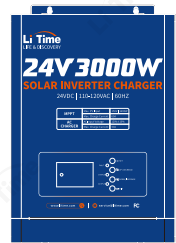




3000W

24VDC | 110-120VAC

PRODUCT MANUAL



All in One Solar Inverter Charger

www.litime.com



IMPORTANT SAFETY INSTRUCTIONS

Please read the following safety instructions carefully and perform installation and connection operations under the guidance of professionals. This manual contains important safety, installation, and operating instructions for the solar inverter charger.

General

- **Read all the instructions** and cautions in the manual before the installation.
- Installation and wiring must comply with the Local and National Electric Codes (NEC) and must be performed by a certified technician.
- There are no user-serviceable parts inside this product except for the fuse. **DO NOT** disassemble or attempt to repair the solar inverter charger.
- **ONLY 24V Battery Banks** are suitable for the solar inverter charger.
- The product is used with a permanent power source (battery, PV and grid power). Input and/or output terminals may still be dangerously energized, even when the product is switched off. **ALWAYS** make sure the solar inverter charger is **in the OFF position** and **disconnect all AC and DC connections** before carrying out maintenance or servicing the product.
- Consult the battery manufacturer's information to ensure that the product is intended for use with the battery. Carefully check the specific requirements of the batteries used in the system and always follow the battery manufacturer's safety instructions.
- Never use the product where there is a risk of gas or dust explosions.
- Do not remove the terminal panel or touch the wiring terminals, the mains input and AC output are high voltage.
- Do not power AC loads through this product and other AC power sources at the same time as this product is only allowed to be off-grid.
- Do not supply power with two AC power sources at the same time to this product as this product only allows off-grid.

Installation

- It is recommended that the DC and AC input cables be fused and fitted with circuit breakers.
- NEVER connect the AC output of the product directly to an Electrical Breaker Panel/ Load Center which is also powered by the utility power/generator.
- Before applying power, ensure that the available power source matches the product configuration settings described in the manual.
- DO NOT connect the battery in reverse polarity, which can and will destroy the product and other electrical equipment.
- Keep the product away from sources of strong electromagnetic interference such as motors and strong magnetic fields.
- Keep out of reach of children.
- Do not touch the product housing, the all-in-one solar inverter charger may be hot when it is working.
- Do not install this product in the same confined space as a lead-acid liquid battery.
- After installation, check whether all wiring connections are tight and reliable to avoid the danger of heat accumulation due to loose connections.

If you have any questions or need any help, please feel free to contact us (and leave your contact phone number) at service@litime.com, we will offer phone or email support in 12hrs.



UNITED STATES



Register Warranty



www.litime.com



service@litime.com

PRODUCT OVERVIEW

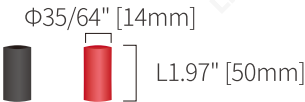
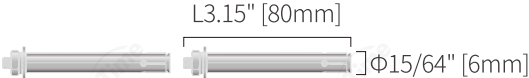
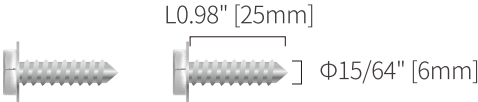
LiTime 3000W Solar Inverter Charger

Rated Output Power	3000W
DC Input Voltage	19.0V to 31.2V
AC Input / Output Voltage	120V±10%
Max. Charge Current (PV+AC)	110A
Default Battery Type	LFP (LiFePO4)
Solar Input Voltage Range	30V to 150V
Max. Solar Panel System Input Power	1600W



ADDITIONAL COMPONENTS

Additional components are included in the package.

Accessories	Image
Copper Wire Connectors (For AC&PV) * 8	
Heat Shrink Tubes (For AC&PV) * 8	
MC4 Connectors * 2	
Battery Wire Connectors * 2	
Heat Shrink Tubes (For Battery) * 2	
200A Spare Fuse * 1	
Expansion Screws (For Wall Mount) * 2	
Parker Screws (For Panel Mount) * 2	



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SPECIFICATIONS

PV Input

Parameter	Value
Operating Voltage Range	30V to 150V
Recommended Operating Voltage Range	30V to 105V
Max. Power	1600W

MPPT Output

Parameter	Value
Max. Power	1600W
Charge Current Range	60A
Optimal Efficiency	95%

Battery Input

Parameter	Value
Rated Voltage	24V
Voltage Range	19.0V to 31.2V
Max. AC Charge Current	50A
Max. Charge Current (PV+AC) ^①	110A
Battery Type	Lithium, Lead Acid, User

① Only grid charging supports lithium battery activation.

