

## Energy Storage

## GSL 8K Hybrid Inverter ( 48V DC )



### Flexible

- Wide input voltage range.
- Compatible with lead-acid or lithium-ion batteries or other battery.

### State-of-art Design

- Fashion apperance, light weight, smart operation.
- Natural cooling, low noise.
- IP65 , wall mounted design, saving space.
- Touch screen LCD.

### Reliable

- Compatible anti counter flow function.
- Battery reverse connect protection.

### Advanced

- Intelligent energy management system for home.
- Power dispatching and demand side response management.
- Distributed virtual power station management.

## Application Scenario



Villa



Communication  
base station



Nomadic area



Farm

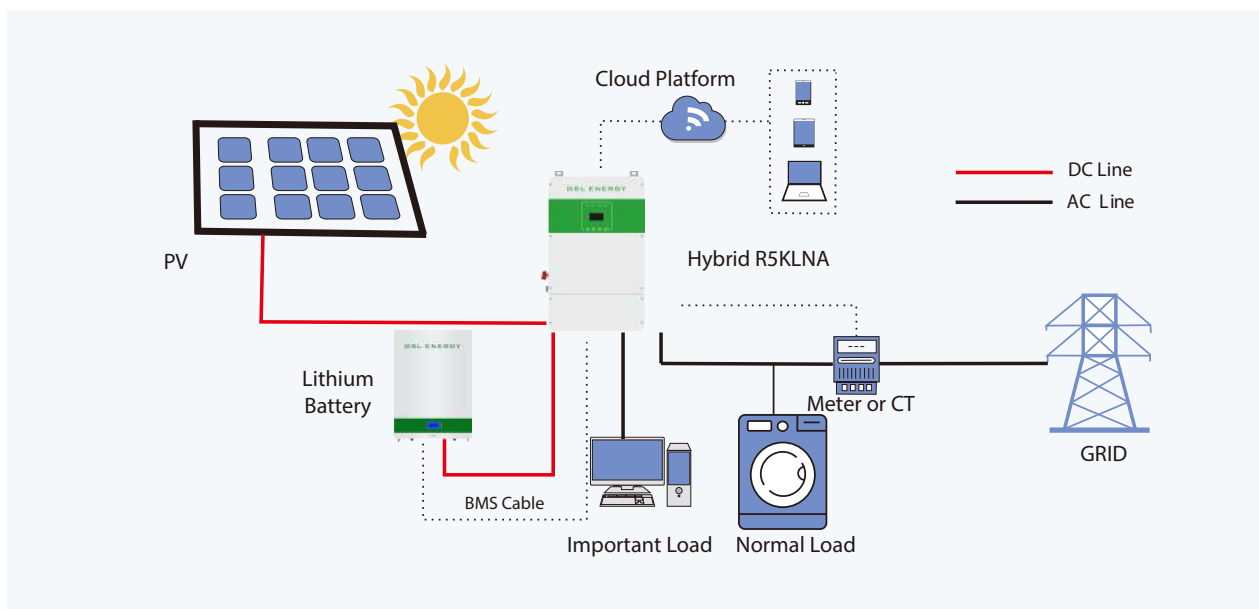


Household



Field  
power supply

## Product Topology



Model	GSL-H-8KLV-US		
PV Input			
PV input power	12KW		
MPPT number	4		
PV voltage range	350V/85V - 500V		
MPPT voltage range	120V-500V		
Single MPPT input current	12A		
Battery			
Max charging/discharging current		190A/190A	
Battery Voltage range		48V	
Battery Type	Lithium-ion,Lead-acid		
Back-up AC Output			
Rated Backup output power		8KVA	
Max Backup output power		10kVA 60S. 12KVA 1S	
Backup AC output Voltage	120/240Vac(split phase), 208Vac(2/3 phase),230Vac(single phase)		
AC Frenquency	50/60Hz		
Output THDI	< 2%		
On Grid AC Output			
Rate AC Output Power		8KVA	
AC Output Voltage	120/240Vac(split phase), 208Vac(2/3 phase),230Vac(single phase)		
AC Output Frenquecny	50/60Hz		
Grid Type	Split phase 、 2/3 phase 、 Single Phase		
Max Output Current		38.3A	
AC reverse charging	Yes		
PF	0.8leading...0.8lagging		
Output THDI	< 2%		
Efficiency			
Max Efficiency	>=98.2%		
CEC Efficiency	>=97.2%		
Protection			
Ground protection	YES		
AFCl protection	YES		
islanding protection	YES		
DC disconnect detection	YES		
Battery Reverse protection	YES		
Battery charge and discharge protection	YES		
