100~700V
- UPS 80kW



Battery 120kWh

- HINAESS PowerStack
- 70.4V/72Ah, 5.069kWh, 0.7C
- **30kWh*4 Stack**
- Voltage range 369.6-481.8V
- 736*382*1209mm/290Kg*4
- **IP65 Protection**



100kW/150kWh

Inverter 100kW

- Luxpower TriP 20k*5
- PV up to 90kW,1000V
- System current up to 250A,100~700V
- UPS 100kW



Battery 150kWh

- HINAESS PowerStack
- 70.4V/72Ah, 5.069kWh, 0.7C
- **30kWh*5 Stack**
- Voltage range 369.6-481.8V
- 736*382*1209mm/290Kg*5
- **IP65 Protection**



200kW/300kWh

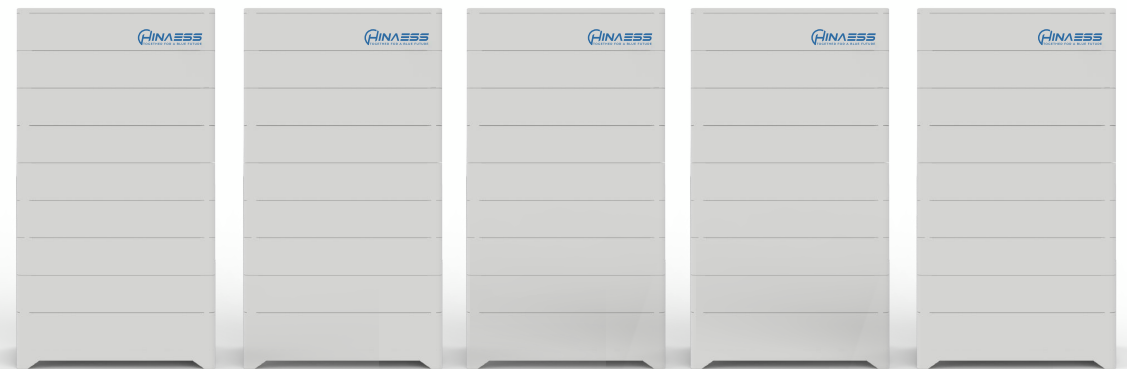
Inverter 200kW

- Luxpower TriP 20k*10
- PV up to 90kW,1000V
- System current up to 150A,100~700V
- UPS 200kW



Battery 300kWh

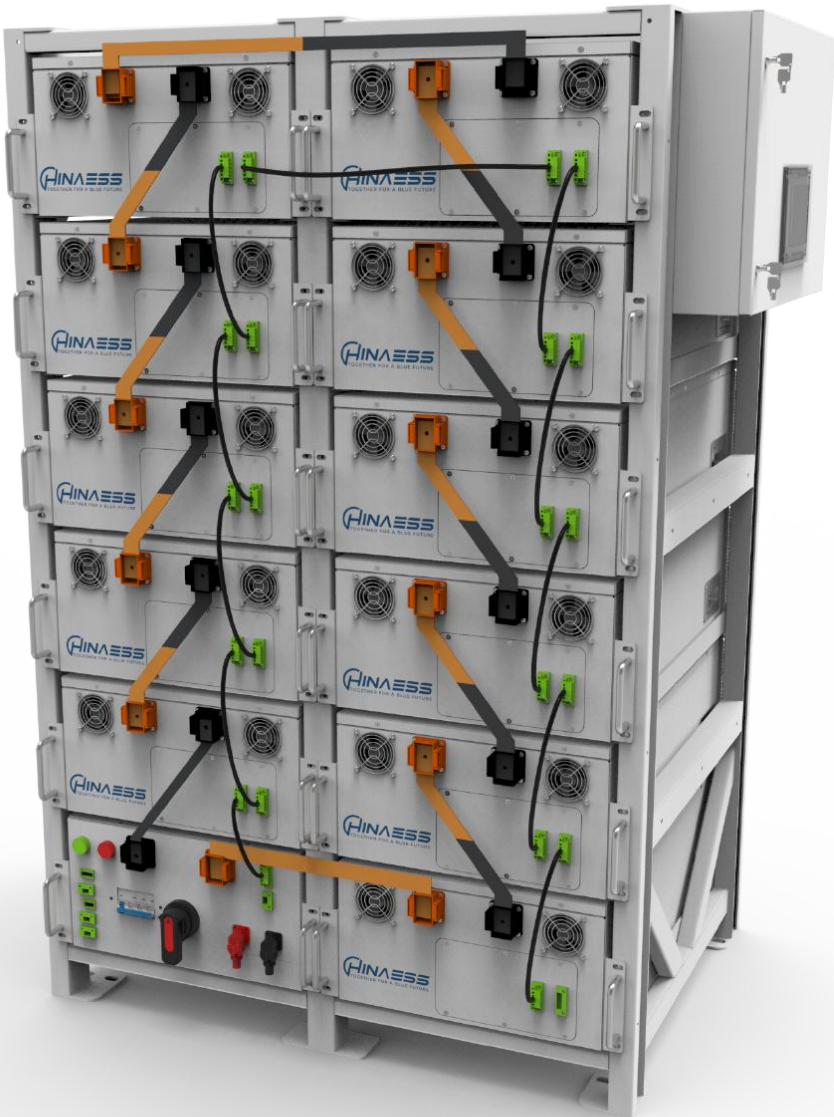
- HINAESS PowerStack
- 70.4V/72Ah, 5.069kWh, 0.7C
- **30kWh*10 Stack**
- Voltage range 369.6-481.8V
- 736*382*1209mm/290Kg*10
- **IP65 Protection**



SPEC SHEET

2 Stack 6 Slots

100 - 157 kWh



HINAESS	Size	100KWh	114kwh	129kWh	143kWh	157KWh
Battery Module	Battery module	C14				
	Rated voltage	51.2V				
	Voltage range	44.8-56.8V				
	Rated capacity	280Ah				
	Rated energy	14.336kWh				
	Rated charge/discharge current	140A				
	Dimension(W/D/H) / Weight	504*781*236mm / 108Kg				
Battery Rack	Battery Rack Configuration	7S	8S	9S	10S	11S
	Configuration	7 batt + 1 BCU	8 batt + 1 BCU	9 batt + 1 BCU	10 batt + 1 BCU	11 batt + 1 BCU
	Rated energy	100.352KWh	114.688kwh	129.024kWh	143.36kWh	157.696KWh
	Rated voltage	358.4V	409.6V	460.8V	512V	563.2V
	Voltage range	313.6-397.6V	358.4-454.4V	403.2-511.2V	448-568V	492.8-624.8V
	Rated charge/discharge	0.5C				
	Display	7" Touch screen				
	BMS	Included				
	Communication	CAN				
	Monitoring	RS485				
	Dimension(W/D/H)	1048*748*1613mm				
	Weight	890kg	1000kg	1110kg	1215kg	1325kg
	Protection level	IP20				
LCD Display	Cell voltage	Yes				
	Cell hight voltage	Yes				
	Cell low voltage	Yes				
	Cell temperature	Yes				
	Charge and dicharge current	Yes				
	Total battery voltage	Yes				
	Battery SOC	Yes				
Protection	Fault warning	Yes				
	Short circuit protection	Yes				
	Over current protection	Yes				
	Over charge protection	Yes				
	Over discharge protection	Yes				
	Cell over-vol protection	Yes				
	Cell under-vol protection	Yes				
	Over temperature protection	Yes				

