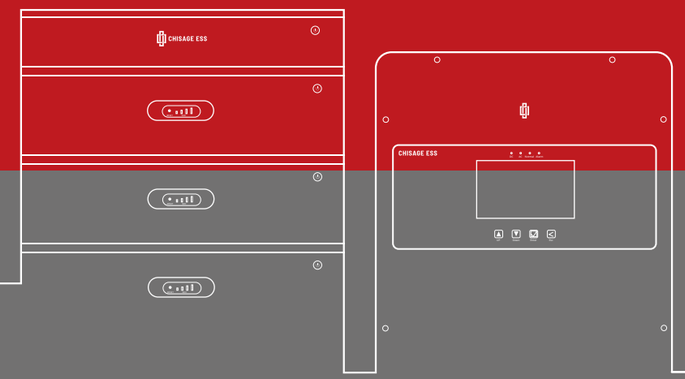
CHISAGE ESS

CHISAGE ESS
PRODUCT CATALOG

Leading The Innovation Of Energy



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CHISAGE ESS

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CHISAGE ESS

LEADING THE INNOVATION OF ENERGY

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ABOUT CHISAGE ESS

Chisage ESS is the holding subsidiary of Chisage group which was founded in **1998**. After over **25 years** of accumulation and growth, we have developed into a modern enterprise with more than **5,000 employees** and **4.5 Billion USD** in sales revenue. Our business range has been across seven major fields, including apparel, bulk commodity trade, consumer electronics, new materials and new energy, health, future life, and industrial investment.

The headquarter of Chisage ESS is located in Ningbo city, relies on the professional R&D team led by domestic and foreign experts, actively explores the energy storage business and services, and tries its best to promote the "**photovoltaic+energy storage**" **on/off-grid solutions** for residential and C&I.

The company has invested in large-scale factories and has crafted products such as **hybrid inverters**, **lithium battery packs**, **all-in-one ESS**, **container ESS**, etc.

Chisage ESS values innovation and reliability and is dedicated to delivering the customers our best solutions.

CERTIFICATION



VISION & MISSION & VALUE



Vision

Leading the innovation of energy

Mission

Battery storage technology makes life better

Value

Customer first, Strivers in nature, Innovation continues

CHISAGE PHYLOGENY

1998

- **Ningbo U&K Fashion Co., Ltd.** was established, which was the predecessor of Ningbo Chisage Holdings Co., Ltd.

2008

- **Sichuan Chisage New Material Technology Co., Ltd.** is a supplier engaged in electronic material, energy anode material,manganous-manganic oxide, high-purity manganese sulfate. It is one of the Aiding-Sichuan projects organized by Zhejiang merchants to achieve the post-disaster reconstruction and recovery of the livelihood and economy of Qingchuan after the May 12th earthquake.

2014

- **Jiangsu Chisage Carbon Photonics Research and Development Center Co., Ltd.** was established, focusing on R&D, production and sales of new biomedical technologies as well as taking the lead in the green phototherapy field worldwide.

2017

- **Ningbo Chisage Resource Co., Ltd.** under Chisage Group was established, which focus on the business platform of bulk commodity trade.
- **Zhejiang Chisage Holding Group Co., Ltd.** was renamed Chisage Holding Group Co., Ltd.
- **Beijing Qunlitiancheng Network Technology Co., Ltd.** became a subsidiary of Chisage Group and it is an innovation driven technological enterprise specializing in high-quality audio products.

2021

- **Zhejiang Jingyan Shenlan New Energy Technology Co., Ltd.** has become a member of the Chisage Group. The company is committed to the industrialization of high-power aqueous secondary electrolyte batteries and currently mainly promotes the low-speed forklift truck and the new energy storage power station.
- **Zhejiang Chisage New Energy Technology Co., Ltd.** is an energy storage + intelligent system solution integrator and investor. specializing in the integration of new aqueous batteries, packs, racks, and integration solutions.

FUTURE

- Along the way **CHISAGE** has been carrying forward her cause and forging ahead into the future. With customer orientation as the guidance, being striver in nature, the spirit of hard work and plain living as consistent pursuit, it is determined to be a group company on both industry and industrial investment area with ongoing value creation.

GLOBAL FOOTPRINTS

Lasted 25 Years Top 500 Private Enterprises



1998
Established

100+
Countries

4.5 Billion USD
Turnover



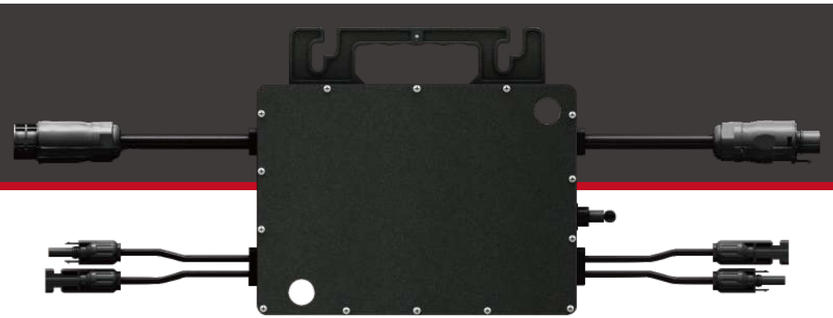
MICROINVERTER

01	Ant-800G1-US Ant-800G1-EU
02	Ant-2000G1-US Ant-2000G1-EU

CHISAGE ESS

Microinverter

Ant-800G1-US
Ant-800G1-EU



Product Features

- Individual MPPT tracking
- Cost-effective easy operation
- IP67 protection degree
- Remote WiFi monitor
- High reliability and efficiency up to 96%
- Support parallel operation

Technical Data		
Model	Ant-800G1-US	Ant-800G1-EU
Input (DC)		
Recommended Input Power (Wp)	210 to 500W+ (2 Pieces)	
Max. Input DC Voltage (Vdc)	60	
MPPT Voltage Range (Vdc)	25~55	20~55
Start-up Voltage (Vdc)	20	
Max. Input Current (A)	13.5×2	
Max. DC Short Circuit Current (A)	16.5×2	
Output (AC)		
Rated Output Power (W)	800	
Max. Output Current (A)	4	3.5
Nominal Grid Voltage (V)	220	230
Grid Voltage Range (V)	184~253	
Nominal Frequency (Hz)	60	50
Frequency Range (Hz)	55~65	45~55
Power Factor	0.99(default),-0.95(lagging),+0.95(leading)	
Maximum Units per Branch	5	
Efficiency		
CEC Weighted Efficiency	95.50%	
Peak Inverter Efficiency	96.00%	
MPPT Track Efficiency	>99.50%	
Night Time Power Consumption (mW)	<50	
Mechanical Data		
Operation Temperature Range (°C)	-40~65	
Dimension (mm)	260Wx225Hx32D	
Weight (kg)	2.9	
Cooling	Natural cooling	
Noise (dB)	<15	
Protection Degree	IP67	
General		
Display	LED, APP	
Communication	Built-in Wifi	
Compliance	IEC 62109,IEC 61000,VDE4105	

Microinverter

Ant-2000G1-US
Ant-2000G1-EU



Product Features

- Individual MPPT tracking
- Cost-effective easy operation
- IP67 protection degree
- Remote WiFi monitor
- High reliability and efficiency up to 96.0%
- Support parallel operation

Technical Data		
Model	Ant-2000G1-US	Ant-2000G1-EU
Input Data (DC)		
Recommended PV Module Power	280W-650W	
Start-up Voltage	20V	
MPPT Voltage Range	28-55V	
Max. Input Voltage	60V	
Max. Input Current	14.5A*4	
Max. DC Short Circuit Current	19A*4	
Number of MPPTs	4	
Output Data (AC)		
Rated output power	2000VA	
Nominal Output Voltage	220V	230V
Extended Output Voltage Range	176-242	184-253
Nominal Output Current	8.7	
Nominal Frequency/Range	60Hz/55~65	50Hz/45~55
Power Factor	>0.99 default	
Total Harmonic Distortion (THD)	<3%	
Max. Units Per Branch	3	
Efficiency		
Peak Efficiency	96.00%	
CEC Efficiency	95.50%	
Static MPPT Efficiency	99.50%	
Night Power Consumption	<50mW	
Mechanical Data		
Ambient Temperature Range	-40℃ ~ +65℃	
Dimensions(WxHxD)	300mm*280mm*50mm	
Weight	7kg	
Enclosure Rating	IP67	
Cooling	Natural Convection - No Fans	
Type of Isolation	High Frequency Transformers	
Monitoring & Communication		
Communication	WiFi	
Energy Management	Solarman Online Platform	
Certifications & Warranty		
Certifications	IEC62109-1，IEC62109-2: IEC61000-6-1，IEC61000-6-3；515ordinance	



ON GRID INVERTER

01	CE-1P3/3.6/4/4.6/5/6KEG
02	CE-1P7/8/9/10KEG
03	CE-3P8/10/12/15/18/20KEG
04	CE-3P22/25/30KEG
05	CE-3P40/50/60KEG
06	CE-3P75/80/90/100/110KEG

CHISAGE ESS

Single Phase On Grid Inverter

CE-1P3/3.6/4/4.6/5/6KEG



Product Features

- High PV string input current up to 18A
- Low PV start-up voltage, generate power eariler
- Support bluetooth communication, easier inverter parameter setting and monitoring
- IP66 protection degree
- High converter efficiency
- AFCI optional

Technical Data

Model	CE-1P3KEG	CE-1P3.6KEG	CE-1P4KEG	CE-1P4.6KEG	CE-1P5KEG	CE-1P6KEG
Input (PV)						
Recommended Max. PV Power (kWp)	4.5	5.4	6	6.9	7.5	9
Max. Input Voltage (V)	600					
Start-up Input Voltage (V)	40					
MPPT Voltage Range (V)	80~580					
Number of MPPTs	2					
String Number per MPPT	1					
Max. MPPT Input Current (A)	18					
Max. MPPT Short Circuit Current (A)	22					
Output(Grid)						
Rated Output Power (kW)	3	3.6	4	4.6	5	6
Max. Output Apparent Power (kVA)	3	3.6	4	4.6	5	6
Max. Output Active Power (kW)	3	3.6	4	4.6	5	6
Rated AC Voltage (V)	220/230/240, L+N+PE					
AC Voltage Range (V)	180~300					
Max. Output Current (A)	13.0	15.7	17.4	20.0	21.7	26.0
Rated Grid Frequency (Hz)	50/60					
Grid Frequency Range (Hz)	45~55/55~65					
Power Factor	>0.99, 0.8 leading~0.8 lagging					
THDi	<3%					
DC Current Injection	<0.5%In					
Efficiency						
Max. Efficiency	98.6%					
European Efficiency	98.1%					
Protection						
Ground Fault Monitoring	Support					
Output Over Voltage Protection	Support					
Anti-islanding Protection	Support					
Intergrated AFCI	Optional					
DC Reverse Protection	Support					
Surge Arrester	DC Type II/ AC Type III					
General						
Topology	Transformerless					
Protection Degree	IP66					
Cooling	Natural Convection					
Operating Temperature Range(°C)	-25~+60 (>45 derating)					
Relative Humidity Range	0~100% (no condensing)					
Max. Operating Altitude (m)	3,000					
Noise Emission (dB)	<=20 dB(A)					
Dimension (mm)	341W×350H×159D					
Weight (kg)	10					
DC Connector	MC4/D4					
Communication	WiFi (2.4G), 4G, GPRS, Bluetooth, RS485					
Certification						
Safety Standard	IEC-62109-1/-2					
EMC Standard	IEC-61000-6-1/-2/-3					
Grid Code	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&62161					

Single Phase On Grid Inverter

CE-1P7/8/9/10KEG



Product Features

- High PV string input current up to 18A
- Low PV start-up voltage, generate power eariler
- Support bluetooth communication, easier inverter parameter setting and monitoring
- IP66 protection degree
- High converter efficiency
- AFCI optional

Technical Data

Model	CE-1P7KEG	CE-1P8KEG	CE-1P9KEG	CE-1P10KEG
Input (PV)				
Recommended Max. PV Power (kWp)	10.5	12	13.5	15
Max. Input Voltage (V)	600			
Start-up Input Voltage (V)	40			
MPPT Voltage Range (V)	80~580			
Number of MPPTs	3			
String Number per MPPT	1/1/1		1/1/2	
Max. MPPT Input Current (A)	18/18/18		18/18/36	
Max. MPPT Short Circuit Current (A)	22/22/22		22/22/44	
Output(Grid)				
Rated Output Power (kW)	7	8	9	10
Max. Output Apparent Power (kVA)	7	8	9	10
Max. Output Active Power (kW)	7	8	9	10
Rated AC Voltage (V)	220/230/240, L+N+PE			
AC Voltage Range (V)	180~300			
Max. Output Current (A)	30.4	34.8	39.1	43.5
Rated Grid Frequency (Hz)	50/60			
Grid Frequency Range (Hz)	45~55/55~65			
Power Factor	>0.99, 0.8 leading~0.8 lagging			
THDi	<3%			
DC Current Injection	<0.5%In			
Efficiency				
Max. Efficiency	98.6%			
European Efficiency	98.1%			
Protection				
Ground Fault Monitoring	Support			
Output Over Voltage Protection	Support			
Anti-islanding Protection	Support			
Intergrated AFCI	Optional			
DC Reverse Protection	Support			
Surge Arrester	DC Type II/ AC Type III			
General				
Topology	Transformerless			
Protection Degree	IP66			
Cooling	Natural Convection	Smart Fan & Natural Convection		
Operating Temperature Range(°C)	-25~+60 (>45 derating)			
Relative Humidity Range	0~100% (no condensing)			
Max. Operating Altitude (m)	3,000			
Noise Emission (dB)	<=20 dB(A)			
Dimension (mm)	411W×401H×162D			
Weight (kg)	15			
DC Connector	MC4/D4			
Communication	WiFi (2.4G), 4G, GPRS, Bluetooth, RS485			
Certification				
Safety Standard	IEC-62109-1/-2			
EMC Standard	IEC-61000-6-1/-2/-3			
Grid Code	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&62161			

Three Phase On Grid Inverter

CE-3P8/10/12/15/18/20KEG



Product Features

- High PV string input current up to 18A
- Low PV start-up voltage, generate power eariler
- Support bluetooth communication, easier inverter parameter setting and monitoring
- IP66 protection degree
- High converter efficiency
- AFCI optional

