



# ***La MARCHÉ***

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## ***FT Series***

Pure Sine Wave Inverter



## Installation and Operation Manual

This manual is subject to change without notice. You may obtain the newest version of the manual at [www.lamarchemfg.com](http://www.lamarchemfg.com)

## Important Safety Instructions

Before using this equipment, read all manuals and other documents related to this inverter and other equipment connected to this unit. Always have a copy of an inverter's manual on file nearby, in a safe place; if a replacement copy of a manual is needed, it can be found at [www.lamarchemfg.com](http://www.lamarchemfg.com).

### Electrical Safety



**WARNING:** Hazardous voltages are present at the input of power systems. The output from inverters and batteries may be low in voltage but can have a very high current capacity that may cause severe or even fatal injury.

When working with any live battery or power system, follow these precautions:

- Never work alone on any live power system, someone should always be close enough to come to your aid.
- Remove personal metal items such as rings, bracelets, necklaces, and watches.
- Wear complete eye protection (with side shields) and clothing protection.
- Always wear gloves and use insulated hand tools.



**WARNING:** Lethal voltages are present within the power system. Parts inside the unit may still be energized even when the unit has been disconnected from the DC or AC input power. Check with a meter before proceeding. Do not touch any parts that are not insulated.

- A licensed electrician should be used in the installation of any unit.
- Always disconnect the unit from the supply, batteries, and loads before performing maintenance or cleaning.
- If the unit is hot-swappable, simply remove it from the shelf for any maintenance or cleaning.
- Always assume that an electrical connection is live and check the connection relative to the ground.
- Be sure that neither liquids nor any wet material come in contact with any internal components.
- Do not operate this unit outside the input and output ratings listed on the unit nameplate.
- Do not use this unit for any purpose not described in the operation manual.

### Mechanical Safety

- This unit or parts of the unit may get very hot during normal operation, use care when working nearby.
- Do not expose equipment to rain or snow. Always install in a clean, dry location.
- Do not operate the equipment if it has received a sharp blow, been dropped, or otherwise damaged in any way.
- Do not disassemble this unit. Incorrect re-assembly may result in a risk of electric shock or fire.

### Battery Safety



**WARNING:** Follow all of the battery manufacturer's safety recommendations when working with or around battery systems. DO NOT smoke or introduce a spark or open flame in the vicinity of a battery. Some batteries generate explosive gases during normal battery operation.

- To reduce the risk of arc, connect, and disconnect the battery only when the unit is off.
- If it is necessary to remove the battery connections, always remove the grounded terminal from the battery first.
- Remove personal metal items such as rings, bracelets, necklaces, and watches.
- Always wear rubber gloves, safety glasses, and a rubber-lined vest/apron when working near a battery.
- Have plenty of freshwater and soap nearby in case the battery electrolyte contacts skin, clothing, or eyes.
- If the battery electrolyte contacts skin or clothing, wash immediately with soap and water.
- If the electrolyte enters the eye, immediately flood the eye with running cold water for at least ten (10) minutes and seek medical attention immediately.
- Do not drop metal on a battery. A spark or short-circuit could occur and could cause an explosion.

## Unit Location

- Allow at least 6 inches of free air on all vented surfaces for proper cooling.
- Do not operate this unit in a closed-in area or restrict ventilation in any way.
- Do not set any battery on top of this unit.
- Never allow battery electrolyte to drip on this unit when reading the specific gravity or filling the battery.
- Never place this unit directly above a standard flooded battery. Gases from the battery will corrode and damage equipment.
- A sealed maintenance-free or valve-regulated lead-acid (VRLA) battery may be placed below this equipment.

## Check for Damages

Before unpacking the product, note any damage to the shipping container and take pictures. Unpack the product and inspect the exterior and interior of the product for damage. If any damage is observed, take pictures and contact the carrier immediately to file a damage claim. Contact La Marche for a Return Material Authorization number to have the inverter sent back for evaluation and repair.



**CAUTION:** Failure to properly file a claim for shipping damages or provide a copy of the claim to La Marche, may void warranty service for any physical damages reported for repair.