SPEC SHEET

2 Stack 8 Slots

1 7 2 - 2 1 5 k W h



HINAESS	Size	172KWh	186KWh	200KWh	215KWh
Battery Module	Battery module	C14			
	Rated voltage	51.2V			
	Voltage range	44.8-56.8V			
	Rated capacity	280Ah			
	Rated energy	14.336kWh			
	Rated charge/discharge current	140A			
	Dimension(W/D/H) / Weight	504*781*236mm / 108Kg			
Battery Rack	Battery Rack Configuration	12S	13S	14S	15S
	Configuration	12 batt + 1 BCU	13 batt + 1 BCU	14 batt + 1 BCU	15 batt + 1 BCU
	Rated energy	172.032KWh	186.368KWh	200.704KWh	215.04KWh
	Rated voltage	614.4V	665.6V	716.8V	768V
	Voltage range	537.6-681.6V	582.4-738.4V	627.2-795.2V	672-852V
	Rated charge/discharge	0.5C			
	Display	7" Touch screen			
	BMS	Included			
	Communication	CAN			
	Monitoring	RS485			
	Dimension(W/D/H)	1048*748*2105mm			
	Weight	1500kg	1605kg	1725kg	1850kg
	Protection level	IP20			
LCD Display	Cell voltage	Yes			
	Cell high voltage	Yes			
	Cell low voltage	Yes			
	Cell temperature	Yes			
	Charge and discharge current	Yes			
	Total battery voltage	Yes			
	Battery SOC	Yes			
Protection	Fault warning	Yes			
	Short circuit protection	Yes			
	Over current protection	Yes			
	Over charge protection	Yes			
	Over discharge protection	Yes			
	Cell over-vol protection	Yes			
	Cell under-vol protection	Yes			
	Over temperature protection	Yes			

TriP 6-20K



New TriP, New Journey 3-Phase Solution

-
- A modern white house with a balcony, featuring a white solar inverter mounted on the wall and a black mailbox with multiple compartments.

**Your Reliable
Energy Solution
Partner**

INPUT (PV DC)	TriP 6K	TriP 8K	TriP 10K	TriP 12K	TriP 15K	TriP 20K
Max. PV array power (W)	9000	12000	15000	18000	22500	30000
Reted PV input voltage (V)	650					
Number of independent MPPT inputs	2			3		
Max. PV input voltage (V)	1000					
MPPT voltage range (V)	200~900					
Start-up voltage (V)	160					
Max. PV input current per MPPT (A)	20/20			40/40/40		
Max. PV short-circuit current input per MPPT	25/25(A:1/B:1)			50/50/50(A:2/B:2/C:2)		
Battery						
Compatible battery type	Lithium-ion/Lead-Acid					
Rated battery voltage (V)	400					
Battery voltage range (V)	100~700					
Max. charging voltage (V)	700					
Max. charging/discharging current (A)	50					
Max. charging/discharging power (W)	6000	8000	10000	12000	15000	20000
Force wake up battery from PV fuction(Y/N)	YES					
Grid						
Rated AC voltage (V)	230/400					
Rated AC frequency (Hz)	50					
Rated AC output current (A)	9.1	12.2	15.2	18.2	22.8	30.3
Rated AC output power (W)	6000	8000	10000	12000	15000	20000
Rated AC input current (A)	11.4	15.3	19	22.8	28.5	37.9
Rated AC input power (W)	6000	8000	10000	12000	15000	20000
PF	0.99(Adjustable from 0.8 leading to0.8 lagging)					
THDI	<3%					
Rated AC current of BYPASS relays (A)	90					
UPS						
Rated output power (W)	6000	8000	10000	12000	15000	20000
Rated output voltage (V)	230/400					
Rated output current (A)	9.1	12.2	15.2	18.2	22.8	30.3
Rated output frequency (Hz)	50					
Surge power, duration	1.5Pn, 10s					
Switching time	20ms					
Wave form	Sine wave					
THDV	<3%					
Efficiency						
Max. efficiency	97.4%					
Max.charging/discharging efficiency	97.2%					
Protection						
PV reverse polarity protection(Y/N)	YES					
Over current/voltage protection(Y/N)	YES					
Anti-islanding protection	YES					
AC Short-circuit protection	YES					
Leakage current protecion	YES					
Grid monitoring	YES					
DC switch	YES					
Ingress protection	YES					
DC Surge protection Type III	YES					
AC Surge protection Type III	YES					
General						
Dimensions (W*H*D)	605*563*257mm/24*22.4*10.2inch					
Weight	43kg/94.8lbs					
Ingress protection rating	IP65					
Operating environment temperature range	-25~60℃					
Storage temperature range	-40~70℃					
Relative humidity	0~100%					
Display & Communication interface	Touch color screen, RS485/Wifi/CAN					
Warranty	5 years					
Cooling method	Natural cooling			Smart cooling		
Topology	Transformer-less					
Altitude	<4000m					
Noise emission (typical)	<50dB					
Standard & Certification						
VDE4105+0214, TOR Type A/B:2022						



Hi-5 Victron



45kVA/36kW+40kWh

Inverter 45kVA/36kW

- Victron MultiPlus-II 15kVA*3
- MPPR charge controller can be added for PV system
- Cerbo GX needed between inverter&battery
- UPS 36kW



Battery 40kWh

- Hi-5*8pcs min capacity
- 51.2V/100Ah, 5.12kWh, 1C
- 481*452.6*165mm/50Kg per Hi-5
- Battery can expand to 32pcs parallel

60kVA/48kW+50kWh

Inverter 60kVA/48kW

- Victron MultiPlus-II 15kVA*4
- MPPR charge controller can be added for PV system
- Cerbo GX needed between inverter&battery
- UPS 48kW

Battery 50kWh

- Hi-5*10pcs min capacity
- 51.2V/100Ah, 5.12kWh, 1C
- 481*452.6*165mm/50Kg per Hi-5
- Battery can expand to 32pcs parallel



90kVA/72kW+81kWh

Inverter 90kVA/72kW

- Victron MultiPlus-II 15kVA*6
- MPPR charge controller can be added for PV system
- Cerbo GX needed between inverter&battery
- UPS 72kW



⋮

6pcs

⋮

16pcs

Battery 81kWh

- Hi-5*16pcs min capacity
- 51.2V/100Ah, 5.12kWh, 1C
- 481*452.6*165mm/50Kg per Hi-5
- Battery can expand to 32pcs parallel



135kVA/108kW+112kWh

Inverter 135kVA/108kW

- Victron MultiPlus-II 15kVA*9
- MPPR charge controller can be added for PV system
- Cerbo GX needed between inverter&battery
- UPS 108kW



