Quick Installation Guide

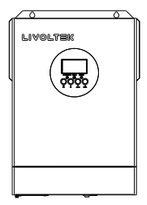
—— Off-Grid Inverter GF1-3K524S2/6K248S2

Scan the QR code below
to view user manual and video

I Preparation Tools

 Bit ⌀10 Hammer drill	 Rubber hammer	 Claw safety hammer	 Cross screwdriver	 Slotted screwdriver
Spirit level	 Tape ruler	 Insulation tape	 Dustproof cover	 Protective glasses
 Euro terminal crimping tool	 Wire stripper	 Diagonal pliers	 OT terminals press clamp	Multifunction terminal  Crimping tool (RJ45)
 Utility knife	 Marker pen	 Hydraulic tong	 (Range ≥1100V DC) Multimeter	 AC/DC clamp-on ammeter

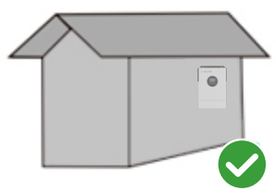
II Packing List

 Inverter *1	 Communication Cable *1	 User Manual *1	 Certificate Card *1	Wi-Fi Logger *1 (Optional)

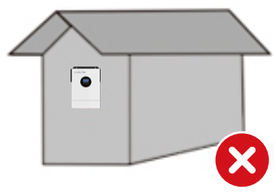
Note: Delivery marked with 'optional', which need to be purchased additionally, please contact your local dealer for details respectively.

