



Off Grid Inverter Charger

User and Installation Manual

PICOGLF50KW384V240VS

PICOGLF50KW384V2083P

PICOGLF30KW300V240VS

PICOGLF30KW300V2083P

PICOGLF30KW300V4803P



Read the manual carefully. Follow all warning and operating instructions contained in the manual before operating the inverter. Keep the manual for future reference.

The information included in this manual is based on the product at the time of publication. However, this manual is subject to change without prior notice. AIMS Power™ reserves the right to continuously improve the product. In addition, the illustrations in this manual are only meant to help explain system configuration concepts and installation instructions. Your system or application may be different than the examples used in this manual.

Exclusion of Liability









AIMS Power cannot monitor the compliance to this manual, nor the conditions and methods of installation, operation, usage and maintenance of the solar controller. Improper installation may result in damage to property and, as a result, to bodily injury. We assume no responsibility or liability for loss, damage or costs which result from, or are in any way related to, incorrect installation, improper operation, or incorrect use and maintenance. AIMS Power reserves the right to make changes to the product, technical data or assembly and operating instructions without prior notice.

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SYMBOLS


SYMBOL	DESCRIPTION
	Grounding point
	Refer to instructions
	Properly dispose
	Beware of dangerous electrical voltage. The inverter operates at high voltages!
	CE mark The inverter complies with the requirements of the applicable CE guidelines.
	SAA mark The inverter complies with the requirements of the applicable Australia guidelines.
	UL mark The inverter complies with the standard of UL1741.
	CSA mark The inverter complies with the standard of CSA22.2.

Safety Instructions

Warning: The warnings, cautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product and must be supplied by operator to prevent electric shock.

1. To avoid risk of fire and electronic shock, make sure existing wiring is in good electrical condition and the wire is not undersized.
2. This equipment contains components which may produce arcs and/or sparks. To prevent fire and/or explosion, do not install in compartments containing batteries or flammable materials including any space containing gasoline-powered machinery, fuel tanks, joints, fittings, or areas that contain fuel.
3. To reduce the risk of electrical shock, **disconnect** both AC and DC power from the inverter before attempting any maintenance or cleaning. Simply turning off the controls will not reduce this risk.
4. Never smoke or allow sparks or flames close to the inverter or solar system.
5. Remove personal metal items such as rings, bracelets, necklaces, and watches when working with this product.
6. Do not operate if under the influence of alcohol or drugs. Read warning labels on prescriptions to determine if your judgement or reflexes are impaired while taking drugs. If there is any doubt, do not operate the box.
7. People with pacemakers should consult their physician(s) before using this product. Electromagnetic fields near a pacemaker could cause interference to or failure of the pacemaker.
8. Keep inverter away from children. Don't install the inverter where it is accessible to children.
9. Properly maintain all equipment. Check all wiring, batteries, inverters and charge controllers.
10. Ensure someone is within close range when working with any type of electrical equipment.
11. Do not expose the inverter to rain, snow, spray, damp area, bilge or dust.
12. Do not cover or obstruct the ventilation openings. Install in a well-ventilated area. Do not install the inverter in a zero-clearance compartment. Overheating may result. Allow at least 12" of clearance around the inverter for air flow. Make sure that the air can circulate freely around the unit. A minimum air flow of 145CFM is required.
13. See Warranty Instructions for servicing the inverter. Only a professional electrician should service the inverter.

 **WARNING** INSTALLATION & MAINTENANCE SHOULD BE PERFORMED BY A PROFESSIONAL ELECTRICIAN/TECHNICIAN. ALL ELECTRICAL INSTALLATION SHOULD FOLLOW LOCAL CODES.

 **NOTE**
CAREFULLY INSPECT ALL PARTS AND MAKE SURE THERE IS NO DAMAGE. NOTIFY MANUFACTURER OF ANY DAMAGES BEFORE ACCEPTING DELIVERY AND INSTALLING THE INVERTER.

 **NOTE**

Do not close any breakers until all equipment is completely connected and inspected.

 **Warning**

Use proper grounding, using appropriate cable and fuse size.

 **Danger**

Before performing checks or maintenance, open (off) AC breaker, turn off start switch, then open (off) DC breaker. **Wait 5 minutes** for energy to dissipate. Measure DC and AC voltages with a multimeter and ensure there is no voltage between DC side and AC side. The display will slowly dim and disappear as the voltage drops.

 **Danger**

Don't make any connections or open door when the inverter is powered on. Shock may occur.

1. Product Introduction

Summary

Our PICOGLF series off grid inverter is one of the largest DC to AC inverters in the world. The Global LF Series Pure Sine Wave Inverter is a combination of an inverter, trickle battery charger and an AC auto-transfer switch into one complete system, with a peak conversion efficiency of 94%.

It is packed with unique features and it is one of the most advanced inverters on the market today. It features power factor correction, customizable AC and DC operation and a pure sine wave output with unprecedentedly high surge capability to meet demanding power needs of inductive loads without damaging the equipment.

When utility AC power cuts off (or falls out of acceptable range), the transfer relay is de-energized, and the load is automatically transferred to Inverter mode. Once the qualified AC power is restored the relay is re-energized and the load is automatically reconnected to AC bypass mode. The priority is programmable.