⋮

9pcs



⋮

22pcs

Battery 112kWh

- Hi-5*22pcs min capacity
- 51.2V/100Ah, 5.12kWh, 1C
- 481*452.6*165mm/50Kg per Hi-5
- Battery can expand to 32pcs parallel



180kVA/144kW+153kWh

Inverter 180kVA/144kW

- Victron MultiPlus-II 15kVA*12
- MPPR charge controller can be added for PV system
- Cerbo GX needed between inverter&battery
- UPS 144kW



⋮

12pcs

⋮

30pcs

Battery 153kWh

- Hi-5*30pcs min capacity
- 51.2V/100Ah, 5.12kWh, 1C
- 481*452.6*165mm/50Kg per Hi-5
- Battery can expand to 32pcs parallel



PowerGem Plus Victron



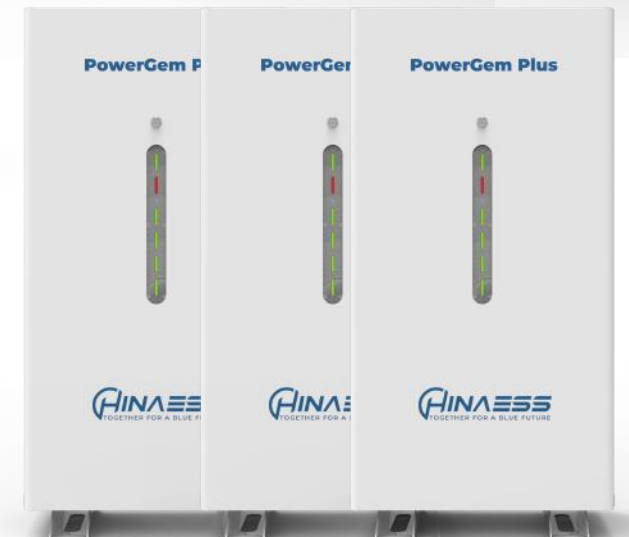
45kVA/36kW+86kWh

Inverter 45kVA/36kW

- Victron MultiPlus-II 15kVA*3
- MPPR charge controller can be added for PV system
- Cerbo GX needed between inverter&battery
- UPS 36kW

Battery 86kWh

- PowerGem Plus*6pcs min capacity
- 51.2V/280Ah, 14.336kWh, 0.5C
- 900*475*238mm/115Kg per battery
- Battery can expand to 32pcs parallel



60kVA/48kW+100kWh

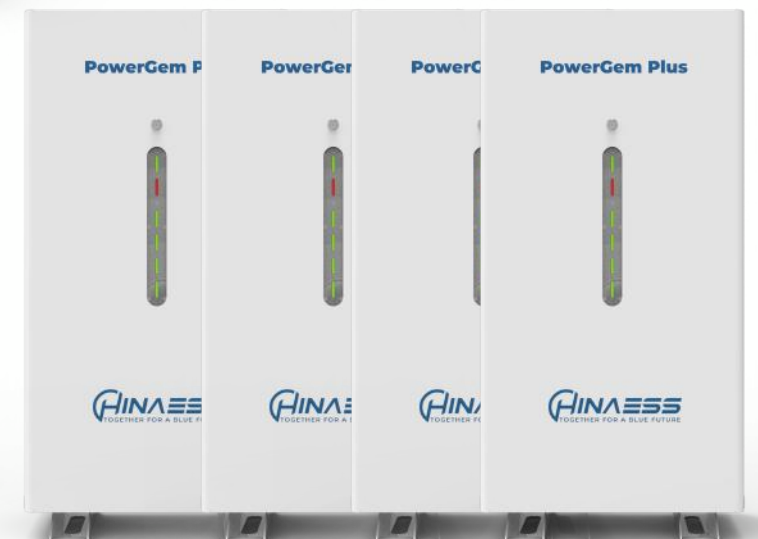
Inverter 60kVA/48kW

- Victron MultiPlus-II 15kVA*4
- MPPR charge controller can be added for PV system
- Cerbo GX needed between inverter&battery
- UPS 48kW



Battery 100kWh

- PowerGem Plus*7pcs min capacity
- 51.2V/280Ah, 14.336kWh, 0.5C
- 900*475*238mm/115Kg per battery
- Battery can expand to 32pcs parallel



90kVA/72kW+157kWh

Inverter 90kVA/72kW

- Victron MultiPlus-II 15kVA*6
- MPPR charge controller can be added for PV system
- Cerbo GX needed between inverter&battery
- UPS 72kW



Battery 157kWh

- PowerGem Plus*11pcs min capacity
- 51.2V/280Ah, 14.336kWh, 0.5C
- 900*475*238mm/115Kg per battery
- Battery can expand to 32pcs parallel



135kVA/108kW+229kWh

Inverter 135kVA/108kW

- Victron MultiPlus-II 15kVA*9
- MPPR charge controller can be added for PV system
- Cerbo GX needed between inverter&battery
- UPS 108kW



Battery 229kWh

- PowerGem Plus*16pcs min capacity
- 51.2V/280Ah, 14.336kWh, 0.5C
- 900*475*238mm/115Kg per battery
- Battery can expand to 32pcs parallel



180kVA/144kW+301kWh

Inverter 135kVA/108kW

- Victron MultiPlus-II 15kVA*12
- MPPR charge controller can be added for PV system
- Cerbo GX needed between inverter&battery
- UPS 144kW



Battery 301kWh

- PowerGem Plus*21pcs min capacity
- 51.2V/280Ah, 14.336kWh, 0.5C
- 900*475*238mm/115Kg per battery
- Battery can expand to 32pcs parallel





50kW+100kWh/114kWh

Inverter 50kW

- Megarevo MPS0050
- PV up to 120kW, 250-850V
- System current up to 140A, 420-850V
- UPS 50kW

Battery 100kWh

- HINAESS C14, 14.336kWh, 0.5C
- 2stack/6slots Rack
- 7Batt+1 *BCU+1 *BAU
- Voltage range 313.6-397.6V
- 1048*748*1613mm/890Kg
- IP54 outdoor cabinet option available



100kW+200kWh/215kWh

Inverter 100kW

- Megarevo MPS0100
- PV up to 240kW, 250-850V
- System current up to 140A, 420-850V
- UPS 100kW

Battery 200kWh

- HINAESS C14, 14.336kWh, 0.5C
- 2stack/8slots Rack
- 14Batt+1*BCU+1*BAU
- Voltage range 627.2-795.2V
- 1048*748*2105mm/1725Kg
- IP54 outdoor cabinet option available



150kW+315kWh/344kWh

Inverter 150kW

- Megarevo MPS0150
- PV up to 240kW, 250-850V
- System current up to 280A, 420-850V
- UPS 150kW

Battery 315kWh

- HINAESS C14, 14.336kWh, 0.5C
- 2stack/6slots Rack*2
- 22Batt+2*CU+1*BAU
- Voltage range 492.8-624.8V
- 1048*748*1613mm/1325Kg*2
- IP65 outdoor container option available



250kW/516kWh

Inverter 250kW

- Megarevo MPS0250
- PV up to 320kW, 250-850V
- System current up to 420A, 420-850V
- UPS 250kW