AC Input

Parameter	Value
Voltage Range (UPS Mode)	90V to 135V
Voltage Range (Normal Mode)	75V to 135V

Max. Bypass Input Current	40A
Frequency	60Hz

AC Output

Parameter	Value
Inverter Output Voltage	120V $\pm$ 10%
Bypass Output Voltage Range (UPS Mode)	90V to 135V
Bypass Output Voltage Range (Normal Mode)	75V to 135V
Rated Power	3000W ^①
Surge Power (500ms)	9000W
Frequency	60Hz
Output Wave Form	Pure Sine Wave
Inverter Optimal Efficiency	90%
Bypass Efficiency	>95%

① It is recommended to use this inverter function within 80% power when working for long hours for AC loads for the best performance.

General

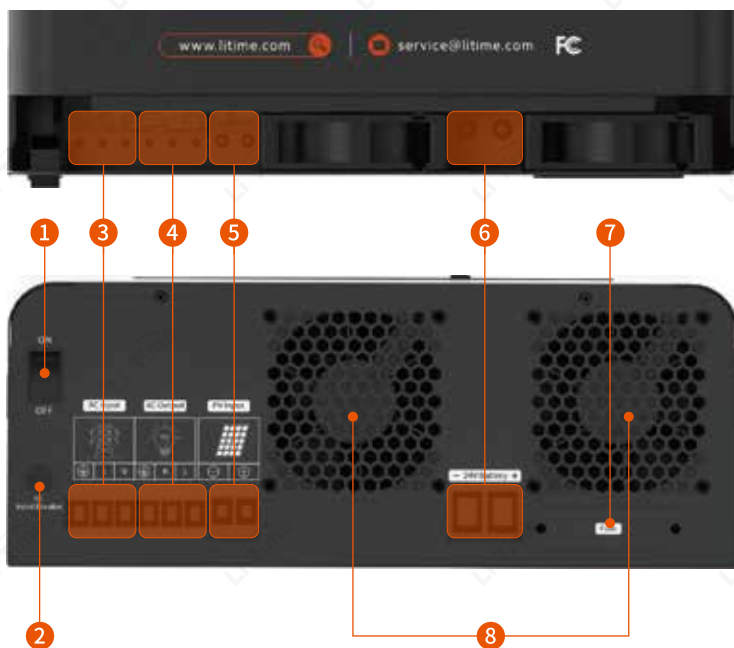
Parameter	Value
No Load Power Consumption	Normal Mode<30W, ECO Mode<18W
Humidity Range	5% to 95%
Operating Temperature Range	32°F to 104°F / 0°C to 40°C
Storage Temperature	14°F to 122°F / -10°C to 50°C
Dimension (L * W * H)	18.31 * 12.20 * 5.31 inch 465 * 310 * 135 mm
Weight	Appr. 41.73 lbs / 18.93 kg

IDENTIFICATION OF PARTS



① To communicate with battery, check page 11 for details.

② To connect with external control devices.



1	On/Off Switch
2	AC Input Breaker (40A)
3	AC Input Terminal Block
4	AC Output Terminal Block (Continuous Output Power $\leq 3000W$, 110-120VAC, 60Hz)
5	PV Input Terminals
6	Battery Terminals
7	DC Fuse Panel (Replaceable Fuse)
8	Cooling Fans

INSTALLATION

1. The product should be installed by a qualified electrician.
2. Make sure the solar inverter charger is in the off position before connecting anything.

Choosing Location

Make sure the installation complies with the following guidelines.

○ In a well-ventilated, cool, and dry environment.

The product must be installed in an area protected from direct sunlight, high temperatures, and water. Make sure there is sufficient room for wiring and ventilation clearance from the DC and AC sides of the product. Clearance should be at least 12 inches [30cm].

○ As close to the battery as possible.

Keep the product and battery as close as possible to minimize cable voltage loss and choose a proper wire size to connect the product and battery.

○ Securely placed or mounted.

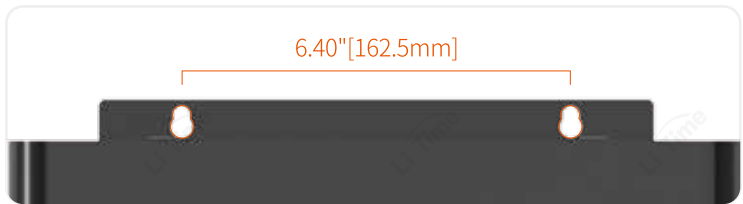
This product could be mounted vertically on the wall or panel.

Installation Steps

○ Installation Method ①: Wall Mount (Optional & Recommended)

Step
1

Drill two holes on the wall with an electric drill.



Step
2

Hammer two expansion screws into the prepared hole.

Step
3

Install the solar inverter charger, then screw the flat washer, spring washer and nut.