Technical Data

Model	CE-3P8KEG	CE-3P10KEG	CE-3P12KEG	CE-3P15KEG	CE-3P18KEG	CE-3P20KEG
Input (PV)						
Recommended Max. PV Power (kWp)	12	15	18	22.5	27	30
Max. Input Voltage (V)	1,100					
Start-up Input Voltage (V)	50					
MPPT Voltage Range (V)	100~1,080					
Number of MPPTs	3					
String Number per MPPT	1/1/1		1/1/2			
Max. MPPT Input Current (A)	18/18/18		18/18/36			
Max. MPPT Short Circuit Current (A)	22/22/22		22/22/44			
Output(Grid)						
Rated Output Power (kW)	8	10	12	15	18	20
Max. Output Apparent Power (kVA)	8	10	12	15	18	20
Max. Output Active Power (kW)	8	10	12	15	18	20
Rated AC Voltage (V)	220/380, 230/400, 240/415, 3L+N+PE					
AC Voltage Range (V)	312~520					
Max. Output Current (A)	11.6	14.5	17.4	21.7	26.1	29.0
Rated Grid Frequency (Hz)	50/60					
Grid Frequency Range (Hz)	45~55/55~65					
Power Factor	>0.99, 0.8 leading~0.8 lagging					
THDi	<3%					
DC Current Injection	<0.5%In					
Efficiency						
Max. Efficiency	98.8%					
European Efficiency	98.3%					
Protection						
Ground Fault Monitoring	Support					
Output Over Voltage Protection	Support					
Anti-islanding Protection	Support					
Intergrated AFCI	Optional					
DC Reverse Protection	Support					
Surge Arrester	DC Type II/ AC Type III					
General						
Topology	Transformerless					
Protection Degree	IP66					
Cooling	Smart Fan & Natural convection					
Operating Temperature Range(℃)	-25~+60 (>45 derating)					
Relative Humidity Range	0~100% (no condensing)					
Max. Operating Altitude (m)	3,000					
Noise Emission (dB)	<=20 dB(A)			<=40 dB(A)		
Dimension (mm)	462W×453H×249D					
Weight (kg)	15			15.2		
DC Connector	MC4/D4					
Communication	WiFi (2.4G), 4G, GPRS, Bluetooth, RS485					
Certification						
Safety Standard	IEC-62109-1/-2					
EMC Standard	IEC-61000-6-1/-2/-3					
Grid Code	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&62161					

Three Phase On Grid Inverter

CE-3P22/25/30KEG



Product Features

- High PV string input current up to 18A
- Low PV start-up voltage, generate power eariler
- Support bluetooth communication, easier inverter parameter setting and monitoring
- IP66 protection degree
- High converter efficiency
- AFCI optional

Technical Data

Model	CE-3P22KEG	CE-3P25KEG	CE-3P30KEG
Input (PV)			
Recommended Max. PV Power (kWp)	33	37.5	45
Max. Input Voltage (V)		1,100	
Start-up Input Voltage (V)		50	
MPPT Voltage Range (V)		100~1,080	
Number of MPPTs		3	
String Number per MPPT		2	
Max. MPPT Input Current (A)		36	
Max. MPPT Short Circuit Current (A)		44	
Output(Grid)			
Rated Output Power (kW)	22	25	30
Max. Output Apparent Power (kVA)	22	25	30
Max. Output Active Power (kW)	22	25	30
Rated AC Voltage (V)		220/380, 230/400, 240/415, 3L+N+PE	
AC Voltage Range (V)		312~520	
Max. Output Current (A)	31.9	36.2	43.5
Rated Grid Frequency (Hz)		50/60	
Grid Frequency Range (Hz)		45~55/55~65	
Power Factor		>0.99, 0.8 leading~0.8 lagging	
THDi		<3%	
DC Current Injection		<0.5%In	
Efficiency			
Max. Efficiency		98.8%	
European Efficiency		98.3%	
Protection			
Ground Fault Monitoring		Support	
Output Over Voltage Protection		Support	
Anti-islanding Protection		Support	
Intergrated AFCI		Optional	
DC Reverse Protection		Support	
Surge Arrester		DC Type II/ AC Type III	
General			
Topology		Transformerless	
Protection Degree		IP66	
Cooling		Smart Fan & Natural Convection	
Operating Temperature Range(°C)		-25~+60 (>45 derating)	
Relative Humidity Range		0~100% (no condensing)	
Max. Operating Altitude (m)		3,000	
Noise Emission (dB)		<=40 dB(A)	
Dimension (mm)		488W×472H×172D	
Weight (kg)		21	
DC Connector		MC4/D4	
Communication		WiFi (2.4G), 4G, GPRS, Bluetooth, RS485	
Certification			
Safety Standard		IEC-62109-1/-2	
EMC Standard		IEC-61000-6-1/-2/-3	
Grid Code		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&62161	

Three Phase On Grid Inverter

CE-3P40/50/60KEG



Product Features

- High PV string input current up to 20A
- Low PV start-up voltage, generate power eariler
- Support bluetooth communication, easier inverter parameter setting and monitoring
- IP66 protection degree
- High converter efficiency
- AFCI optional

Technical Data

Model	CE-3P40KEG	CE-3P50KEG	CE-3P60KEG
Input (PV)			
Recommended Max. PV Power (kWp)	60	75	90
Max. Input Voltage (V)		1,100	
Start-up Input Voltage (V)		50	
MPPT Voltage Range (V)		100~1,080	
Number of MPPTs	4	5	6
String Number per MPPT	2	2	2
Max. MPPT Input Current (A)	40	40	40
Max. MPPT Short Circuit Current (A)	60	60	60
Output(Grid)			
Rated Output Power (kW)	40	50	60
Max. Output Apparent Power (kVA)	40	50	60
Max. Output Active Power (kW)	40	50	60
Rated AC Voltage (V)		220/380, 230/400, 240/415, 3L+N+PE	
AC Voltage Range (V)		312~520	
Max. Output Current (A)	58.0	72.5	87.0
Rated Grid Frequency (Hz)		50/60	
Grid Frequency Range (Hz)		45~55/55~65	
Power Factor		>0.99, 0.8 leading~0.8 lagging	
THDi		<3%	
DC Current Injection		<0.5%In	
Efficiency			
Max. Efficiency		98.8%	
European Efficiency		98.3%	
Protection			
Ground Fault Monitoring		Support	
Output Over Voltage Protection		Support	
Anti-islanding Protection		Support	
Intergrated AFCI		Optional	
DC Reverse Protection		Support	
Surge Arrester		DC Type II /AC Type III	
General			
Topology		Transformerless	
Protection Degree		IP66	
Cooling		Smart Fan & Natural Convection	
Operating Temperature Range (℃)		-25~+60, (>45 derating)	
Relative Humidity Range		0~100% (no condensing)	
Max. Operating Altitude (m)		3,000	
Noise Emission (dB)		<=40 dB(A)	
Dimension (mm)		700W×519H×270D	
Weight (kg)		45	
DC Connector		MC4/D4	
Communication		WiFi (2.4G), 4G, GPRS, Bluetooth, RS485	
Certification			
Safety Standard		IEC-62109-1/-2	
EMC Standard		IEC-61000-6-1/-2/-3	
Grid Code		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&62161	

Three Phase On Grid Inverter

CE-3P75/80/90/100/110KEG



Product Features

- High PV string input current up to 20A
- Low PV start-up voltage, generate power eariler
- Support bluetooth communication, easier inverter parameter setting and monitoring
- IP66 protection degree
- High converter efficiency
- AFCI optional

Technical Data

Model	CE-3P75KEG	CE-3P80KEG	CE-3P90KEG	CE-3P100KEG	CE-3P110KEG
Input (PV)					
Recommended Max. PV Power (kWp)	112.5	120	135	150	165
Max. Input Voltage (V)	1,100				
Start-up Input Voltage (V)	50				
MPPT Voltage Range (V)	100~1,080				
Number of MPPTs	7			9	
String Number per MPPT	2			2	
Max. MPPT Input Current (A)	7x40			9x40	
Max. MPPT Short Circuit Current (A)	7x60			9x60	
Output(Grid)					
Rated Output Power (kW)	75	80	90	100	110
Max. Output Apparent Power (kVA)	75	80	90	100	110
Max. Output Active Power (kW)	75	80	90	100	110
Rated AC Voltage (V)	220/380, 230/400, 240/415, 312~520, 3L+N+PE				
AC Voltage Range (V)	312~520				
Max. Output Current (A)	108.7	115.9	130.4	144.9	159.4
Rated Grid Frequency (Hz)	50/60				
Grid Frequency Range (Hz)	45~55/55~65				
Power Factor	>0.99, 0.8 leading~0.8 lagging				
THDi	<3%				
DC Current Injection	<0.5%In				
Efficiency					
Max. Efficiency	98.8%				
European Efficiency	98.3%				
Protection					
Ground Fault Monitoring	Support				
Output Over Voltage Protection	Support				
Anti-islanding Protection	Support				
Intergrated AFCI	Optional				
DC Reverse Protection	Support				
Surge Arrester	DC Type Ⅱ/AC Type Ⅲ				
General					
Topology	Transformerless				
Ingress Protection	IP66				
Cooling	Smart Fan & Natural Convection				
Operating Temperature Range (℃)	-25~+60 (>45 derating)				
Relative Humidity Range	0~100% (no condensing)				
Max. Operating Altitude (m)	3,000				
Noise Emission (dB)	<=40 dB(A)				
Dimension (mm)	1,020W×696H×300D				
Weight (kg)	65				
DC Connector	MC4/D4				
Communication	WiFi (2.4G), 4G, GPRS, Bluetooth, RS485				
Certification					
Safety Standard	IEC-62109-1/-2				
EMC Standard	IEC-61000-6-1/-2/-3				
Grid Code	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&62161				



OFF GRID INVERTER

01	CE2430-EU-80-H
02	CE4830-EU-60-H CE4850-EU-80-H
03	CEP4850-EU-80-H
04	CE4880-EU-180-H CE48100-EU-200-H

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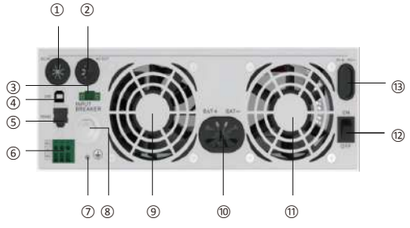
Off Grid Hybrid Inverter

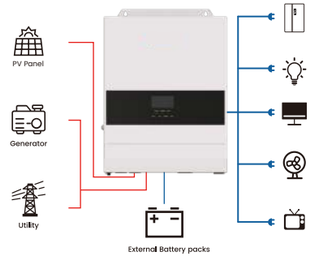
CE2430-EU-80-H



Product Features

- Pure sine wave AC output
- High PV input voltage
- High energy efficiency
- Power saving function
- Intelligent programming
- Efficient heat dissipation
- Multiple safety protection
- Uninterrupted power supply
- Instant viewing of operation
- Approved of CE/EC 62109-1 certifications
- Support a wide range of battery technology
- Support grid and PV activated lithium batteries





Technical Data

Model	CE2430-EU-80-H
AC Charge	
Battery Type	Sealed、FLood、GEL、LFP、Ternary
Rated Battery Input voltage (V)	24 (Minimum Startup Voltage 22V)
Hybrid Charging Maximum Charging Current (A)	80
Battery voltge Range	20Vdc~33Vdc ± 0.3Vdc(Undervoltage Warning/Shutdown Voltage/ Overvoltage Warning/Overvoltage Recovery...)
Solar Charge	
Maximum PV Open circuit Voltage (Vdc)	500
PV Working Voltage Range (Vdc)	120~500
MPPT Voltage Range (Vdc)	120~450
Maximum PV Input Current (A)	13
Maximum PV Input Power (W)	4000
Maximum PV Charging Current (A)	80
AC Input	
Mains Maximum Charging Current (A)	80
Rated Input Voltage (Vac)	220/230
Input Voltage Range	UPS Mains Mode：(170Vac~280Vac)±2% APL Generator Mode：(90Vac~280Vac)±2%
Frequency	50Hz/ 60Hz (Automatic Detection)
Mains Charging Efficiency	>92%
Switch Time (bypass and inverter)	10ms(Typical Value)
Maximum Bypass Overload Current (A)	30
AC Output	
Output Voltage Waveform	Pure sine wave
Rated Output Voltage (Vac)	230Vac (200/208/220/240Vac)
Rated Output Power (VA)	3300 (2850/2950/3150/3000)
Rated Output Power (W)	3300 (2850/2950/3150/3000)
Peak Power	6000VA
On-load Motor Capacity	2HP
Output Frequency Range(Hz)	50Hz±0.3Hz/60Hz±0.3Hz
Maximum Efficiency	>92%
No load Loss	Non Energy-saving Mode: ≤50W Energy-saving Mode：≤ 25W (Manual Setup)
General	
Certification	CE(IEC 62109-1)
EMC Certification Level	EN61000, C2
Working Temperature Range	-10°C ~ 55°C
Storage Temperature Range	-25°C ~ 60°C
Humidity Range	5% to 95%(Conformal Coating Protection)
Dimensions (mm)	378L×280W×103D
Weight (KG)	6.8

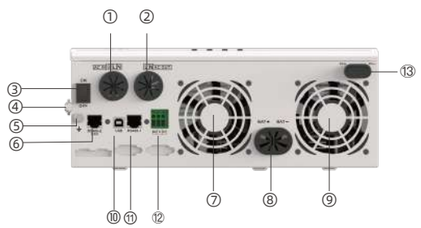
Off Grid Hybrid Inverter

CE4830-EU-60-H
CE4850-EU-80-H



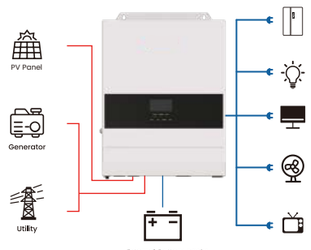
Product Features

- Power saving function
- High PV input voltage
- Multiple safety protection
- Pure sine wave AC output
- Uninterrupted power supply
- Intelligent speed control fans
- LCD screen and LED indicator lights
- Approved CE-LVD, CE-EMC certifications
- Grid power bypass and inverter output modes
- Support grid and PV activated lithium batteries
- Support lead-acid and lithium battery connections



① AC Input Port
② AC Output Port
③ ON/OFF Rocker Switch
④ Overload Protector
⑤ Grouding Screw Hold
⑥ RS485-2 Communication Port
⑦ Cooling Fan
⑧ Battery Port
⑨ Cooling Fan
⑩ USB Communication Port
⑪ RS485-1 Communication Port
⑫ Dry Contact Port
⑬ PV Port
⑭ LCD Screen
⑮ Indicator Light
⑯ Function Key