Battery 516kWh

- HINAESS C14, 14.336kWh, 0.5C
- 2stack/8slots Rack*3
- 36Batt+3*BCU+1*BAU
- Voltage range 537.6-681.6V
- 1048*748*2105mm/1500Kg*3
- IP65 outdoor container option available



500kW/1.075MWh

Inverter 500kW

- Megarevo MPS0500
- PV up to 720kW, 250-850V
- System current up to 700A, 420-850V
- UPS 500kW

Battery 1.075MWh

- HINAESS C14, 14.336kWh, 0.5C
- 2stack/8slots Rack*5
- 75Batt+5*BCU+1*BAU
- Voltage range 672-852V
- 1048*748*2105mm/1850Kg*5
- IP65 outdoor container option available



MPS microgrid hybrid inverter



KEY STRENGTHS

- Internal integration of PV/ storage / PCS equipment, more unified bus control, increased system stability.
- Highly integrated, easy to deploy, shorten the installation and debugging time.
- Easy expansion, support PV flexible configuration.
- EMS functions are integrated into hybrid inverter , improve the economic benefits of the system.
- Support unattended, improve the operation and maintenance efficiency of the operator.
- With Mixed economy mode.

APPLICATIONS

- » Off-grid mine
- » Off-grid island
- » Nomadic farm
- » Villages without electricity



MPS microgrid series



AC(on-grid)						
Model	MPS0030	MPS0050	MPS0100	MPS0150	MPS0250	MPS0500
Max output power(kVA)	33	55	110	165	275	550
Rate output power(kW)	30	50	100	150	250	500
Rated voltage(V)	400					
Voltage range(V)	320~460					
Rated current(A)	43	72	144	216	361	722
Rated frequency (Hz)	50/60					
Frequency range (Hz)	45~55/55~65					
THDi	<3%					
Power factor	1lagging-1leading (Settable)					
AC connection	3W+N+PE					
Transformer ratio	100/400	200/400	270/400	270/400	270/400	315/400

AC(off-grid)						
Max output power(kVA)	33	55	110	165	275	550
Rated power(kW)	30	50	100	150	250	500
Rated voltage(V)	400					
Rated current(A)	43	72	144	216	361	722
THDu	≤1% linear; or ≤5% nonlinear					
Rated frequency(Hz)	50/60					
Overload capacity	110% long-term					

PV input						
Max.PV input voltage(V)	1,000					
Max.PV power(kW)	36/72	60/120	120/180/240	120/180/240	300/360	600/660/720
MPPT voltage range(V)	250-850					
MPPT voltage range@full load (V)	450-850					

Battery						
Battery voltage range(V)	250~850	320~850	420~850	420~850	420~850	500~850
Max. charging power(kW)	36/72	60/120	120/180/240	120/180/240	300/360	600/660/720

General data						
Dimension W*D*H (mm)	800*800*1,900	800*800*1,900	1,200*800*2,050	1,200*800*2,050	(600*720*2,050)*1+ 1,200*800*2,050	(600*720*2,050)*2+ 1,600*1050*2,050
Net weight (kg)	576/607	720/750	1,120/1,150/1,180	1,250/1,280/1,310	1,980/2,010	3,265/3,295/3,325
Operation temperature (°C)	-30 ~ 55					
Relative humidity	0 ~95% non-condensing					
Ingress protection	IP20					
Noise emission (dB)	<70					
Operating altitude	5,000m(>3,000 Derating)					
Cooling	Air Cooling					

Display and communication	
Display	LCD touch-screen
BMS communication	RS485, CAN
EMS communication	RS485, TCP/IP
Certificates	EN62109-1/-2, EN62477-1, EN61000-6-2, EN61000-6-4, South Africa NRS097-2-1:2017, Pakistan & India IEC61727, IEC62116, IEC 61683

MPS PV and battery configuration principles:

- Boost mode configuration principle - open voltage at low temperature at the limit of PV installation * number of PV panels in series ≤ the lowest voltage of the battery;
- Buck mode configuration principle - the maximum power operating voltage at the extreme high temperature of PV installation ≥ the highest voltage of the battery;
- The PV and battery configurations of MPS must comply with the above configuration principles.



50kW/114kWh

Inverter 50kW

- ATESS HPS50
- PV up to 75kW, 480-800V
- System current up to 140A, 352-600V
- UPS 50kW

Battery 114kWh

- HINAESS C14, 14.336kWh, 0.5C
- 2stack/6slots Rack
- 8Batt+1 *BCU+1 *BAU
- Voltage range 358.4-454.4V
- 1048*748*1613mm/1000Kg
- IP54 outdoor cabinet option available



100kW/229kWh

Inverter 100kW

- ATESS HPS100
- PV up to 150kW, 480-800V
- System current up to 280A, 352-600V
- UPS 100kW

Battery 229kWh

- HINAESS C14, 14.336kWh, 0.5C
- 2stack/6slots Rack*2
- 16Batt+2*BCU+1*BAU
- Voltage range 358.4-454.4V
- 1048*748*1613mm/2000Kg
- IP65 outdoor container option available



150kW/286kWh

Inverter 150kW

- ATESS HPS150
- PV up to 225kW, 480-800V
- System current up to 280A, 352-600V
- UPS 150kW

Battery 286kWh

- HINAESS C14, 14.336kWh, 0.5C
- 2stack/6slots Rack*2
- 20Batt+2*BCU+1*BAU
- Voltage range 448-568V
- 1048*748*1613mm/1215Kg*2
- IP65 outdoor cabinet option available





HPS30/50
HPS100/120/150

Overview

Large capacity all-in-one hybrid inverter for commercial application, supporting up to 600kW system capacity

Features



All-in-one hybrid inverter



Seamless on/off grid transfer



Programmable working mode



Support remote control of DG

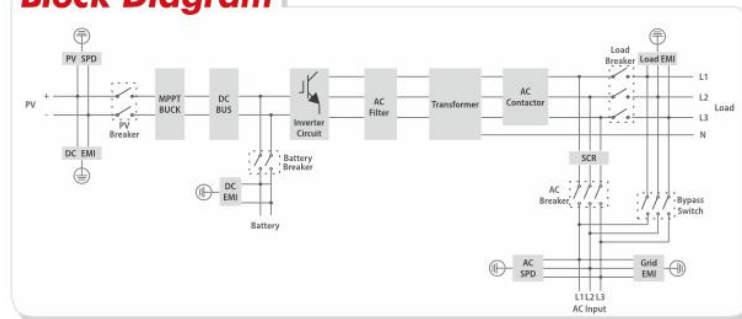


Touchscreen LCD



Quadruple capacity by paralleling 4 units

Block Diagram



Datasheet

	HPS30	HPS50	HPS100	HPS120	HPS150
AC (Grid-connected)					
Apparent power	33kVA	55kVA	110kVA	132kVA	165kVA
Rated power	30kW	50kW	100kW	120kW	150kW
Rated voltage	400V	400V	400V	400V	400V
Rated current	43A	72A	144A	173A	217A
Voltage range	360V - 440V	360V - 440V	360V - 440V	360V - 440V	360V - 440V
Rated frequency	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
Frequency range	45~55/55~65Hz	45~55/55~65Hz	45~55/55~65Hz	45~55/55~65Hz	45~55/55~65Hz
THDI	<3%	<3%	<3%	<3%	<3%
PF	0.8lagging~0.8leading	0.8lagging~0.8leading	0.8lagging~0.8leading	0.8lagging~0.8leading	0.8lagging~0.8leading
AC connection	3/N/PE	3/N/PE	3/N/PE	3/N/PE	3/N/PE
AC input	60kVA	100kVA	200kVA	240kVA	240kVA

