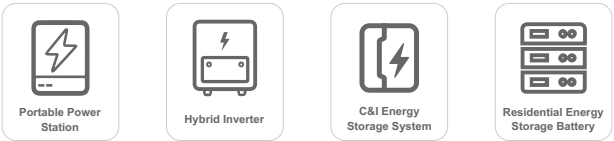


EAST GROUP CO., LTD.



ESS Brochure



Off-Grid Inverter

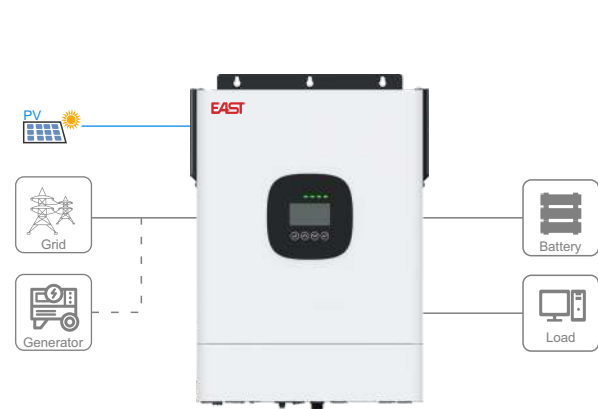
EAO3K/5K1PLVG3-LA

Single phase

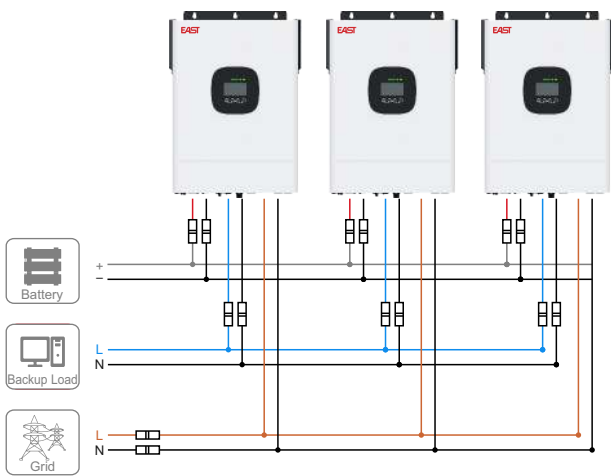


-  Flexible setting of multiple working modes according to preferences
-  Real time remote monitoring system via WiFi module, easy operation and maintenance
-  Graphical LCD and keypad design, user-friendly operation interface
-  High charge/discharge efficiency, compatible with lithium battery and lead-acid battery

Typical application



Parallel application



Specification

MODEL	EAO3K1PLVG3-LA	EAO5K1PLVG3-LA
Rated power	3000VA/3000W	5000VA/5000W
Parallel function	No	Yes, 6 units max
AC input		
Rated input voltage	120Vac	
Input voltage range	90~140Vac	
Rated input frequency	50/60Hz self-adapting	
Input frequency range	40~65Hz	
Rated input current	36A	61.33A
Max. input current	40A	80A
AC output		
Rated AC output voltage	120Vac	
Output settable voltage	100V/110V/120V	
Output settable frequency	50Hz/60Hz	
Rated AC output current	25.00A	41.67A
Overload capacity	60s@105%~110% rated load; 10s@110%~150% rated load; 5s@150%~180% rated load; 300ms@>180% rated load;	
THDu	<5%, linear load; <10%, non-linear load	
Efficiency(peak value)	93%	
Surge power	6000VA, 5 cycles	10000VA, 5 cycles
Switching time	10ms(Typical)	
Battery		
Battery type	Lead-acid battery/lithium battery	
Rated voltage	24Vdc	48Vdc
Charging voltage	27Vdc(default), 24~29.2Vdc settable	54Vdc(default), 48~58.4Vdc settable
Overcharge protection voltage	30.2Vdc	60.5Vdc
Rated discharge current	130A	113.7A
PV/AC charging		
PV charging	MPPT	
Max. PV input power	4000W	6000W
Max. PV input open circuit voltage	450Vdc	
MPPT operation range voltage	120~430Vdc	
Max. PV input current	18A	27A
Max. PV charging current	100A	
Max. AC charging current	100A	
Max. battery charging current	100A	
Others		
Dimension(W×H×D)(mm)	322×390×122	332×420×142
Net weight(kg)	9	12
Operating environment	-10℃~50℃	
IP rating	IP20	
Protections	Input over/under voltage protection, input over/under frequency protection, output overload, output short-circuit, radiator overtemperature protection, fan fault detection etc.	
Communication interfaces	USB/RS485, dry contact, WiFi(optional)	

