

**DXQ LV6048**

# LV6048 MPP Solar Inverter User Manual

**Brand:** DXQ | **Model:** LV6048

## 1. INTRODUCTION

The LV6048 is a 6000W/48Vdc grid-optional solar inverter designed for power systems in regions utilizing 110/120V single phase, 208V/240V split phase, or 208V 3-phase loads. This model is suitable for off-grid applications in the US, Canada, Puerto Rico, and other regions where 120V/240V split phase power is standard, eliminating the need for an external step-down transformer.

Each unit includes two dual 80A max MPPT solar chargers and supports up to three units in parallel (parallel kit built-in). The inverter offers high programmability via its LCD menu and supports both 50Hz and 60Hz operation, as well as dual AC or DC priority modes. It also features a generator starter dry contact and comes with the WatchPower monitoring program.



**Figure 1.1:** Front view of the LV6048 MPP Solar Inverter, showcasing its compact design and integrated display panel.

## 2. KEY FEATURES

- **Output Versatility:** Capable of producing 110V/120V Single Phase, 120V/240V Split Phase, 208V Split Phase, and 208V 3-Phase output.
- **High Power Output:** Max continuous 6000W 48Vdc battery-based pure sine wave solar inverter.
- **Integrated MPPT Chargers:** Built-in dual 2x 80A 3-stage MPPT solar chargers, supporting up to 8KW PV array in total with a max PV input of 145V open circuit.

- **Operational Modes:** Dual AC and DC priority modes allow operation as a UPS or battery/solar inverter with backup options.
- **Frequency Support:** Supports both 50Hz and 60Hz load through LCD programming.
- **Generator Compatibility:** Built-in genset starter dry contact feature for use with generators (inverter-type generators with remote start function required).
- **Monitoring Software:** Bundled monitoring software compatible with Windows, Mac, and Linux operating systems.
- **Parallel Capability:** Supports up to 3 units in parallel with built-in parallel kit.


www.mppsolar.com

# INNOVATIVE SOLAR INVERTER

LV 6048

Max **6kW** output  
 48VDC system  
 60A Utility Charger  
**120V / 240V / 208V Output**  
 Dual 2x MPPT Input (80A each)  
 Parallel up to 3 units



3 Output Voltage  
**120V / 240V / 208V**  
 Capable!



120V/240V  
 Split Phase

 <p><b>Max Output Power</b> 6000W, Pure Sine Wave</p>	 <p><b>System Voltage</b> 48VDC</p>	 <p><b>Genset Starter</b> Yes, Dry Contact</p>
 <p><b>Output Voltage</b> 120V / 240V / 208V</p>	 <p><b>Built-in Solar Charger</b> 2X MPPT, 80A each</p>	 <p><b>Parallel Support</b> Yes, up to 3</p>
 <p><b>Output Frequency</b> 50 / 60 Hz</p>	 <p><b>Built-in Utility Charger</b> 60A</p>	 <p><b>Communication</b> USB, RS232</p>

## MAIN FEATURES

PV+ PV- PV+ PV-

[Inverter Unit]

[Monitoring Software]





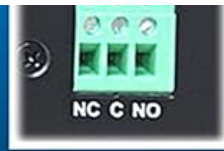
#### Power Upgrade

Now 6KW max output, the new LV6048 offers 1 extra kw capacity from the previous LV5048.



#### Dual MPPT Tracker

This inverter comes with TWO (2) PV input with dual trackers (PV1, PV2) which can scan two arrays facing in different directions, therefore improving PV power generation.



#### Genset Starter

A special feature common on many of our Off-Grid inverters. This port will send a signal to a compatible generator and "wakes" it up when solar/battery is low and requires backup.



#### Parallel Support

This model supports parallel operation up to 3 units, in either 1-Phase, Split Phase or 3-Phase configurations. Parallel kits are required and already built-in for LV5048.

Figure 2.1: Diagram highlighting key features such as max 6kW output, 48VDC system, 60A utility charger, dual 80A MPPT, and parallel capability.

### 3. PRODUCT OVERVIEW AND COMPONENTS

The LV6048 inverter features a clear LCD display for status monitoring, LED indicators for AC/INV, CHG, and FAULT, and intuitive function keys (ESC, UP, DOWN, ENTER) for navigation and settings adjustment.