Features

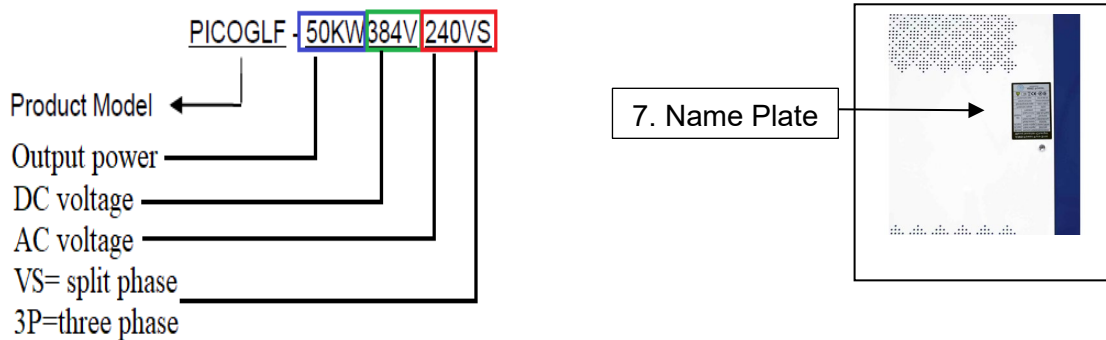
- ⊙ Advanced short circuit, over load, over temperature protections ensure a service life up to 15 years or more.
- ⊙ Two types of startup modes: Soft Start and Variable Frequency Start. User can select mode according to the type of load.
- ⊙ Adjustable output frequency.
- ⊙ Adjustable AC output voltage. Output voltage can be set between -40 % to +20 % of rated voltage.
- ⊙ Adjustable DC voltage range. Over-voltage point, under-voltage point, over-voltage recovery point and under-voltage recovery point can be set via the LCD panel.
- ⊙ Powerful data display and fault instruction function. The LCD can display DC input voltage, output frequency, phase voltage, phase current, AC bypass input voltage, power generated, time and date, temperature, fault code display.
- ⊙ Pure sine wave output with quick transfer less than 50ms, minimal waveform distortion and stable output voltage.
- ⊙ Low frequency transformer with isolated DC and AC busbars to eliminate interference.
- ⊙ Wide input voltage range, customizable to customer's requirement. Input voltage range of 100-300V or 200-600V or 400-800V, suitable for solar/wind system without using backup batteries and charge controller. it can save many cost and maximization use the solar/wind energy.
- ⊙ Using SVPWM space vector algorithms, high conversion efficiency, high instantaneous power and low losses conversion efficiency up to 94%.
- ⊙ Output AC power compatible for all types of home electric equipment, sensitive electronics, and electric motors, etc.
- ⊙ European CE (EMC & LVD) certified and UL1741 & CSA22.2 listed.

Physical Layout



Model number nomenclature

Example: PICOGLF50KW384V240VS



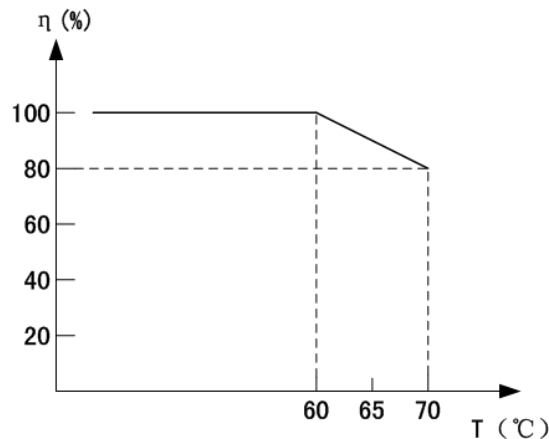
VS

No.	Name	Description
1	LCD Display Screen	Displays inverter's operating status. Some functions are settable using the LCD display. Battery voltage, AC output voltage, AC current, frequency, work mode and faults.
2	Lock & Handle	Inverter lock and handle for main door.
3	Cable Gland	The input and output wire throughputs.
4	Start Switch	Start switch to charge capacitors for starting the inverter.
5	Breakers	DC input and AC output breaker.
6	Connection Terminals	DC input terminal & AC output terminal.
7	Name Plate	Basic inverter specifications listed on the nameplate including serial number.

2. Technical Information

Derating

Reducing the output power is a way to prevent inverter overload or damage. When the operating environment temperature and altitude are too high, both can cause a decrease in the inverter's output power.



Inverter temperature derating curve

$$\eta = (P_{out}/P_{nom}) \times 100$$

T = environment temperature

P_{out} is the off grid inverter's actual maximum output power

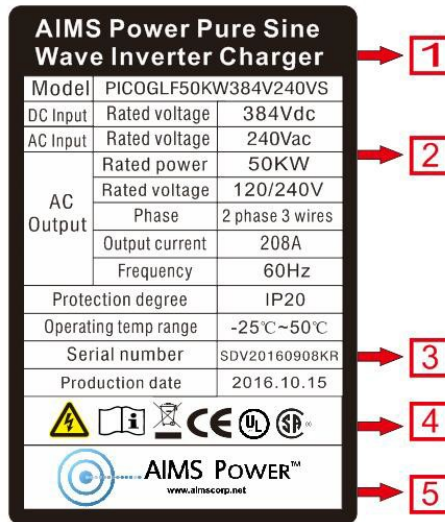
P_{nom} is the off grid inverter's allowed max. output power

3. Unpacking the Inverter

The product has been tested, thoroughly inspected and packaged to withstand transportation. It is important to check the package and inverter before installing.

Be sure to inspect for any damage or incorrect quantities BEFORE signing for the product. If you accept the product, make sure to have the carrier NOTE the damage before signing.

The nameplate shows the inverter's model and other important information. Confirm you ordered and that you received the correct inverter.



NO.	Description
1	AIMS Power Logo and product name.
2	Inverter model and parameter information.
3	Serial number.
4	Certifications and safety symbols.
5	Company info.



Note!

Photos are for reference only, check nameplate on the inverter.