Hybrid Inverter

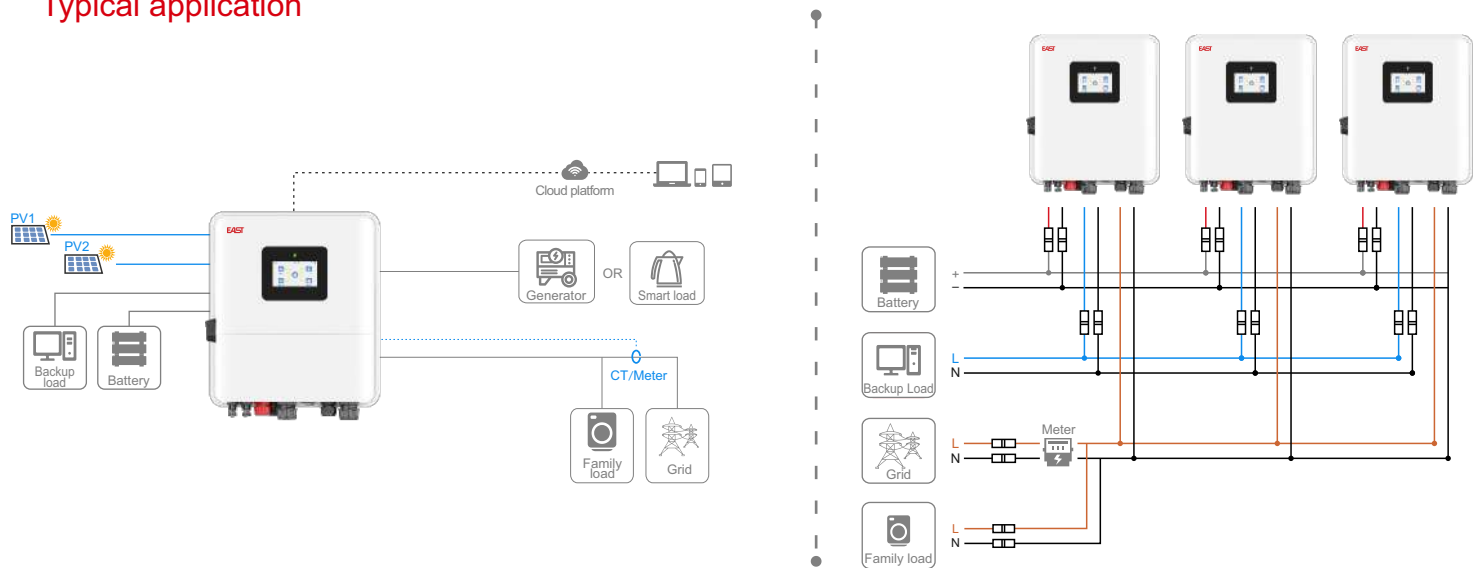
ESH3.5K1PLVG2-LA

Single phase



- Dual independent MPPT channels, 213% oversized PV capacity, max. 7.8kW PV input
- Powerful parallel capability: support multi units single-phase parallel connection
- Compatible with 40~60V lithium & lead-acid batteries, max. 75A battery charge/discharge current
- IP65 dustproof & waterproof design, equipped with seamless UPS backup transfer <10ms for power outage

Typical application



Specification

MODEL	ESH3.5K1PLVG2-LA
PV input	
Max. input power	7800W
Max. input voltage	500V
Start-up voltage	90V
MPPT voltage range	70V~480V
Max. input current	18A
Max. short circuit current	25A
Number of MPPT/ max. number of PV strings	2/1
Battery input/output	
Battery voltage range	40V~60V
Max. charge/ discharge current	75A/75A
Max. charge/ discharge power	3600W
Battery BMS communication	RS485/CAN
AC output(EPS & Smart)	
Rated output power	3157W@110V, 3444W@120V, 3645W@127V
Max. apparent output power	3472.7VA@110V, 3788.4VA@120V, 4009.5VA@127V
Rated output current	28.7 A
Rated output voltage/ frequency	110V/120V/127V, 50Hz/60Hz, L+N+PE
Power factor	>0.99(0.8 leading~0.8 lagging)
THDi	<3%@rated power
EPS switching time	<10ms
Starting surge	10s@2×rated power
THDu	<3%(Linear load)
AC input(Grid & Smart)	
Max. AC charging power (grid to battery)	3600W
Max. grid input current	41A
Max. diesel generator input current	41A
Rated input voltage/ frequency	110V/120V/127V, 50Hz/60Hz, L+N+PE
Efficiency	
Max. efficiency	97.3%
European efficiency	96.50%
MPPT efficiency	99%
General parameters	
Display	LED+LCD
Communications	CAN(for BMS), RS485, CAN(for parallel), 1×DO, 1×DI, Wi-Fi
IP rating	IP65
Operating temperature	-25°C~60°C(>45°C derating)
Humidity	0~100%
Cooling mode	Natural Cooling
Noise level	<45dB
Dimensions(W×H×D)(mm)	367×421×215
Net weight(kg)	15