## PRODUCT SPECIFICATION

Split Phase LV SERIES	LV6048
<b>STANDARD RATING</b>	
Continuous Output	6000W
System DC Volt	48VDC
AC Input Voltage	110 / 120VAC (Phase - Neutral)
Maximum Parallel	Up to 3 units
<b>PV INPUT / SOLAR CHARGING</b>	
Max PV Input Power	8000W (4000W each input)
Max PV Input Volt	145VDC (open circuit Voc)
MPPT Range	60 - 110VDC
Number of PV Input	2
Max Charging Current	160A (80A X 2)
<b>OUTPUT MODE</b>	
Output Waveform	Pure Sine Wave
AC Output Mode	120V L-N / 240V L1-L2 / 208V L1-L2 3-Phase
Frequency	50 / 60Hz, auto-sensing
Max Bypass Current	40A
Max Efficiency	>90%
Max Utility Charging	60A
Max Utility + Solar Charging	220A
Max Bulk/Float Charge	58.4V
<b>ENVIRONMENTAL / MECHANICAL SPECIFICATIONS</b>	
Communication Port	USB / RS232 / Dry Contact
Operating Temp.	0 - 50°C
Operating Humidity	0 - 90% RH (No Condensing)
Dimension	623*610*130mm
Net Weight	30Kg

## CERTIFICATION

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\*all our products are CE certified unless otherwise stated. Specific regional certification available on certain hybrid inverters only.

## PAYMENT, SHIPPING, AND WARRANTY

- ◆ We accept default payment methods based on the specific platform where transaction takes place. Alternative payment methods are available upon request — please contact us.
- ◆ Default shipping method is DHL / FedEx or EMS at the seller's own discretion. **When a shipping method becomes unavailable due to uncontrollable events we may suggest alternative shipping method and extra cost may be applicable at the expense of the buyer.** No COD or self-pick up is available. **IMPORTANT:** For items with item location "within EU" — duty-free shipping available **ONLY** within EU mainland (overseas islands **EXCLUDED**, e.g. Canary Island). For items located "overseas" from Buyer's country, import duties and taxes may apply and **NOT** included in the item price. **These charges are Buyer's responsibility.** Buyers should check locally to determine what these additional costs will be prior to purchase. In line with eBay Policies please note we are not allowed to falsify invoice values or declare a lower value that's different from the actual transaction. In addition, Remote Area Surcharge may apply on courier deliveries (DHL, FedEx, TNT, etc.) if postal code is listed under "remote area" and at the expense to the buyer.
- ◆ Standard international warranty is **1-year**. \*For more information please visit MPP Solar official website ([www.mppsolar.com](http://www.mppsolar.com))
- ◆ According to international customs requirements, customers from countries listed below **MUST** provide their Personal Tax code information. Otherwise, the goods will not be released by local customs. Thank you for understanding.
  - Brazil : CPF No. / C NPJ No.
  - Italy : Fiscal Code No.
  - Germany : EORI No.
  - Argentina : Value Added No.

**Figure 3.1:** Detailed product overview showing the LCD display, LED indicators, function keys, and rear panel connections including AC input, AC output, parallel ID, RS232 port, PV input, genset starter, power switch, battery input, circuit breaker, and USB port. Dimensions are approximately 623mm (height) x 610mm (width).

## 4. INSTALLATION AND SYSTEM WIRING CONCEPT

Proper installation is crucial for the safe and efficient operation of the LV6048 inverter. The system is designed to integrate with solar panels, batteries, utility grid, and a generator to provide power to home appliances.