III Installation Instructions

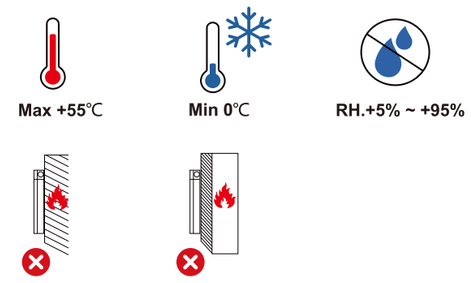
A Location and Environment Requirments



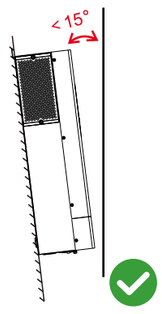
Indoor area

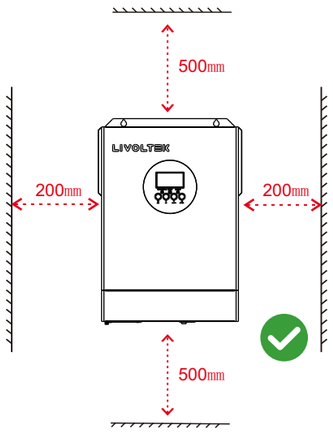


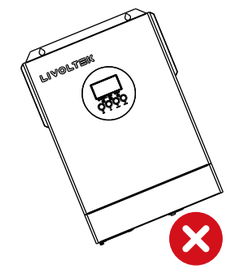
No outdoor



B Angle and Space Requirments





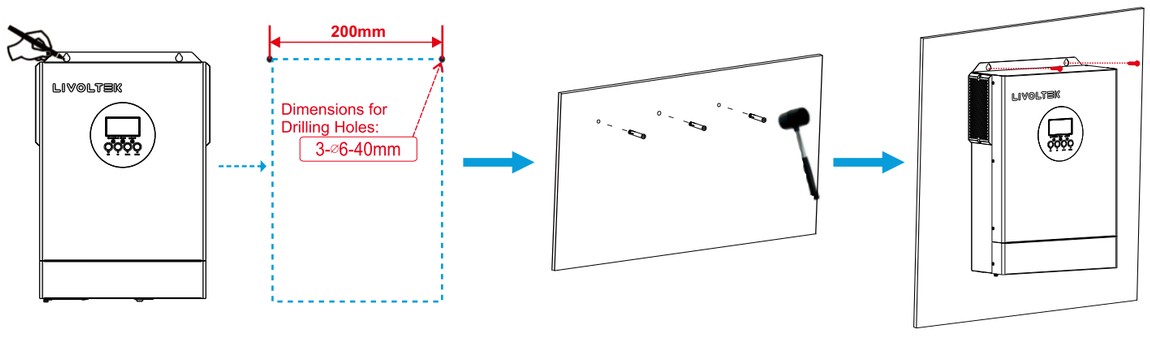


C Mounting Instrucions

Step1: Drill holes on the wall
- Mark the positions of holes of 2 corners of the inverter's bracket by marker pen.
- Drill holes with driller and make sure the holes are deep enough(at least 40mm) to support the inverter.

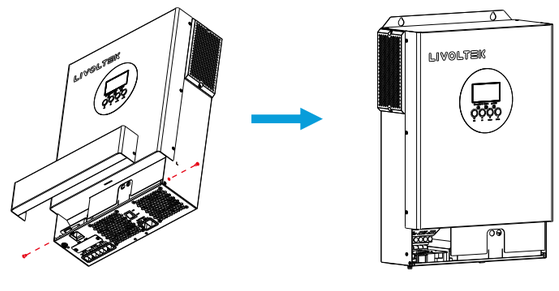
Step2: Mounting the inverter
- Insert the expansion tubes into the holes and lighten them. Then install the inverter by screwing the screws.

Step3: Installation Self-check
- Make sure the inveter is well fixed.



D Before Cable Connection

In order to facilitate subsequent cable connection, installers needs to remove the fixed screws on both sides of the inverter to remove the panel.



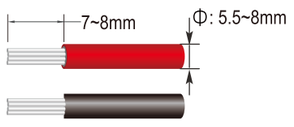
IV PV Cable Connection

Step1 Remove an appropriate length(about 7~8mm) of the insulation layer from the PV strings power cables.
Step2 Measure the voltage of every route strings using a multimeter. Ensure that the polarities of the DC input power cables are correct.
Step3 Insert the stripped PV cables into the corresponding interface in inverter and tighten the screws.

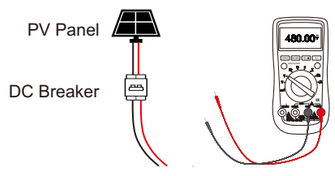
1 Suggested cable requirement for PV cables:

Model	Typical Amperage	Cable Size	Torque
3.5KVA	15A	12 AWG	1.4~1.6 Nm
6.2KVA	27A	12 AWG	1.4~1.6 Nm

2 Strip the PV cables:

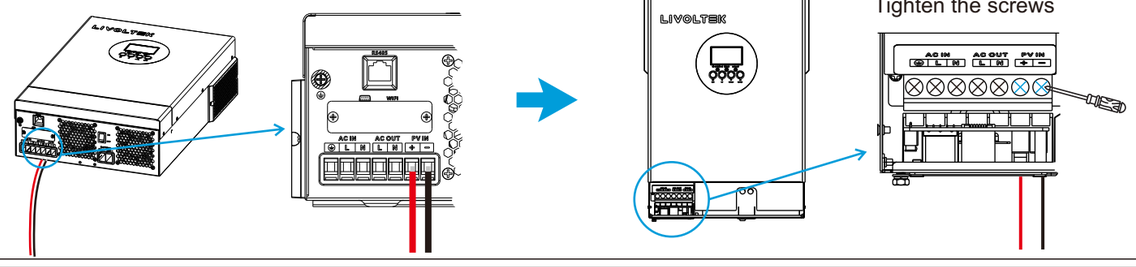


3



GF1-3K5: <240V
GF1-6K2: <480V

4 Insert the PV cables into 'PV IN' port



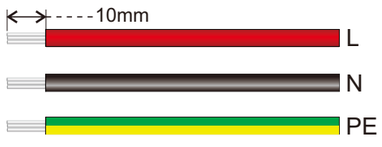
V AC Cable Connection

Step1 Before making AC input/output connection, be sure to open DC protector or disconnector first.
Step2 Remove the cable jacket and strip the wire insulation by 10mm.
Step3 Insert AC input cables according to polarities indicated on terminal block and tighten the terminal screws.
Note: Be sure to connect PE protective conductor first.
Step4 Insert AC output cables according to polarities indicated on terminal block and tighten the terminal screws.
Step5 Make sure the wires are securely connected.