Hybrid Inverter

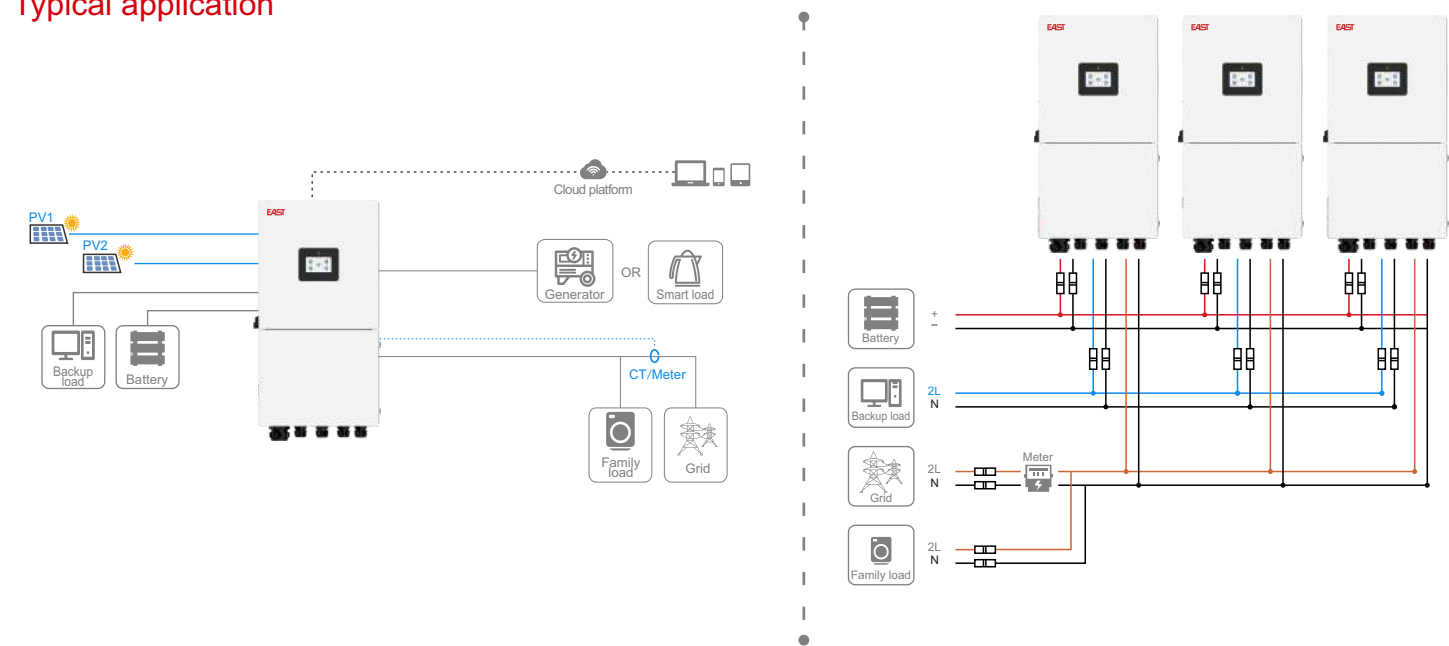
ESH6K/7.5K/8K/12K2PLVG2-LA

Split phase



- Three independent MPPT channels, 30A current per MPPT channel, max. 210A battery charge/discharge current
- Compatible with 40~60V lithium & lead-acid batteries, support generator connection, smart load output and AC coupling
- Powerful parallel capability: max. 9 units parallel connection, compatible with both on-grid and off-grid working modes
- IP65 dustproof & waterproof design, built-in AC & DC circuit breakers, optional AFCI arc fault protection
- Support multiple operation modes with timing schedule for battery charging and discharging
- Equipped with local touch screen and cloud remote monitoring system to check real-time operation data

Typical application



Specification

MODEL	ESH6K2PLVG2-LA	ESH7.5K2PLVG2-LA	ESH8K2PLVG2-LA	ESH12K2PLVG2-LA
PV input				
Max. input power	9000W	12000W	15000W	
Max. input voltage		600V		
Start-up voltage		90V		
MPPT voltage range		70V~540V		
Max. input current	30A/22A	30A/22A/22A		
Max. short circuit current	40A/30A	40A/30A/30A		
Number of MPPT/ Max. number of PV strings	2/2	3/2		
Battery input/output				
Battery voltage range		40V~60V		
Max. charge/ discharge current	210A/130A	210A/180A	210A/180A	210A/210A
Max. charge/ discharge power	10000W/6000W	10000W/7500W	10000W/8000W	10000W/10000W
Battery BMS communication		RS485/CAN		
AC output(Backup & Smart)				
Rated output power	6000W	7500W	8000W	12000W
Max. apparent output power	6600VA	7500VA	8800VA	12000VA
Rated output current	25A@240V/50A@120V	31.25A@240V/ 62.5A@120V	33.3A@240V/ 66.6A@120V	50A@240V/ 100A@120V
Rated output voltage/ frequency		L1/L2/N/PE, 120/240V, 50/60Hz		
Power factor		>0.99(0.8 leading~0.8 lagging)		
THDi		<3%@rated power		
EPS switching time		<10ms		
Starting surge		5min@1.2×rated power/1min@1.4×rated power		
THDu		<3%(Linear load)		
AC input(Grid & Gen)				
Max. AC charging power (grid to battery)		10000W		
Max. grid input current	40A	52.5A	52.5A	62.5A
Max. generator input power		11000W		
Rated input voltage/ frequency		L1/L2/N/PE, 120/240V, 50/60Hz		
Efficiency				
Max. efficiency		94.5%		
CEC. efficiency		96.50%		
MPPT efficiency		99%		
General parameters				
Display		LED+LCD		
Communications		CAN(for BMS), RS485(for meter), RS485, CAN(for parallel), Optional: WiFi /LAN		
Max. operation altitude		4000m(>2000m derating)		
IP rating		IP65		
Operating temperature		-25~60°C(>45°C derating)		
Humidity		0~100%		
Cooling mode		Smart Cooling		
Noise level		<45dB		
Dimensions(W×H×D)(mm)		420x790x255		
Net weight(kg)		44		