4. Installation

Location

- ✓ The inverter must be installed in a cool dry area. Water, dirt and dust will damage the inverter.
- ✓ A 1ft clearance around the inverter is recommended.
- ✓ Installation must comply with local standards and codes.
- ✓ Do not install the inverter in a flammable or explosive area or a place where flammable or explosive materials are stored.
- ✓ Do not install the inverter in areas where the inverter is vulnerable to lightning strikes.
- ✓ Do not install the inverter in a high salt, humid environment.
- ✓ Inverter has a rating of IP20. Install indoors and out of direct sunlight.
- ✓ Place inverter on a solid, sturdy, flat surface that can handle the inverter's weight.
- ✓ The ideal temperature should be maintained within -13 to 122°F and humidity not exceeding 95%.
- ✓ The inverter should be installed vertically.
- ✓ Do not allow the inverter to tilt forwards.

- ✓ Never install the inverter horizontally.
- ✓ Install the inverter so the LCD is easy to access and read.
- ✓ The inverter should have plenty of air flow all around the inverter for proper cooling fan operation.
- ✓ Don't install the inverter where passersby or children can tamper or access the unit.

5. Electrical Connection

As mentioned several times in this manual, installation should be done by a licensed professional. The electrical connections should be tested immediately after the installation is completed.

Prechecks

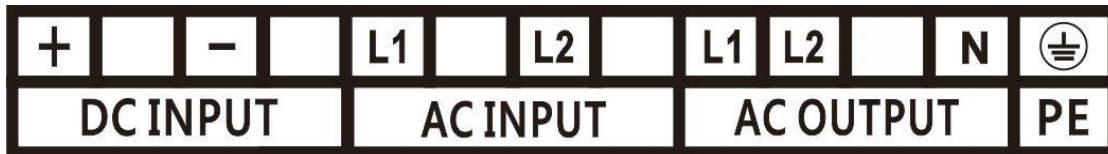
- ⦿ All electrical connections must meet local electrical codes.
- ⦿ Incorrect wiring and/or installation may damage the inverter and may cause bodily harm.
- ⦿ Before making any connections or performing maintenance to the inverter, make sure all power is off and no voltage present on the AC and DC sides.
- ⦿ Test for correct grounding, using proper cable and fuse sizes.
- ⦿ Use a fuse or breaker 12 inches off the battery bank.
- ⦿ Confirm the front panel breakers are in the "OFF" position and confirm all connections are properly wired.
- ⦿ Check that the DC input breakers are in the "OFF" position.
- ⦿ The cable between the battery and inverter should be as short as possible to avoid voltage drop.
- ⦿ Never turn off DC input breaker with the inverter on or under a load, damage to the breaker or the inverter will occur.
- ⦿ Ensure all air vents are free from obstructions and clear of dust and debris.
- ⦿ Don't connect ground wire (PE) of cabinet and neutral wire (N) together.

NOTE: Do not over shut DC breaker off during operation. To shut AC off, use AC breaker first, then disengage AC start switch. To shut down inverter completely, follow above steps first then turn off DC breaker. Shutting off DC breaker during operation and under a load will damage the breaker and cause arcing.



Terminals	Description
+	DC positive input terminals
-	DC negative input terminals
L1, L2	AC input terminals, connect with AC grid or generator
L1, L2, N	AC output terminals, connect with AC load panel
PE	Earth ground

Terminal Block



Warning !

- ⊙ Do not reverse the polarity when connecting to DC input terminals. Confirm your wires are connected properly. Use the proper size cable and use bigger cable to handle voltage drop for long distance runs. **REVERSE POLARITY IS NOT COVERED UNDER WARRANTY.**
- ⊙ Source ground to case ground must be isolated and wire length should be as short as possible.
- ⊙ After all wire connections have been made, check all voltages to ensure the voltages are within inverter's specification.
- ⊙ Never operate any inductive motor larger than 30% of the inverters output due to high startup surge.
- ⊙ When turning on the DC input breakers, the breaker may trip or pop the first time. This is normal as the large capacitors are rapidly charging. If this happens, simply reset the DC breakers.
- ⊙ When powering on the inverter, we recommend turning on the output circuit breaker first, then turn on start switch allowing a soft start of AC loads to avoid any damage by large inrush current to inverter.
- ⊙ Before performing checks or maintenance, open (off) AC breaker, turn off start switch, then open (off) DC breaker. **Wait 5 minutes** for energy to dissipate. Measure DC and AC voltages with a multimeter and ensure there is no voltage between DC side and AC side. The display will slowly dim and disappear as the voltage drops. Inverter may still be live and have voltage present in the off position due to the large capacitors. Never touch any connection prior to testing with a multimeter.
- ⊙ When the inverter is operating normally, it is typical to see a rise in temperature. The cooling fans will start when the temperature reaches @ 113°F.
- ⊙ Do not open inverter's door or touch any wire while in operation.