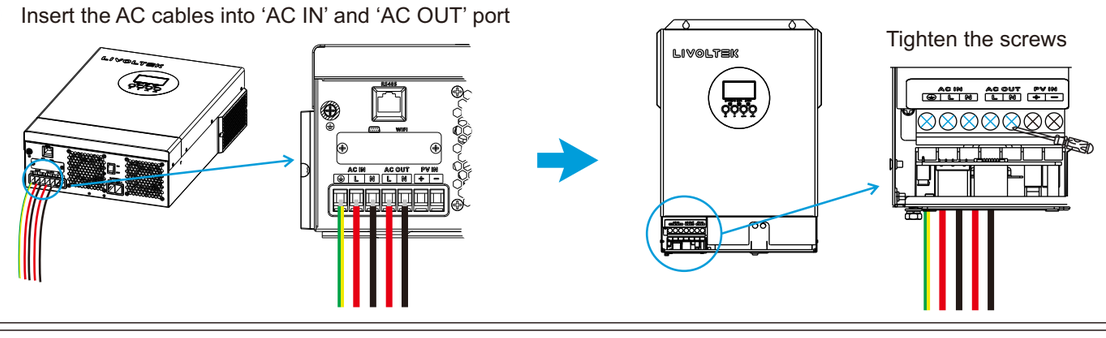
1 Suggested cable requirement for AC cables

Model	Cable Size	Torque
3.5KVA	10 AWG	1.4~1.6 Nm
6.2KVA	8 AWG	1.4~1.6 Nm

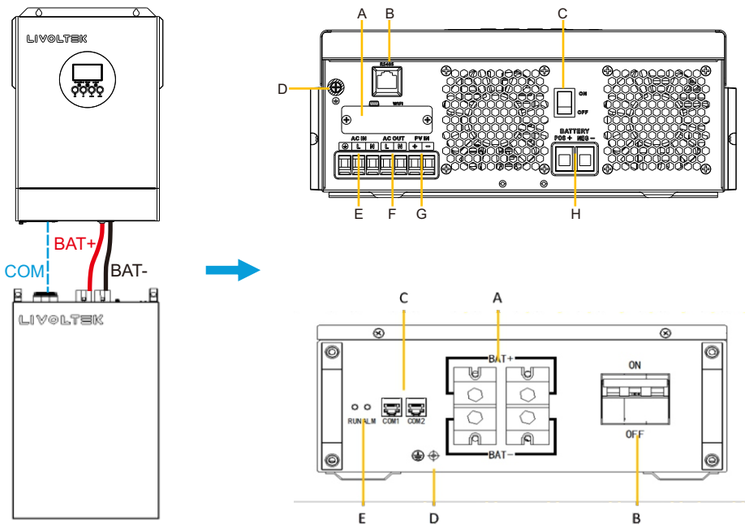
2 Strip the AC cables:



3 Insert the AC cables into 'AC IN' and 'AC OUT' port



VI Battery Communication Connection



Position	Definition
A	RS 232 communication port
B	RS 485 communication port
C	Power on/off switch
D	Grounding
E	AC input
F	AC output
G	PV input
H	Battery input

Position	Definition
A	Battery Power Ports
B	DC Breaker
C	BMS Communication Ports
D	Ground Port
E	LED Indicator

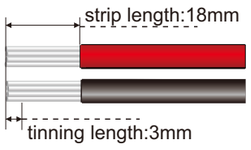
A Batter Power Connection

Note: Before connecting the power cables, make sure the DC breaker of the battery is disconnected.
Step1 Remove the cable jacket and strip the wire insulation by 18mm.
Note: Please use appropriate cable, stripping length and tinning length.
Step2 Connect all battery packs as units requires. It's suggested to use recommended battery capacity.
Step3 Insert battery cable flatly into battery connector of inverter and make sure the bolts are tightened.
Note: Make sure polarity at both the battery and the inverter/charge is correctly connected.
Step4 Install the OT terminals ends of power cable to the battery.
Step5 Make sure the wires are securely connected.