Hybrid Inverter

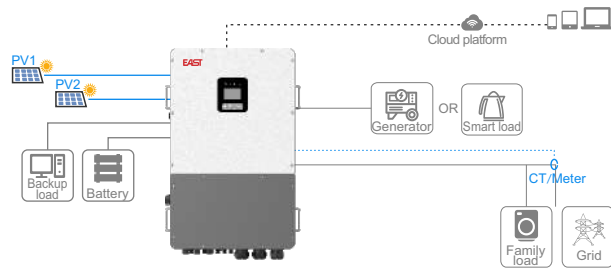
ESH30K3PHVG1-LA

Three phase

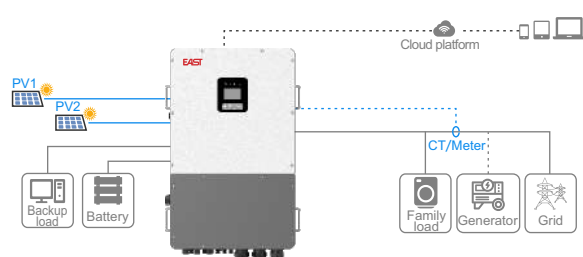


- 4 independent MPPT, wide 150~850V PV voltage range for higher yield
- <20ms UPS-level switching, AC coupling ready for system retrofit
- Max. 2×100A charge/discharge, compatible with genset, up to 8 units parallel
- Full aluminum IP66 enclosure, stable operation under harsh environments

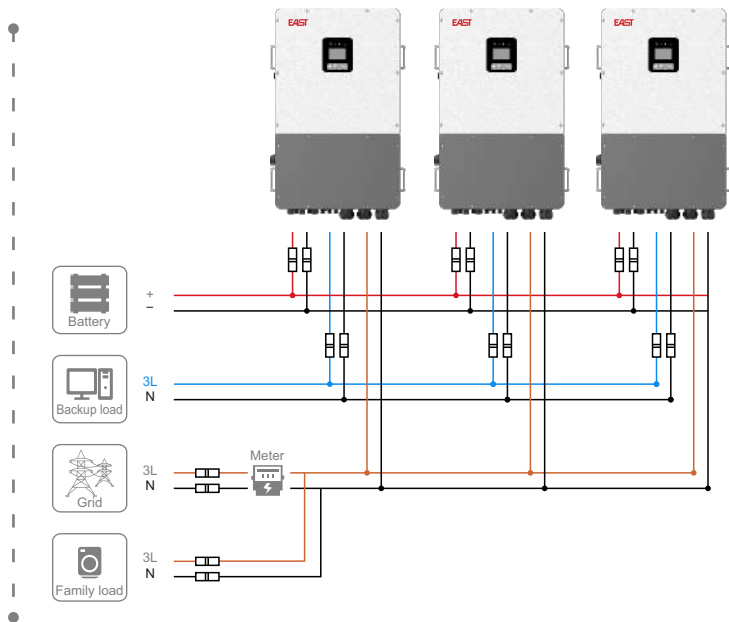
Typical application 1



Typical application 2



Parallel application



Specification

MODEL	ESH30K3PHVG1-LA
PV input	
Max. input power	60kW
Max. input voltage	1000Vdc
Start-up voltage	200Vdc
MPPT voltage range	150~850V
Max. input current	8×20A
Max. short circuit current	8×30A
Number of MPPT/ max. number of PV strings	4/2+2+2+2
Battery input/output	
Battery voltage range	150~850V
Max. charge/ discharge current	100A/100A
Max. charge/ discharge power	30kW/30kW
Battery BMS communication	CAN/RS485
AC output(EPS & Smart)	
Rated output power	30kW
Max. apparent output power	30kVA
Rated output current	83.3A
Rated output voltage/ frequency	120/208V, 3L+N+PE, 50/60Hz
Power factor	>0.99(0.8 leading~0.8 lagging)
THDi	<3%@rated power
EPS switching time	<20ms
Starting surge	30s@1.1×rated power/10s@1.2×rated power/0.2s@1.5×rated power
THDu	<3%(Linear load)
AC input(Grid & Smart)	
Max. AC charging power (grid to battery)	60kW
Max. grid input current	166.6A
Max. diesel generator input current	91.6A
Rated input voltage/ frequency	120/208V, 3L+N+PE, 50/60Hz
Efficiency	
Max. efficiency	98.0%
European efficiency	97.00%
MPPT efficiency	99.90%
General parameters	
Display	LED+APP
Communications	RS485/WiFi/Bluetooth/LAN/CAN/DRM/Meter
IP rating	IP66
Operating temperature	-25~+60°C(>45°C linear derating to 60%)
Humidity	0~100%(non-condensing)
Cooling mode	Intelligent Air Cooling
Noise level	<65 dB
Dimensions(W×H×D)(mm)	544×880×278
Net weight(kg)	88