AC(Off-grid)					
Apparent power	33kVA	55kVA	110kVA	132kVA	165kVA
Rated power	30kW	50kW	100kW	120kW	150kW
Rated voltage	400V	400V	400V	400V	400V
Rated current	43A	72A	144A	173A	217A
THDU	≤2%linear	≤2%linear	≤2%linear	≤2%linear	≤2%linear
Rated frequency	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
Overload capability	110%-10 mins 120%-1 min	110%-10 mins 120%-1 min	110%-10 mins 120%-1 min	110%-10 mins 120%-1 min	110%-10 mins 120%-1 min

DC (Battery and PV)					
Max. PV open-circuit voltage	1000V DC	1000V DC	1000V DC	1000V DC	1000V DC
Max. PV power	45kWp	75kWp	150kWp	180kWp	225kWp
PV MPPT voltage range	480V-800V DC	480V-800V DC	480V-800V DC	480V-800V DC	480V-800V DC
Battery voltage range at Max. charge power	450V-600V	500V-600V	500V-600V	517V-600V	500V-600V
Battery voltage range	352-600V	352-600V	352-600V	352-600V	352-600V
Max. charge power	45kW	75kW	150kW	180kW	225kW
Max. discharge power	33kW	55kW	110kW	132kW	165kW
Max. charge current	100A	150A	300A	350A	450A
Max. discharge current	93A	156A	313A	374A	467A

General Information					
Protection degree	IP20	IP20	IP20	IP20	IP20
Noise emission	<65dB(A)@1m	<65dB(A)@1m	<65dB(A)@1m	<65dB(A)@1m	<65dB(A)@1m
Operating temperature	-25 °C~+55 °C	-25 °C~+55 °C	-25 °C~+55 °C	-25 °C~+55 °C	-25 °C~+55 °C
Cooling	Forced-air	Forced-air	Forced-air	Forced-air	Forced-air
Relative humidity	0-95% non-condensing	0-95% non-condensing	0-95% non-condensing	0-95% non-condensing	0-95% non-condensing
Maximum altitude	6000m (derate over 3000m)	6000m (derate over 3000m)	6000m (derate over 3000m)	6000m (derate over 3000m)	6000m (derate over 3000m)
Dimension (W/H/D)	700/1660/600mm	950/1860/750mm	1200/1900/800mm	1200/1900/800mm	1200/1900/800mm
Weight	355kg	610kg	948kg	1025kg	1230kg
Build-in transformer	Yes	Yes	Yes	Yes	Yes
Transfer between on/off grid	Automatics≤10ms	Automatics≤10ms	Automatics≤10ms	Automatics≤10ms	Automatics≤10ms
Standby consumption	<30W	<30W	<30W	<30W	<30W

Communication					
Display	Touch screen	Touch screen	Touch screen	Touch screen	Touch screen
Communication	RS485/CAN	RS485/CAN	RS485/CAN	RS485/CAN	RS485/CAN

Certificate CE, MEA, PEA, UKCA, AS 4777.2, EN 61000-6-4:2007+A1:2011, EN 61000-6-2:2005, EN 62109-1:2010, EN 62109-2:2011, EN 50549-1:2019, IEC62109.1, IEC62109.2, NRS 097-2-1:2017, G99, VDE-AR-N 4105:2018, DIN VDE V 0124-100:2020-06, PSE:2018-12

The MPPT voltage of PV strings should be 50~200V higher than the Max battery voltage.



Sinexcel

50kW/100kWh

Inverter 50kW

- Sinexcel PWG2-50K-EX
- PV up to 100kW, 520-800V
- System current up to 140A, 250-520V
- UPS 50kW

Battery 100kWh

- HINAESS C14, 14.336kWh, 0.5C
- 2stack/6slots Rack
- 7Batt+1 *BCU+1 *BAU
- Voltage range 313.6-397.6V
- 1048*748*1613mm/890Kg
- IP54 outdoor cabinet option available



100kW/229kWh

Inverter 100kW

- Sinexcel PWG2-100K-EX
- PV up to 200kW, 520-800V
- System current up to 260A, 250-520V
- UPS 100kW

Battery 229kWh

- HINAESS C14, 14.336kWh, 0.5C
- 2stack/6slots Rack*2
- 16Batt+2*BCU+1*BAU
- Voltage range 358.4-454.4V
- 1048*748*1613mm/2000Kg
- IP65 outdoor container option available



500kW/1.075MWh

Inverter 500kW

- Sinexcel 500K
- Need DCDC, 750kW/500-1500V
- Need STS unit
- System current up to 700A, 600-900V
- UPS 500kW

Battery 1.075MWh

- HINAESS C14, 14.336kWh, 0.5C
- 2stack/8slots Rack*5
- 75Batt+5*BCU+1*BAU
- Voltage range 672-852V
- 1048*748*2105mm/1850Kg*5
- IP65 outdoor container option available