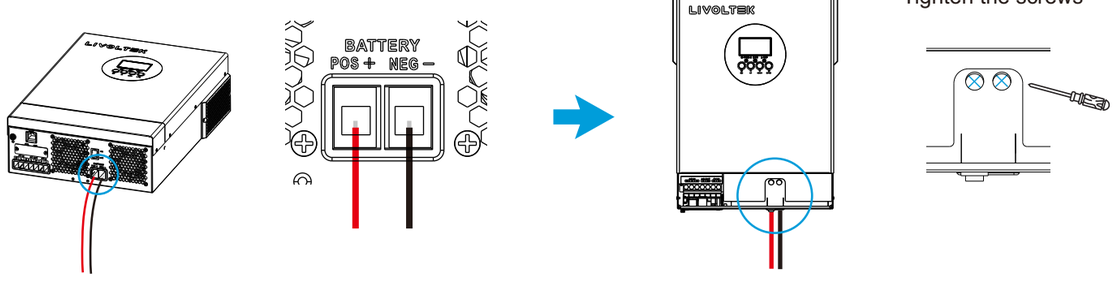
1 Suggested cable requirement for battery cables

Model	Maximum Amperage	Cable Size	Torque
3.5KVA / 6.2KVA	137A	2 AWG	2~3 Nm

2 Strip the battery cables:



3 Insert the AC cables into 'AC IN' and 'AC OUT' port

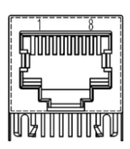


Tighten the screws

B BMS Communication Connection

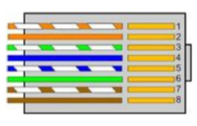
Step1 Assemble communication cable based on recommended information.
Step2 Please insert the RJ45 connector of the communication cable into the COM1 port of battery.
Step3 Please insert the other end of the cable in the corresponding port of inverter.
Note: If choosing lithium battery for the inverter, users are allowed to use the lithium battery only which LIVOLTEK have configured.

Inverter Connector Pin Definition:



Pin Number	RS 485 Port
Pin1	RS485-B
Pin2	RS485-A
Pin7	RS485-A
Pin8	RS485-B

BMS Connector Pin Definition:



1	Orange/White	BMS_CAN_H
2	Orange	BMS_CAN_L
3	Green/White	BMS_485_A
4	Blue	GND
5	Blue/White	BMS_485_B
6	Green	NC
7	Brown/White	NC
8	Brown	NC

Note: Users could choose Pin1&Pin2(Pin1-5, Pin2-3), or Pin7&Pin8(Pin7-3,Pin8-5)). Please ensure that the 485A(485B) on inverter side is connected to the 485A(485B) on the battery side.

VII Powering ON/OFF the Inverter

A Inspection before Commissioning

No.	Content	State	
		Yes	No
1	All the switches connected to the inverter are set to the OFF position.		
2	The inverter is installed correctly and securely.		
3	All cables are connected correctly and securely.		
4	Unused cable holes are fitted using the waterproof nuts.		
5	The electrical conduit holes are sealed.		
6	The battery is well connected.		

B Powering on the System

Step 1
Turn on the AC breaker on the ON-GRID side.

Step 2
Turn on the battery breaker and Battery

Step 3
Rotate the DC switch of the inverter to ON position.

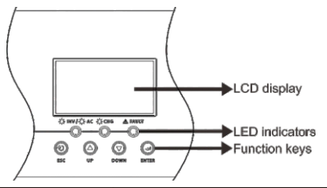
Step 4
Press ON/OFF switch to turn on the unit.