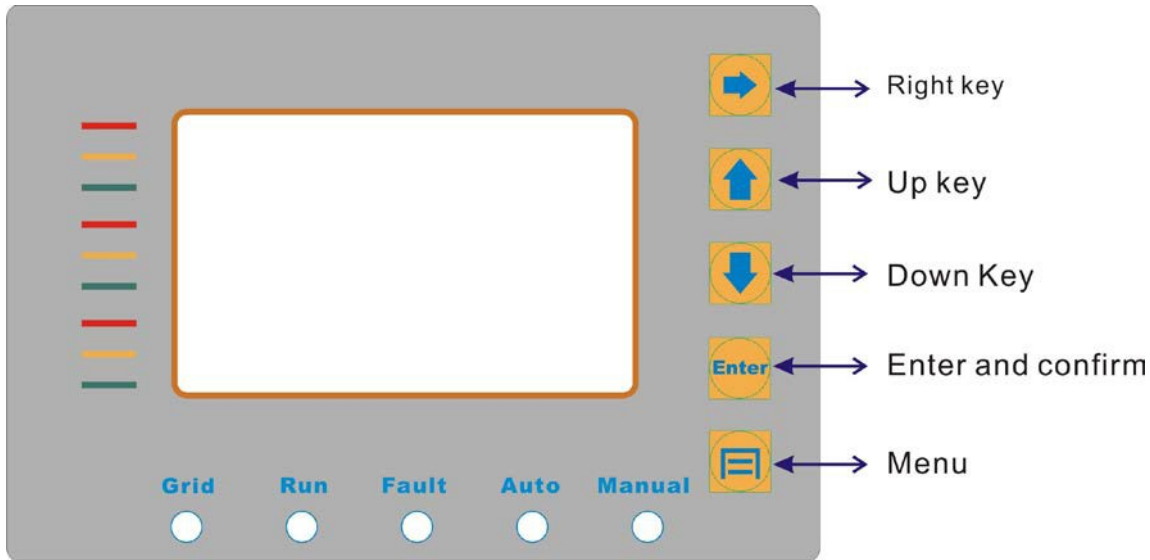


NOTE

When the inverter is running, it is normal for the inverter to get warm. To avoid injury, only touch the LCD display and start/stop switch. **DO NOT TOUCH ANY BREAKERS WHILE INVERTER IS OPERATING. THIS MAY CAUSE BODILY HARM AND RUIN THE INVERTER.**

After all connections are made and voltages are verified with a multimeter, proceed to the startup procedure in section 6.

6. LCD Display Layout



LED Indicators

There are 5 LED lights on the panel: Grid, Run, Fault, Auto, Manual.

Table7-1 LED Indicator Direction

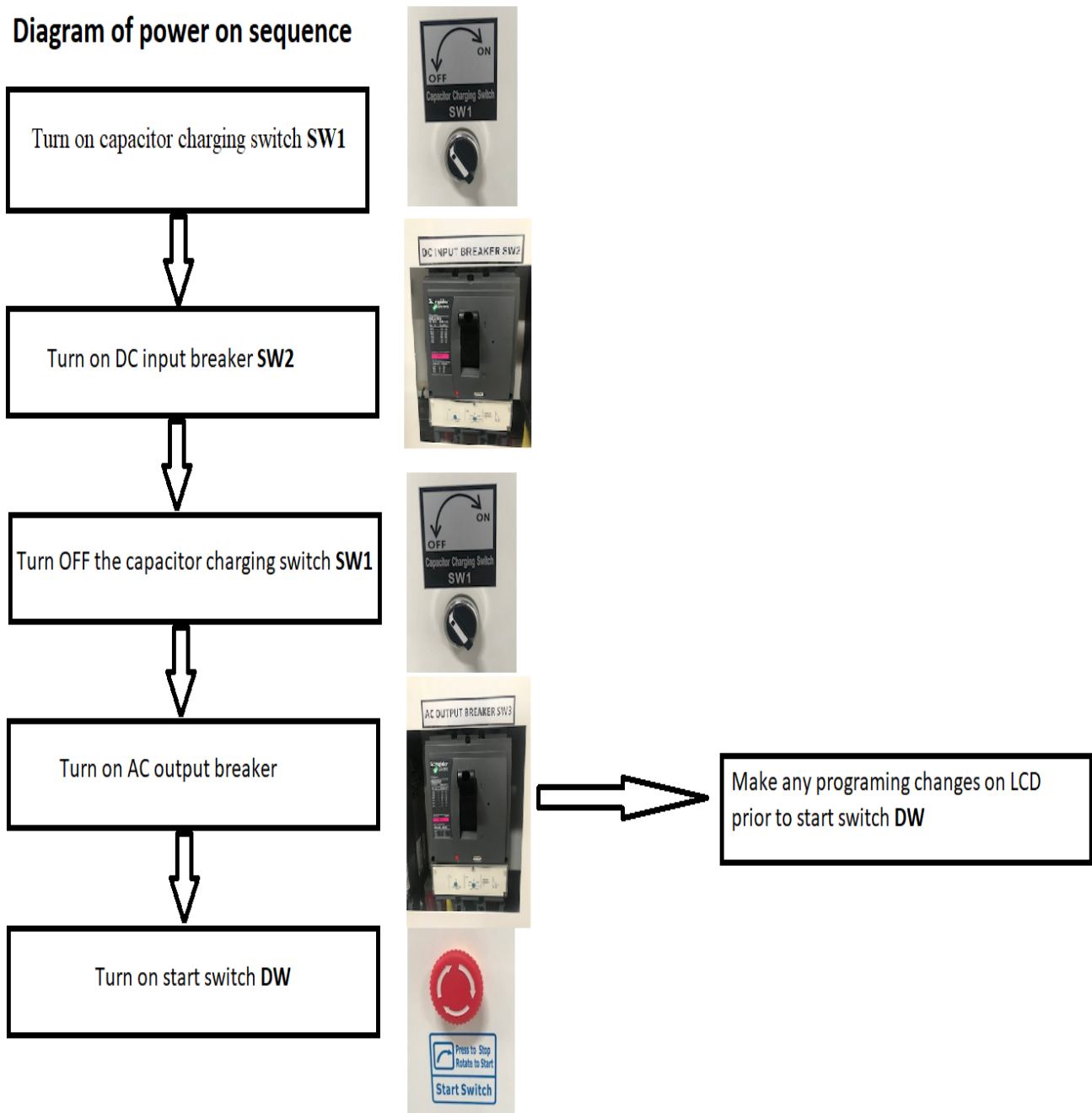
LED Indicator	Color	Instructions
Grid	Amber	AC bypass priority mode indicates the AC grid input condition.
Run	Green	Battery priority mode indicates the battery supply condition. Inverter mode.
Fault	Red	System fault.
Auto	Blue	Inverter running, indicates the inverter is work normally.
Manual	Illuminated	Variable frequency mode, the inverter is working in variable frequency mode.