## Returns for Service

Save the original shipping container. If the product needs to be returned for service, it should be packaged in its original shipping container. If the original container is damaged/unavailable, make sure the product is packed with at least three inches of shock-absorbing material to prevent shipping damage. *La Marche is not responsible for damage caused by improper packaging of returned products.*

## Inspection Checklist

- The enclosure exterior and interior are not marred or dented.
- No visible damage to the components.
- All hardware and connections are tight.
- All wire terminations are secure.
- All items on the packing list have been included.

## Handling

Equipment can be very heavy with uneven distribution of weight. Use adequate manpower or equipment for handling. Until the equipment is securely mounted, care must be used to prevent equipment from being accidentally tipped over or dropped.

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## Model Scope/General Description

The La Marche FT Series Inverter is a pure sine wave AC output, designed to adopt to various types of loads. This DC to AC Inverter with dual CPU control provides excellent performance with automatic protection. The FT Inverter temporarily provides up to 120% of the output for 30 seconds, providing extra power needed to start motorized equipment. Available in 120 VAC or 230 VAC Output.



Figure 1 – FT Series Inverter Overview

## Understanding the Model Number

The FT Series model number is coded to describe the features that are included. Find the model number on the nomenclature nameplate of the enclosure. Follow the chart below to determine the configuration of the inverter.

		FT - 6K - 48V - A6				
DC Bus	Rating	Model	Rating	Frequency	Output Voltage	Frequency
12V	1kVA				A = 120VAC	50Hz / 60Hz
24V	2kVA				B = 240VAC	
48V	3kVA				D = 208VAC	
96V	4kVA				L = 220VAC	
	5kVA					
	6kVA					
	8kVA					

## Optional Accessories Included in the Inverter

This inverter may have been outfitted with a number of optional accessories or option packages. To determine the options included (if any) refer to the cover page of the manual package. If the manual package that is included with the inverter is no longer available, contact La Marche and provide the model or serial number to receive a list of the included accessories.

## 1 Equipment Handling

### 1.1 Storing the FT Series Inverter

If the FT Series Inverter is to be stored for more than a few days after delivery, it should be stored within its shipping container. The location chosen for storage should be within an ambient temperature of -4 to 140°F (-20 to 60°C) with a non-condensing relative humidity of 0 to 95%. Storage should not exceed 2 years due to the limited shelf life of the filter capacitors when they are not in service.

### 1.2 Moving the FT Series Inverter

After careful inspection and upon verification that the FT Series is undamaged, identify the enclosure style and weight of the inverter. Refer to Table 1 below.

	Output kW	Output Voltage	Dimensions (D x W x H)	Weight (lbs)	Enclosure Size
FT Series Inverter	1kW/2kW/3kW	120VAC, 208VAC,	19.2 x 10 x 7"	28.6/35.2/39.6	250
	4kW/5kW/6kW	220VAC	22 x 12 x 8"	59.5/66.1/74.9	251
	8kW	or 230VAC	25.7 x 13.3 x 10.2"	103.6	Consult Factory

Table 1 – Case and Weight

## 2 Installation

### 2.1 Mounting the FT Series Inverter

When mounting the FT Series Inverter, consider the size and weight of the inverter. The FT Series Inverter is wall mounting system. Refer to Table 1 to verify the weight of the inverter. The location chosen for the inverter should be within an ambient temperature range of -4°F to 122°F (-20°C to 50°C) with a non-condensing relative humidity no higher than 95%. The inverter should be mounted in an area free of explosive materials and away from any liquids. Avoid using equipment in a location with corrosive gases (e.g. over flooded Lead Acid batteries) and dust. The FT Series utilizes fan-assisted cooling, so clearance of at least 12 inches of free air must be maintained in bottom and on top for proper cooling. The preferred fastener is a machine bolt backed with a flat washer, lock washer, and nut. All hardware should be corrosion-resistant.

#### 2.1.1 Wall-Mounting the FT Series Inverter

To wall-mount the FT, mark and drill the points on the wall per the mounting dimensions and install (4) bolts in the wall, rated to support the inverter's weight plus a safety factor of at least four times. Refer to Table 1 for unit weight specifications. Secure the inverter on bolts, add appropriate mounting hardware, and tighten securely.