insulation testing	YES		
GFCI	YES		
DC anti-thunder	YES		
AC anti-thunder	YES		
Input overvoltage&under-voltage protections	YES		
Output overvoltage&under-voltage protections	YES		
AC&DC over-current protection	YES		
AC short-circuit current protection	YES		
overheating protection	YES		
General Data			
Operation Temperature range	-25~ +60°C		
environment humidity	0-95%		
Altitude	0~4000M ( over 2000M derating)		
IP rank	IP65/NEMA 3R		
Weight	45kg		
Dimension(W x H x D)	430x710x210mm		
Cooling	Fan Cooling		
Noise(dB)	<29dB		
Display	LCD		
Communication	Modbus, RS485 , WIFI,4G		
Safty	EN61000-6-1, EN61000-6-3, FCC 15 class B		
EMC	IEC62109-1, IEC62109-2		
On Grid	UL1741,IEEE1547,RULE21,VDE 0126,AS4777,NRS2017,G98,G99		

## Energy Storage

## GSL Hybrid Inverter ( UL Standard )



### Flexible

- The model covers 7.6kw-11.4kw, with unified appearance design.
- Wide battery input range, compatible with a variety of lithium batteries and lead-acid.

### State-of-art Design

- Fashion apperance, convenient wiring.
- IP65 design, natural cooling, external fan free design, low noise , improve the whole machine life.

### Reliable

- Battery reverse connect protection, the charge and discharge are controlled by intelligent software to improve the battery life.
- Input and output lightning protection, PV arcing detection.
- Discharge at full power and disconnect the charger automatically when the battery is ful.
- Off grid full power output, transient 1.5 times overload, soft start mode, with air conditioning, water pump and other loads.
- Insulation detection, leakage battery, ground fault detection, island protection to prevent electric shock.

### Advanced

- Maximum efficiency up to 98.2%.
- 4 independent MPPT design, making full use of light energy in different directions.
- Distributed virtual power station management node.
- Remote monitoring of computers and mobile phones.