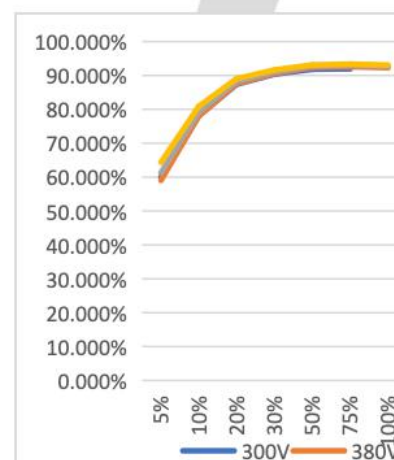


Specification

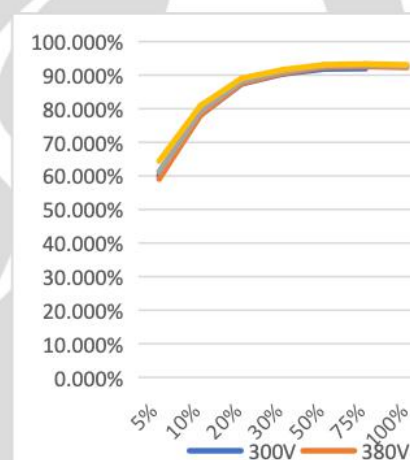
Model	PWG2-50K-EX	PWG2-100K-EX
Utility-interactive Mode		
Battery voltage range	250~520Vdc	
Batter DC Max Current	150A	300A
PV Maximum open circuit voltage	900Vdc	
PV Voltage Range	520~800Vdc	
PV DC. Max Current	192A	384A
AC voltage	400(±15%) Vac	
AC current	72A	144A
Nominal power	50kVA	100kVA
AC frequency	50/60Hz(±2.5Hz)	
Output THDI	≤3%	≤3%
AC PF	Listed: 0.8~1 leading or lagging (Controllable)	
	Actual: 0.1~1 leading or lagging (Controllable)	
Stand-alone Mode		
Battery voltage range	250~520Vdc	
Battery DC Max Current	150A	300A
PV Maximum open circuit voltage	900Vdc	
PV Voltage Range	520~800Vdc	
PV DC. Max Current	192A	384A
AC output voltage	400(±10% configurable)Vac	
AC output current	72A (Max 79A)	144A(Max 159A)
Nominal AC output power	50kVA	100kVA
AC Max Power	55kVA	110kVA
Output THDu	≤2%	≤2%
AC frequency	50/60(±2.5 configurable) Hz	
AC PF	Listed: 0.8~1 leading or lagging (Load-depend)	
	Actual: 0.1~1 leading or lagging (Load-depend)	
Overload Capability	105%~115%	10min
	115%~125%	1min
	125%~150%	200ms

Specification

Physical	
Cooling	Forced air cooling
Noise	<75dB
Enclosure	IP20
Max elevation	3000m/10000feet (>3000m/10000feet derating)
Operating temp.	-20°C to 50°C (De-rating over 45°C)
Humidity	0~95% (No condensing)
Size (W*H*D)	800*2160*800mm 31.5*85*31.5 inches
Weight	520kg 750kg
Installation	Floor standing
Other	
CEC efficiency	-
Protection	OTP, AC OVP/UVP, OFP/UFP, EPO, AC Phase Reverse,



PWG2-50K Efficiency curve



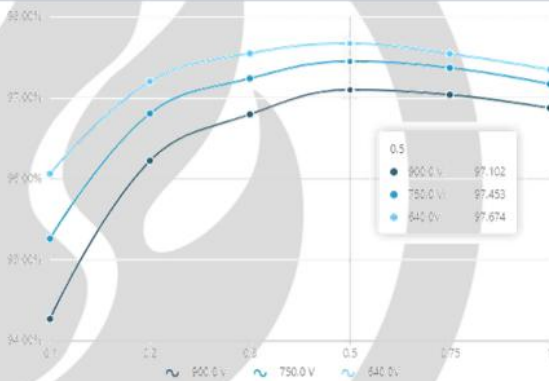
PWG2-100K Efficiency curve

Specification

	PWS1-500KTL-EX-8M1	PWS1-500KTL-EX-8M4	PWS1-500KTL-EX-8M8
Utility-interactive Mode			
Nominal power	500kVA ¹		
AC max power	550kVA ¹		
AC frequency	50/60(-2.5~2.5) Hz		
AC voltage	400(-15%~15%) Vac		
Battery voltage range	600~900Vdc		
Quantity of battery strings	1	4	8
DC max current in each branch	880A	220A	110A
THDi	≤3%		
AC PF	Listed: 0.8~1 leading or lagging (Controllable)		
	Actual: 0.1~1 leading or lagging (Controllable)		
Stand-alone Mode			
Nominal AC output power	500kVA ¹		
AC max power	550kVA ¹		
AC frequency	50/60(-2.5~2.5) Hz		
AC output voltage	380/400(±10% configurable) Vac		
Battery voltage range	600~900Vdc		
Quantity of battery strings	1	4	8
DC max current in each branch	880A	220A	110A
Output THDu	≤2% (Linear load)		
AC PF	Listed: 0.8~1 leading or lagging (Load-depend)		
	Actual: 0.1~1 leading or lagging (Load-depend)		
Overload Capability	110%~115% 10min		
	115%~125% 1min		
	125%~150% 200ms		

1. Power could be 62.5Kw to 500Kw by equipping different numbers of power modules.

Specification

Physical																																													
Cooling	Forced air cooling																																												
Noise	< 75dB																																												
Enclosure	NEMA1 IP20 and optional IP54 with outdoor cabinet																																												
Max elevation	3000m/10000feet (> 3000m/10000feet derating)																																												
Operating ambient temperature	-20°C to 50°C (De-rating over 45°C)																																												
Humidity	0~95% (No condensing)																																												
Size (W×H×D)	1100×2160×800 mm																																												
Weight	Cabinet 280kg + Module 40kg*n (n=1,2,...,8)																																												
Installation	Floor standing																																												
Other																																													
Efficiency curve	 <table><thead><tr><th>PF</th><th>600.0V</th><th>750.0V</th><th>840.0V</th></tr></thead><tbody><tr><td>0.1</td><td>94.00%</td><td>95.00%</td><td>96.00%</td></tr><tr><td>0.2</td><td>95.00%</td><td>96.00%</td><td>97.00%</td></tr><tr><td>0.3</td><td>96.00%</td><td>97.00%</td><td>98.00%</td></tr><tr><td>0.4</td><td>97.00%</td><td>98.00%</td><td>99.00%</td></tr><tr><td>0.5</td><td>97.50%</td><td>98.50%</td><td>99.50%</td></tr><tr><td>0.6</td><td>97.80%</td><td>98.80%</td><td>99.80%</td></tr><tr><td>0.7</td><td>97.90%</td><td>98.90%</td><td>99.90%</td></tr><tr><td>0.8</td><td>97.90%</td><td>98.90%</td><td>99.90%</td></tr><tr><td>0.9</td><td>97.80%</td><td>98.80%</td><td>99.80%</td></tr><tr><td>1</td><td>97.60%</td><td>98.60%</td><td>99.60%</td></tr></tbody></table>	PF	600.0V	750.0V	840.0V	0.1	94.00%	95.00%	96.00%	0.2	95.00%	96.00%	97.00%	0.3	96.00%	97.00%	98.00%	0.4	97.00%	98.00%	99.00%	0.5	97.50%	98.50%	99.50%	0.6	97.80%	98.80%	99.80%	0.7	97.90%	98.90%	99.90%	0.8	97.90%	98.90%	99.90%	0.9	97.80%	98.80%	99.80%	1	97.60%	98.60%	99.60%
PF	600.0V	750.0V	840.0V																																										
0.1	94.00%	95.00%	96.00%																																										
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0.8	97.90%	98.90%	99.90%																																										
0.9	97.80%	98.80%	99.80%																																										
1	97.60%	98.60%	99.60%																																										
CEC efficiency	-																																												
Protection	OTP, AC OVP/UVP, OFP/UFP, EPO, AC Phase Reverse, Fan/Relay Failure, OLP, GFDI, Anti-islanding																																												
Configurable protection limits	Upper/Lower AC Voltage/Frequency limit, Battery EOD voltage.																																												
AC connection	3-Phase 3-Wire																																												
Display	Touch Screen																																												
Communication	RS485, CAN, Ethernet																																												
Isolation	Non-isolation																																												
Certification	CE LVD IEC 62477, CE EMC IEC 61000, EN 50549-1:2019 G99, AS4777																																												
Short circuit																																													
Fault current	2000A																																												
Fault duration	100ms																																												