Technical Data

Model	CE4830-EU-60-H	CE4850-EU-80-H
AC Charge		
Battery Type	Lithium-ion/Lead-acid/User Define	
Max. AC Charge Current (A)	60	
Charge Voltage Range (Vdc)	40~60	
Short Circuit Protection	Circuit breaker and blown fuse	
Circuit Breaker Specifications (A)	40	
Solar Charge		
Max. PV Open Circuit Voltage (Vdc)	500	
MPPT Voltage Range (Vdc)	120~450	
Battery Voltage Range (Vdc)	40~60	
Max. PV Input Power (W)	4,400	5,200
Max. PV Input Current (A)	18	
Max. PV Charge Current (A)	60	80
Max. Hybrid Charge Current (A)	80	
Charge Short Circuit Protection	Blown fuse	
Wiring Protection	Inverse wiring protection	
AC Input		
Rated Input Voltage (Vac)	220/230	
Input Voltage Range (Vac)	UPS: (170~280) ±2%, APL: (90~280)±2%	
Frequency (Hz)	50/60 (Auto sensing)	
Frequency Range (Hz)	47±0.3~55±0.3 (50)/57±0.3~65±0.3 (60)	
Overload/short Circuit Protection	Breaker	
Efficiency	>95%	
Conversion Time (bypass and inverter)	10ms (Typical value)	
AC Reverse Protection	yes	
Max. Bypass Overload Current (A)	40	
AC Output		
Output Voltage Waveform	Pure sine wave	
Rated Output Power (W)	3,000(2,600/2,700/2,850/3,000)	5,000(4,350/4,500/4,750/5,000)
Power Factor	1	
Rated Output Voltage (Vac)	230(200/208/220/240 settable)	
Output Voltage Error	±5%	
Output Frequency Range (Hz)	50±0.3/60±0.3	
Max. Efficiency	>92%	
Overload Protection	(102% < load <125%) ±10%: report error and turn off the output after 5 minutes (125% < load < 150%) ± 10%: report error and turn off the output after 10 seconds Load >150% ±10%: report error and turn off the output after 5 seconds	
Peak Power (VA)	6,000	10,000
Loaded Motor Capacity (HP)	2	4
Output Short Circuit Protection	Breaker	
Bypass Breaker Specifications (A)	40	
Rated Battery Input Voltage (Vdc)	48 (Min. starting voltage 44)	
Battery Voltage Range (Vdc)	40.0~60±0.6 (Undervoltage alarm/shutdown voltage/overvoltage alarm /overvoltage recovery settable on LCD screen)	
No Load Loss (W)	Non Energy-saving Mode: ≤50W, Energy-saving Mode: ≤25W	
General		
Certification	IEC62109, EN61000	
Operation Temperature Range (°C)	-15~55	
Storage Temperature Range (°C)	-25~60	
Humidity Range	5%~95% (Conformal coating protection)	
Noise (dB)	≤60	
Heat Dissipation	Forced air cooling, variable speed of fan	
Communication Interface	USB/RS485/dry node control	
Size (mm)	426L×322W×126D	
Weight (kg)	10.9	

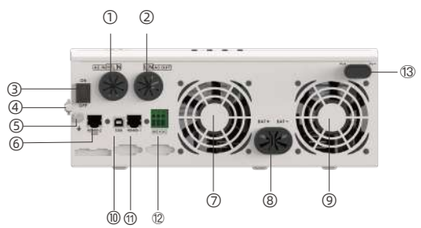
Off Grid Hybrid Inverter

CEP4850-EU-80-H



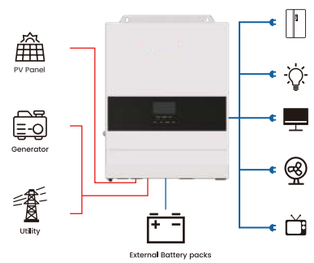
Product Features

- Power saving function
- LCD screen and LED indicator lights
- High PV output voltage
- Approved CE-LVD & CE-EMC certifications
- Multiple safety protection
- Available for Max. 6 units parallel connection
- Pure sine wave AC output
- Grid power bypass and inverter output modes
- Uninterrupted power supply
- Support grid and PV activated lithium batteries
- Intelligent speed control fans
- Support lead-acid and lithium battery connections





① AC Input Port
② AC Output Port
③ ON/OFF Rocker Switch
④ Overload Protector
⑤ Grouding Screw Hold
⑥ RS485-2 Communication Port
⑦ Cooling Fan
⑧ Battery Port
⑨ Cooling Fan
⑩ USB Communication Port
⑪ RS485-1 Communication Port
⑫ Dry Contact Port
⑬ PV Port
⑭ LCD Screen
⑮ Indicator Light
⑯ Function Key



Technical Data

Model	CEP4850-EU-80-H
AC Charge	
Battery Type	Lithium-ion/Lead-acid/User Define
Max. AC Charge Current (A)	60
Charge Voltage Range (Vdc)	40~60
Short Circuit Protection	Circuit breaker and blown fuse
Circuit Breaker Specifications (A)	40
Solar Charge	
Max. PV Open Circuit Voltage (Vdc)	500
MPPT Voltage Range (Vdc)	120~450
Battery Voltage Range (Vdc)	40~60
Max. PV Input Power (W)	5,500
Max. PV Input Current (A)	22
Max. PV Charge Current (A)	80
Max. Hybrid Charge Current (A)	80
Charge Short Circuit Protection	Blown fuse
Wiring Protection	Inverse wiring protection
AC Input	
Rated Input Voltage (Vac)	220/230
Input Voltage Range (Vac)	UPS: (170~280) ±2%, APL: (90~280)±2%
Frequency (Hz)	50/60 (Auto sensing)
Frequency Range (Hz)	47±0.3~55±0.3 (50)/57±0.3~65±0.3 (60)
Overload/short Circuit Protection	Breaker
Efficiency	>95%
Conversion Time (bypass and inverter)	10ms (Typical value)
AC Reverse Protection	yes
Max. Bypass Overload Current (A)	40
AC Output	
Output Voltage Waveform	Pure sine wave
Rated Output Power (W)	5,000(4,350/4,500/4,750/5,000)
Power Factor	1
Rated Output Voltage (Vac)	230(200/208/220/240 settable)
Output Voltage Error	±5%
Output Frequency Range (Hz)	50±0.3/60±0.3
Max. Efficiency	>92%
Overload Protection	(102% < load <125%) ±10%: report error and turn off the output after 5 minutes (125% < load < 150%) ± 10%: report error and turn off the output after 10 seconds Load >150% ±10%: report error and turn off the output after 5 seconds
Loaded Motor Capacity (HP)	4
Output Short Circuit Protection	Breaker
Bypass Breaker Specifications (A)	40
Rated Battery Input Voltage (Vdc)	48 (Min. starting voltage 44)
Battery Voltage Range (Vdc)	40.0~60±0.6 (Undervoltage alarm/shutdown voltage/overvoltage alarm /overvoltage recovery settable on LCD screen)
No Load Loss (W)	Non Energy-saving Mode:≤50W, Energy-saving Mode: ≤25W
General	
Number of Parallel	1~6 PCS
Certification	IEC62109, EN61000
Operation Temperature Range (°C)	-15~55
Storage Temperature Range (°C)	-25~60
Humidity Range	5%~95% (Conformal coating protection)
Noise (dB)	≤60
Heat Dissipation	Forced air cooling, variable speed of fan
Communication Interface	USB/RS485/dry node control
Size (mm)	426L×322W×124D
Weight (kg)	10.5

Off Grid Hybrid Inverter

CE4880-EU-180-H
CE48100-EU-200-H



Product Features

- Pure sine wave AC output
- Power saving function
- Multiple safety protection
- Intelligent speed control fans
- Uninterrupted power supply
- High PV output voltage
- LCD screen and LED indicator lights
- Approved CE-LVD, CE-EMC certifications
- Grid power bypass and inverter output modes
- Support grid and PV activated lithium batteries
- Support lead-acid and lithium battery connections
- High load power to meet the needs of most households

Technical Data

Model	CE4880-EU-180-H	CE48100-EU-200-H
AC Charge		
Battery Type	Lithium-ion/Lead-acid/User Define	
Max. AC Charge Current (A)	100	
Charge Voltage Range (Vdc)	40~60	
Short Circuit Protection	Circuit breaker and blown fuse	
Solar Charge		
Max. PV Open Circuit Voltage (Vdc)	500	
MPPT Voltage Range (Vdc)	120~425	
Number of PV MPPT Tracker	2	
Max. PV Input Power (W)	5,500+5,500	
Max. PV Input Current (A)	22+22	
Max. PV Charge Current (A)	180	200
Max. Hybrid Charge Current (A)	180	200
Charge Short Circuit Protection	Blown fuse	
Wiring Protection	Inverse wiring protection	
AC Input		
Rated Input Voltage (Vac)	230 (Single phase)	
Input Voltage Range (Vac)	170~280	
Frequency (Hz)	50/60	
Frequency Range (Hz)	47±0.3~55±0.3 (50)/57±0.3~65±0.3 (60)	
Overload/Short Circuit Protection	Breaker	
Efficiency	>95%	
Conversion Time (bypass and inverter)	10ms (Typical value)	
AC Reverse Protection	Yes	
Max. Bypass Overload Current (A)	63	
AC Output		
Output Voltage Waveform	Pure sine wave	
Rated Output Power (W)	8,000	10,000
Power Factor	1	
Rated Output Voltage (Vac)	230 (Single phase)	
Output Voltage Error	±5%	
Output Frequency Range (Hz)	50±0.3 / 60±0.3	
Max. Efficiency	>92%	
Overload Protection	(102% < load <110%) ±10%: report error and turn off the output after5 minutes; (110% < load < 125%) ± 10%: report error and turn off the output after 10 seconds; Load >125% ±10%: report error and turn offthe output after 5 seconds;	
Peak Power (VA)	16,000	20,000
Loaded Motor Capacity (HP)	5	10
Output Short Circuit Protection	Breaker	
Bypass Breaker Specifications (A)	63	
Rated Battery Input Voltage (Vdc)	48 (Minimum starting voltage 44)	
Battery Voltage Range (Vdc)	40.0~60 ± 0.6 (Undervoltage alarm/shutdown voltage/overvoltage alarm/overvoltage recovery settable on LCD screen)	
General		
Certification	IEC62109, EN61000	
Operation Temperature Range (°C)	-15~55	
Storage Temperature Range (°C)	-25~60	
Humidity Range	5%~95% (Conformal coating protection)	
Noise (dB)	< 60	
Heat Dissipation	Forced air cooling, variable speed of fan	
Communication Interface	USB/RS485/dry node control	
Size (mm)	620L×445W×130D	
Weight (kg)	27	



04

HYBRID INVERTER

Single Phase Hybrid Inverter

01	Ven-2.5/3.6/5/6G1-LE
02	Jup-3/5/6/8/10G1-LE Jup-3/5/6/8/10G2-LE

Triple Phase Hybrid Inverter

03	Mars-5/6/8/10/12/14G1-LE Mars-5/6/8/10/12/14G2-LE
04	Merc-20/25/29.9/30/ 35/40/50/60G1-HE

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Single Phase Hybrid Inverter

Ven-2.5/3.6/5/6G1-LE



Product Features

- Support different power inverters parallel connection
- Up to 20 PCS inverters parallel for off-grid operation
- Support on/off grid mode switch, EPS output
- IP65 protection degree
- Support battery charging/discharging according to the time setting
- Independent AC input port for diesel generator
- Support storing energy from diesel generator
- ARC fault detection optional

Technical Data

Model	Ven-2.5G1-LE	Ven-3.6G1-LE	Ven-5G1-LE	Ven-6G1-LE
Battery Input Data				
Battery Type	Lead-acid or Li-ion			
Battery Voltage Range (V)	40-60			
Max. Charge Current (A)	60	72	120	140
Max. Discharge Current (A)	60	72	120	140
Charging Curve	3 Stages/Equalization			
External Temperature Sensor	Optional			
Charging Strategy for Li-Ion Battery	Self-Adaption to BMS			
PV String Input Data				
Max. DC Input Power (W)	2,750	4,800	7,500	9,000
PV Input Voltage (V)	370(125~500)			
MPPT Range (V)	150~425			
Start-up Voltage (V)	120			
PV Input Current (A)	17+17	17+17	17+17	17+17
Max. PV Isc (A)	20+20	20+20	20+20	20+20
No. of MPPT Trackers	2	2	2	2
No. of String Per MPPT Tracker	1+1	1+1	1+1	1+1
AC Output Data				
Rated AC Output Power and UPS Power (W)	2,500	3,600	5,000	6,000
Max. AC Output Power (W)	3,000	4,320	6,000	7,200
Peak Power(off grid)	2 times of rated power, 10s			
AC Output Rated Current (A)	11.4/10.9	16.4/15.7	22.7/21.7	27.3/26.1
Max. AC Current (A)	13.6/13.1	18/17.2	25/23.9	30.0/28.7
Max. Continuous AC Passthrough (A)	30	30	40	40
Power Factor	0.8 leading to 0.8 lagging			
Output Frequence and Voltage	50/60Hz,220/230Vac(single phase)			
Grid Type	single phase			
Current Harmonic Distortion	THD<3%(Linear load <1.5%)			
Efficiency				
Max. Efficiency	97.90%			
Euro Efficiency	96.90%			
MPPT Efficiency	99.90%			
Protection				
Integrated	PV Input Lightning Protection, Anti-islanding Protection, PV String Input Reverse Polarity Protection, Insulation Resistor Detection, Residual Current Monitoring Unit, Output Over Current Protection, Output Shorted Protection			
PV ARC Fault Detection	Optional			
Output Over Voltage Protection	DC Type II/AC Type III			
Certification and Standards				
Grid Regulation	CEI 0-21,VDE-AR-N 4105,NRS 097,IEC61727,G99,G98,VDE 0126-1-1,RD 1699,C10-11			
EMC/Safety Regulation	IEC/ED 62109-1 IEC/EN 62109-2,IEC/EN 61000-6-1,IEC/EN 61000-6-2, IEC/EN 61000-6-3, IEC/EN 61000-6-4			
General Data				
Operating Temperature Range(℃)	-45~60，>45 Derating			
Cooling	Smart cooling			
Noise(dB)	≤45			
Communication with BMS	CAN, RS485			
Weight (kg)	34			
Dimensions (mm)	356W×380H×177D			
Protection Degree	IP65			
Installation Style	Wall-mounted			

Single Phase Hybrid Inverter

Jup-3/5/6/8/10G1-LE
Jup-3/5/6/8/10G2-LE



Product Features

- Support different power inverters parallel connection
- Up to 20 PCS inverters parallel for off-grid operation
- Support on/off grid mode switch, EPS output
- Colorful 5-inch touch LCD, IP65 protection degree
- Support battery charging/discharging according to the time setting
- Independent AC input port for diesel generator
- Support storing energy from diesel generator
- ARC fault detection optional