*When in inverter mode, the LED will be blue/green or blue/amber. This is normal.

Fault Code

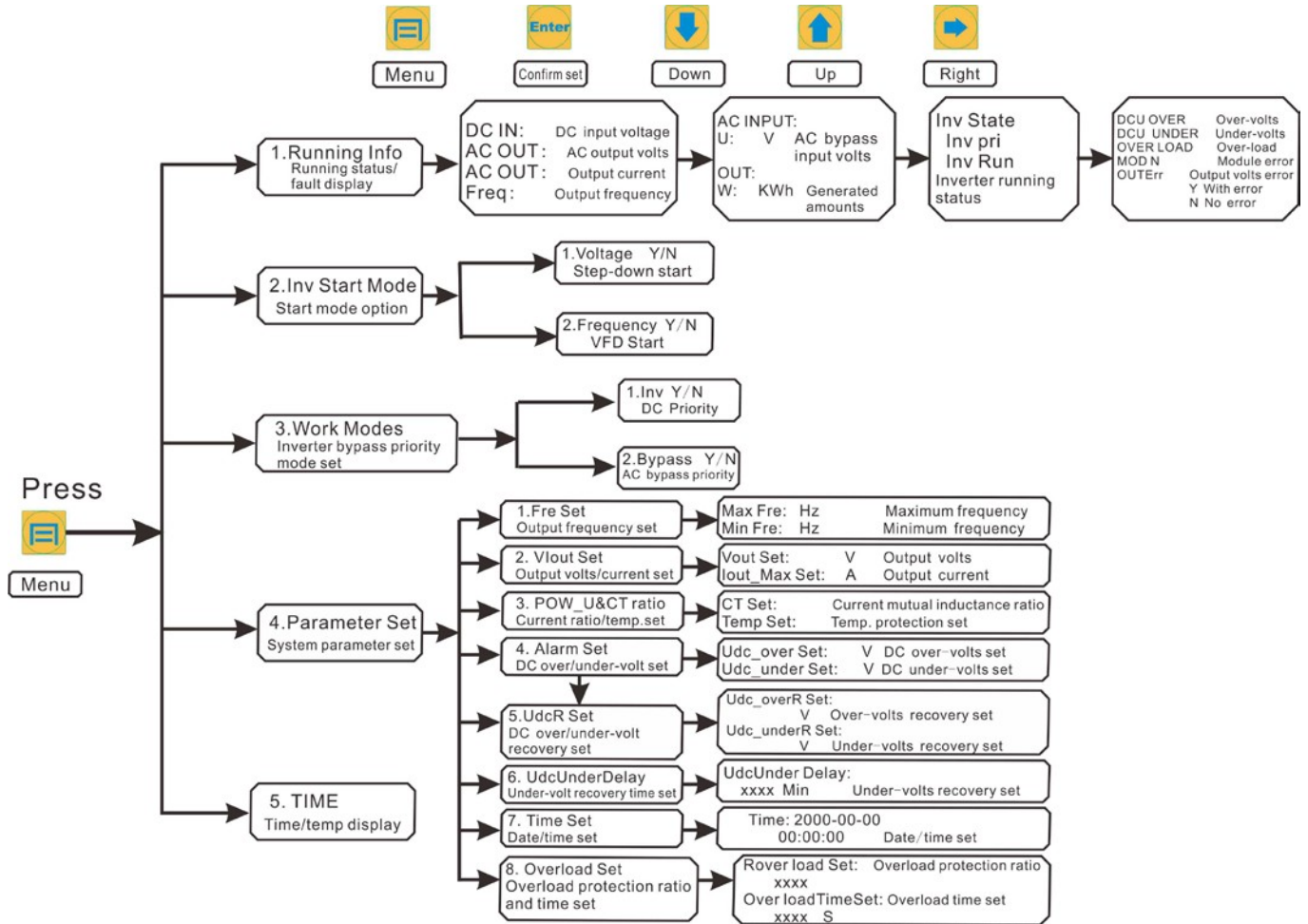
DCU OVER	DC over-voltage
DCU UNDER	DC under-voltage
OVER LOAD	Current over-load
MOD	Module error
OUTErr	Output voltage unbalance (This error is only for 3 phase output, single phase output without this error display).

Diagram of power on sequence



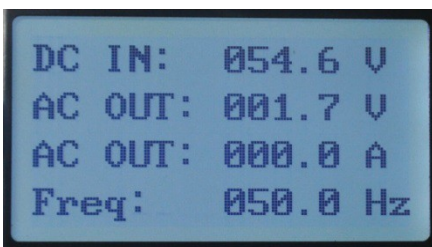
If any inverter parameters need to be made, follow instructions on page 15 **LCD Panel Operating Instructions**. **All parameters must be set prior to engaging start switch DW.**

LCD Display Interface Overview

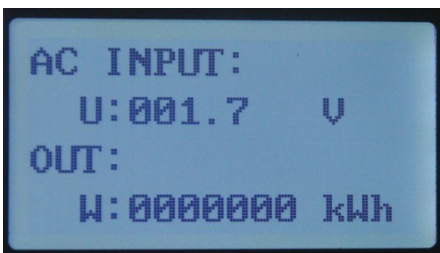


7. LCD Panel Operating Instructions

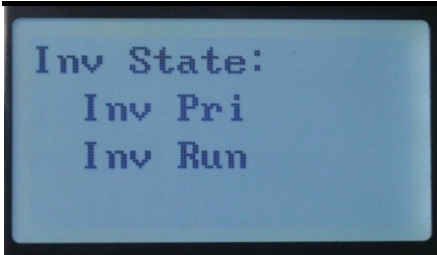
Inverter power on, the first interface display parameter, press “down” key to display the following parameters:



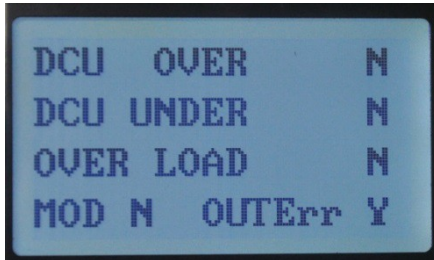
DC IN DC input voltage display
AC OUT AC output voltage display
AC OUT Output current display
Freq Output frequency display



AC INPUT: AC bypass input
U: V Bypass phase voltage
OUT: Total generated amounts
W: KWH Generated amounts



Inv State: Inverter working state:



DCU OVER	DC over-voltage
DCU UNDER	DC under-voltage
OVER LOAD	Over-load
MOD	Module error

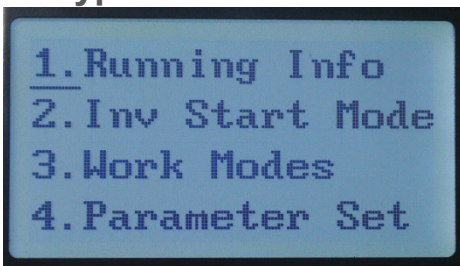
Fault display: "N" indicates no error, "Y" indicates error

OUTErr	Output voltage unbalanced
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**This error is only for 3 phase output. (NA for 240V)

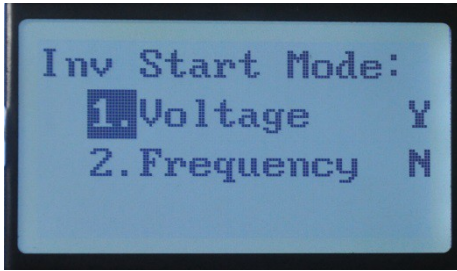
- ◆ Fault alarm can be divided into automatic recovery and non-automatic recovery: When the LCD screen display MOD error and overload you need to manually restart, turn off the DC circuit breaker until the LCD screen is completely off and then turn on the DC circuit breaker; over-voltage, under-voltage will automatically recover (the under-voltage recovery default setting is 10 minutes), and can be set according to the customer application.

Keypad function



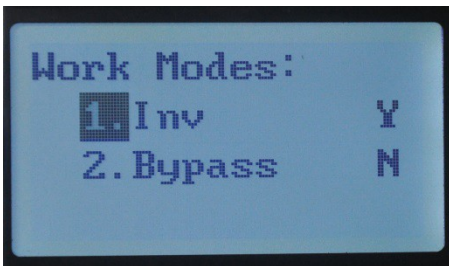
- | | |
|-------------------|--------------------------|
| 1. Running Info | Running state display |
| 2. Inv Start Mode | Inverter Start mode |
| 3. Work Modes | Working Mode |
| 4. Parameter Set | System parameter setting |

Press “ 2. Inv Start Mode ” displays the following

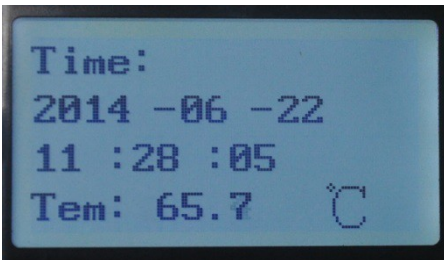


- 1. Voltage Constant frequency step-down voltage Starting mode
 - 2. Frequency Variable frequency starting mode
- Y : YES N: NO

Press “ 3. Work Modes ” displays the following



- 1. Inv Battery priority mode
 - 2. Bypass AC bypass priority mode
- Y : YES N: NO

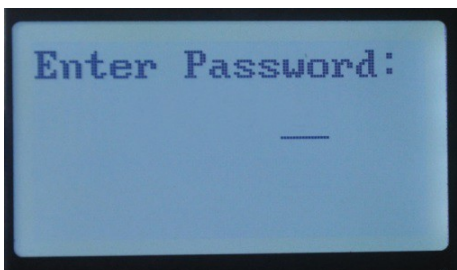


- Time: Display current time and date
- Tem: Environmental temperature display

Press “ 4. Parameter Set ” you will need to enter password each time.



Note! If you want to adjust the parameter setting, please contact the manufacturer and ask for password

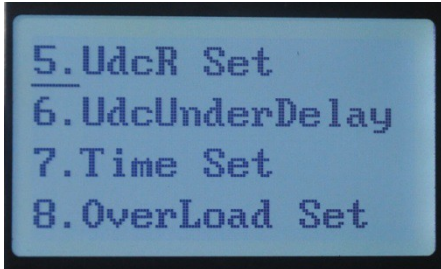


Note! When inverter is working, please don't adjust parameters setting. If you want to adjust parameter setting, please turn off start button and operation of inverter.

The following settings are to be set by a qualified professional. If you are not qualified to make these changes, damage will occur and not covered under warranty.

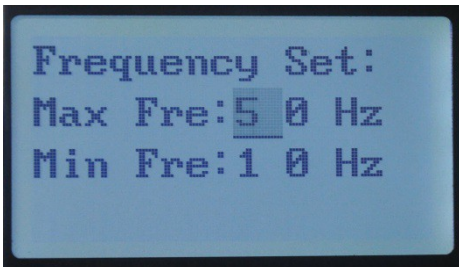


- 1. Freq Set Frequency setting
- 2. Vout Set Output voltage setting
- 3. CT&Temp Set Current ratio setting and temperature Protection setting
- 4. Alarm Set DC over-voltage and under-voltage setting