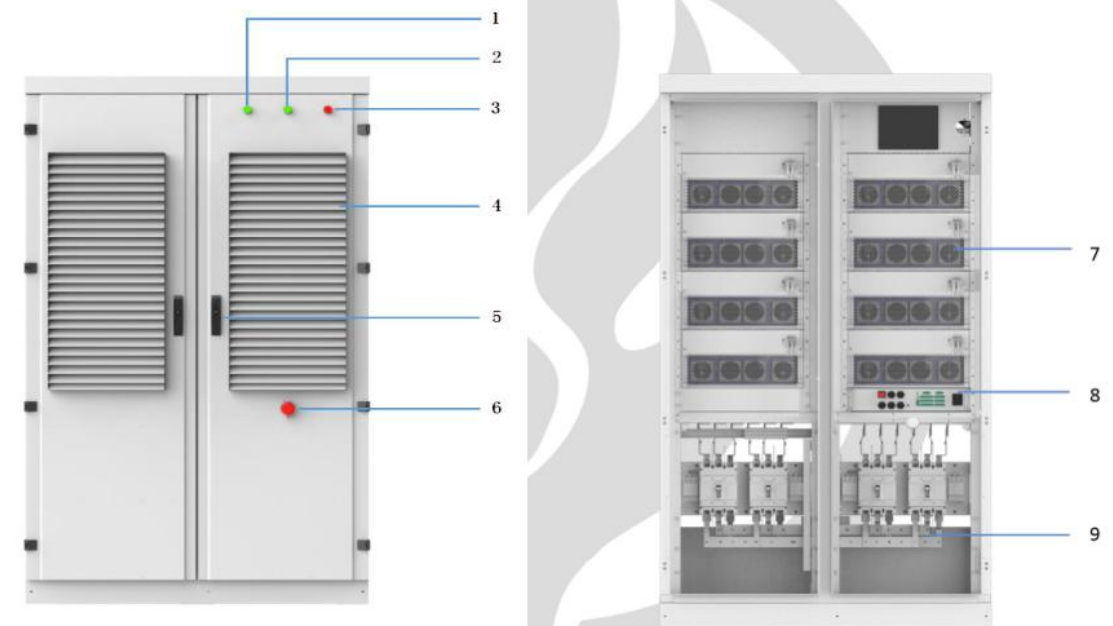
Specification

	PDS1 -750k
Nominal Power	750kW
Battery Side	
Maximum DC voltage	1500V
Voltage range	500-1500V
Nominal voltage	1000V
Nominal current	750A
Maximum current	825A
Bus Side	
Maximum DC voltage	1500V
Voltage range	500-1500V
Nominal voltage	1000V
Nominal current	750A
Maximum current	825A
Physical	
Cooling	Forced air cooling
Noise	< 85dB
Enclosure	IP54
Max elevation	3000m (> 3000m derating)
Operating temp.	-20°C to 50°C (De-rating over 45°C)
Humidity	0~95% (No condensing)
Size (W*H*D)	1200*2100*970mm (TBD)
Weight	Cabinet 292kg + Module 51kg*n (n=1,2,...,8)
Installation	Floor Standing
Other	
Efficiency curve Charging Discharging	
Peak efficiency	98.96%
AUX power supply	Built-in
Protection	OTP, EPO, Fan/Relay Failure, OLP, Reverse connection protection
Configurable protection limits	Battery EOD voltage.

Specification

Display	LED lights on the front for operating mode, alert, and error state. Built-in LCD screen for operation. WIFI control through smart phone
Cable Entry	Bottom
Communication protocols	Modbus TCP/IP
Communication sockets	RS485, CAN, Ethernet
Isolation	Non-isolation
System monitoring	Real-time monitoring with automated alerts and data storage
Compliant	CE LVD IEC 62109/62477, CE EMC IEC 61000, UL1741(Pending)

Appearance



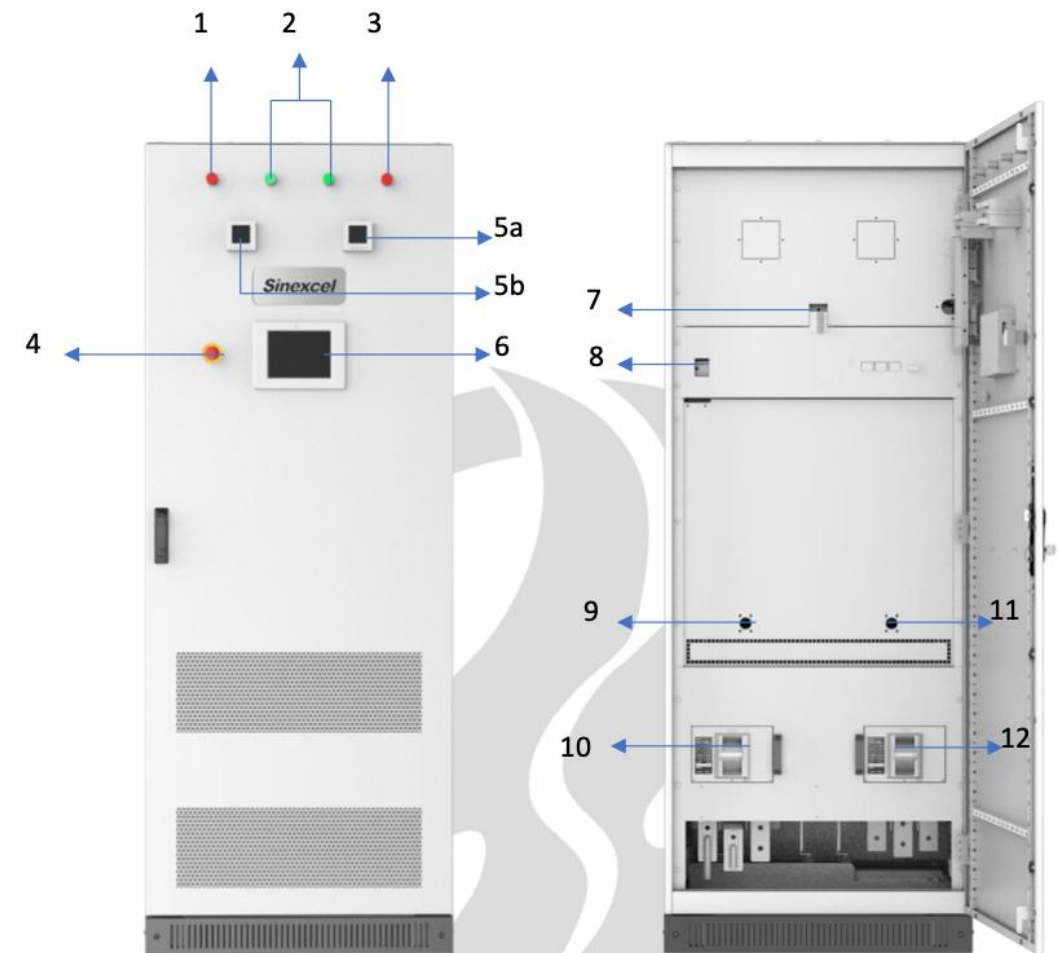
Appearance of bidirectional DC converter