○ Installation Method ②: Panel Mount (Optional)

Fix the solar inverter charger on the wooden panel by provided Parker screws with an electric drill.

Sizing a Battery Bank

The selection of the battery bank can be calculated to reach a suitable conclusion.

Data To Be Confirmed	The rated power(W) of the load ^① to be run.
	Expected runtime(Hrs) of the load.
	The nominal voltage of the selected battery type and voltage.
Reference Calculation Formula	$\text{Energy(Wh)} = \text{Load Power(W)} * \text{Runtime(Hrs)} / \text{Inverter Efficiency}^{\textcircled{2}}$
	$\text{Capacity(Ah)} = \text{Energy(Wh)} / \text{Battery Nominal Voltage(V)}$

① The rated power(W) of the load should be less than the continuous power supported by the inverter (**3000W** for this product).

② Inverter Efficiency=Inverter Output Power/Inverter Input Power, 85% is the usual conversion efficiency of the product under normal conditions.

For LiTime lithium batteries and this solar inverter charger, the battery bank will be 24 volts direct current (24V DC) with 25.6V nominal voltage.

Example	
○ 2000W load(s)	$2000\text{W} * 3\text{Hrs} / 85\% \approx 7059\text{Wh}$ $7059\text{Wh} / 25.6\text{V} \approx 276\text{Ah}$
○ 3Hrs runtime/day	
○ 25.6V lithium battery	

To use the 2000W load(s) for 3 hours per day, at least a 24V (25.6V) 276Ah lithium battery should be selected on an everyday battery fully charged basis.

If there are different requirements for the time to fully charge the battery, the calculation method will be more complicated. Please feel free to contact us at service@litime.com for a free recommendation of a customized solution.

Connecting

DC Wiring

1. This product is ONLY suitable for a 24V battery bank. Failure to comply with the proper DC voltage will cause irreversible damage to the product.
2. Avoid direct contact between the terminals of the positive and negative wires connected to the battery, and do not reverse the positive and negative connections. Damage to the LiTime solar inverter charger and battery due to reverse polarity is NOT covered by warranty.

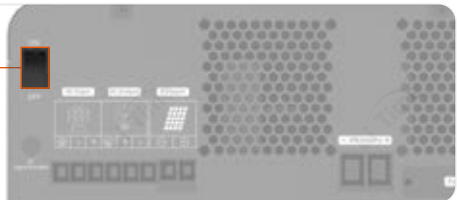
Recommended Cable Sizing and Breaker

Terminal	Recommended Cable Size	Recommended Breaker
Battery	2AWG (within 6ft/2m)	200A
AC Input/Output	8AWG (within 6ft/2m)	63A
PV	8AWG (within 16ft/5m)	63A

Step
1

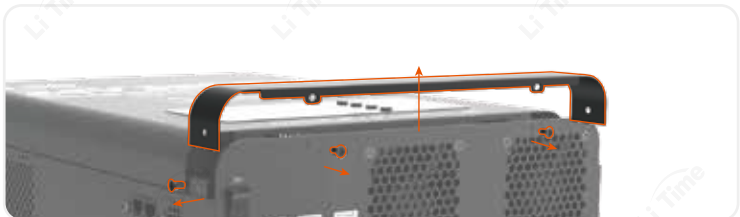
Make sure the Power Switch is in the OFF position and all breakers are in the "OFF" status.

OFF



Step
2

Unscrew the terminal panel.



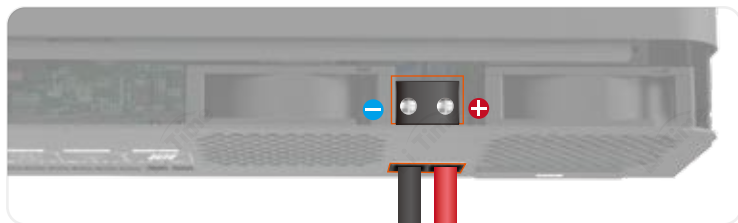
Step 3

Use the provided battery wire connectors and heat shrink tubes to prepare the cables for connection to the battery terminals.



Step 4

Connect the battery to the solar inverter charger, **+** to **+**, **-** to **-**.



AC Wiring

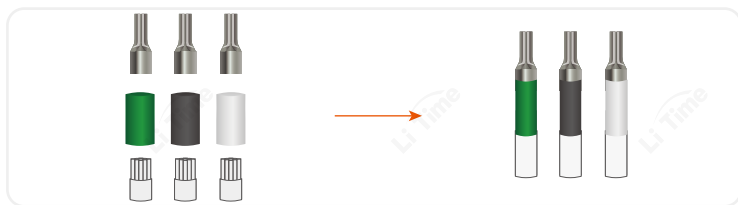
1. Avoid switching on the solar inverter charger with the load already turned on. This may trigger an overload since some electronic devices have an initial high power surge to start.
2. Be sure to turn off all loads first before switching off the solar inverter charger. Even if the solar inverter charger is turned off, the capacitors will still have a charge, so the DC and AC terminals must be disconnected if altering the circuitry.