## PRODUCT SPECIFICATION

Split Phase LV SERIES	LV6048
<b>STANDARD RATING</b>	
Continuous Output	6000W
System DC Volt	48VDC
AC Input Voltage	110 / 120VAC (Phase - Neutral)
Maximum Parallel	Up to 3 units
<b>PV INPUT / SOLAR CHARGING</b>	
Max PV Input Power	8000W (4000W each input)
Max PV Input Volt	145VDC (open circuit Voc)
MPPT Range	60 - 110VDC
Number of PV Input	2
Max Charging Current	160A (80A X 2)
<b>OUTPUT MODE</b>	
Output Waveform	Pure Sine Wave



AC Output Mode	120V L-N / 240V L1-L2 / 208V L1-L2 3-Phase
Frequency	50 / 60Hz, auto-sensing
Max Bypass Current	40A
Max Efficiency	>90%
Max Utility Charging	60A
Max Utility + Solar Charging	220A
Max Bulk/Float Charge	58.4V
<b>ENVIRONMENTAL / MECHANICAL SPECIFICATIONS</b>	
Communication Port	USB / RS232 / Dry Contact
Operating Temp.	0 - 50°C
Operating Humidity	0 - 90% RH (No Condensing)
Dimension	623*610*130mm
Net Weight	30Kg

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- ◆ Standard international warranty is **1-year**. \*For more information please visit MPP Solar official website ([www.mppsolar.com](http://www.mppsolar.com))
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**Figure 4.1:** Conceptual diagram illustrating the wiring of the solar power system, including solar panels, inverter, battery bank, utility grid connection, generator, and household loads. This diagram provides a high-level overview of component interconnection.

### 4.1. Operation Voltage Configurations

The LV6048 inverter supports various output voltage configurations to suit different regional power standards:

- **Single Phase L1-N/L2-N = 120V:** Standard 120V output.
- **Split Phase L1-L2 = 208V:** For 208V split phase applications.
- **Split Phase L1-L2 = 240V:** For 240V split phase applications.

## OPERATION VOLTAGE

### Single Phase L1-N / L2-N = 120V



### Split Phase / 3-Phase L1-L2 = 208V



### Split Phase L1-L2 = 240V



## LCD MENU PROGRAM

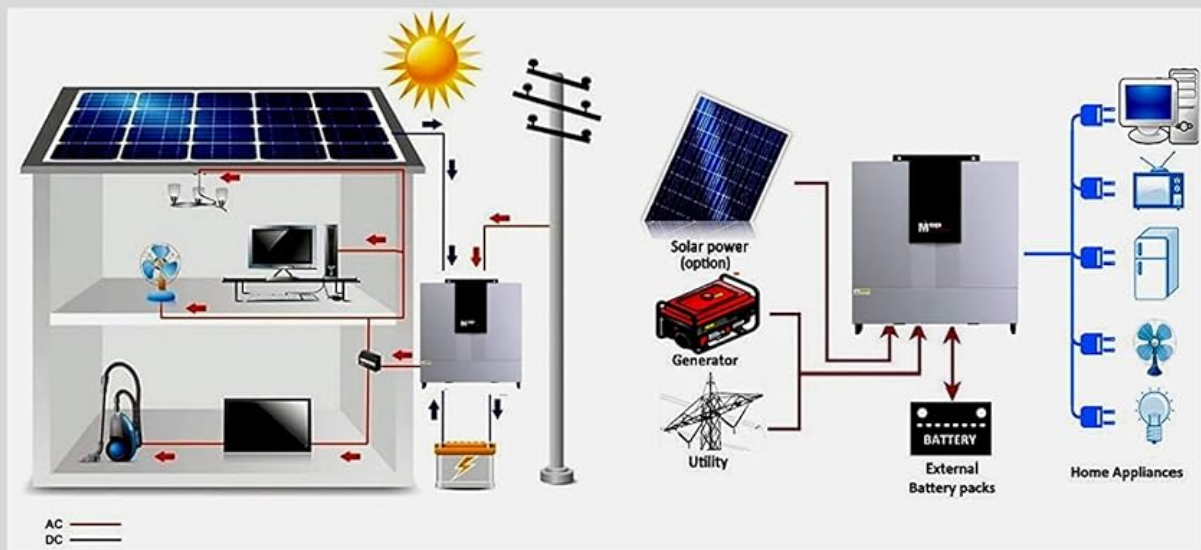
28	AC output mode *This setting is able to set up only when the inverter is in standby mode. Be sure that on/off switch is in "OFF" status.	Parallel output in single phase. Output voltage is 120V. 	Support L1 phase output on 3-Phase application. Output voltage is 120V. 
28	AC output mode *This setting is able to set up only when the inverter is in standby mode. Be sure that on/off switch is in "OFF" status.	Support L2 phase output on 3-Phase application. Output voltage is 120V. 	Support L3 phase output on 3-Phase application. Output voltage is 120V. 
		Support L1/L2 phase output on split phase application with L1 to L2 output voltage in 208V. 	Support L1/L2 phase output on split phase application with L1 to L2 output voltage in 240V. 