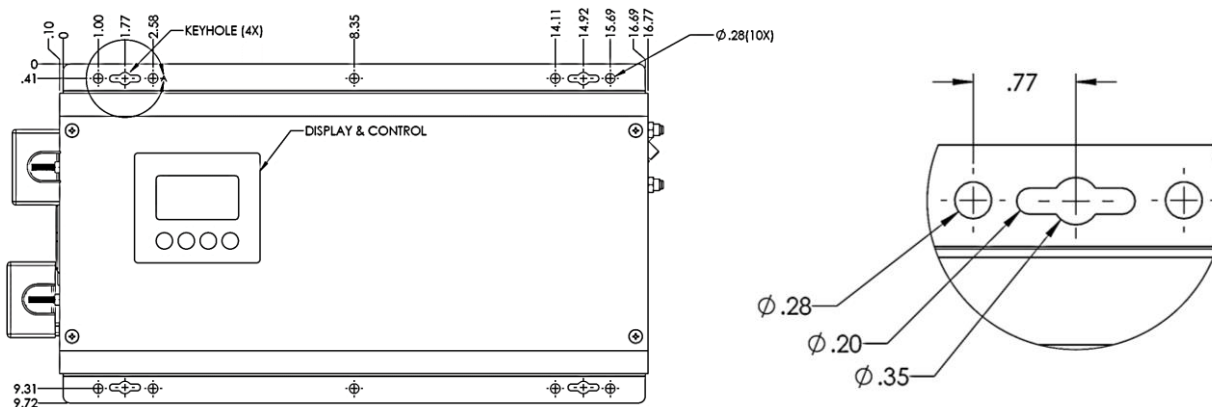
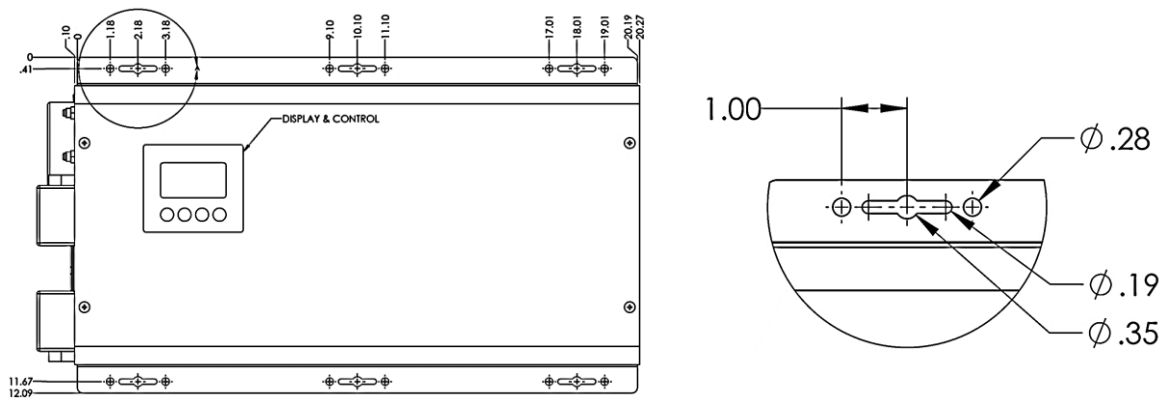
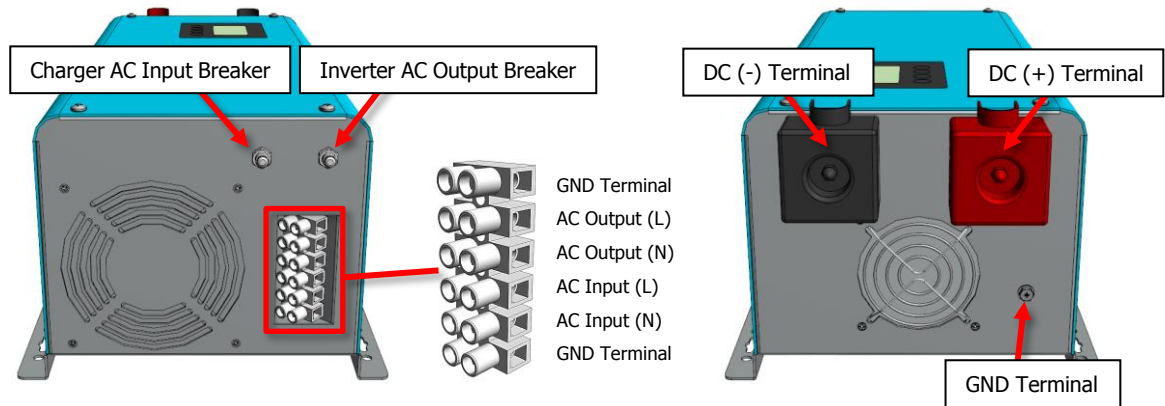


