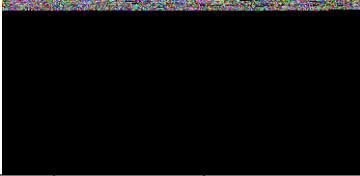


Utility Charge Mode Specifications	
Nominal Input Voltage	230Vac
Input Voltage Range	90-280Vac
Nominal Output Voltage	Dependent on battery type
Max. Charge Current	150A
Charge Current Regulation	10-150A (Adjustable unit is 1A)
Over Charge Protection	Yes
Solar Charging & Grid Charging	
Max. PV Open Circuit Voltage	500V
PV Voltage Working Range	90V-450V
Max. Input Power	10000W(5000W for single PV)
Max. Solar Charging Current	150A
Max. Charging Current(PV+Grid)	150A
Max. Input Current	20A×2(MAX 40A)
Min. Startup Voltage	100V

Charge Algorithm			
Algorithm	Three stage: Boost CC (Constant current stage) -> Boost CV (Constant voltage stage) -> Float (Constant voltage stage)		
Charging Curve			
Battery Type Setting	Battery Type	Boost CC/CV	Float
	AGM	56.4V	54V
	Flooded	58.4V	54V
	Self - defined	Adjustable, up to 60V	
	Lithium		

Inverter Mode Specifications	
Model	IVEM8048
Rated Output Power	8000VA
	8000W
Nominal DC Input Voltage	48V
Output Voltage Waveform	Pure sine wave
Nominal Output Voltage	230Vac±5%
Nominal Output Frequency (Hz)	50±0.3Hz/60Hz±0.3Hz (Adjustable)
Parallel capability	Yes, up to 6 units
Peak Efficiency	94.5%
Over-Load Protection (SMPS load)	5s@ ≥ 150% load; 10s@105%~150%load
Surge Rating	2* rated power for 5s
Capable of Starting Electric	Yes
Output Short Circuit Protection	Yes
Cold Start Voltage	46V
Low Battery Alarm	45.0V
Load < 50%	44.0V
@Load ≥ 50%	
Low Battery Alarm Recovery	47.0V
Load < 50%	46.0V
@Load ≥ 50%	
Low DC Input Shut-down	43.0V
Load < 50%	42.0V
@Load ≥ 50%	
High DC Input Alarm & Fault	62V±0.4V
High DC Input Recovery	56.4V±0.4V
General Specifications	
Operating Temperature	0°C~55°C
Range Storage Temperature	-15°C~60°C
Net Weight (Kg)	23.7KG
Product Size (D*W*H)	607×406×141MM
Package Dimension (D*W*H)	712×582×259MM

INSTALLATION

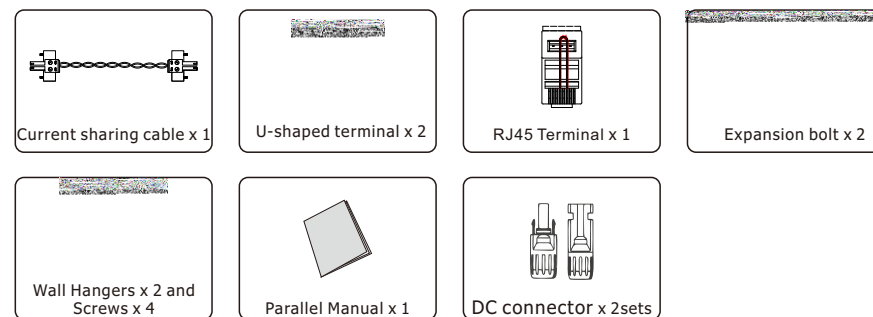
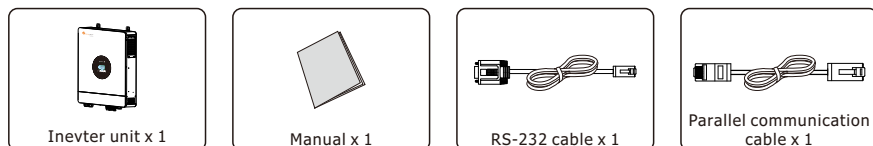
Safety Guidance

Warning marks inform users of conditions which can cause serious physical injury or death, or damage to the device. They also tell users how to prevent the dangers. The warning marks used in this operation manual are shown below:

	- After receiving this product, first confirm the product package is intact. If any question, contact the logistic company or local distributor immediately. - The installation and operation of inverter must be carried out by professional technicians who have received professional trainings and thoroughly familiar with all the contents in this manual and the safety requirements of the electrical system.
	Do not carry out connection/disconnection, unpacking inspection and unit replacement operations on the inverter when power source is applied. Before wiring and inspection, users must confirm the breakers on DC and AC side of inverter are disconnected and wait for at least 5 minutes.
	- Ensure there is no strong electromagnetic interference caused by other electronic or electrical devices around the installation site. - Do not refit the inverter unless authorized. - All the electrical installation must conform to local and national electrical standards
	Do not touch the housing of the inverter or the radiator to avoid scald as they may become hot during operation.
	Ground with proper technics before operation.
	Do not open the surface cover of the inverter unless authorized. The electronic components inside the inverter are electrostatic sensitive. Do take proper anti-electrostatic measures during authorized operation.
	The inverter needs to be reliably grounded.
	Ensure that DC and AC side circuit breakers have been disconnected and wait at least 5 minutes before wiring and checking.