Technical Data

Model	Jup-3G1-LE Jup-3G2-LE	Jup-5G1-LE Jup-5G2-LE	Jup-6G1-LE Jup-6G2-LE	Jup-8G1-LE Jup-8G2-LE	Jup-10G1-LE Jup-10G2-LE
Battery Input Data					
Battery Type	Lead-acid or Li-ion				
Battery Voltage Range (V)	40-60				
Max. Charge Current (A)	70	120	140	190	210
Max. Discharge Current (A)	70	120	140	190	210
Charging Curve	3 Stages/Equalization				
External Temperature Sensor	Optional				
Charging Strategy for Li-Ion Battery	Self-Adaption to BMS				
PV String Input Data					
Max. DC Input Power (W)	4,500	7,500	9,000	12,000	15,000
PV Input Voltage (V)	370(125-500)				
MPPT Range (V)	150-425				
Start-up Voltage (V)	120				
PV Input Current (A)	17	17+17	17+17	26+26	26+26
Max. PV Isc (A)	20	20+20	20+20	34+34	34+34
No. of MPPT Trackers	1	2	2	2	2
No. of String Per MPPT Tracker	1	1+1	1+1	2+2	2+2
AC Output Data					
Rated AC Output Power and UPS Power (W)	3,000	5,000	6,000	8,000	10,000
Max. AC Output Power (W)	3,600	6,000	7,200	9,600	12,000
Peak Power(off grid)	2 times of rated power, 10s			1.8 times of rated power, 10s	
AC Output Rated Current (A)	13.65/13.05	22.7/21.7	27.3/26.1	34.5/33	45.5/43.5
Max. AC Current (A)	25/14.35	25/23.9	30/28.7	40/38.3	50.0/47.8
Max. Continuous AC Passthrough (A)	40	40	40	50	60
Power Factor	0.8 leading to 0.8 lagging				
Output Frequency and Voltage	50/60Hz,220/230Vac(single phase)				
Grid Type	single phase				
Current Harmonic Distortion	THD<3%(Linear load <1.5%)				
Efficiency					
Max. Efficiency	97.90%				
Euro Efficiency	96.90%				
MPPT Efficiency	99.90%				
Protection					
Integrated	PV Input Lightning Protection, Anti-islanding Protection, PV String Input Reverse Polarity Protection, Insulation Resistor Detection, Residual Current Monitoring Unit, Output Over Current Protection, Output Shorted Protection				
PV ARC Fault Detection	Optional				
Output Over Voltage Protection	DC Type II/AC Type III				
Certification and Standards					
Grid Regulation	CEI 0-21,VDE-AR-N 4105,NRS 097,IEC61727,G99,G98,VDE 0126-1-1,RD 1699,C10-11				
EMC/Safety Regulation	IEC/EN 62109-1 IEC/EN 62109-2,IEC/EN 61000-6-1,IEC/EN 61000-6-2, IEC/EN 61000-6-3, IEC/EN 61000-6-4				
General Data					
Operating Temperature Range(℃)	-45~60,>45 Derating				
Cooling	Smart cooling				
Noise(dB)	≤45				
Communication with BMS	CAN, RS485 34				
Weight (kg)	34				
Dimensions (mm)	514W×749H×291D				
Protection Degree	IP65				
Installation Style	Wall-mounted				

Triple Phase Hybrid Inverter

Mars-5/6/8/10/12/14G1-LE
Mars-5/6/8/10/12/14G2-LE



Product Features

- Support different power inverters parallel connection
- 100% unbalanced output each phase max. output up to 5kW
- Up to 20 PCS inverters parallel for off-grid operation
- Support on/off grid mode switch, EPS output
- Colorful 7-inch touch LCD, IP65 protection degree
- Support battery charging/discharging according to the time setting
- Independent AC input port for diesel generator
- Support storing energy from diesel generator
- ARC fault detection optional

Technical Data

Model	Mars-5G1-LE Mars-5G2-LE	Mars-6G1-LE Mars-6G2-LE	Mars-8G1-LE Mars-8G2-LE	Mars-10G1-LE Mars-10G2-LE	Mars-12G1-LE Mars-12G2-LE	Mars-14G1-LE Mars-14G2-LE
Battery Input						
Battery Type	Lead-acid or Li-ion					
Battery Voltage Range (V)	40-60					
Max. Charge Current (A)	120	130	200	220	250	280
Max. Discharge Current (A)	120	130	200	220	250	280
Charging Curve	3 Stages/Equalization					
External Temperature Sensor	Optional					
Charging Strategy for Li-Ion Battery	Self-Adaption to BMS					
PV String Input						
Max. DC Input Power (W)	7,500	9,000	12,000	15,000	18,000	20,000
PV Input Voltage (V)	650(160~800)					
MPPT Range (V)	200~700					
Full Load DC Voltage Range (V)	260~650					
Start-up Voltage (V)	160					
PV Input Current (A)	17+17	17+17	17+17	26+17	26+17	26+17
Max. PV Isc (A)	20+20	20+20	20+20	34+20	34+20	34+20
No. of MPPT Trackers	2					
No. of Strings per MPPT Trackers	1+1	1+1	1+1	2+1	2+1	2+1
AC Output						
Rated AC Output and UPS Power (W)	5,000	6,000	8,000	10,000	12,000	14,000
Max. AC Output Power (W)	6,000	7,200	9,600	12,000	13,200	15,400
Peak PoWer(off grid)	2 times of rated power, 10s				1.8 times of rated power, 10s	
AC Output Rated Current (A)	7.6/7.3	9.1/8.7	12.1/11.6	15.2/14.5	18.2/17.4	21.1/20.3
Max. AC Current (A)	11.4/10.9	13.6/13	18.2/17.4	22.7/21.7	27.3/26.1	27.6/26.4
Max. Continuous AC Passthrough (A)	30	30	30	50	50	50
Power Factor	0.8 leading to 0.8 lagging					
Output Frequency and Voltage (V)	50/60Hz, 380/400Vac(Triple phase)					
Grid Type	Three phase					
Current Harmonic Distortion	THD<3%(Linear load<1.5%)					
Efficiency						
Max. Efficiency	97.90%					
Euro Efficiency	96.90%					
MPPT Efficiency	99.90%					
Protection						
Integrated	PV Input Lightning Protection, Anti-islanding Protection, PV String Input Reverse Polarity Protection, Insulation Resistor Detection, Residual Current Monitoring Unit, Output Over Current Protection, Output Shorted Protection					
PV ARC Fault Detection	Optional					
Output Over Voltage Protection	DC Type II/AC Type III					
Certifications and Standards						
Grid Regulation	CEI 0-21, VDE-AR-N 4105, NRS 097, IEC 61727, G99, G98, VDE 0126-1-1, RD 1699,C10-11					
Safety Regulation	IEC/EN62109-1, IEC/EN62109-2					
EMC	IEC/EN 61000-6-1,IEC/EN 61000-6-2, IEC/EN 61000-6-3, IEC/EN 61000-6-4					
General Data						
Operating Temperature Range (℃)	-45~60, >45 Derating					
Cooling	Smart Cooling					
Noise (dB)	≤45					
Communication with BMS	CAN, RS485					
Weight (kg)	38	40	42	44	44	45
Dimensions (mm)	510W×630H×290D					
Protection Degree	IP65					
Installation Style	Wall-mounted					

Triple Phase Hybrid Inverter

Merc-20/25/29.9/30/35/40/50/60G1-HE



Product Features

- High PV input current up to 18A
- High battery charging/discharging current up to 120A
- Support on/off-grid mode switch, EPS output
- Colorful touch LCD, IP65 protection degree
- Support battery charging/discharging according to the time setting
- Independent AC input port for diesel generator
- Support storing energy from diesel generator
- Up to 20 PCS inverters parallel for off-grid operation

Technical Data

Model	Merc-20G1-HE	Merc-25G1-HE	Merc-29.9G1-HE	Merc-30G1-HE	Merc-35G1-HE	Merc-40G1-HE	Merc-50G1-HE	Merc-60G1-HE
Battery Input								
Battery Type	Lead-acid or Li-ion							
Battery Voltage Range (V)	160~800							
Max. Charging/Discharging Current (A)	50				60+60			
Max. Charging/Discharging Power (kW)	22	27.5	29.9	33	38.5	44	55	62.5
Charging Curve	3 Stages/Equalization							
Number of Battery input	1				2			
Charging Strategy for Li-Ion Battery	Self-Adaption to BMS							
PV String Input								
Max. DC Input Power (kW)	30	37.5	44.85	45	52.5	60	70	78
PV Input Voltage (V)	800(160~1000)							
MPPT Range (V)	200~850							
Start-up Voltage (V)	160							
PV Input Current (A)	36+36		36+36+36		36+36+36+36		36+36+36+36+36	
Max. PV Isc (A)	55+55		55+55+55		55+55+55+55		55+55+55+55+55	
No. of MPPT Trackers	2		3		4		5	
No. of Strings per MPPT Trackers	2+2		2+2+2		2+2+2+2		2+2+2+2+2	
AC Output								
Rated AC Output and UPS Power (kW)	20	25	29.9	30	35	40	50	60
Max. AC Output Power (kW)	22	27.5	29.9	33	38.5	44	55	66
Peak Power(off grid)(kW)	1.5 times of rated power, 10s							
AC Output Rated Current (A)	30.3/29.0	37.9/36.2	45.4/43.4	45.5/43.5	53.1/50.8	60.7/50.8	75.8/72.5	90.9/87.0
Max. AC Current (A)	33.3/31.9	41.7/39.8	45.4/43.4	50/47.9	58.4/55.8	66.7/63.6	83.4/79.8	100/95.8
Max. Continuous AC Passthrough (A)	100				200			
Output Frequency and Voltage (V)	50/60Hz, 230/400Vac, 220/380							
Grid Type	Three phase							
Current Harmonic Distortion	THD<3%							
Efficiency								
Max. Efficiency	97.60%							
Euro Efficiency	97.00%							
MPPT Efficiency	>99%							
Protection								
Integrated	PV Input Lightning Protection, Anti-Islanding Protection,PV String Input Reverse Polarity Protection, Insulation Resistor Detection, Residual Current Monitoring Unit, Output Over Current Protection, Output Shorted Protection							
PV ARC Fault Detection	Optional							
Output Over Voltage Protection	DC Type II/AC Type III							
Certifications and Standards								
Grid Regulation	CEI 0-21, VDE-AR-N 4105, NRS 097, IEC 61727, G99, G98, VDE 0126-1-1, RD 1699,C10-11							
Safety Regulation	IEC/EN62109-1, IEC/EN62109-2							
EMC	IEC/EN 61000-6-1,IEC/EN 61000-6-2, IEC/EN 61000-6-3, IEC/EN 61000-6-4							
General Data								
Operating Temperature Range (℃)	-45~60, >45 Derating							
Cooling	Smart Cooling							
Noise (dB)	≤65							
Communication with BMS	CAN, RS485							
Weight (kg)	85							
Dimensions (mm)	890W×550H×300D							
Protection Degree	IP65							
Installation Style	Wall-mounted							

05

BATTERY PACK

01	MOON5-R
02	MOON5-R Pro
03	Pho2.5-W
04	MOON2.5-W
05	CE48100-W
06	MOON5-W
07	CE48200-W
08	MOON8-W
09	MOON10-W
10	MOON15-G
11	MOON16-G
12	MOON16-G Pro
13	Link5/10/15/20-L

CHISAGE ESS

Battery Pack

MOON5-R



Product Features

- Max. 1C output current
- Up to 15 packs can be parallel connected
- High inverter compatibility
- Safe LiFePO4 rechargeable battery
- High usable energy ratio, less self-consumption
- Without toxic heavy metal or caustic materials

Technical Data

Model	MOON5-R
Nominal Energy (Wh)	5,120
Nominal Capacity (Ah)	100
Nominal Voltage (V)	51.2
Operation Voltage Range (V)	40~58.4
Recommend Charge Current (A)	50
Max. Continuous Charge Current (A)	50
Recommend Discharge Current (A)	50
Max. Continuous Discharge Current (A)	100
Max. Parallel Quantities (pcs)	15
Operation Temperature	Charge Temperature: 0~55℃ Discharge Temperature: -20~55℃
Operation Humidity	20~80%RH (No condensing)
Protection Degree	IP21
Dimension (mm)	420Wx134.5Hx510D (Without ear and handle)
Net Weight (kg)	45
Installation	Rack mounted
Certification	IEC62619, CE-EMC, ROHS, UN38.3
Communication	CAN, RS485
Cycle Life	6000≥100%DOD, 70%EOL@25℃/0.5C

Battery Pack

MOON5-R Pro



Product Features

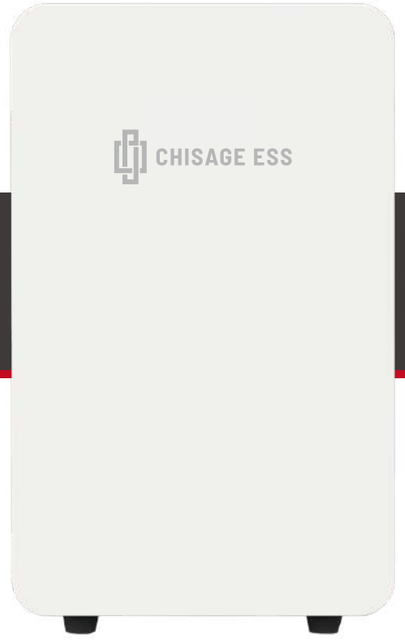
- Max. 1C output current
- Up to 15 packs can be parallel connected
- With circuit breaker controlled by BMS
- High inverter compatibility
- Safe LiFePO4 rechargeable battery
- High usable energy ratio, less self-consumption

Technical Data

Model	MOON5-R Pro
Nominal Energy (Wh)	5,120
Nominal Capacity (Ah)	100
Nominal Voltage (V)	51.2
Operation Voltage Range (V)	40~58.4
Recommend Charge Current (A)	50
Max. Continuous Charge Current (A)	50
Recommend Discharge Current (A)	50
Max. Continuous Discharge Current (A)	100
Max. Parallel Quantities (pcs)	15
Operation Temperature	Charge Temperature: 0~55℃ Discharge Temperature: -20~55℃
Operation Humidity	20~80%RH (No condensing)
Protection Degree	IP21
Dimension (mm)	420Wx134.5Hx550D (Without ear and handle)
Net Weight (kg)	45
Installation	Rack mounted
Certification	IEC62619,CE-EMC, ROHS, UN38.3
Communication	CAN, RS485
Cycle Life	6000≥100%DOD, 70%EOL@25℃/0.5C

Battery Pack

Pho2.5-W



Product Features

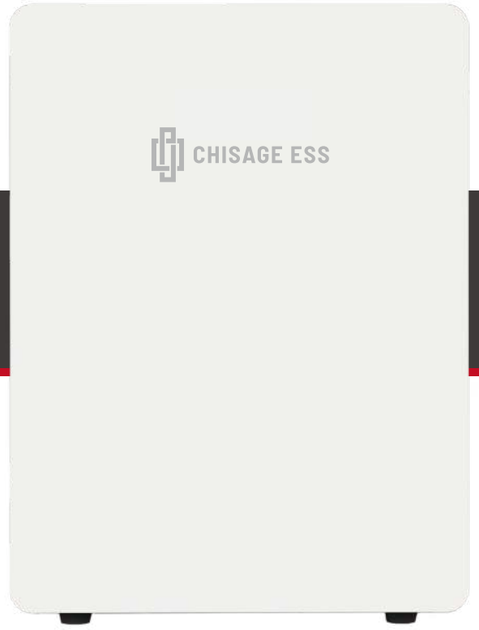
- 25.6V voltage, compatible with low power inverter
- Max. 1C output current
- High inverter compatibility
- Up to 15 packs can be parallel connected
- Support floor and wall mounted
- Safe LiFePO4 rechargeable battery