**Figure 4.2:** Diagrams illustrating the grid input and grid output configurations for 120V single phase, 208V split phase, and 240V split phase operations, showing voltage relationships between L1, L2, and Neutral.

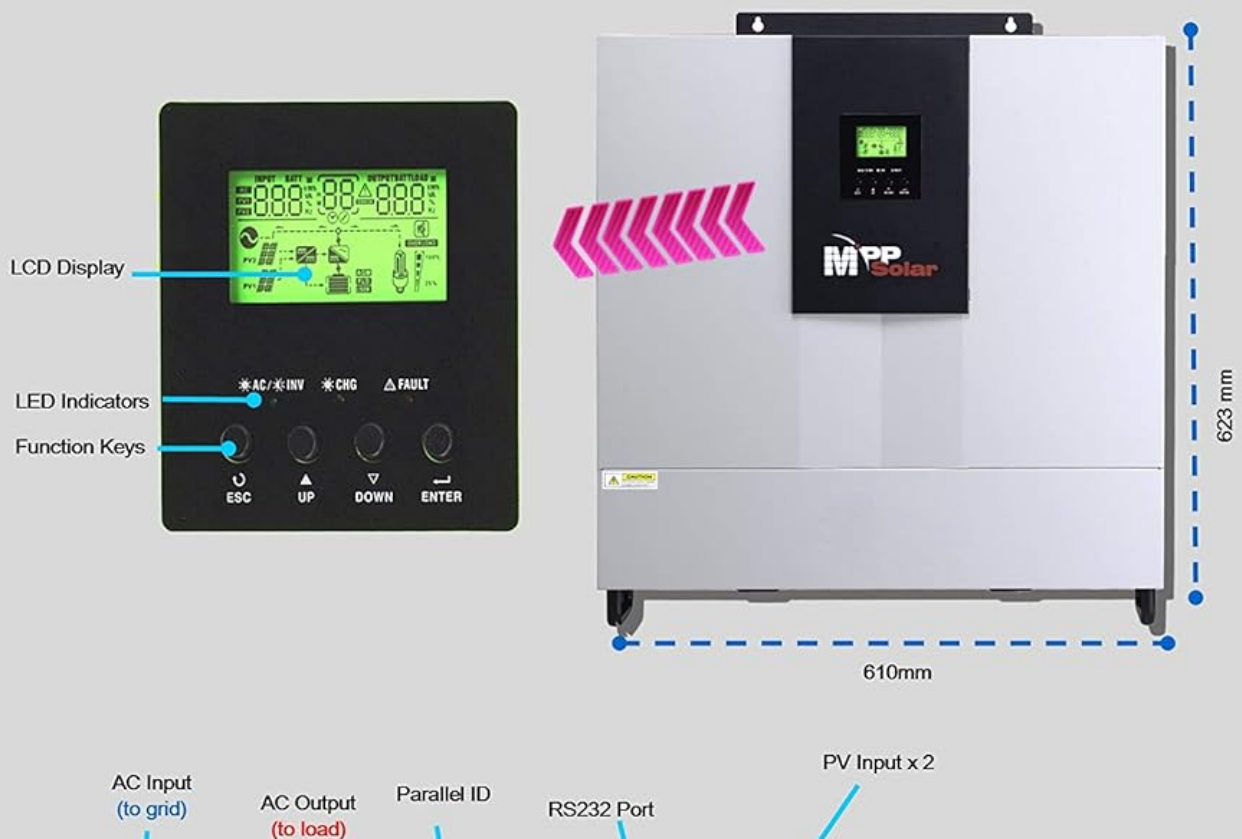
## 5. LCD MENU PROGRAM

The inverter's LCD menu allows for comprehensive configuration and monitoring. Settings can be adjusted when the inverter is in standby mode and the on/off switch is in the "OFF" status.