Hybrid Inverter

ESH60K3PHVG1-US

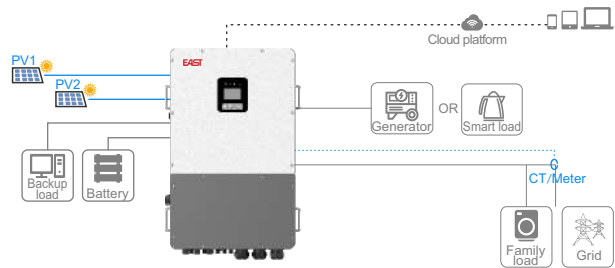
Three phase



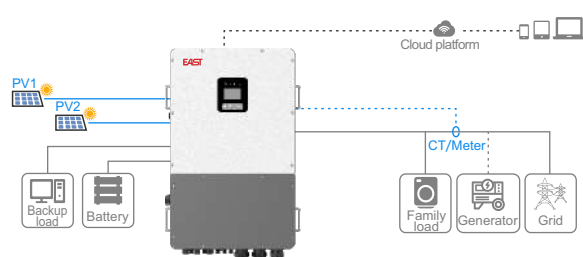
- 4 independent MPPT, wide 150~850V PV voltage range for higher yield
- <20ms UPS-level switching, AC coupling ready for system retrofit

- Max. multi-path high current charge/discharge, compatible with genset, up to 8 units parallel
- Full aluminum IP66 enclosure, stable operation under harsh environments

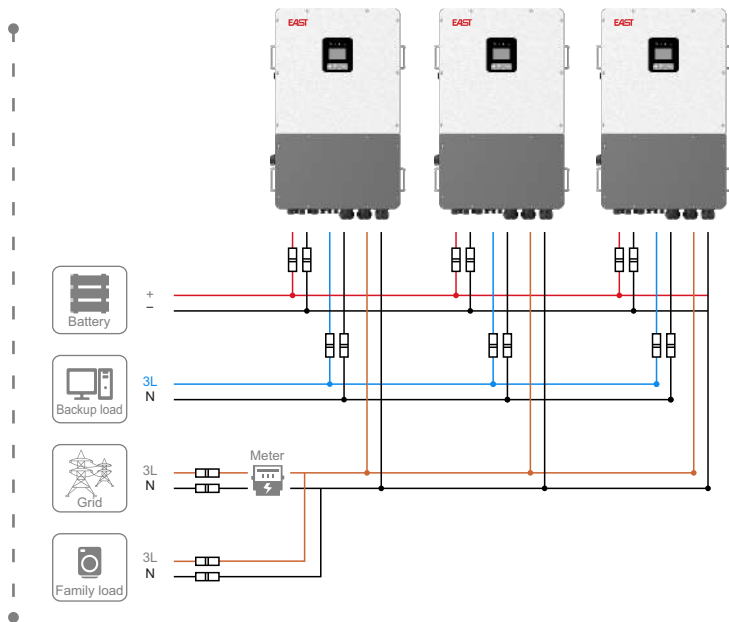
Typical application 1



Typical application 2



Parallel application



Specification

MODEL	ESH60K3PHVG1-US
PV input	
Max. input power	100kW
Max. input voltage	1000Vdc
Start-up voltage	200Vdc
MPPT voltage range	150~850V
Max. input current	8×20A
Max. short circuit current	8×30A
Number of MPPT/ max. number of PV strings	4/2+2+2+2
Battery input/output	
Battery voltage range	150~850V
Max. charge/ discharge current	100A/100A
Max. charge/ discharge power	60kW/60kW
Battery BMS communication	CAN/RS485
AC output(EPS & Smart)	
Rated output power	60kW
Max. apparent output power	60kVA
Rated output current	72.2A
Rated output voltage/ frequency	277/480V, 3L+N+PE, 50/60Hz
Power factor	>0.99(0.8 leading~0.8 lagging)
THDi	<3%@rated power
EPS switching time	<20ms
Starting surge	30s@1.1×rated power/10s@1.2×rated power/0.2s@1.5×rated power
THDu	<3%(Linear load)
AC input(Grid & Smart)	
Max. AC charging power (grid to battery)	120kW
Max. grid input current	144.4A
Max. diesel generator input current	92.6A
Rated input voltage/ frequency	277/480V, 3L+N+PE, 50/60Hz
Efficiency	
Max. efficiency	98.0%
European efficiency	97.00%
MPPT efficiency	99.90%
General parameters	
Display	LED+APP
Communications	RS485/WiFi/Bluetooth/LAN/CAN/DRM/Meter
IP rating	IP66
Operating temperature	-25~+60°C(>45°C linear derating to 60%)
Humidity	0~100%(non-condensing)
Cooling mode	Intelligent Air Cooling
Noise level	<65 dB
Dimensions(W×H×D)(mm)	544×880×278
Net weight(kg)	88