AC Input

Do not supply power to this product by the alternator and the grid at the same time, as it will damage the product. Make sure that only one power input supplies power to this product.

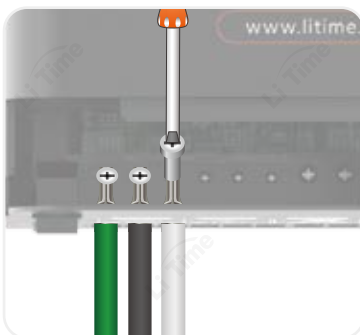
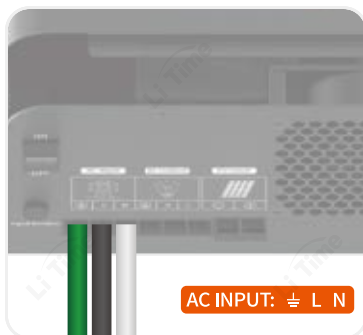
Step 1

Use the provided wire connectors and heat shrink tubes to prepare the cables for connection to the AC input and output terminal blocks.



Step 2

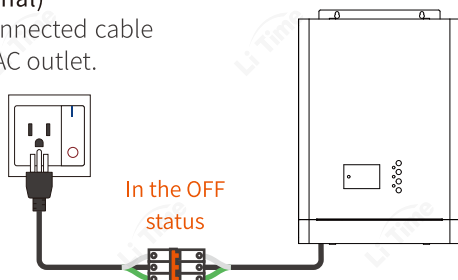
Connect the AC input terminals from left to right (Ground → Live → Neutral) sequences.



Step 3

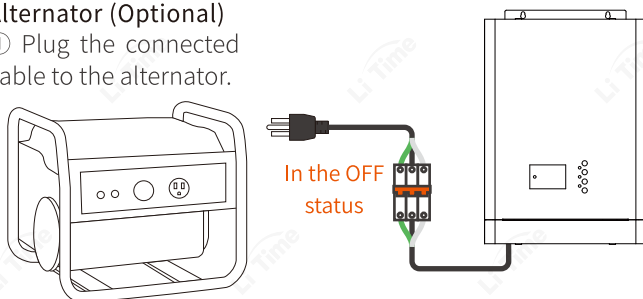
Grid (Optional)

Plug the connected cable to the grid AC outlet.



Alternator (Optional)

① Plug the connected cable to the alternator.



② Check the alternator manual, and connect to NC-COM or NO-COM of this product according to the control logic of the alternator.

If a normally open connection is required, connect to NO-COM on this product.

If a normally closed connection is needed, connect to NC-COM.

○ AC Output

Connect the AC output terminals as the Ground → Live → Neutral sequences.

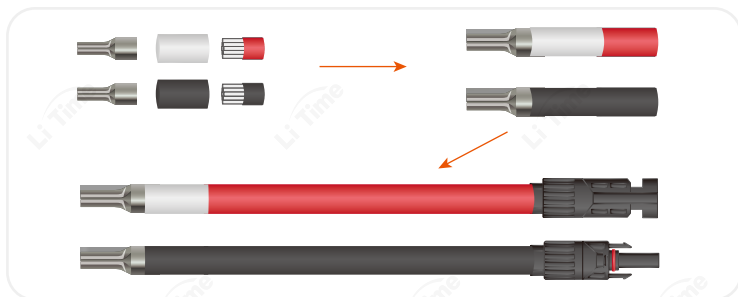


■ PV Wiring

Step
1

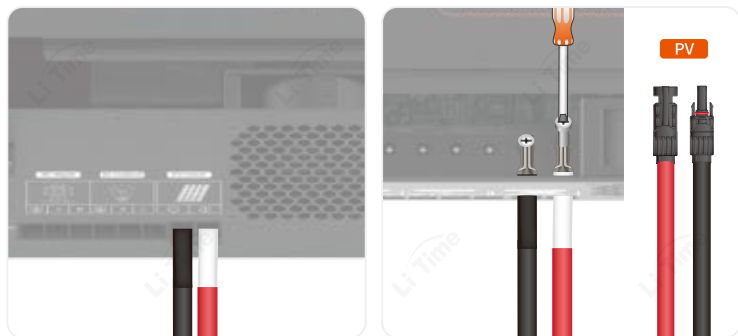
Use the provided wire connectors and heat shrink tubes to prepare the cables for connection to the PV terminals on this product.