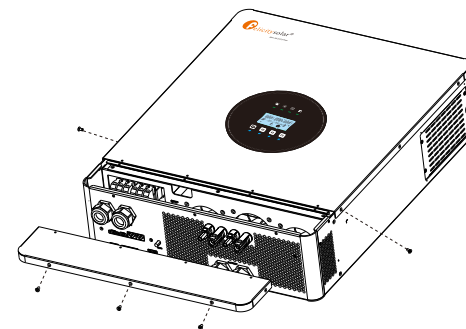
Unpacking and Inspection

Before installation, please inspect the unit. Be sure that nothing inside the package is damaged. You should have received the following items inside of package:



Preparation

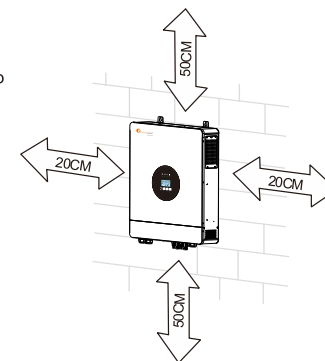
Before connecting all wirings, please take off bottom cover by removing five screws as shown below.



Mounting the Unit

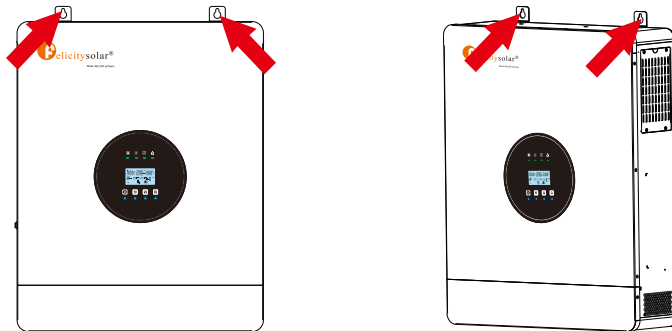
Consider the following points before selecting where to install:

- Do not mount the inverter on flammable construction materials.
- Mount on a solid surface
- Install this inverter at eye level in order to allow the LCD display to be read at all times.
- The ambient temperature should be between 0°C and 55°C to ensure optimal operation.
- The recommended installation position is to be adhered to the wall vertically.
- Be sure to keep other objects and surfaces as shown in the right diagram to guarantee sufficient heat dissipation and to have enough space for removing wires.



SUITABLE FOR MOUNTING ON CONCRETE OR OTHER NON-COMBUSTIBLE SURFACE ONLY.

Install the unit by screwing two screws. It's recommended to use M4 or M5 screws.



Battery Connection

CAUTION: For safety operation and regulation compliance, it's requested to install a separate DC over-current protector or disconnect device between battery and inverter. It may not be requested to have a disconnect device in some applications, however, it's still requested to have over-current protection installed. Please refer to typical amperage in below table as required fuse or breaker size.

WARNING! All wiring must be performed by a qualified personnel.

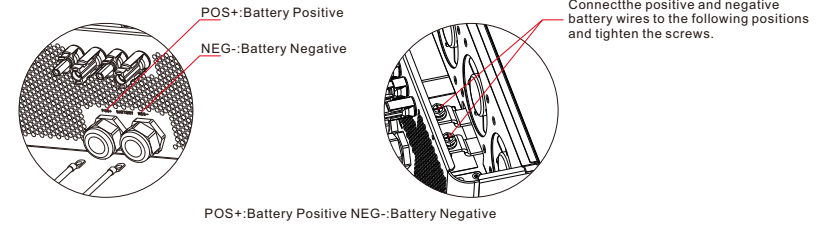
WARNING! It's very important for system safety and efficient operation to use appropriate cable for battery connection. To reduce risk of injury, please use the proper recommended cable and terminal size as below.

Recommended battery cable and terminal size:

Model	Wire Size	Cable (mm ²)	Torque Value(Max)
8KVA	1*1AWG	50	2 Nm

Please follow below steps to implement battery connection:

1. Assemble battery ring terminal based on recommended battery cable and terminal size.
2. Connect all battery packs as units requires. It's suggested to connect at least 200Ah capacity battery.
3. Insert the ring terminal of battery cable flatly into battery connector of inverter and make sure the bolts are tightened with torque of 2 Nm. Make sure polarity at both the battery and the inverter/charge is correctly connected and ring terminals are tightly screwed to the battery terminals.



WARNING: Shock Hazard
Installation must be performed with care due to high battery voltage in series.

CAUTION!! Do not place anything between the flat part of the inverter terminal and the ring terminal. Otherwise, overheating may occur.
CAUTION!! Do not apply anti-oxidant substance on the terminals before terminals are connected tightly.
CAUTION!! Before making the final DC connection or closing DC breaker/disconnector, be sure positive (+) must be connected to positive (+) and negative (-) must be connected to negative (-).

AC Input/Output Connection

CAUTION!! Before connecting to AC input power source, please install a separate AC breaker between inverter and AC input power source. This will ensure the inverter can be securely disconnected during maintenance and fully protected from over current of AC input, The recommended spec of AC breaker is 63A for 8KVA

CAUTION!! There are two terminal blocks with "IN" and "OUT" markings. Please do NOT mis-connect input and output connectors.

WARNING! All wiring must be performed by qualified personnel.

WARNING! It's very important for system safety and efficient operation to use appropriate cable for AC input connection. To reduce risk of injury, please use the proper recommended cable size as below.

Suggested cable requirement for AC wires

Model	Gauge	Cable (mm ²)	Torque Value
8KVA	8 AWG	10	1.4~ 1.6Nm

Please follow below steps to implement AC input/output connection:

1. Before making AC input/output connection, be sure to open DC protector or disconnector first.
2. Remove insulation sleeve 10mm for six conductors. And shorten phase L and neutral conductor N 3 mm.