Position	Designation	Description
1	Power (POWER) indicator	
2	Running (RUN) indicator	
3	FAULT indicator	
4	Air intake shutters	
5	Door lock	
6	Emergency stop knob	
7	PCS-DC-H (1~8 module(s))	
8	Control box panel	
9	Bus side positive wiring copper bar	

Specification

Model	PWD-800K
Basic Parameter	
Nominal output power	800kW
Nominal grid voltage	400V
Input grid range	-15%~15%
Output grid range	-15%~15%
AC frequency	50Hz/60Hz (±2.5Hz)
Long-term output overload capacity	1.1
Grid-tied/off-grid switch time	<20ms
Nominal current	1215A @380Vac, 1154A@400Vac
Max. current	1336A @380Vac, 1269A@400Vac (1.1 times)
The maximum efficiency	99.5% (full load)
Communication interface	RS485, CAN and Ethernet
Max on-load switching power	500kW (RCD load、pure capacitive load or inductive load is less than 100kW)
Wiring method	3P4W
Auto-protection	Over-temperature、AC over-voltage or under voltage、AC reverse sequence、E-STOP、fan fault、output overload
Programmable protection	AC voltage protection upper & lower limit, AC frequency protection upper & lower limit
Lifetime	10 years
Grid access	1 input
PCS access	1 input (less than 500KW)
Load access	1 input
Weight	450Kg
Noise	< 75dB
IP degree	IP20
Temperature range	-20°C~50°C
Cooling mode	Forced air cooling
Humidity range	0~95% (No condensing)
Max elevation	3000m
Dimension (W×D×H)	800*800*2160mm
Display	LCD

Appearance



Position	Designation	Description
1	Fault Indicator	
2	On-Grid/Operation Indicator	
3	Off-Grid Indicator	
4	Emergency Button	
5a	Grid-Side Meter	Voltage/current sampling
5b	Load-Side Meter	Voltage/current sampling
6	Touch Screen	HMI
7	Fan Switch Circuit Breaker	
8	24V Power Switch Circuit Breaker	
9	Grid Switch	
10	Load Switch	
11	By-Pass Switch	
12	PCS Switch	



100kW/215kWh

Inverter 100kW

- Growatt WIT-100k
- PV up to 156kW, 180-800V
- System current up to 140A, 680-1000V
- UPS 100kW

Battery 215kWh

- HINAESS C14, 14.336kWh, 0.5C
- 2stack/8slots Rack
- 15Batt+1*BCU+1*BAU
- Voltage range 672-852V
- 1048*748*2105mm/1850Kg
- IP54 outdoor cabinet option available



WIT 50-100kW Hybrid Inverter

(WIT 50-100K-H, WIT 50-100K-HU)

- Scalable system configuration, extend to 300kW
- Support UPS function and black start
- 100% unbalanced load when backup
- 110% continuous AC overloading capacity
- Support remote control of DG
- Multiple MPPTs input
- Grid-support functions



Preliminary Version

P O W E R
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GROWATT

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Datasheet	WIT 50K-H WIT 50K-HU	WIT 63K-H WIT 63K-HU	WIT 75K-H WIT 75K-HU	WIT 100K-H WIT 100K-HU
Input Data (PV)				
Max. recommended PV power(for module STC)	109.2kW	124.8kW	156kW	156kW
Start voltage			195V	
Max. Input Voltage			1100V	
MPPT nominal voltage/range			550V,180V~800V	
Max. input current per MPP tracker			32A	
Max. short-circuit current per MPP tracker			40A	
No. of PV strings per MPP tracker			2	
No. of MPP trackers	7	8	10	10
Output Data (AC)				
AC nominal power	50kW	63kW	75kW	100kW
Max. AC apparent power	55kVA	69.3kVA	82.5kVA	110kVA
Nominal AC voltage/range			380/400/415V,-15%~+10%	
Nominal AC grid frequency/range			50/60Hz,45~55Hz/55~65Hz	
Max. output current	83.3A	105A	125A	166.7A
Adjustable power factor			-1...+1	
THDi			<3%	
AC grid connection type			3P3W+PE/3P4W+PE	
Input Data (AC)				
AC nominal power	50kW/100kW	63kW/126kW	75kW/150kW	100kW/200kW
Max. AC apparent power	55kVA/100kVA	69.3kVA/126kVA	82.5kVA/150kVA	110kVA/200kVA
Nominal AC voltage/range			380/400/415V,-15%~+10%	
Nominal AC grid frequency/range			50/60Hz,45~55Hz/55~65Hz	
Max. input current	83.3A/151.5A	105A/190.9A	125A/227.3A	166.7A/303A
Battery Data (DC)				
Continuous charging and discharging power	56.7kW	71.4kW	85.1kW	113.5kW
Battery voltage range			600~1000V (for 3P3W) / 680~1000V (for 3P4W)	
Recommended battery voltage			768V	
Max charging and discharging current	83.3A	105A	125A	167A
BMS communication			RS485/CAN	
Backup Power (AC)*				
Rated AC output power	50kW	63kW	75kW	100kW
Max. AC apparent power	60kVA	75.6kVA	90kVA	120kVA
Rated AC output voltage			220V/230V/240V(L-N),380V/400V/415V(L-L)	
Nominal AC output frequency			50/60 Hz	
Load connection			3W+N+PE	
Max. output current	90.9A	114.5A	136.4A	181.8A
THDv			<3% (Linear load)	
Load unbalance			100% three-phase unbalanced	
Overload capacity			≤110%: Continues; 110%~120%: <1min; >120%: 200ms	
On/off grid transfer time			≤20ms	
Efficiency				
Max. efficiency			98.2%	
Protection Devices				
PV reverse polarity protection			Yes	
Battery reverse protection			Yes	
AC/DC surge protection			Type II	
Insulation resistance monitoring			Yes	
Ground fault monitoring			Yes	
Grid monitoring			Yes	
Residual-current monitoring unit			Yes	
AC short-circuit protection			Yes	
Strings monitoring			Yes	
Anti-islanding protection			Yes	
PID protection			Yes	
AFCI function			Opt	
General				
Dimensions (W / H / D)			820/1350/510mm	
Weight	153kg	153kg	160kg	160kg
Operating temperature range			-30℃~60℃ (> 50℃, derating)	
Relative humidity			0~100%	
Altitude			4000m	
Topology			Transformerless	
Cooling			Smart air cooling	
IP degree			IP66	
Display			OLED+LED/WIFI+APP	
Interfaces: RS485/CAN/USB			Yes	
Interfaces: WIFI/LAN			Opt	
Warranty (5/10 years)			Yes/Opt	
EN 62920-2017, IEC/EN62477-1, IEC/EN62109-1, IEC/EN62109-2, IEC62116, IEC61727, G99:2020, EN50549-1, VDE 4105, VDE 0124, NRS 097-2-1				

* The parameter of backup power is only available for WIT 50-100K-HU model.

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