One end of the wires is connected to the wire connectors and the other end is connected to the MC4 connectors.



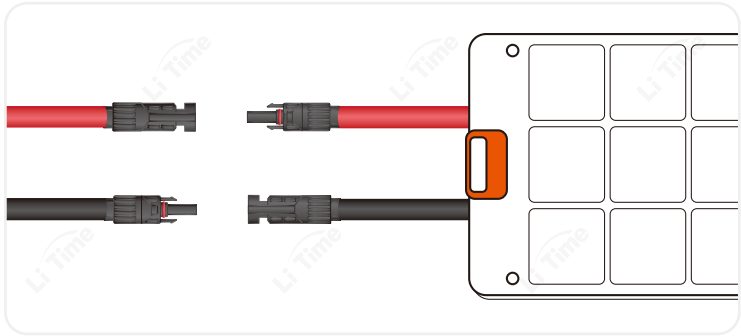
Step
2

Connect the wire connectors of the cables to the PV terminals on this product, the MC4 female connector cable to **+**, the MC4 male connector cable to **-**.



Step 3

Connect MC4 connectors to solar panels then screw the terminal panel.



Communication Ports (Optional)

RS485 Communication Port

Communicate with a protocol-matched home energy storage battery through this interface, allowing the solar inverter charger to read the information from the home energy storage battery.

The RS485 port pin assignment of the battery is shown in the right chart, make sure the battery connected to the solar inverter charger is Pin to Pin.

Pin Number	RS485
1	RS485-B(-)
2	RS485-A(+)
3	NC
4	NC
5	NC
6	NC
7	NC
8	NC

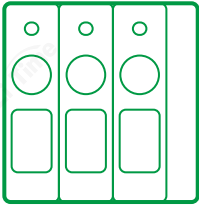
Dry Contacts

The dry contact on this product is used for communication with external devices, allowing seamless integration with other components for efficient operation.

The external device needs to be connected to the AC input/output ports of this product to provide or use power.

⚠ DO NOT supply power to this product by two AC power sources (such as grid power and alternator) at the same time, otherwise, it will damage the product.

Condition		Dry Contact Port Connection		Common Connected Devices
		NC ^① &COM	NO ^② &COM	
General		Close ^③	Open ^④	Devices with dry contacts or intermediate (/ control) relays
Inverter First Output Mode	Battery Voltage < Low Voltage Warning Voltage	Open	Close	
	Battery Voltage > Float Voltage/Full Charge Voltage	Close	Open	
MPPT First Output Mode	Battery Voltage < Battery Power to Grid Power Voltage	Open	Close	
	Battery Voltage > Grid Power to Battery Power Voltage	Close	Open	



Dry Contact
NO COM NC

- ① Normally Closed
- ② Normally Open
- ③ Power On & Current Flow
- ④ Power Off & No Current

Power On after Finishing All Connections

After finishing all connections, make sure all connections are tight and turn on all switches or circuit breakers in the system in the following order:

Battery breaker → Solar inverter charger (this product) switch → PV breaker → AC input breaker → AC output breaker → AC loads