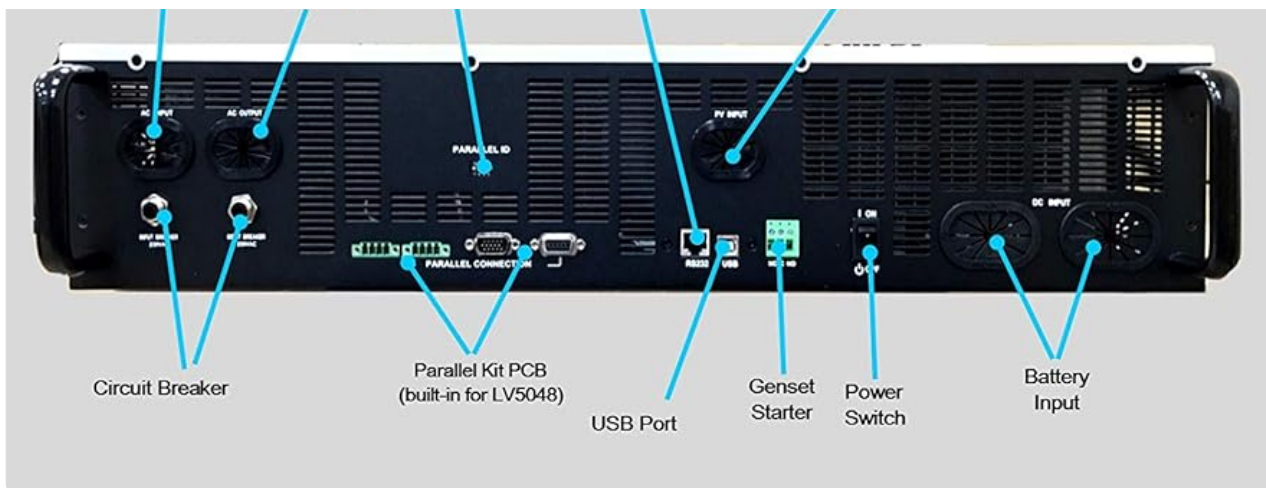
### SYSTEM WIRING CONCEPT



### PRODUCT OVERVIEW







**Figure 5.1:** Examples of LCD menu settings, including AC output mode (setting 28) for parallel output in single phase (120V), 3-phase (120V), and split phase (208V, 240V) configurations. These settings are crucial for adapting the inverter to specific power requirements.

## 6. SPECIFICATIONS

Detailed technical specifications for the LV6048 inverter are provided below:

Category	Parameter	Value
General	Model Name	LV6048
	Brand	DXQ
Output (AC)	Standard Rating	6000W
	Continuous Output	6000W
	Output Waveform	Pure Sine Wave
	AC Output Mode	120V L-N / 240V L1-L2 / 208V L1-L2 3-Phase
	Frequency	50 / 60Hz, auto-sensing
Input (AC)	AC Input Voltage	110 / 120VAC (Phase - Neutral)
	Max Bypass Current	40A
PV & Charging	System DC Voltage	48Vdc
	Max PV Input Power	8000W (4000W each input)
	Max PV Input Voltage	145Vdc (open circuit Voc)
	MPPT Range	60 - 110Vdc
	Number of PV Input	2
	Max Charging Current	160A (80A x 2)
	Max Utility Charging	90A

Category	Parameter	Value
Battery Charging	Max Utility + Solar Charging	220A
	Max Bulk/Float Charge	58.4V
Physical & Environmental	Dimensions (H*W*D)	623 x 610 x 130 mm
	Net Weight	30kg (66.14 lbs)
	Communication Port	USB / RS232 / Dry Contact
	Operating Temperature	0 - 50°C
	Operating Humidity	0 - 90% RH (Non-Condensing)