C&I Energy Storage System

30k/100kWh-120kWh

Diesel-PV-ESS



- 

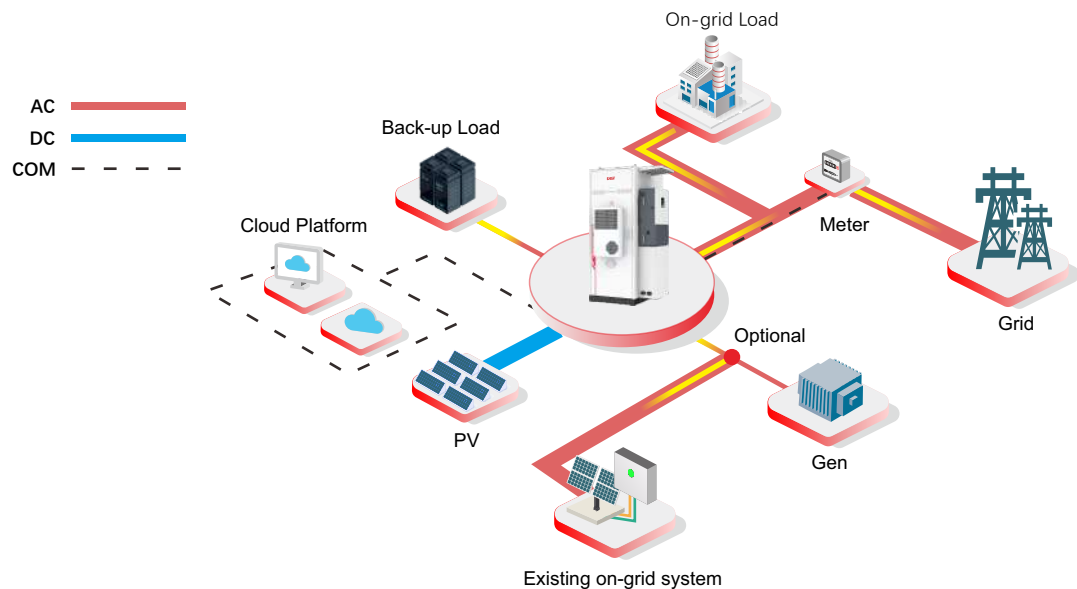
4 independent MPPT, wide 150~850V PV voltage range for higher yield
- 

Max. 2×100A charge/discharge, compatible with genset, up to 8 units parallel
- 

<20ms UPS-level switching, AC coupling ready for system retrofit
- 

Full aluminum IP66 enclosure, stable operation under harsh environments

Typical application



Specification

MODEL	30kW-100kWh	30kW-120kWh
System		
Rated energy capacity	100kWh	120kWh
Rated system power	30kW	
On-grid and off-grid switching time	<20ms	
Max. conversion efficiency	98.00%	
European/MPPT efficiency	97%/99.9%	
IP rating	Battery cabinet(IP54), Inverter(IP66)	
Operating temperature	-25~+60°C(>45°C linear derating to 60%)	
Relative humidity	<95%(non-condensing)	
Altitude	<4000m	
Cooling method	Air cooling	
Noise	<65dB	
Fire protection system	cabinet level gas fire-fighting(perfluorohexanone)/aerosol+water fire-fighting	
Wired/ wireless communication	RS485/WiFi/Bluetooth/LAN/CAN/DRM/Meter	
Human-computer interaction	LED+APP	
Standards	UL 1741-2021(UL1741SB), CSA C22.2 No 107.1-16, IEEE Std C37.90.2-2004, IEEE C62.45-2002, IEEE Std C62.41.2-2002, IEEE Std C37.90.1-2024, UL 1741-2021(UL1741SA), CSA C22.2 No 107.1-16, IEEE 1547-2018 & 1547a-2020 & 1547.1-2020(SRD V2.0), UL 1741 CRD-PCS, UL1699B, CEC, SGIP, CSIP	
Dimensions(W×H×D)(mm)	800x2100x1200	
Weight(kg)	≤1300	
Battery		
Cell	314Ah	
Configuration	1P100S	1P120S
Rated energy	100kWh	120kWh
Rated voltage	320Vdc	384Vdc
Voltage range	280~365Vdc	336~438Vdc
Inverter		
Inverter model	ESH30K3PHVG1-LA	
PV parameters		
Max. input power	60kW	
Max. input voltage	1000Vdc	
Input voltage range	150~950V	
Starting voltage	200Vdc	
Max. input current per string	8×20A	
Max. short-circuit current per string	8×30A	
MPPT voltage range	150~850Vdc	
MPPT quantity/ strings per MPPT	4/2+2+2+2	
Grid parameters		
Rated input/output power	30kW	
Voltage range	120/208V, 3L+N+PE	
Rated input current	83.3A	
Rated output current	83.3A	
Power factor	>0.99(0.8 leading~0.8 lagging)	
THDi	<3%@rated power	
Diesel engine parameters		
Rated power	30kW	
Voltage range	104~127V(L-N)/208~254V(L-L)	
Rated current	83.3A	
Backup parameters		
Rated power	30kW	
Rated voltage	120/208V, 3L+N+PE	
Rated frequency	50Hz/60Hz	
Rated current	83.3A	