LCD SCREEN OPERATING

Operation Buttons and LED Indicators



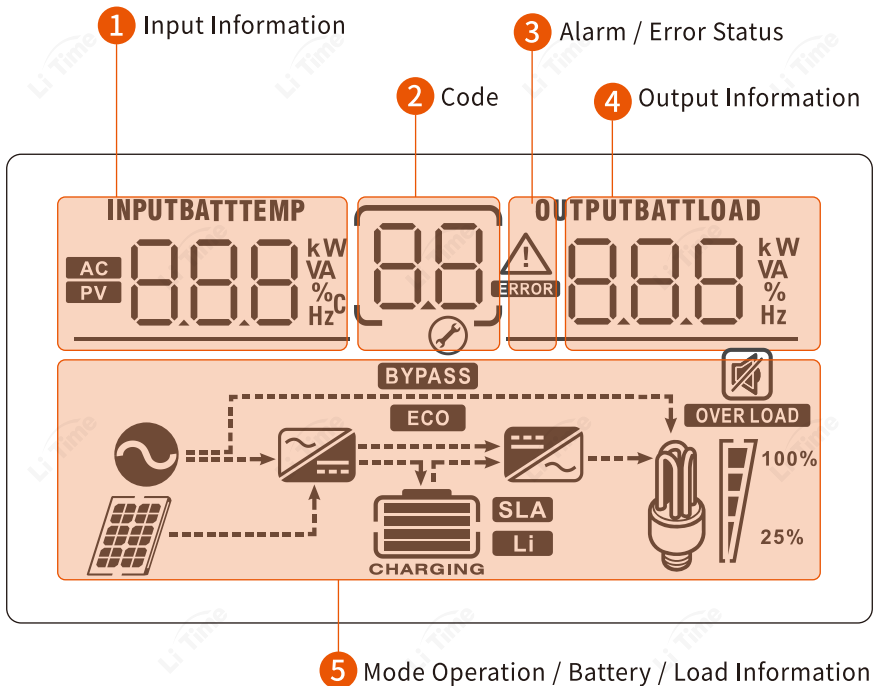
Operation Buttons

Buttons	Description
SET	Enter Settings Menu/Confirm the Parameter or Value
UP	View Previous Parameter/Reduce the Value
DOWN	View Next Parameter/Increase the Value
EXIT	Exit Settings Menu

LED Indicators

Indicators	Status	Description
OUTPUT (Green)	Steady on	The grid power is working.
	Flash	The inverter is working.
CHARGE (Yellow)	Steady on	Charge finished.
	Flash	The battery is charging.
FAULT (Red)	Steady on	The product is in fault status.

LCD Screen



1 Input Information

Icon	Function Description
INPUTBATTEMP AC PV BATT kW VA %C Hz	Indicates input real-time data, different information can be switched by pressing the buttons "UP" or "DOWN", check details on page 17.
AC	Indicates AC input and data.
PV	Indicates PV input and data.
BATT	Indicates battery data.

2 Code

Icon	Function Description
	Indicates setting mode when  is displayed.
	Indicates view mode when no icon is displayed.

3 Alarm / Error Status

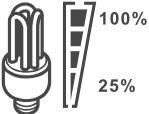
Icon	Function Description
	Indicates this product is in alarm status.
	Indicates this product is in error status.

4 Output Information

Icon	Function Description
	Indicates output real-time data, different information can be switched by pressing the buttons "UP" or "DOWN", check detailed on page 17.

5 Mode Operation / Battery / Load Information

Icon	Function Description
	The product is connected to grid power.

Icon	Function Description
	The product is connected to solar panel.
BYPASS	The load is supplied by grid power.
ECO	The product is in ECO mode.
	The grid power is working.
	The inverter is working.
 CHARGING	Battery capacity percentage (Each block represents 25% of the battery power).
SLA Li	Indicates the set battery type.
	Indicates that the buzzer is disabled.
OVER LOAD	Indicates the AC output is in overload status.
	Load level (Each block represents 25% of the load level).

Real-time Data

Press the "UP" or "DOWN" buttons to scroll through the input and output real-time data of the product at the same time.

Left	Icon	Right
AC Input Voltage (V) (Default) / Frequency (Hz)		AC Output Voltage (V) (Default) / Frequency (Hz)
Battery Voltage (V)		AC Input Current (A)
Internal Heatsink Temperature (°C)		Output Load Ratio (%)
PV Voltage (V)		MPPT Current (A)
Output Mode		Charge Mode
Machine Type		Motherboard Version
/		Screen Software Version
Battery Temperature (°C)		Battery SOC

Left	Icon	Right
Charge Current (A)		Discharge Current (A)
/		Battery Factory

Since the machine uses octal calculation, the display may be a little different from the user manual shown, the below table is for reference.

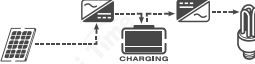
A A	b B	C C	d D	E E	F F
G G	H H	I I	J J	K K	L L
M M	N N	O O	P P	Q Q	R R
S S	T T	U U	V V	W W	X X
Y Y	Z Z	1 1	2 2	3 3	4 4
5 5	6 6	7 7	8 8	9 9	0 0

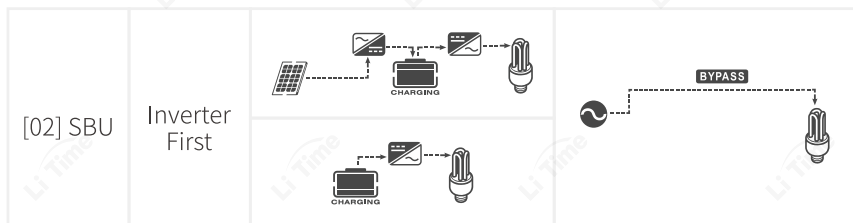
Work Modes

Charging Modes

Setting Code	Description	Icon	Back Up Mode ^①
[03] CSO	MPPT First		
[03] CUT (Default)	MPPT and Grid		
			
[03] OSO	Only MPPT		/

Output Modes

Setting Code	Description	Icon	Back Up Mode ^①
[02] SOL	MPPT First		
[02] UTI (Default)	Grid First		
			



① The product will automatically switch to the back up mode if it is available when the selected primary charging/output source runs out of power.