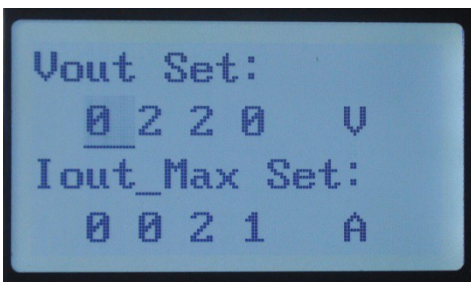
- 5. UdcR Set Recovery setting of DC over-voltage and under-voltage
- 6. Udc Under Delay Default recovery time of under-voltage is 10 minutes
- 7. Time Set Date and time setting
- 8. Overload Set Overload times and overload time setting

Press “ 1. Freq Set ” output frequency setting display as following



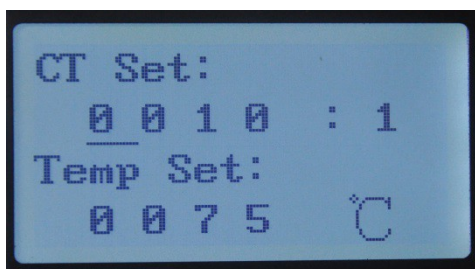
- Max Fre: HZ Recommend maximum output frequency setting between 30-100Hz
- Min Fre: HZ The minimum frequency of output Starting can't less than 5Hz

Press “ 2. Vout Set ” output voltage and current setting display as following



- Vout Set Output voltage setting
 - Iout_Max Set: Output current setting
- Note: Output Max Current default is the overload protection current value and can be lowered, Output voltage should be set to no more than 20% of the rated power. If the inverter is damaged by incorrect settings it will not be covered under warranty.**

Press “ 3. CT&Temp Set ” Current and mutual inductance ratio and Protection temperature setting display as following



- CT Set: Current and mutual inductance ratio setting
- Temp Set: Protection temperature setting

Press “ 4. Alarm Set ” over-voltage and under-voltage setting display as following



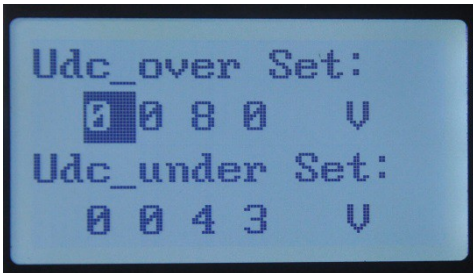
Udc-over Set: DC over-voltage protection setting
 Udc-under Set DC under-voltage protection setting

Press “ 5. UdcR Set ” DC over-voltage and under-voltage recovery setting display as following



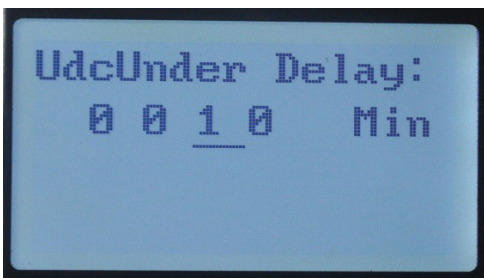
Udc-over Set: DC over-voltage recovery setting
 Udc-under Set: DC under-voltage recovery setting

Press “ 6. Udc Under Delay ” Under-voltage recovery time setting display as following



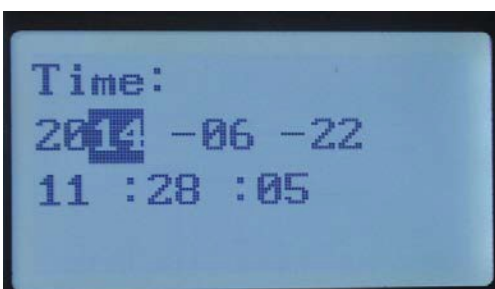
Udc Under Delay: Under-voltage recovery time setting
 Min Minute

Press “ 7. Time Set ” to display as following



Time:
 Display date and time setting

Press “ 8. Over Load Set ”



Recovery over Load Set: Overload times
 setting Overload surge time

8. Malfunction and Troubleshooting

If a malfunction or alarm sounds, the malfunction LED will light up, LCD will display current malfunction or stop condition, please refer to chart below for commons malfunction and troubleshooting steps.

Condition code	Name	Phenomena	Cause value	Troubleshooting
State 01	DC input voltage low	Inverter stopped working, No AC output, inverter restarts automatically	Battery voltage out of inverter's DC range. DC input voltage lower than min input voltage of inverter	Check battery output voltage on the inverter, ensure the output voltage is within spec of inverter.
State 02	DC input Over voltage	Inverter stopped working, No AC output, inverter restarts automatically	DC input voltage higher than maximum input voltage of inverter	Check battery output. voltage or PV array voltage and ensure the output voltage is within spec of inverter.
State 03	Output overload	Inverter shut down, AC loads turn on and off	Load higher than rated output power of inverter. Battery bank too small	Insure correct system design. This fault is usually caused by high surge devices that the inverter or battery bank can't support.
State 04	IPM fault	Inverter shut down, will no longer output AC power		Check for short circuit on AC output. If this fault appears frequently, please contact AIMS Power

Under fault of MOD, overload, output error and fault alarm, turn off the DC input breaker for 1 hour to restart the machine.

9. Maintenance

CAUTION

Before performing checks or maintenance, open (off) AC breaker, turn off start switch, then open (off) DC breaker. **Wait 5 minutes** for energy to dissipate. Measure DC and AC voltages with a multimeter and ensure there is no voltage between DC side and AC side. The display will slowly dim and disappear as the voltage drops. Inverter may still be live and have voltage present in the off position due to the large capacitors. Never touch any connection prior to testing with a multimeter.

Every 6 months

- Check all ventilation and fan airways. Blow air and clear all dust in the inverter and in the surrounding area. If high level of dust is accumulating, relocate inverter or find a way to keep dust at a minimum.
- Check the inverter cable connections. If loose, tighten according to the proper connection guidelines in this manual.
- Ensure the cables are not damaged, inspect for cracking, fraying, cut or over heated wiring.