C&I Energy Storage System

60k/120kWh

Diesel-PV-ESS



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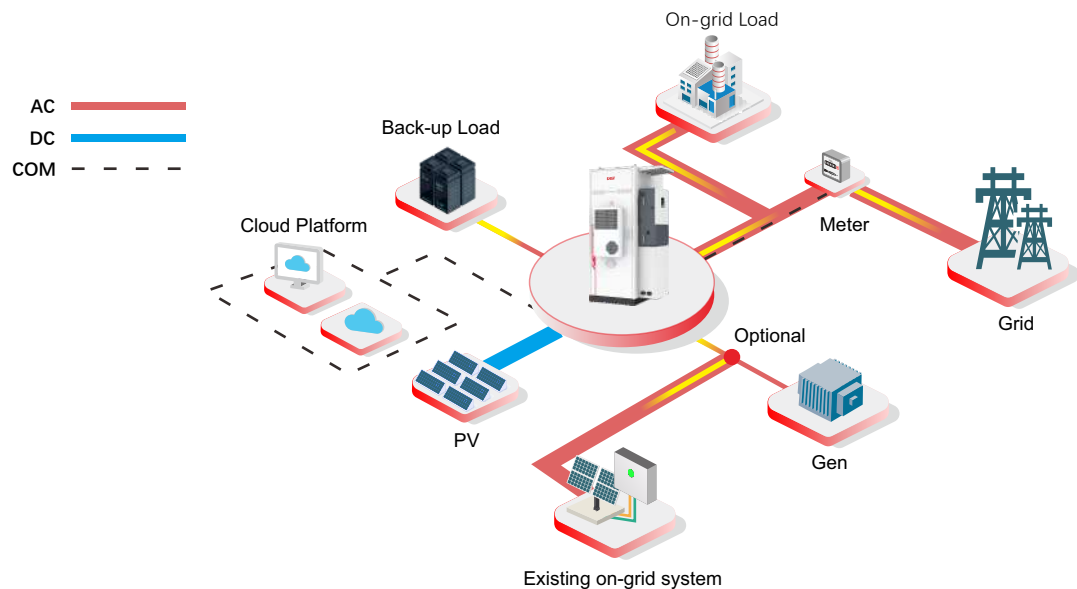
4 independent MPPT, wide 150~850V PV voltage range for higher yield
- 

Max. multi-path high current charge/discharge, compatible with genset, up to 8 units parallel
- 

<20ms UPS-level switching, AC coupling ready for system retrofit
- 

Full aluminum IP66 enclosure, stable operation under harsh environments

Typical application



Specification

MODEL	60kW-120kWh
System	
Rated energy capacity	120kWh
Rated system power	60kW
On-grid and off-grid switching time	<20ms
Max. conversion efficiency	98.00%
European/MPPT efficiency	97%/99.9%
IP rating	Battery cabinet(IP54), Inverter(IP66)
Operating temperature	-25~+60°C(>45°C linear derating to 60%)
Relative humidity	<95%(non-condensing)
Altitude	<4000m
Cooling method	Air cooling
Noise	<65dB
Fire protection system	cabinet level gas fire-fighting(perfluorohexanone)/aerosol+water fire-fighting
Wired/ wireless communication	RS485/WiFi/Bluetooth/LAN/CAN/DRM/Meter
Human-computer interaction	LED+APP
Standards	UL 1741-2021(UL1741SB), CSA C22.2 No 107.1-16, IEEE Std C37.90.2-2004, IEEE C62.45-2002, IEEE Std C62.41.2-2002, IEEE Std C37.90.1-2024, UL 1741-2021(UL1741SA), CSA C22.2 No 107.1-16, IEEE 1547-2018 & 1547a-2020 & 1547.1-2020(SRD V2.0), UL 1741 CRD-PCS, UL1699B, CEC, SGIP, CSIP
Dimensions(W×H×D)(mm)	800x2100x1200
Weight(kg)	≤1300
Battery	
Cell	314Ah
Configuration	1P120S
Rated energy	120kWh
Rated voltage	384Vdc
Voltage range	336~438Vdc
Inverter	
Inverter model	ESH60K3PHVG1-US
PV parameters	
Max. input power	100kW
Max. input voltage	1000Vdc
Input voltage range	150~950V
Starting voltage	200Vdc
Max. input current per string	8x20A
Max. short-circuit current per string	8x30A
MPPT voltage range	150~850Vdc
MPPT quantity/ strings per MPPT	4/2+2+2+2
Grid parameters	
Rated input/output power	60kW
Voltage range	277/480V, 3L+N+PE
Rated input current	144.4A
Rated output current	72.2A
Power factor	>0.99(0.8 leading~0.8 lagging)
THDi	<3%@rated power
Diesel engine parameters	
Rated power	60kW
Voltage range	249~305V(L-N)/432~528V(L-L)
Rated current	72.2A
Backup parameters	
Rated power	60kW
Rated voltage	277/480V, 3L+N+PE
Rated frequency	50Hz/60Hz
Rated current	72.2A

Residential Energy Storage Battery

Residential energy storage systems offer high-quality new energy products that are simple to install, easy to operate, safe to use, and environmentally friendly, suitable for powering household appliances. They power household appliances, storing grid electricity in batteries during off-peak periods and then transferring it to the grid during peak periods. Their modular design allows multiple batteries to be connected in parallel to expand capacity, ensuring greater storage capacity for both household use and grid delivery.

Product types include rack-mounted, stacked, vertical, and wall-mounted series, compatible with mainstream inverters on the market. Voltage levels include 24V, 48V, and 750V. Basic battery system capacities include 100Ah, 200Ah, and 314Ah. Multiple parallel groups are supported.