Adjust Settings

Setting Operation

Parameters can be adjusted according to the following steps.

- **Step 1:** Press the "**SET**" button 10 seconds to enter the setup menu when it is in view mode, then the parameter number [00] will flash.
- **Step 2:** Press the "**UP**" or "**DOWN**" buttons to select the setting code.
- **Step 3:** Press the "**SET**" button to enter the parameter editing mode, and the value of the parameter is flashing.
- **Step 4:** Adjust the parameter code value with the "**UP**" or "**DOWN**" buttons.
- **Step 5:** Press the "**SET**" button to confirm the parameter, then set other settings codes continuously.
- **Step 6:** Exit setting mode by pressing the "**EXIT**" button after finishing all settings.

Setting Parameters

Parameter codes in orange are the default settings. All voltage settings are in 0.2V or 1V increments/reductions, and 1% for percentage.

Setting Codes	Parameter	Parameter Codes/Value	Description
00	AC Input Voltage Range	UPS	Input voltage range: 90V~135V.
		APL	Input voltage range: 75V~135V.

01	Output Frequency	LO	Input frequency range: 45~65Hz.
		HI	Input frequency range: 40~70Hz.
02	Output Modes	UTI	Grid First mode, switching to inverter only when the grid fails.
		SOL	MPPT First mode, switching to the Grid when the PV fails, or the battery is lower than the low voltage warning or the Battery Power to Grid Power set values.
		SBU	Inverter First mode, switching to the Grid only when the battery voltage is under the set value of low voltage warning or Battery Power to Grid Power.
03	Charging Modes	CSO	MPPT First charging: Switching to Grid charging only when MPPT charging fails.
		CUT	MPPT and Grid charging: MPPT charging first. Grid will supplement for charging only when the PV energy is insufficient. Once the PV energy is sufficient, the Grid charging stops.
		OSO	Only MPPT charging, with the Grid charging not available.
04	Grid Charging Current Ratio	100%	Setting range: 10~100%.
05	MPPT Charging Current Ratio	100%	Setting range: 20~100%.
06	Boost Charge Voltage	28.4V	Setting range: 27.0~30.0V.
07	Float Charge Voltage	28.4V	Setting range: 24.0V~30.0V.

08	Low Voltage Disconnect	21.6V	Setting range: 19.0V~27.0V. When the battery voltage is lower than this setting, the output is turned off immediately.
09	Battery Power to Grid Power(no communicated with battery BMS)	24.0V	Setting range: 23.0V~25.0V. Cannot exceed the value of the low voltage warning. When the setting code [02] =SOL/SBU and the battery voltage is lower than the set value, then output will be switched from the Inverter/MPPT to the Grid.
10	Grid Power to Battery Power(no communicated with battery BMS))	27.2V	Setting range: 26.0V~28.0V. Cannot be lower the value of Battery Power to Grid Power & [23] settings. When the setting code [02] =SOL/SBU and the battery voltage is higher than the set value, and the output will be switched from the Grid to the Inverter/MPPT.
11	AC Output Voltage	120VAC	Setting range: 100V~120V.
12	Grid Detection Speed	HI	High Speed.
		IDE	Medium Speed.
		LO	Low Speed.
13	Output Frequency	50Hz	Once the grid is disconnected, the output frequency can be set through this menu.
		60Hz	
14	Load Fault Auto-start	TE	Enable restart 3 times for the overload or short circuit.
		TD	Disable restart for the overload or short circuit.
15	Backlight Control	LON	Always on.
		LOF	Always off.
		LOD	Delay off.
16	Buzzer Alarm	AON	Disable alarm.
		AOF	Enable alarm.

17	Low Voltage Warning Switch	OFF	Battery protection function, it is not recommended to change.
		ON	
18	Load Limit	OFF	The machine triggers protection after use this inverter's output power above 80% power when working for long hours for AC loads.
		ON	
19	Load Alarm Limit	OFF	Function is not available.
		ON	
20	Baud Rate ^①	0	2400
		1	4800
		2	9600
21	Inverter Output Voltage	0	Do not change this setting, it is for internal use only.
		1	
22	Low Voltage Restart(no communicated with battery BMS)	23.0V	Setting range: 21V~24.4V. The battery voltage should be higher than the set value before it can be turned on normally when the machine is shut down abnormally.
23	Low Voltage Reconnect	25.6V	Setting range: 24V~28V. The battery voltage should be higher than the set value before it can be automatically turned on when the machine is powered off at low power.
24	Battery Type	SEL	Sealed lead-acid battery.
		GEL	Gel-sealed lead-acid battery.
		FLD	Flooded lead-acid battery.
		USE	User-defined.
		TER	LiCoMnNiO2 battery.
		LIF	LiFePO4 battery.
		LFP	LiFePO4 battery.