Technical Data

Model	Pho2.5-W
Nominal Energy (Wh)	2,560
Nominal Capacity (Ah)	100
Nominal Voltage (V)	25.6
Operation Voltage Range (V)	20~29.2
Recommend Charge Current (A)	50
Max. Continuous Charge Current (A)	50
Recommend Discharge Current (A)	50
Max. Continuous Discharge Current (A)	100
Max. Parallel Quantities (pcs)	15
Operation Temperature	Charge Temperature: 0~55℃ Discharge Temperature: -20~55℃
Operation Humidity	20~80%RH (No condensing)
Protection Degree	IP21
Dimension (mm)	310Wx500Hx162D (Without floor mount foot)
Net Weight (kg)	28
Installation	Wall mounted, floor mounted
Certification	IEC62619,CE-EMC, ROHS, UN38.3
Communication	CAN, RS485
Cycle Life	6000≥100%DOD, 70%EOL@25℃/0.5C

Battery Pack

MOON2.5-W



Product Features

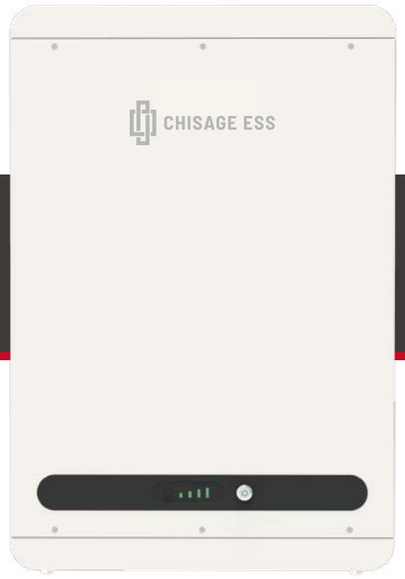
- Max. 1C output current
- High inverter compatibility
- Up to 15 packs can be parallel connected
- Safe LiFePO4 rechargeable battery
- High usable energy ratio, less self-consumption

Technical Data

Model	MOON2.5-W
Nominal Energy (Wh)	2,560
Nominal Capacity (Ah)	50
Nominal Voltage (V)	51.2
Operation Voltage Range (V)	40~58.4
Recommend Charge Current (A)	25
Max. Continuous Charge Current (A)	25
Recommend Discharge Current (A)	25
Max. Continuous Discharge Current (A)	50
Max. Parallel Quantities (pcs)	15
Operation Temperature	Charge Temperature: 0~55℃ Discharge Temperature: -20~55℃
Operation Humidity	20~80%RH (No condensing)
Protection Degree	IP21
Dimension (mm)	390Wx520Hx153.5D (Without floor mount foot)
Net Weight (kg)	32
Installation	Wall mounted, floor mounted
Certification	IEC62619,CE-EMC, ROHS, UN38.3
Communication	CAN, RS485
Cycle Life	6000≥100%DOD, 70%EOL@25℃/0.5C

Battery Pack

CE48100-W



Product Features

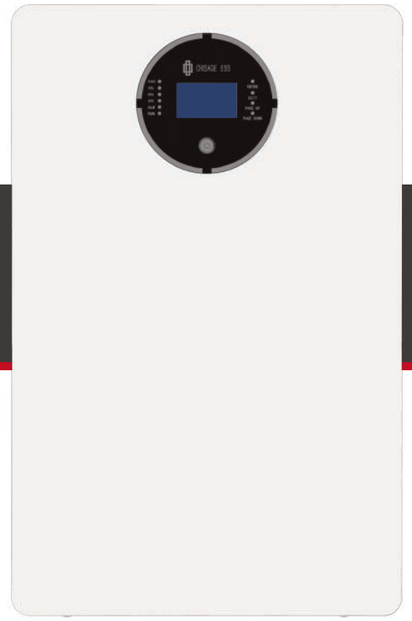
- Max. 1C discharge power
- IP65 protection degree
- Up to 15 packs can be parallel connected
- High inverter compatibility
- Safe LiFePO4 rechargeable battery
- High usable energy ratio, less self-consumption

Technical Data

Model	CE48100-W
Nominal Energy (Wh)	5,120
Nominal Capacity (Ah)	100
Nominal Voltage (V)	51.2
Operation Voltage Range (V)	40~58.4
Recommend Charge Current (A)	50
Max. Continuous Charge Current (A)	50
Recommend Discharge Current (A)	50
Max. Continuous Discharge Current (A)	100
Max. Parallel Quantities (pcs)	15
Operation Temperature	Charge Temperature: 0~55°C Discharge Temperature: -20~55°C
Operation Humidity	20~95%RH (No condensing)
Protection Degree	IP65
Dimension (mm)	480Wx650Hx168D (Without floor mount foot)
Net Weight (kg)	50±5
Installation	Wall mounted, floor mounted
Certification	IEC62619,CE-EMC, ROHS, UN38.3
Communication	CAN, RS485
Cycle Life	6000≥100%DOD, 70%EOL@25°C/0.5C

Battery Pack

MOON5-W



Product Features

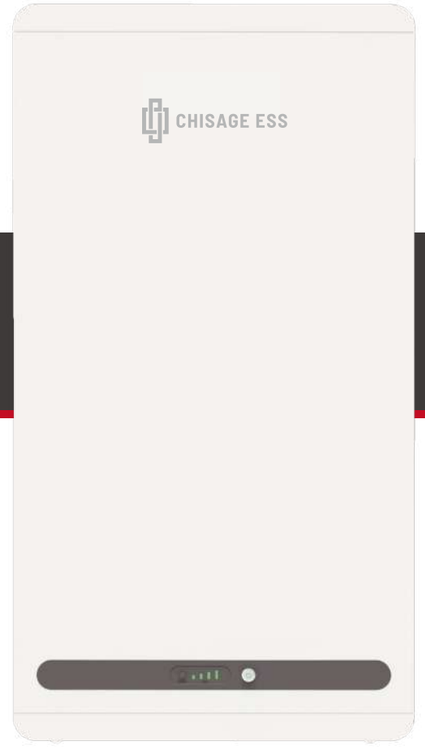
- Max. 1C output current
- LCD display and support bluetooth connection
- Up to 15 packs can be parallel connected
- High inverter compatibility
- Safe LiFePO4 rechargeable battery
- High usable energy ratio, less self-consumption

Technical Data

Model	MOON5-W
Nominal Energy (Wh)	5,120
Nominal Capacity (Ah)	100
Nominal Voltage (V)	51.2
Operation Voltage Range (V)	40~58.4
Recommend Charge Current (A)	50
Max. Continuous Charge Current (A)	50
Recommend Discharge Current (A)	50
Max. Continuous Discharge Current (A)	100
Max. Parallel Quantities (pcs)	15
Operation Temperature	Charge Temperature: 0~55°C Discharge Temperature: -20~55°C
Operation Humidity	20~80%RH (No condensing)
Protection Degree	IP21
Dimension (mm)	415Wx661Hx185D (Without floor mount foot)
Net Weight (kg)	48
Installation	Wall mounted, floor mounted
Certification	IEC62619,CE-EMC, ROHS, UN38.3
Communication	CAN, RS485
Cycle Life	6000≥100%DOD, 70%EOL@25°C/0.5C

Battery Pack

CE48200-W



Product Features

- IP65 protection degree
- Up to 15 packs can be parallel connected
- High inverter compatibility
- Safe LiFePO4 rechargeable battery
- High usable energy ratio, less self-consumption

Technical Data

Model	CE48200-W
Nominal Energy (Wh)	10,240
Nominal Capacity (Ah)	200
Nominal Voltage (V)	51.2
Operation Voltage Range (V)	40~58.4
Recommend Charge Current (A)	100
Max. Continuous Charge Current (A)	100
Recommend Discharge Current (A)	100
Max. Continuous Discharge Current (A)	100
Max. Parallel Quantities (pcs)	15
Operation Temperature	Charge Temperature: 0~55℃ Discharge Temperature: -20~55℃
Operation Humidity	20~95%RH (No condensing)
Protection Degree	IP65
Dimension (mm)	480Wx650Hx168D (Without floor mount foot)
Net Weight (kg)	94±5
Installation	Wall mounted, floor mounted
Certification	IEC62619,CE-EMC, ROHS, UN38.3
Communication	CAN, RS485
Cycle Life	6000≥100%DOD, 70%EOL@25℃/0.5C

Battery Pack

MOON8-W



Product Features

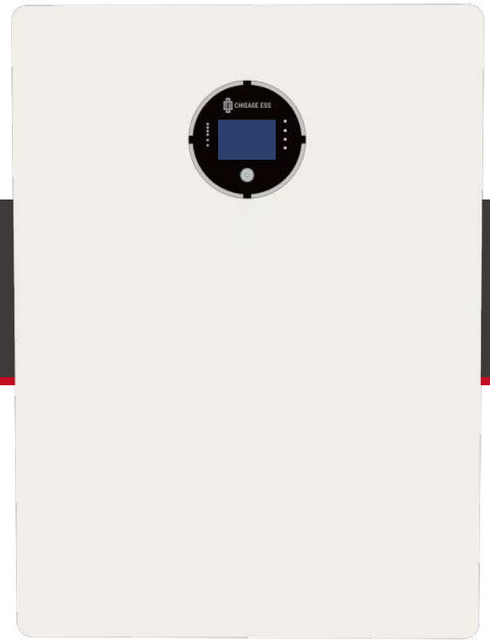
- LCD display and support bluetooth connection
- Up to 15 packs can be parallel connected
- High inverter compatibility
- Safe LiFePO4 rechargeable battery
- High usable energy ratio, less self-consumption

Technical Data

Model	MOON8-W
Nominal Energy (Wh)	8,038
Nominal Capacity (Ah)	314
Nominal Voltage (V)	25.6
Operation Voltage Range (V)	22.4~28.8
Recommend Charge Current (A)	150
Max. Continuous Charge Current (A)	150
Recommend Discharge Current (A)	150
Max. Continuous Discharge Current (A)	150
Max. Parallel Quantities (pcs)	15
Operation Temperature	"Charge Temperature: 0~60°C Discharge Temperature: -20~60°C"
Operation Humidity	20~80%RH (No condensing)
Protection Degree	IP20
Dimension (mm)	420Wx498Hx270D (Without floor mount foot)
Net Weight (kg)	62
Installation	Wall mounted, floor mounted
Certification	IEC62619,CE-EMC, ROHS, UN38.3
Communication	CAN, RS485
Cycle Life	6000≥100%DOD, 70%EOL@25°C/0.5C

Battery Pack

MOON10-W



Product Features

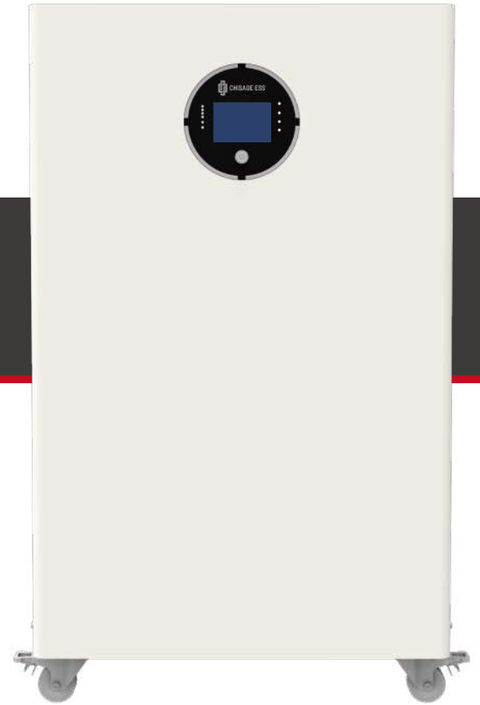
- Max. 0.75C output current
- LCD display and support bluetooth connection
- Up to 15 packs can be parallel connected
- High inverter compatibility
- Safe LiFePO4 rechargeable battery
- High usable energy ratio, less self-consumption

Technical Data

Model	MOON10-W
Nominal Energy (Wh)	10,240
Nominal Capacity (Ah)	200
Nominal Voltage (V)	51.2
Operation Voltage Range (V)	40~58.4
Recommend Charge Current (A)	100
Max. Continuous Charge Current (A)	100
Recommend Discharge Current (A)	100
Max. Continuous Discharge Current (A)	150
Max. Parallel Quantities (pcs)	15
Operation Temperature	Charge Temperature: 0~55°C Discharge Temperature: -20~55°C
Operation Humidity	20~80%RH (No condensing)
Protection Degree	IP21
Dimension (mm)	600Wx822Hx187.5D (Without floor mount foot)
Net Weight (kg)	92.5
Installation	Wall mounted, floor mounted
Certification	IEC62619,CE-EMC, ROHS, UN38.3
Communication	CAN, RS485
Cycle Life	6000≥100%DOD, 70%EOL@25°C/0.5C

Battery Pack

MOON15-G



Product Features

- LCD display and support bluetooth connection
- Up to 15 packs can be parallel connected
- High inverter compatibility
- Safe LiFePO4 rechargeable battery
- High usable energy ratio, less self-consumption

Technical Data

Model	MOON15-G
Nominal Energy (Wh)	15,360
Nominal Capacity (Ah)	300
Nominal Voltage (V)	51.2
Operation Voltage Range (V)	40~58.4
Recommend Charge Current (A)	150
Max. Continuous Charge Current (A)	150
Recommend Discharge Current (A)	150
Max. Continuous Discharge Current (A)	150
Max. Parallel Quantities (pcs)	15
Operation Temperature	Charge Temperature: 0~55°C Discharge Temperature: -20~55°C
Operation Humidity	20~80%RH (No condensing)
Protection Degree	IP21
Dimension (mm)	550Wx925Hx269D (Without floor mount foot)
Net Weight (kg)	135
Installation	Floor mounted
Certification	IEC62619,CE-EMC, ROHS, UN38.3
Communication	CAN, RS485
Cycle Life	6000≥100%DOD, 70%EOL@25°C/0.5C

Battery Pack

MOON16-G



Product Features

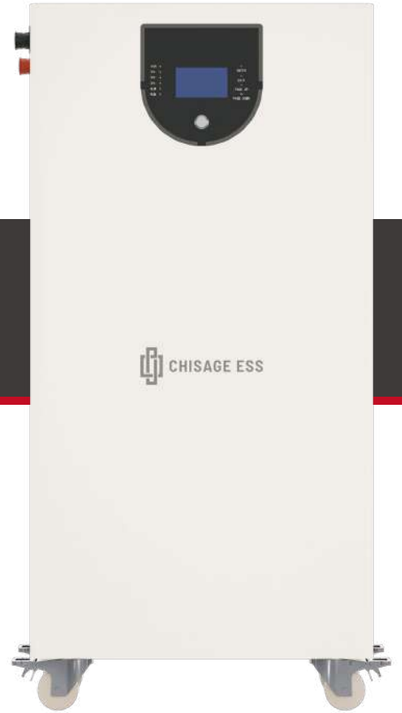
- LCD display and support bluetooth connection
- Up to 15 packs can be parallel connected
- High inverter compatibility
- Safe LiFePO4 rechargeable battery
- High usable energy ratio, less self-consumption