Parts	Check the contents	Solutions
Input and output terminals	Loose	Tighten
Input and output cable	Condition of cable	Replace poor quality cable
Control board	Accumulation of dust and dirt	Using 392kPa-588kPa pressure dry compressed air to clean inverter
Bus capacitor	Discoloration or smell	Replace capacitor
Radiator Fan	Not working	Replace fan
Inside of cabinet	Accumulation of dust and dirt	Using 392kPa-588kPa pressure dry compressed air to blow off
Button cell	LCD doesn't display Time	Replace the CR1220 Button Cell on the motherboard

10. Warranty Conditions

All AIMS Power® products come with warranty coverage against defects as follows, from the date of purchase, unless otherwise indicated:

- 2-Year with optional extended warranties

Within the warranty coverage period, AIMS Power® will either repair or replace, at its sole discretion, the defective product. A refund may be issued if a defective product is not repairable or a comparable replacement is available. – We will never issue a refund. We will always have a replacement if the unit is not repairable. Our distributors offer their own return policy. AIMS only covers warranty issues.

Any shipping charges that occur as a result of a warranty return or exchange are NOT covered by the warranty and are the responsibility of the customer.

The warranty **does not cover** the following:

- Products that AIMS Power® determine, in its sole discretion, to be free of any material or workmanship defects or flaws
- Products evidencing excessive wear, misuse or alteration
- Products with missing or defaced labels, stickers, or other identifying information
- Improper care or storage (e.g. water damage, exposure to extreme heat or cold temperatures)
- Alterations or customization
- Items that were purchased second hand, or from an unauthorized seller
- Items outside of the covered warranty period

AIMS Power
9550 Gateway Drive
Reno, NV 89521
775-359-6703
www.aimscorp.net

11. Specifications

Model		30KW
Isolation mode		Low Frequency Transformer
DC Input	Rated voltage (Vdc)	300V Operating: 270-430V DC Programming: 250-500V DC
	Rated current(A)	100A
	DC operating range	270-430V DC
	Programmable range	250-500V DC
AC Output	Rated power (KW)	30KW
	Rated voltage	120/240V split 120/208V 3 phase 480 3 phase
	Output phases	Split phase 3 phase – depends on model
	Rated current (A)	125A 83.3A (phase current)
	Output frequency	60Hz
	Output waveform	Pure Sine Wave
	Voltage accuracy	Load balance ≤ 1%, Unbalance load ≤ 5%
	Waveform distortion rate (THD)	Linear load ≤ 2%, Nonlinear load ≤ 3%
	Dynamic Response	5%, ≤ 50ms(load 0 ~ 100%)
	Power Factor (PF)	0.95
	Inverter Efficiency	>94%
	Electrical insulation properties	2000Vac, 1 Minute
	Running mode	Working continuously, can work 24h*7@50% load
	Output voltage (Vac)	110/120/220/230/240/380/400/415/440VAC can be customized
	Phases	Single / Split/ Three phase optional – per order
Protection Function	Overload Ability	120% - 35 seconds, 150% - 5 seconds
	Protection	Input reverse polarity, under voltage, over voltage, output over-current, short circuit, overheating etc.
	Display	LCD
	Communication port	RS485(Optional)
	Cooling method	Fan-cooled
	Short-circuit protection	No automatic recovery, need to restart the machine
Working environment & Mechanical dimension	Degree of protection	IP20(indoor)
	Working Altitude (m)	≤2500m
	Working temperature	-15~+50°C
	Relative humidity	0~90%, non-condensing
	Noise (1 meter)	≤50dB
	Depth* Width * Height	650x750x1100mm 24" x 24.75" x 42.50"
	Weight (Kg)	260Kg 568lb – 650lb
Certifications	European CE (EMC & LVD) UL, CSA	

Model		50KW
Isolation mode		Low Frequency Transformer
DC Input	Rated voltage (Vdc)	360V
	Rated current(A)	139A
	DC operating range	346-550V DC
	Programmable range	320-600V DC
AC Output	Rated power (KW)	50KW
	Rated voltage	120/240V 120/208V
	Output phases	Split phase 3 phase
	Rated current (A)	208.3A 138.8A (phase current)
	Output frequency	50Hz or 60Hz
	Output waveform	Pure Sine Wave
	Voltage accuracy	Load balance ≤ 1%, Unbalance load ≤ 5%
	Waveform distortion rate (THD)	Linear load ≤ 2%, Nonlinear load ≤ 3%
	Dynamic Response	5%, ≤ 50ms (load 0 ~ 100%)
	Power Factor (PF)	0.95
	Inverter Efficiency	>94%
	Electrical insulation properties	2000Vac, 1 Minute
	Running mode	Working continuously, can work 24h*7
	Output voltage (Vac)	110/120/220/230/240/380/400/415/440VAC can be customized
	Phases	Single / Split/ Three phase optional – per order
Protection Function	Overload Ability	120% - 35 seconds, 150% - 5 seconds
	Protection	Input reverse polarity, under voltage, over voltage, output over-current, short circuit, overheating etc.
	Display	LCD
	Communication port	RS485(Optional)
	Cooling method	Fan-cooled
	Short-circuit protection	No automatic recovery, need to restart the machine
Working environment & Mechanical dimension	Degree of protection	IP20(indoor)
	Working Altitude (m)	≤ 2500m
	Working temperature	-15~+50°C
	Relative humidity	0~90%, non-condensing
	Noise (1 meter)	≤ 50dB
	Depth* Width * Height	710x750x1300mm 31.5" x 31.5" x 49.5"
	Weight (Kg)	400Kg 900lb -960lb
Certification	European CE (EMC & LVD) UL, CSA	

Electrical Diagram