25	BMS Communication	ON	Enable communication with BMS.
		OFF	Disable communicate with BMS.
26	Low Voltage Disconnect	10%	Setting range: 5~50%.
27	Battery Power to Grid Power (communicated with battery BMS)	20%	Setting range: 5~50%.
28	Grid Power to Battery Power (communicated with battery BMS)	90%	Setting range: 5~100%.
29	Low Voltage Restart (communicated with battery BMS)	50%	Setting range: 30~100%.
30	Low Voltage Warning	24.8V	Setting range: 20.0V~31.0V.
31	BMS Communication Protocols	0	Automatic Battery Protocol Identification.
		1	Voltronic
		2	Pylon
		3	Growatt
32	Factory Reset	ON	All settings are restored to factory settings.
		OFF	Keep current settings.
None	ECO Mode	ON	Enable saving-energy mode.
		OFF	Disable saving-energy mode.

① Set to the same baud rate as the connected communication function battery.

BATTERY TYPES AND DEFAULT PARAMETERS

Setting \ Battery Type	LFP ^① (LiFe-PO4) (Default setting)	LIF ^② (LiFe-PO4)	TER (LiCoM-nNiO2)	SEL/ GEL	FLD	USE (User-Defin-able)
Over Voltage Disconnect	31.2V					
Boost Charge Voltage (Setting Code 06)	28.4V	28.4V	25.2V	28.4V	29.2V	28.4V (27~30V)
Float Charge Voltage (07)	28.4V	28.4V	25.2V	27V	27V	27V (24~30V)
Low Voltage Warning (30)	24.8V	22.2V	18.6V	21.6V	21.6V	24.8V (20~31V)
Low Voltage Recover	>Low Voltage Warning Value					
Low Voltage Disconnect (08)	21.6V	21.6V	18V	21V	21V	21V (19~27V)
Low Voltage Reconnect (23)	25.6V	26V	26V	26V	26V	26V (24~28V)

The parameters that can be adjusted in the settings are shown in blue.

- ① Under LFP mode, the battery discharge will stop when the remaining battery capacity falls within 10% to 20%.
- ② Under LIF mode, the battery discharge will stop when the remaining battery capacity falls within 5% to 10%.

ALARM / FAULT CODES

Type	Code	Description
ALA (Alarm)	021	Machine Communication Connection Failure
	52	Abnormal PV Temperature Sensor
	53	PV Over Temperature
	61	Abnormal BMS Communication
	231	Abnormal Inverter Output
	232	Memory Chip Connection Failure
	233	Abnormal Grid Output
	234	Battery Over Voltage
	235	Battery Low Voltage
	236	Abnormal Load
	237	Inverter Overload
	238	Inverter Over Temperature
	239	High Machine Temperature from Load
	241	Memory Chip Read and Write Error
	242	Host Computer Software Planned Shutdown
	244	Other BMS Alarms

	245	Abnormal BMS Communication
	246	BMS Charging Over Current
	247	BMS Discharging Over Current
	248	BMS Over Temperature
	249	BMS Low Temperature
FAL (Fault)	33	PV Input Over Voltage
	36	PV Over Temperature
	102	Overload Shutdown
	104	Abnormal Inverter Output
	105	Abnormal Load
	106	Inverter Over Temperature
	123	High Machine Temperature from Load
	134	Battery Low Voltage
	135	Battery Over Voltage
	152	Temperature Sensor Connection Failure
	161	Abnormal Grid Output
	162	Host Computer Software Planned Shutdown
	169	Current Detection Signal Failure

TROUBLESHOOTING

Issue Code/Part	Description	Solution
Display	No display on the screen	① Check if the battery's breaker/fuse or the PV's breaker/fuse is in "OFF" status; ② Press any button on the screen to exit the screen sleep mode if the breaker/fuse is in the "ON" status. ③ Check if the DC fuse of this product is blown. If so, please contact service@litime.com for detailed fuse replacement instructions.
Cooling Fan	Fan failure	Check if the fan is not turning or blocked by objects.
134/235	Battery low voltage	Charge the battery until it returns to the Low Voltage Reconnect Voltage (setting Item 23).
135/234	Battery over voltage	Turn off the charging inputs.
33	PV over voltage	Reduce the PV's voltage to 30V~150V.
104/105/236/237	Overload	① Reduce the use of AC output loads; ② Restart the machine to resume load output.
106/123/238/239	Heatsink over temperature	Reduce or disconnect the loads then cool down the machine to normal temperature.
Others	/	Contact us at service@litime.com for further assistance.

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