## TECHNICAL SUPPORT PROCEDURE



## PACKING AND ACCESSORIES



## MONITORING SOFTWARE



## OPTIONAL ACCESSORIES

 <p><b>Unsupported Device</b></p>				 <p><b>Standard Built-In</b></p>
<p><b>Remote LCD Display</b></p> <p>Extension of existing LCD display and allows up to 15m in length. Only select models are supported.</p>	<p><b>SNMP Box/Card</b></p> <p>Enables inverter to be visible through network or the Web (may need to purchase IP from ISP)</p>	<p><b>WiFi Box</b></p> <p>Allows inverter to be accessed via WIFI either through AP mode (access point) or STA mode (station mode).</p>	<p><b>WiFi Module</b></p> <p>Enable inverter data to be transmitted via WIFI to user's iPhone or Android smartphone. App can be downloaded from Apple or Android store</p>	<p><b>Parallel Kit</b></p> <p>Required accessory for inverters that support parallel operation. Only identical models can be paralleled together</p>

**Figure 6.1:** Official product specification sheet for the LV6048 series, detailing standard rating, continuous output, system DC voltage, AC input voltage, maximum parallel units, PV input power, MPPT range, output waveform, and environmental conditions.

## 7. MONITORING SOFTWARE AND OPTIONAL ACCESSORIES

The LV6048 inverter comes with bundled monitoring software and supports various optional accessories to enhance functionality.

### 7.1. Monitoring Software

The inverter includes monitoring software, typically provided on a CD, which allows users to monitor system performance via a computer. Connection is usually made via USB or RS232 (bundled cable included).

### 7.2. Optional Accessories

- **Remote LCD Display:** For convenient monitoring from a distance (up to 15m). Note: Only specific models are supported.
- **SNMP Box/Card:** Enables inverter to be visible through network. Requires purchase of IP from ISP.
- **WiFi Box:** Allows inverter to be accessed via WiFi through AP mode (access point) or STA mode (station mode).
- **WiFi Module:** Enables inverter data to be transmitted to WiFi for monitoring via iOS/Android smartphone apps.
- **Parallel Kit:** Required accessory for systems with parallel operation. Note: Only identical models can be paralleled together. (Standard Built-in for LV6048)



## **IMPORTANT:**

**there is no UL certification with this inverter or any inverters in our store. UL is normally mandatory only for Grid-Tie inverters (feed-in to grid) in USA. However if your State requires all inverters, Off-Grid or Grid-Tie, to be UL-compliant then please do NOT place order or else returns for this reason will be subject to a maximum restocking fee of 20%.**

**Figure 7.1:** Visual representation of the monitoring software setup with an inverter and laptop, along with images of various optional accessories such as remote LCD display, SNMP box, WiFi box, and WiFi module. Also shows the standard built-in parallel kit.

## **8. TECHNICAL SUPPORT AND WARRANTY**

For technical assistance and warranty claims, please follow the procedure outlined below.

### **8.1. Technical Support Procedure**

1. **Problem Found:** Identify the issue with the inverter.
2. **Email Tech Support:** Contact technical support via email.
3. **Technical Evaluation and Solution:** Support will evaluate the problem and provide a solution.
4. **Send Replacement Hardware (if needed):** If a replacement is necessary and no return is required, hardware will be sent.
5. **Return Required (RMA):** If a return is required, obtain a Return Merchandise Authorization (RMA) number.
6. **Ship Package:** Ship the package to the designated service facility (e.g., in Taiwan).
7. **Service or Refund:** The unit will be serviced, or a refund will be processed.

### **8.2. Warranty Information**

The product comes with an International 1 Year Warranty. Please refer to the official MPP Solar website for detailed warranty terms and conditions.

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Figure 8.1: Flowchart detailing the technical support and RMA (Return Merchandise Authorization) process, from problem identification to service or refund, including steps for obtaining RMA and shipping.

## **9. IMPORTANT NOTES AND DISCLAIMERS**

**There is no UL certification with this inverter. UL certification is typically mandatory only for Grid-Tie inverters (feed-in to grid) in the USA. However, if your State requires all inverters, whether Off-Grid or Grid-Tie, to be UL-compliant, then this product may not be suitable. Please verify local regulations before purchase, as returns for this reason may be subject to a maximum restocking fee of 20%.**

This unit is not designed for use in countries utilizing 220-240V type power standards, such as Europe or Africa.