Figure 2 – 250 Enclosure Bolt Pattern

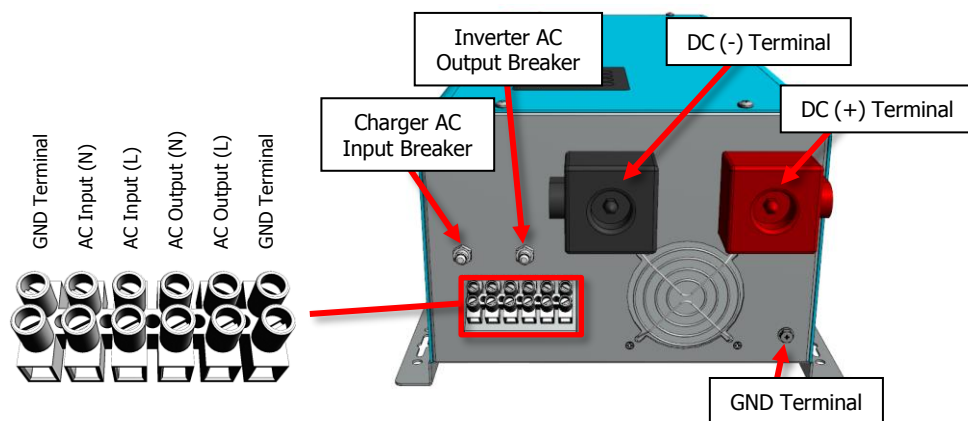


**Figure 3 – 251 Enclosure Bolt Pattern**

## 2.2 FT Series Inverter Overview



**Figure 4 – FT Inverter Overview (250 Enclosure)**



**Figure 5 – FT Inverter Overview (251 Enclosure)**

## 2.3 DC Input Connections

Before making any of the DC output connections, make sure you read and fully understand the DC Connection Procedure on the following page. Select proper size for the DC wires using the table below. Refer to Appendix A for the DC input current draws at full load capacity. This is based on an overload current of 110-115% of the input current listed on the inverter nameplate. If the distance between the inverter's DC input and the battery exceeds 10 feet, use the Power Wiring Guide in Appendix B to minimize the voltage drop across the wire distance.



**WARNING:** Before beginning any work inside the inverter, ensure that all incoming AC/DC power is de-energized and/or isolated. Verify that no voltage is present inside the case by using a voltmeter at all input and output terminals. Assure the inverter that is being used is the same number and type of cell as the inverter front nameplate specifications.

The FT inverter DC terminal bolts accept a 5/16" or M8 ring terminal stud size.

**NOTE:** It is recommended to use a battery disconnect breaker between inverter and battery bank; helpful during battery or inverter maintenance. The breaker/disconnect should be sized with consideration of the full load DC input current of the inverter. Refer to Appendix A for the DC input current draws at full load capacity.