### Application Scenario



Villa



Communication  
base station



Nomadic area



Farm

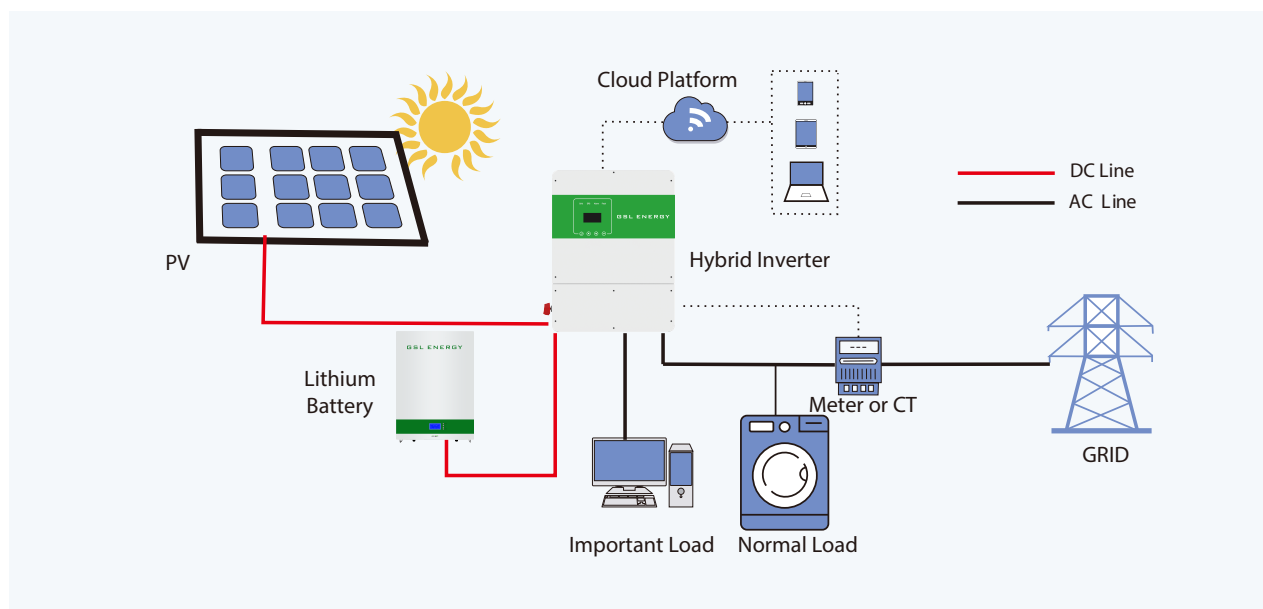


Household



Field  
power supply

### Product Topology



Model	GSL-H-12KHV-US		
PV Input			
PV Input Power	15.6KW		
MPPT Number	4		
Start-up Voltage	120		
MPPT Voltage Range	125V-500V		
Max PV Input Voltage	500V		
Single MPPT Input Current	12A		
Battery			
Max Charging/Discharging Current	80A/80A		
Battery Voltage Range	85V~400V		
Battery Capacity Range	6.6 to 66 kWh		
Battery Type	Lithium,Lead-acid		
Communication	CAN,RS485		
Back-up AC Output			
Rated Backup Output Power	12KVA		
Max Backup Output Power	15KVA 60S . 18KVA 1S		
Backup AC Output Voltage	110-120/220-240 split phase		
AC Frenquency	50/60Hz		
Output THDI	< 2%		
On Grid AC Output			
Rate AC Output Power	± 120/240V 12KVA		
AC Output Voltage	211~264V@240V		
AC Output Frenquecny	50/60Hz （45 to 54.9Hz / 55 to 65Hz）		
Power Factor	0.8leading...0.8lagging		
Max Output Current	50A		
AC Reverse Charging	Yes		
THDI	< 2%		
Efficiency			
Max Efficiency	>=98.2%		
CEC Efficiency	>=97.2%		
Protection			
Complete Protection	Ground protection;AFCI protection;islanding protection;DC disconnect detection;Battery Reverse protection;Battery charge and discharge protection;insulation testing;GFCI;DC&AC anti-thunder;Overvoltage and under-voltage protections;AC&DC over-current protection;AC short-circuit current protection;overheating protection		
General Data			
Output Conduit Size	25.4mm		
PV Input Conduit Size	25.4mm		
Battery Input Conduit Size	34.5mm		
Temperature Range	-25 ~ +60°C		
Environment Humidity	0-95%		
Altitude	0~4000M （Derating when over 2000m）		
IP Grade	IP65		
Weight	30kg		
Dimension (W x H x D)	530x 660 x 200mm		
Cooling	Natural cooling		
Noise Emission(dB)	<29dB		
Display	LCD		
Communication	Modbus, RS485 , WIFI,4G		
Self-consumption At Night	< 2.5 W (with battery enabling < 5 W)		
No Transformer	YES		
Safety	UL1741SA all options, UL1699B, CSA 22.2		
EMC	FCC Part 15 ClassB		