Technical Data

Model	MOON16-G
Nominal Energy (Wh)	16076.8
Nominal Capacity (Ah)	314
Nominal Voltage (V)	51.2
Operation Voltage Range (V)	44.8~57.6
Recommend Charge Current (A)	150
Max. Continuous Charge Current (A)	150
Recommend Discharge Current (A)	150
Max. Continuous Discharge Current (A)	150
Max. Parallel Quantities (pcs)	15
Operation Temperature	"Charge Temperature: 0~60°C Discharge Temperature: -20~60°C"
Operation Humidity	20~80%RH (No condensing)
Protection Degree	IP20
Dimension (mm)	420Wx800Hx250D (Without floor mount foot)
Net Weight (kg)	115
Installation	Wall mounted, floor mounted
Certification	IEC62619,CE-EMC, ROHS, UN38.3
Communication	CAN, RS485
Cycle Life	6000≥100%DOD, 70%EOL@25°C/0.5C

Battery Pack

MOON16-G Pro



Product Features

- LCD display and support bluetooth connection
- Up to 15 packs can be parallel connected
- High inverter compatibility
- Safe LiFePO4 rechargeable battery
- High usable energy ratio, less self-consumption

Technical Data

Model	MOON16-G Pro
Nominal Energy (Wh)	16,070
Nominal Capacity (Ah)	314
Nominal Voltage (V)	51.2
Operation Voltage Range (V)	44.8~57.6
Recommend Charge Current (A)	150
Max. Continuous Charge Current (A)	150
Recommend Discharge Current (A)	150
Max. Continuous Discharge Current (A)	150
Max. Parallel Quantities (pcs)	15
Operation Temperature	"Charge Temperature: 0ºC~60ºC Discharge Temperature: -20~60ºC"
Operation Humidity	20~80%RH (No condensing)
Protection Degree	IP20
Dimension (mm)	420W x 800H x 250D (Without floor mount foot)
Net Weight (kg)	115
Installation	Wall mounted, floor mounted
Certification	IEC62619, CE-EMC, CE-RED, ROHS, UN38.3
Communication	CAN, RS485
Cycle Life	6000≥100%DOD, 70%EOL@25ºC/0.5C

Lithium Battery

Link5-L Link15-L
Link10-L Link20-L



Product Features

- Flexibility modular design, from 5kWh to 20kWh each battery tower
- IP65 protection degree, suitable for both indoor and outdoor installation
- Mounting handle design, easy lift and installation
- Quick connector and auto battery address setting, save installation time
- Independent BMS and SOC indicator for each module
- Safe LiFePO4 rechargeable battery

Technical Data

Model	Link5-L	Link10-L	Link15-L	Link20-L
Nominal Energy (Wh)	5,120	10,240	15,360	20,480
Nominal Capacity (Ah)	100	200	300	400
Nominal Voltage (V)	51.2			
Operation Voltage Range (V)	40~58.4			
Recommend Charge Current (A)	50	100	150	200
Max. Continuous Charge Current (A)	50	100	150	200
Recommend Discharge Current (A)	50	100	150	200
Max. Continuous Discharge Current (A)	50	100	150	200
Max. Parallel Quantities (pcs)	4 pcs Link5-L modules			
Operation Temperature	Charge Temperature: 0~55°C Discharge Temperature: -20~55°C			
Operation Humidity	20~95%RH (No condensing)			
Protection Degree	IP65			
Dimension (mm)	665Wx478.8H x430D	665Wx687.6H x430D	665Wx932.4H x430D	665Wx1159.2H x430D
Net Weight (kg)	60	120	180	240
Installation	floor mounted			
Certification	IEC62619,CE-EMC, ROHS, UN38.3			
Communication	CAN, RS485			
Cycle Life	6000≥100%DOD, 70%EOL@25°C/0.5C			

06



HIGH VOLTAGE HYBRID ALL IN ONE ESS

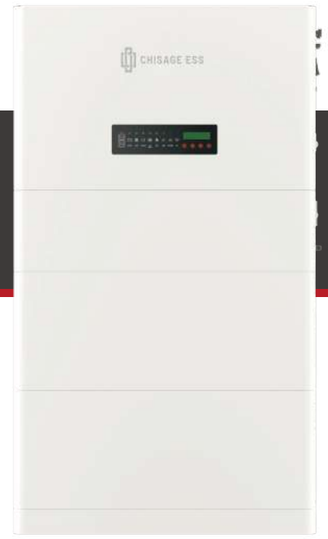
01 CE-1P3/3.6/4/4.6/
5/6/8KEG-HE-EU

02 CE-3P4/5/6/8/10/12/15
/18/20KEG-HE-EU

CHISAGE ESS

Household Single Phase Hybrid All In One ESS

CE-1P3/3.6/4/4.6/5/6/8KEG-HE-EU



Product Features

- 80-500V super wide battery voltage range
- Within 10ms UPS-level switching
- Max. 18A PV input current
- 100% full load charge and discharge
- WiFi and Bluetooth connection
- IP66 protection degree
- 21A/25A charging and discharging current, suitable for middle voltage and high voltage batteries

Technical Data

Model	CE-1P3KEG -HE-EU	CE-1P3.6KEG -HE-EU	CE-1P4KEG -HE-EU	CE-1P4.6KEG -HE-EU	CE-1P5KEG -HE-EU	CE-1P6KEG -HE-EU	CE-1P8KEG -HE-EU
Inverter Data							
Battery Type	Li-ion						
Battery Voltage Range (Vdc)	80~500						
Max. Charging/discharging Current (A)	25/25						
Rated Charging/discharging Current (A)	21/21						
Recommended Max. PV Power (kWp)	6	7.2	8	9.2	10	12	16
Max. Input Voltage (V)	600						
MPPT Voltage Range (V)	80~580						
MPPT Number	2						
Strings Number per MPPT	1/2						
Max. MPPT Input Current (A)	36						
Max. MPPT Short Circuit Current (A)	44						
Rated Output Power (kW)	3	3.6	4	4.6	5	6	8
Max. Apparent Output Power (kVA)	3	3.6	4	4.6	5	6	8
Max. Output Current (A)	13.0	15.7	17.4	20	21.7	26.1	34.8
Rated Grid Voltage/range (V)	220/230/240/180~300						
Back-Up Switch Time (ms)	<10						
Rated Frequency (Hz)	50/60						
Max. Efficiency	98.60%						
EU Efficiency	98.10%						
Topology	Transformerless						
Dimensions (mm)	630×450×178						
Weight (kg)	25.5						25
General Data							
Shell Material	Aluminium alloy						
Operating Ambient Temperature Range (°C)	-25~60						
Protection Degree	IP66						
Cooling Concept	Natural convection				Smart fan		
Max. Operation Altitude (m)	3,000						
Grid Connection Standard	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&62161						
Safety/EMC Standard	IEC-62109-1/-2, IEC-61000-6-1/-2/-3, NB/T32004						
Communications	WiFi, 4G, GPRS, Bluetooth, RS485, CAN						
Battery Data							
Model (kWh)	4.03						
Battery Type	LFP						
Nominal Voltage/Range (V)	96/80~108						
Capacity (Ah)	42						
Depth of discharge(DoD)	95%						
Dimension (mm)	630W×630H×178D						
Weight (kg)	53						
System Parameter	**H4**		**H8**	**H12**	**H16**		**H20**
Qty. of Batteries	1		2	3	4		5
Charge/Discharge Temperature Range	Charge: 0°C to 53°C/Discharge: -10°C to 53°C						
Cycle Life	6,000						
Nominal voltage (V)	96		192	288	384		480
Battery Total Energy (kWh)	4.03		8.06	12.09	16.12		20.15
Dimension (mm)	630W×1,080H×178D		630W×1,450H×178D	630W×1,820H×178D	630W×2,190H×178D		630W×2,560H×178D
Weight (kg)	83		122	161	200		238

Household Three Phase Hybrid All In One ESS

CE-3P4/5/6/8/10/12/15/18/20KEG-HE-EU



Product Features

- 80-800V super wide battery voltage range
- Within 10ms UPS-level switching
- Max. 18A PV input current
- 100% full load charge and discharge
- WiFi and Bluetooth connection
- IP66 protection degree
- 21A/25A charging and discharging current, suitable for middle voltage and high voltage batteries

Technical Data									
Model	CE-3P4KEG-HE-EU	CE-3P5KEG-HE-EU	CE-3P6KEG-HE-EU	CE-3P8KEG-HE-EU	CE-3P10KEG-HE-EU	CE-3P12KEG-HE-EU	CE-3P15KEG-HE-EU	CE-3P18KEG-HE-EU	CE-3P20KEG-HE-EU
Inverter Data									
Battery Type	Li-ion								
Battery Voltage Range (Vdc)	80-800								
Max. Charging/Discharging Current (A)	25/25								
Rated Charging/Discharging Current (A)	21/21								
Recommended Max. PV Power (kWp)	6.4	8	9.6	12.8	16	19.2	24	28.8	32
Max. Input Voltage (V)	1,100								
MPPT Voltage Range (V)	100-1,080								
MPPT Number	2		3				3		
Strings Number per MPPT	1/1		1/1/1				1/1/2		
Max.MPPT Input Current (A)	20/20		20/20/20				20/20/40		
Max.MPPT Short Circuit Current (A)	30/30		30/30/30				30/30/60		
Rated Output Power (kW)	4	5	6	8	10	12	15	18	20
Max. Apparent Output Power (kVA)	4	5	6	8	10	12	15	18	20
Max. Output Current (A)	5.8	7.2	8.7	11.6	14.5	17.4	21.7	26.1	29
Rated Grid Voltage/range (V)	220/380,230/400,240/415,312-520								
Back-Up Switch Time (ms)	<10								
Rated Frequency (Hz)	50/60								
Max. Efficiency	98.60%								
EU Efficiency	98.10%								
Topology	Transformerless								
Dimensions (mm)	630W×450H×178D								
Weight (kg)	31								

General Data	
Shell Material	Aluminium alloy
Operating Ambient Temperature Range (°C)	-25-60
Protection Degree	IP66
Cooling Concept	Smart fan & Natural convection
Max. Operation Altitude (m)	3,000
Grid Connection Standard	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&62161
Safety/EMC Standard	IEC-62109-1/-2, IEC-61000-6-1/-2/-3, NB/T32004
Communications	WiFi, 4G, GPRS, Bluetooth, RS485, CAN

Battery Data	
Model (kWh)	4.03
Battery Type	LFP
Nominal Voltage/Range (V)	96/80-108
Capacity (Ah)	42
Depth of discharge(DoD)	95%
Dimension (mm)	630W×630H×178D
Weight (kg)	53

System Parameter	H4	H8	H12	H16	H20
Qty. of Batteries	1	2	3	4	5
Charge/Discharge Temperature Range	Charge: 0°C to 53°C/Discharge: -10°C to 53°C				
Cycle Life	6,000				
Nominal Voltage (V)	96	192	288	384	480
Battery Total Energy (kWh)	4.03	8.06	12.09	16.12	20.15
Dimension (mm)	630W×1,080H×178D	630W×1,450H×178D	630W×1,820H×178D	630W×2,190H×178D	630W×2,560H×178D
Weight (kg)	93	132	171	210	248

07



Lithium Battery Storage System

01 CAL5-RH
CAL40/60-RH

02 CE186372

03 CE100215-B

04 OBE47/54/62/70

CHISAGE ESS

Lithium Battery Cluster System

CAL5-RH
CAL40/60-RH





Product Features

- Longer life cycles
- Higher power density
- Max. 1C discharge current
- Higher usable energy ratio, less self-consumption
- Contains no toxic heavy metal or caustic materials
- Up to 20 clusters can be parallel connected

Technical Data

Model	CAL5-RH
Connection Style	16S
Nominal Energy (Wh)	5,120
Nominal Capacity (Ah)	100
Nominal Voltage (V)	51.2
Operation Voltage Range (V)	44.8~57.6
Recommend Charge Current (A)	50
Max. Continuous Charge Current (A)	100
Recommend Discharge Current (A)	50
Max. Continuous Discharge Current (A)	100
Operation Temperature	Charge Temperature: 0°C~60°C Discharge Temperature: -20~60°C
Operation Humidity	20~80%RH (No condensing)
Protection Degree	IP20
Dimension (mm)	416W x 136H x 546D (Without ear and handle)
Net Weight (kg)	45
Installation	Rack mounted
Certification	/
Communication	Cascade
Cycle Life	6,000≥80%DOD, 70%EOL@25°C/0.5C

Model	CAL40-RH	CAL60-RH
Connection Style	128S	192S
Nominal Energy (KWh)	40.9	61.44
Nominal Capacity (Ah)	100	
Nominal Voltage (V)	409.6	614.4
Operation Voltage Range (V)	358.4~460.8	537.6~691.2
Recommend Charge Current (A)	50	
Max. Continuous Charge Current (A)	100	
Recommend Discharge Current (A)	50	
Max. Continuous Discharge Current (A)	100	
Max. Parallel Quantities (system)	20	
Operation Temperature	Charge Temperature: 0°C~60°C Discharge Temperature: -20~60°C	
Operation Humidity	20~80%RH (No condensing)	
Protection Degree	IP20	
Dimension (mm)	520W x 2,070H x 566D	
Net Weight (kg)	424	618
Certification	IEC62619, CE-EMC, LVD, ROHS, UN38.3	
Communication	CAN, RS485	
Cycle Life	6,000≥80%DOD, 70%EOL@25°C/0.5C	

C&I ESS

CE-186372



Product Features

- High safety : Industry-leading lithium iron phosphate battery with high efficiency and safety to extend cycle life
- Small size : Highly integrated system with compact design for land saving
- Better stability : Integrated liquid-cooling temperature control system makes the temperature difference stable, system safe and reliable
- Excellent transportability : Modular design makes transportation fast and installation easy
- Intelligent : Deep learning of system algorithm, real-time collection of status information of each component, intelligent terminal display
- Easy to operate and maintain : System self-diagnostic function, support remote operation and upgrade, save operation and maintenance cost

Technical Data

Model	CE-186372
Battery Cell	LFP3.2V/280Ah
Configuration	1P416S
Nominal Voltage (V)	1,331.2v
Nominal Capacity (kWh)	372.7
Max. Charge/Discharge Ratio	≤0.5P
Protection Degree	IP54
Dimension (mm)	1,300L×1,300W×2,360H
Weight (kg)	≈3,500
Operation Temperature Range(℃)	-30~50,>45 Derating
Operation Humidity Range	0-95%(No Condensing)
BMS Communication Interface	RS485, CAN, Ethernet
Max. Operating Altitude (m)	5,000 (2,000 Derating)
Firefighting	Aerosol / Heptafluoropropane / Perfluorohexanone (Optional)
Heat Management	Intelligent liquid cooling