Step 5
Wi-Fi Setting configuration

Step 6
Observe the LED indicator

Note: The shutdown steps are opposite to the above order.

C LED Display



LED Indicator			Messages
AC / INV	Green	Solid On	Output is powered by utility in Line mode.
		Flashing	Output is powered by battery or PV in battery mode.
CHG	Green	Solid On	Battery is fully charged.
		Flashing	Battery is charging.
FAULT	Red	Solid On	Fault occurs in the inverter.
		Flashing	Warning condition occurs in the inverter.

Function Key	Description
ESC	To exit setting mode.
UP	To go to previous selection.
DOWN	To go to next selection.
ENTER	To confirm the selection in setting mode or enter setting mode.

WARNING	Before maintaining and commissioning inverter and itsperipheral distribution unit switch o ffall the chargedterminals of the inverter, and wait at least 10 minutesafter the inverter is powered off.

IX Wi-Fi Configuration

A Preparation

- Power on inverter.
- Power on router and check the wireless networks that your mobile phone joined.
- Open the 'My Livoltek' APP.

Note: *'My Livoltek' is the APP to communicate with your device via WiFi or bluetooth on your phone.You can scan the QR code to download the APP on your phone.*

APP: Search for My Livoltek on Apple App Store, Google Play.

Google Play | App Store | Mylivoltek

My Livoltek | Download

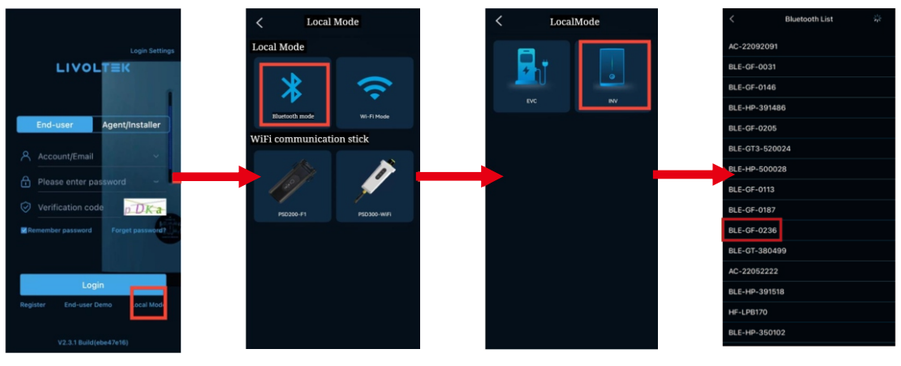
B Configuration on the APP

Step 1
Click on "Local Mode".

Step 2
Click on "Bluetooth Mode".

Step 3
Click on "INV".

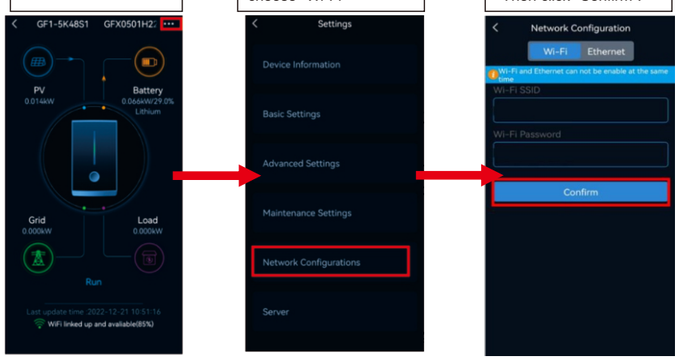
Step 4
Find your inverter according to device's SN number ("BLF-GF- xxxx* "), which is the few tail numbers of SN on the label.



Step 5
Click on ••• to click setting.

Step 6
Click on "Network Configurations". And choose "Wi-Fi"

Step 7
Enter wireless network name & password. Then click "Confirm".



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