51.2V 102AH Rack-mounted LiFePO4 Battery



- Flexible Expansion: Max. 2 units(parallel connection at battery side); Max. 63 units(parallel connection at inverter busbar side)
- Integrated PACK: reduced line loss, enhanced energy density
- Comprehensive Protection: Advanced BMS with active fuse
- High compatibility, integrated design with mature and stable performance

MODEL		R5-21			
Model type		EFP48100R			
Cathode material		LiFePO4			
Rated voltage/V		51.2			
Cell capacity/Ah		102			
Rated energy/kWh		5.22	10.44	15.67	20.89
Standard parallel unit/P		1	2	3	4
Output power/kW		5	10	10	10
Charge voltage/V		58.4			
Operating voltage range/V		41.6~58.4			
Max. charge current/A		50	100	150	200
Max. discharge current/A		100	200	200	200
Operating temperature/°C	Charge temperature/°C	0~55			
	Discharge temperature/°C	-20~55			
Weight/kg		46	92	138	184
Dimension(W×D×H)(mm)		483×450×153	483×450×306	483×450×459	483×450×612
IP rating		IP21			
Certification		UN38.3, CE-EMC			
Cooling method		Natural cooling			
Communication		CAN/RS485, Bluetooth+APP			
Cycle life		≥6000 Cycles@0.5C/90%DOD@70%EOL, 25±2°C			
Display configuration		ON/OFF button, SOC indicator light(button LCD optional)			

51.2V 102AH Stacked LiFePO4 Battery



- Modular independent battery packs, support free vertical stacking expansion
- Uniform single-pack capacity, flexible capacity adjustment, easy to upgrade later
- Built-in independent BMS, automatic parallel communication between packs, no extra controller required
- Single pack fault can be replaced separately without affecting overall operation, easy maintenance

MODEL		S5-54						
Model type		EFP48100R						
Cathode material		LiFePO4						
Rated voltage/V		51.2						
Cell capacity/Ah		102						
Rated energy/kWh		5.22	10.44		15.67		20.89	
Standard parallel unit/P		1	2		3		4	
Output power/kW		5	5	10	5	10	5	10
Charge voltage/V		58.4						
Operating voltage range/V		41.6~58.4						
Max. charge current/A		50	100		120	150	120	200
Max. discharge current/A		100	120	200	120	200	120	200
Operating temperature/°C	Charge temperature/°C	0~55						
	Discharge temperature/°C	-20~55						
Weight/kg		11+50×1		11+50×2		11+50×3		11+50×4
Dimension(W×D×H)(mm)		580×390×380		580×390×560		580×390×740		580×390×920
IP rating		IP54						
Certification		UN38.3, CE-EMC						
Cooling method		Natural cooling						
Communication		CAN/RS485, Bluetooth+APP						
Cycle life		≥6000 Cycles@0.5C/90%DOD@70%EOL, 25±2°C						
Display configuration		Quick-connect terminal, ON/OFF button, SOC indicator light						

51.2V Wall-mounted/Floor-mounted Battery



- Ultra-thin wall-mounted design, saves floor space, wall installation
- Integrated design, beautiful and concise appearance, suitable for indoor home environment
- High safety, dustproof and moisture-proof, suitable for indoor household use
- Optional wheels easy to move and carry, suitable for garages and balconies

MODEL	WF5	WF10	WF16
Cathode material	LiFePO4		
Rated voltage/V	51.2	51.2	51.2
Cell capacity/Ah	100	206	314
Rated energy/kWh	5.12	10.55	16.07
Standard parallel unit/P	1	1	1
Output power/kW	5	10	8
Charge voltage/V	58.4	58.4	58.4
Operating voltage range/V	41.6~58.4	41.6~58.4	41.6~58.4
Max. charge current/A	100	100	160
Max. discharge current/A	100	200	200
Operating temperature/°C	0~55		
	-20~55		
Weight/kg	56	101	125/116
Dimension(W×D×H)(mm)	440×200×725 (785 with wheels)	470×235×765 (825 with wheels)	480×230×895 (955 with wheels)
IP rating	IP65/IP21		
Certification	UN38.3, CE-EMC		
Cooling method	Natural cooling		
Communication	CAN/RS485		
Cycle life	≥4000 Cycles@0.5C/90%DOD@ 80%EOL, 25±2°C	≥6000 Cycles@0.5C/90%DOD@ 80%EOL, 25±2°C	≥8000 Cycles@0.5C/90%DOD@ 80%EOL, 25±2°C
Display configuration	ON/OFF button, LCD touchscreen		

CORE BUSINESS

Power Supply

UPS/EPS power supply, rail transit power supply, special power supply

Smart Energy

Solar inverter, EV charging piles, power generation system, sodium-ion/lithium-ion battery

Digital Industry & Smart Energy Integrated Solutions Provider

Data Center

Cloud computing data center, IT infrastructure, precision air conditioner

Energy Storage

Energy storage system, PCS, EMS, BMS, micro-grid network and smart distribution network

Digital technology helps all walks of life with smart upgrade!

STRONG RESEARCH & DEVELOPMENT TEAM

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600+ R&D Engineers

800+ Patents

70+ Core Technology