C&I ESS

CE100215-B



Product Features

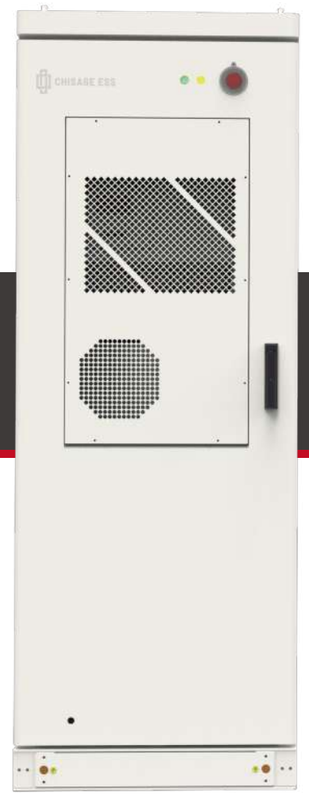
- Built-in forklift location and hoisting position make transportation and installation easier
- Internal module design make maintenance easier
- Multi-level fuse protection, interlock design
- Safe LiFePO4 battery
- High usable energy ratio, less self-consumption
- Contains no toxic heavy metals or caustic materials

Technical Data

Model	CE100215-B
DC Parameter (Battery)	
Battery Type	LFP/280Ah
Series and Parallel	1P240S
Rated Capacity (Ah)	280
Rated Voltage (V)	768
Rated Energy (kWh)	215
Continuous Charge/Discharge Current (A)	0.5C
Cycle life	8000 cycles, 70%Eol @25°C 0.5C
AC Parameter	
Rated Voltage (V)	400, 3 phase
Voltage Range (V)	320~460
Frequency (Hz)	50
THD	< 3% (rated power)
Rated Charging Power (kW)	100
Rated Discharge Power (kW)	100
Power Factor	0.8 lagging ~ 0.8 leading
Efficiency	
Maximum Charging Efficiency	94.00%
Maximum Discharge Efficiency	94.00%
Protection	
Anti Reverse for Battery Connection	Yes
DC Overcurrent Protection	Yes
AC Overcurrent Protection	Yes
AC Overvoltage Protection	Yes
General	
Operation Temperature Range (°C)	-25~+55
Protection Degree	IP54
Cooling	Air conditioner + air cooling
Dimension (mm)	1500W*1250D*2435H
Weight (kg)	about 3000kg
Firefighting	Perfluorohexanone/Aerosol

Lithium Battery Cabinet System

OBE47/54/62/70



Product Features

- Longer life cycles
- Higher power density
- Max. 1C discharge current
- Higher usable energy ratio, less self-consumption
- Contains no toxic heavy metal or caustic materials
- Up to 20 cabinets can be parallel connected
- Flexibility modular design, from 47kWh to 70kWh each battery cabinet

Technical Data

Model	OBE47	OBE54	OBE62	OBE70
Connection series	144S	168S	192s	216S
Nominal Energy (kWh)	46.08	53.76	61.44	69.12
Nominal Capacity (Ah)	100			
Nominal Voltage (V)	460.8	537.6	614.4	691.2
Operation Voltage Range (V)	403.2~518.4	470.4~604.8	537.6~691.2	604.8~777.6
Recommend Charge Current (A)	100			
Max. Continuous Charge Current (A)	100			
Recommend Discharge Current (A)	100			
Max. Continuous Discharge Current (A)	100			
Max. Parallel Quantities (system)	20			
Operation Temperature	Charge Temperature: 0ºC~60ºC Discharge Temperature: -20~60ºC			
Operation Humidity	20~80%RH (No condensing)			
Protection Degree	IP54			
Dimension (mm)	690W x 1,950H x 1,200D			
Net Weight (kg)	850	915	980	1,045
Certification	IEC62619, CE-EMC, LVD, ROHS, IP54, UN38.3			
Communication	CAN, RS485			
Cycle Life	≥6,000 80%EOL@25ºC 1P			

08



CONTAINER BESS

01 CE166280-L-H

02 CESS-3354/6709L

CHISAGE ESS

Liquid Cooling Battery

CE166280-L-H



Product Features

- 30% higher energy density than air cooling system, decrease installation area
- Smart liquid cooling temperature control system, decrease 20% auxiliary power supply, save operation cost
- IP65 dual firefighting and anti-explosion design
- Low-temperature difference to 3℃, extend battery lifetime
- Realtime battery state monitoring, dynamic adjustment of energy management strategy

Technical Data

Model	CE166280-L-H
Cell Capacity (Ah)	280
Nominal Voltage (V)	166.4
Nominal Energy (Wh)	46,592
Usable Energy (Wh)	41,933
Operation Voltage Range (V)	135.2~187.2
Standard Charge Current (A)	140
Standard Discharge Current (A)	140
Max. Charge Current (A)	140
Max. Discharge Current (A)	140
Temperature Range	Charge Temperature: 0~55℃ Discharge Temperature: -20~55℃
Operation Humidity	20~95%RH (No condensing)
Protection Degree	IP65
Dimension (mm)	808W×1,172D×242H
Net Weight (kg)	350
Certification	CE, UN38.3
Battery Rack	
Connection Series	1P52S×8
Norminal Voltage (V)	1,331
Nominal Energy (kWh)	372.7
Usable Energy (kWh)	335.5
Operation Voltage Range (V)	1,081.6~1,497.6@(0~55℃)
Standard Charge Current (A)	140
Standard Discharge Current (A)	140
Max. Charge Current (A)	140
Max. Discharge Current (A)	140
Dimension (mm)	925W×1,180D×2,390H
Approximate Weight (kg)	3,000
Life Cycles	6,000 cycles@80% DoD

Liquid Cooling Bess

CESS-3354/6709L



Product Features

- 30% higher energy density than air cooling system, decrease installation area
- Smart liquid cooling temperature control system, decrease 20% auxiliary power supply, save operation cost
- IP67 dual firefighting and anti-explosion design
- Centrally symmetrical layout design, liquid cooling units are mutually backup
- Low-temperature difference to 3℃, extend battery lifetime
- Realtime battery state monitoring, dynamic adjustment of energy management strategy

Technical Data

Storage System		
Model	CESS-3354L	CESS-6709L
Battery Cell	LFP-280Ah	
Nominal Voltage (V)	1,331.20	
Operation Voltage Range (V)	1,164.8~1,497.6	
Nominal Capacity (kWh)	3,354	6,709
Nominal Charge Ratio	≤0.5C	
Nominal Discharge Ratio	≤0.5C	
Protection Degree	IP67(Battery Pack IP54)	
Dimension (mm)	6,058W×2,600H×2,896D	12,192W×2,600H×2,896D

09

PORTABLE POWER STATION

01 CE-P600CS
CE-P1000CS

02 CE-P2000CS
CE-P2000CS-PRO

CHISAGE ESS

Portable Power Station

CE-P600CS
CE-P1000CS



Product Features

- 100W high power PD output
- Safety LiFePO4 battery built inside
- DC/PV input with MPPT function to charge the battery
- High power factor portable inverter with pure sine wave output
- Bi-directional inverter that supports AC fast charging within 90mins to full capacity
- Smart drive mode support 1200/2000W+ high power resistance load operation

Technical Data

Model	CE-P600CS		CE-P1000CS	
Battery				
Battery Type	LiFePO4			
Battery Nominal Voltage (V)	22.4			
Battery Operation Voltage (V)	18.2~26			
Battery Nominal Capacity (Wh)	672		1,008	
Nominal Charge Current (A)	25		36	
Nominal Discharge Current (A)	30		45	
Max. Discharge Current (A)	30		45	
Life Cycles	>2,000@25°C, 1C discharge			
AC Input				
AC Charge Power (W)	480		800	
Nominal Voltage (V)	110	230	110	230
Voltage Range (V)	90~140	180~270	90~140	180~270
Nominal Frequency (Hz)	60	50	60	50
Frequency Range (Hz)	55~65	45~55	55~65	45~55
Power Factor	>0.99@max. charging power			
DC Input				
Max. Car Charge Input Power (W)	120			
Max. Solar Charge Input Power (W)	200			
DC Input Voltage Range (V)	10~30			
Max. DC Input Current (A)	10			
AC Output				
Nominal AC Power (W)	600		1,000	
Surge Power (W)	1,200		2,000	
Nominal Grid Voltage (V)	110	230	110	230
Nominal Grid Frequency (Hz)	60	50	60	50
Nominal AC Current (A)	5.5	2.6	9	4.3
DC Output				
USB-A (x1)	5V/2.4A			
QC3.0 (x2)	5V/3A, 9V/2A, 12V/1.5A			
USB-TypeC (x2)	5V/3A, 9V/3A, 12V/3A, 20V/5A			
Car Port (x1)	13.2V/10A			
DC Port (x2)	13.2V/10A			
Car & DC Port Total Max. Power (W)	132			
Wireless Charger	10W			
LED Light	3W			
Efficiency				
Max. Battery to AC Efficiency (%)	92.5	93.0	92.5	93.0
Max. AC to Battery Efficiency (%)	92			
General Data				
Dimension (mm)	348Wx192Dx264H			
Weight (kg)	9.5		11.1	
Cooling	Forced air cooling			
Operation Temperature Range (°C)	0~40(charge), -15~40(discharge)			
Operation Relative Humidity (RH(%))	0~95, Non condensation			
Protection Degree	IP20			
Noise (dB)	<65			
Communication Interface	Wifi			
Display	LCD			
Protection	AC output over current, AC output short circuit, AC charging over current, AC output over/under voltage, AC output over/under frequency, Inverter over temperature, AC charging over/under voltage, Battery temperature high/low, Battery over/under voltage			

Portable Power Station

CE-P2000CS
CE-P2000CS-PRO



Product Features

- 100W high power PD output
- Safety LiFePO4 battery built inside
- DC/PV input with MPPT function to charge the battery
- High power factor portable inverter with pure sine wave output
- Bi-directional inverter that supports AC fast charging within 90mins to full capacity
- Smart drive mode support 1200/2000W+ high power resistance load operation

Technical Data

Model	CE-P2000CS		CE-P2000CS-PRO	
	110Vac	230Vac	110Vac	230Vac
Battery Input				
Battery Type	LiFePO4			
Battery Nominal Voltage (V)	48			
Battery Operation Voltage (V)	40~60			
Battery Nominal Capacity (Wh)	1,440		1,920	
Nominal Charge Current (A)	25			
Nominal Discharge Current (A)	45			
Max. Discharge Current (A)	60			
Life Cycles	>2,000@25°C, 1C discharge			
AC Input				
Nominal AC Power (W)	2,000		2,000	
Surge Power (W)	4,000		4,000	
Nominal Grid Voltage (Vac)	110	230	110	230
Nominal Grid Frequency(Hz)	60	50	60	50
Max.AC Current(A)	22	12	22	12
Nominal AC Current (A)	18	9	18	9
THDv at Nominal Power (%)	<1.5			
DC Input				
Max. Car Charge Input Power (W)	120			
Max. Solar Charge Input Power (W)	500			
DC Input Voltage Range (V)	10~50			
Max. DC Input Current (A)	11			
AC Output				
Nominal AC Power (W)	600		1,000	
Surge Power (W)	1,200		2,000	
Nominal Grid Voltage (V)	110	230	110	230
Nominal Grid Frequency (Hz)	60	50	60	50
Nominal AC Current (A)	5.5	2.6	9	4.3
DC Output				
USB-A (x1)	12W, 5V, 2.4A			
QC3.0 (x2)	18W Max per port,5V/3A, 9V/2A, 12V/1.5A			
USB-TypeC (x2)	100w Max per port, 5V, 9V, 12V: 3A; 20V:5A			
Car Port and DC Port Totally Max. Output	132W			
Car Port (x1)	132W, 13.2V, 10A			
DC Port (x2)	132W Max per port, 13.2V, 10A			
Wireless Charger (w)	10			
Efficiency				
Max. Battery to AC Efficiency (%)	92.5	93.0	92.0	93.0
Max. AC to Battery Efficiency (%)	93			
Protection	AC output over current; AC output short circuit; AC charging over current;AC output over/under voltage; AC output over/under frequency, inverter over temperature;AC charging over/under voltage; Battery temperature high/low; Battery over/under voltage			
General Data				
Dimension (mm)	355Wx287Dx226H		355Wx347Dx226H	
Weight (kg)	17.2		20.5	
LCD(mm)	97x48			
Cooling	Forced Air Cooling			
Operation Temperature Range (°C)	0~40°C(Charging),-15~40°C(Discharging)			
Operation Relative Humidity [RH(%)]	0-95%, Non Condensation			
Ingress Protection	IP20			
Noise(DB)	<65			
Communication Interface	WiFi			
LED Light (w)	3W			



CHISAGE ESS CLOUD

01 WiFi Plug

CHISAGE ESS

WiFi+BLE

Circular Connector



Chisage ESS residential monitoring solution takes great care to ensure that your PV system is in excellent operation. It has been developed to help you get the most out of your Chisage ess inverter. Tailored for customers and installers, it gives you complete control. Gaining access to features such as the update / upgrade feature, remote programming.

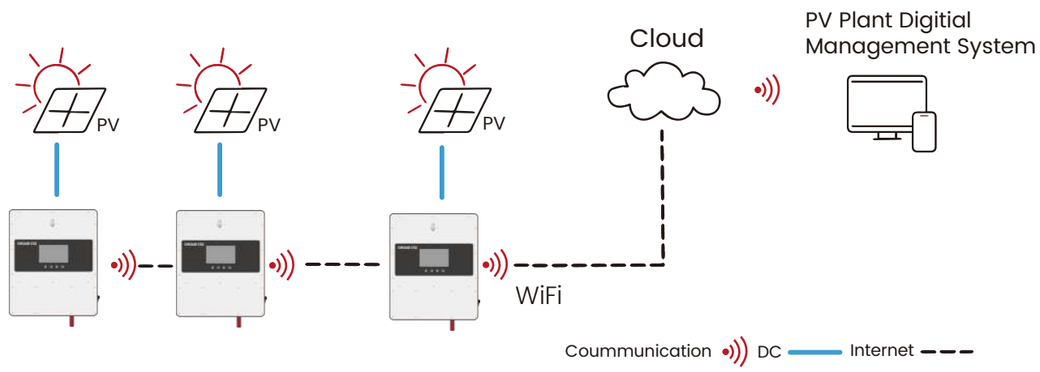
Users can easily access the monitoring page via PC web or phone APP.