Breaker Size/ Fuse Size (Amps)	Minimum AC/DC Wire Size Requirement	Equipment Grounding Conductor Minimum
25	#10	#12
30	#10	#10
40	#8	#10
50	#8	#10
60	#6	#10
70	#6	#8
80	#4	#8
90	#4	#8
100	#4	#8
125	#2	#6
150	#1	#6
175	#1/0	#6
200	#2/0	#6
250	#4/0	#4
300	250 MCM	#4

**Table 2 – AC/DC & Ground Wire Size Minimum Requirements**  
(All wires specified in the table are rated at 90 °C or 194 °F)

**NOTE:** These are recommended sizes per La Marche Standards. The National Electrical Code (NEC) and Local Wiring Codes must be followed.

### DC Connection Procedure

The battery connections should be done in the following order:

1. Assure that the incoming AC mains input power to the inverter is turned off.
2. Check polarity of DC input cables and verify with multimeter.
3. Connect the positive DC input cable to the positive terminal and the negative DC input cable to the negative terminal. **OBSERVE PROPER POLARITY.**

## 2.4 AC Output/AC Input Connections

A terminal strip is provided for the AC output/load, as well as for the AC input line (utility). Before beginning any work inside the inverter, ensure that all incoming AC/DC power is de-energized and/or isolated. Verify that no voltage is present inside the inverter by using a voltmeter at all input and output terminals.

Select wire size using the Table 2 on the previous page. Use the table below to determine the breaker size used in the FT inverter being installed. Refer to Figures 4 and 5 for connector locations.

For the AC output, connect the AC load phase (hot) to the OUTPUT (L) terminal and the AC load neutral to the OUTPUT (N) terminal. For the AC input, connect the AC input phase (hot) to the INPUT (L) terminal and the AC input neutral to the INPUT (N) terminal. Connect an adequate earth ground lead (use table on previous page for sizing) to the corresponding grounding terminal. The AC terminals accept 14 – 6 AWG wire.

**NOTE:** Feeder breakers should be sized to match the size of the protection used in inverter. See the table below for the inverter AC breaker sizes.

FT Model	AC Input/Output Voltage			
	120VAC	208VAC	220VAC	240VAC
1K	11A	6A	6A	6A
2K	21A	12A	12A	11A
3K	32A	18A	17A	16A
4K	42A	24A	23A	21A
5K	52A	30A	29A	26A
6K	63A	36A	34A	32A
8K	84A	48A	46A	42A

**Table 3 – Resettable AC Breaker Sizes**

## 2.5 Alarms

The FT series inverter has an audible buzzer alarm which activates depending on the status of the inverter. Below are the available alarms/status indicators:

- Load Powered by Battery: Beeps 4 times every 15 seconds
- High Battery Voltage: Beeps 4 times per second
- Low Battery Voltage: Beeps 2 times per second
- Overtemperature: Beeps 2 quick times per second

### 2.5.1 Alarm/Status Indicator Descriptions

**LOAD POWERED BY BATTERY ALARM** will trigger and the inverter will beep 4 times every 15 seconds if the AC load is being powered by the battery. This may be an indication that the AC mains may not be available as a supply or the AC mains may not be within range to be considered an AC supply. The alarm will clear once the inverter shifts its source to the AC mains.

**LOW BATTERY VOLTAGE ALARM** will trigger and the inverter will beep 2 times per second if the DC voltage falls below 1.67 volts per cell for longer than 5 seconds. The alarm will clear once the low battery voltage condition is no longer present.

**HIGH BATTERY VOLTAGE ALARM** will trigger and the inverter will beep 4 times per second if the DC voltage rises above 2.5 volts per cell for longer than 5 seconds. The alarm will clear once the high battery voltage condition is no longer present.

**OVERTEMPERATURE ALARM** will trigger and the inverter will beep 2 quick times per second if the internal temperature of the inverter rises above 40°C/104°F for longer than 5 seconds. The alarm will clear once the overtemperature alarm condition is no longer present.

### 3 Operation

#### Checking the Installation

Before attempting to start up the FT Series Inverter, check and verify the following:

- Verify all connections are correct.
- Assure all terminations and contacts are tightened securely.
- Verify AC feeder breaker and battery breaker (if applicable) matches the inverter's protection rating.
- Assure the battery/load voltage matches the DC input and AC output voltage on the inverter's nameplate respectively.