Product Features

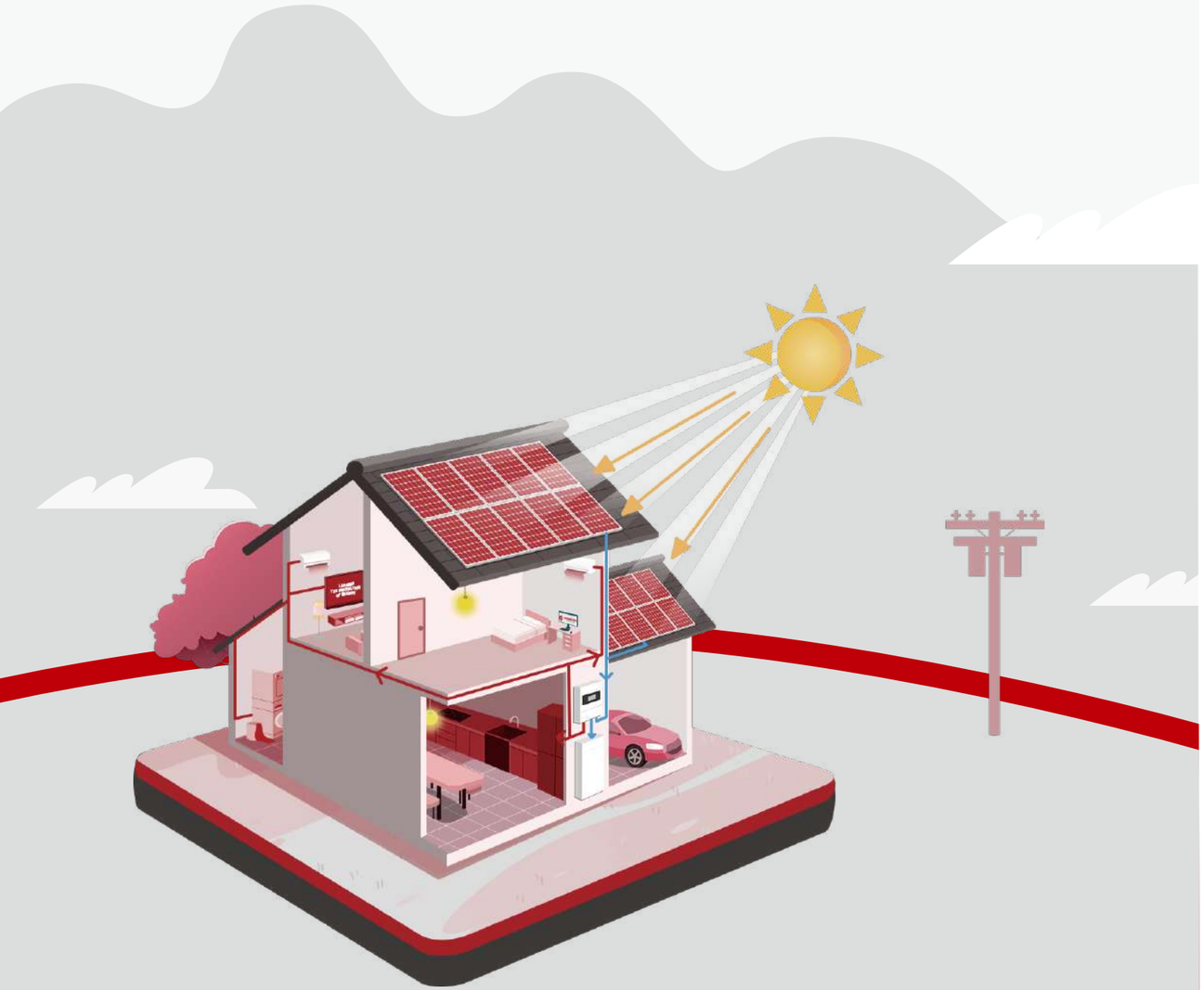
- Plug & Play
- Remote Maintenance
- Secure Encryption
- Quick Disassembly Design
- Breakpoint Continuation
- Outdoor Feasibility
- Local Maintenance

Technical Data

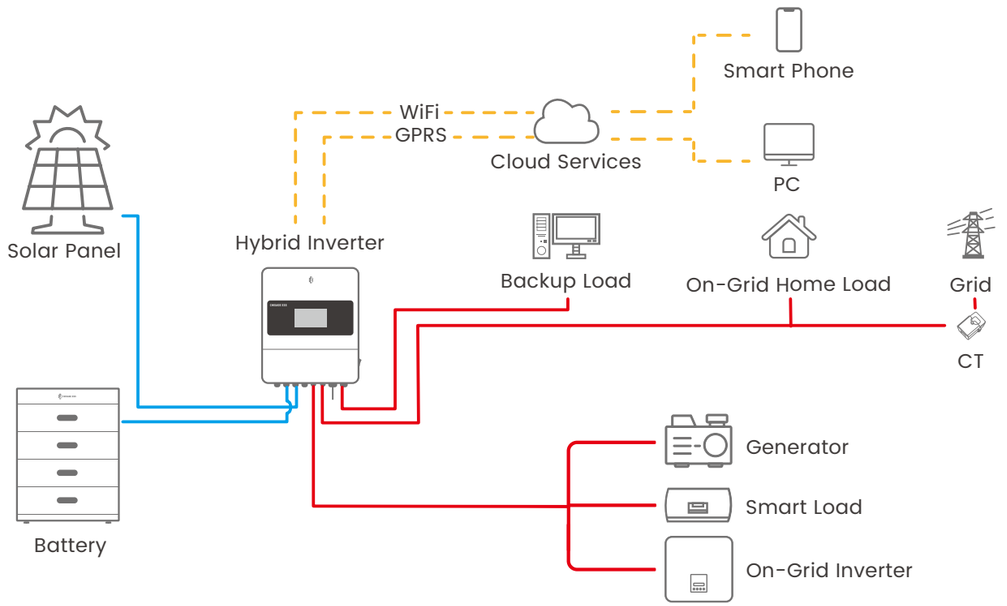
Product Model	Magpie(Wi-Fi+BLE)
Electrical	
Supply Voltage	DC 5V - 12V
Current consumption	Max. 550mA; Avg. 120mA
Wi-Fi	
Standrod	802.11 b/g/n
Security Mode	WPA/WPA2/WPA2-Enterprise
Operating Mode	Station/AP/Station + AP
Antenna	Bullt-in
Others	802.11 n(2.4 GH2) up to 150Mbps
Bluetooth	
Standard	V4.2
Antenna	Bullt-in
Interface	
Physical Interface	Circular Connector
Electrical Interface	RS485-HD / RS232 / Uart TTL
Communlcatlon Parameters	9600bps 8/N/1 (Default)
LED Indicator	
DEV	Device Communication Indicator
NET	Network Communication indicator
Mechanical	
Dimension (Bare Device)	98,0 24.0 24.0 mm
Weight	About 40g -48g
Installation	Plug-in-out
Environmental	
Operating temperature range	-20°C~+60°C
Relative Humility(non-condensing)	0%~100%
Maintenance	
Upgrading Methods	OTA / Webserver / Bluetooth
Inverter Upgrading	Remote / Local
Parmenters Setup	Remote / Local
Others	
Degree of Protection	IPX7
Flame Retardant Rating	UL94 V-0
Anti-UV	F1



SYSTEM SOLUTION



Chisage ESS
On/Off Grid Solar Hybrid Home System



Product Features

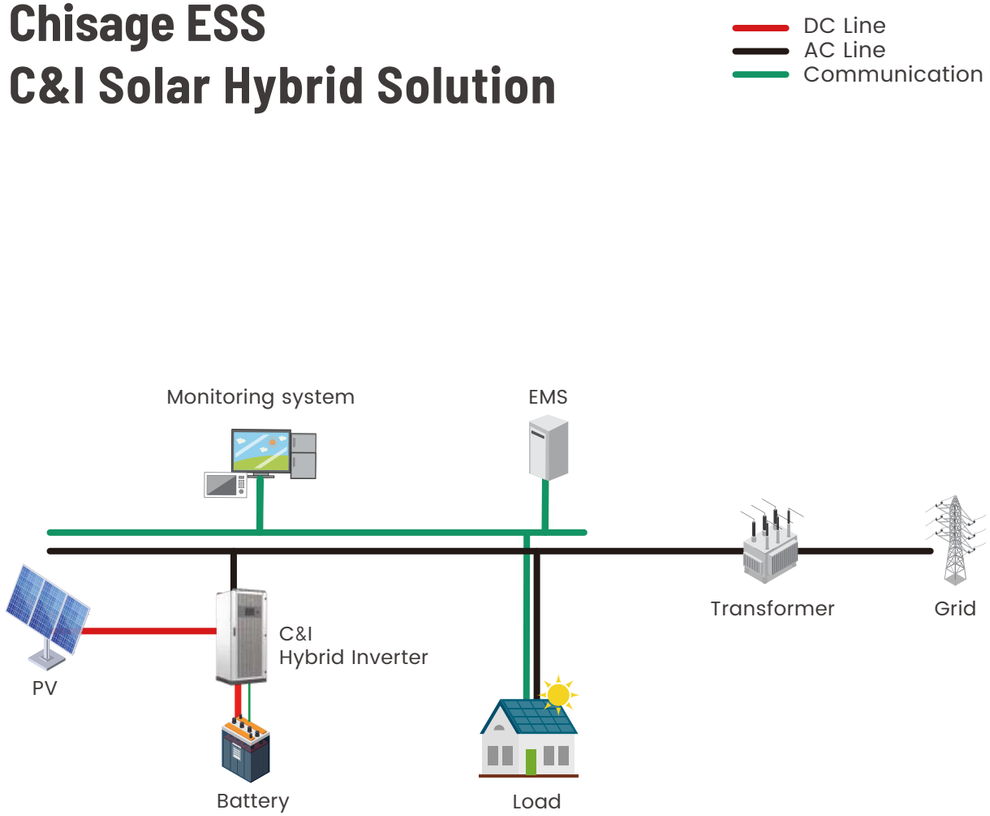
- Wall mounted & rack battery wait for your choose, meet different requirements
- Support lithium battery active function, easier battery maintenance
- IP65 inverter protection degree
- Support on-grid & off-grid modes

Support generator function

AC couple function available with grid connected inverter

Smart meter, WiFi datalogger optional, monitor your load consumption 24 hours

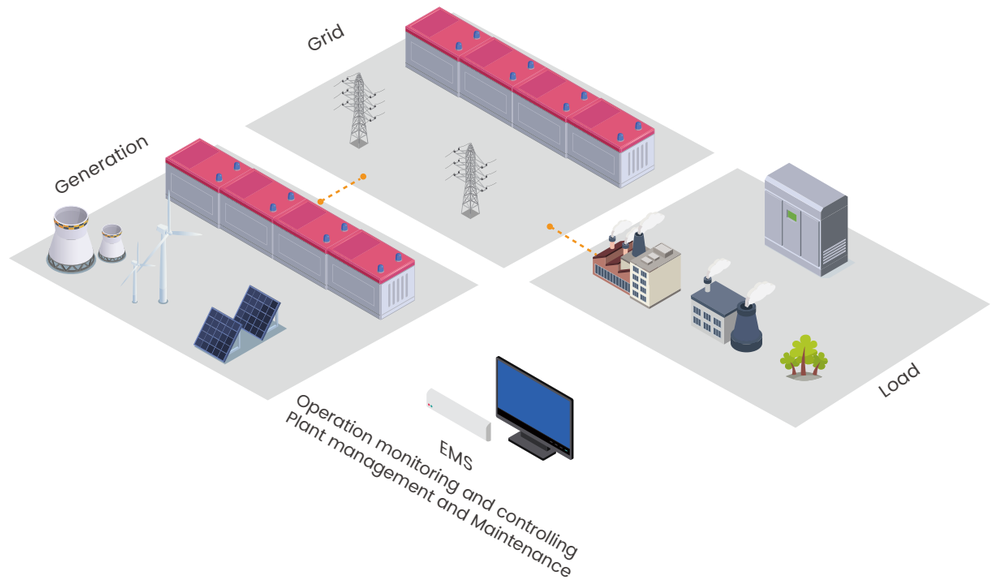
Chisage ESS
C&I Solar Hybrid Solution



Product Features

- Reactive power compensation and APF
- With strong load adaptability and reliability
- Peak shaving and valley filling
- Integrate energy management system

Chisage ESS
Smart Micro Grid Solution



Product Features

- Support both DC couple and AC couple solutions
- Support both BTM and FTM systems controlled by smart EMS,self-consumption, peak shaving and valley filling, voltage and frequency regulation etc.

PROJECT REFERENCE



Application:
Inverter -- Mars-12G1-LE
Solar Panel -- CE410-27V-MH

Time: May, 2023
Address: Lebanon
Capacity: 12kW/10kWh



Application:
Inverter -- Mars-12G1-LE
Solar Panel -- CE410-27V-MH

Time: Jun, 2023
Address: South Africa
Capacity: 12kW/10kWh



Application:
CE -- 2501300

Time: Dec, 2021
Address: Ningbo, China
Capacity: 250kW/1.3MWh



Application:
Inverter -- Mars-12G1-LE
Solar Panel -- CE410-27V-MH

Time: Jun, 2023
Address: South Africa
Capacity: 12kW/30kWh



Application:
CE -- 100200

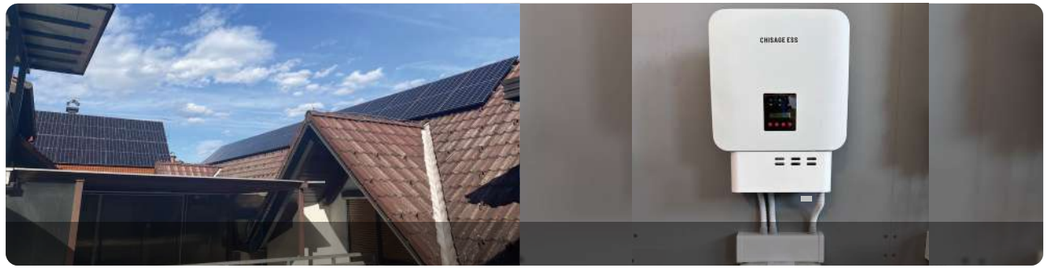
Time: Jun, 2022
Address: Ningbo, China
Capacity: 100kW/200kWh



Application:
Solar Panel -- CE410-27V-MH
Battery -- CE48200-W

Time: Oct, 2023
Address: Thailand
Capacity: 10kW/10kWh

PROJECT REFERENCE



Application:
Inverter -- CE-3P15KEG
Solar Panel -- CE410-27V-MH

Time: Jul, 2023
Address: Slovenia
Capacity: 15kW



Application:
Inverter -- Mars-14G1-LE
Solar Panel -- CE410-27V-MH

Time: March,2024
Address: Vietnam
Capacity: 14kW/10kWh



Application:
Inverter -- Mars-12G1-LE
Solar Panel -- CE410-27V-MH

Time: Oct, 2023
Address: Germany
Capacity: 12kW*2pcs



Application:
Inverter -- Mars-14G2-LE
Solar Panel -- CE410-27V-MH

Time: Jan, 2024
Address: Poland
Capacity: 14kW/15kWh



Application:
Inverter -- Mars-14G1-LE
Solar Panel -- CE410-27V-MH

Time: March,2024
Address: Vietnam
Capacity: 14kW/10kWh



Application:
Inverter -- Mars-14G2-LE
Solar Panel -- CE410-27V-MH

Time: Oct, 2023
Address: Lithuania
Capacity: 14kW/10kWh