#### Start-Up Sequence

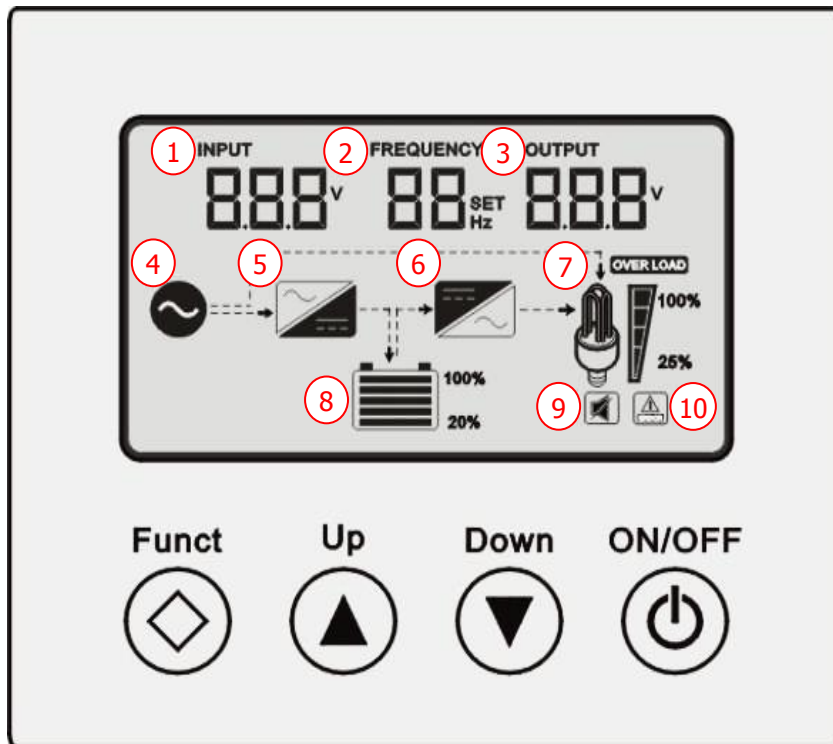
To power up the FT inverter, simply press the ON/OFF button while the screen is off. The inverter's display should turn on and display the output voltage.

#### Power Down Sequence

To power down the FT inverter, simply press the ON/OFF button while the screen is on. The inverter's display should turn off and the output voltage should decrease. Confirm with multimeter if attempting to service the FT.





#### 3.1 Front Panel LCD Display

After the FT Series Inverter has completed startup, the LCD will display the Input/Output Voltage, Frequency, Grid Mode, Inverter Mode, Battery Capacity, Load Capacity, Alarm Warning. See below for reference.










1. AC Mains Input Voltage Meter
2. AC Output Frequency Meter & Operating Mode Indicator
3. AC Output Voltage Meter
4. AC Mains Input Status
5. AC-DC Operation Status
6. DC-AC Operation Status
7. Load Usage Percentage Indicator
8. Battery Capacity Indicator
9. Mute Status
10. Error Indicator






### 3.1.1 Controls

Button		Function
	Mute / Operation Mode Menu	1 Second Press: Mute the buzzer Long Press: Enter Operation Mode menu
	Up / Charge Voltage Menu	1 Second Press: Raise current setting/value 5 second Press: Enter Charge Voltage menu
	Down / Charge Current Menu	1 Second Press: Lower current setting/value 5 second Press: Enter Charge Current menu
	ON/OFF	ON/OFF control







### 3.1.2 LCD Display Indicators

LCD Parameter Icon			
LCD Display	Description		
	AC Mains Input Voltage Meter		
	AC Output Frequency Meter		
	AC Output Voltage Meter		
	Equipment Operating Mode Selection*		
	Grid Priority Mode	Energy-Saving Mode	Battery Priority Mode
			

\*Operating Mode can be entered by long pressing the Function button for seconds.










Battery Icon				
LCD Display	Battery Voltage Values			
	12VDC	24VDC	48VDC	96VDC
	<ul style="list-style-type: none"> <li>Below 10.5V<sup>1</sup></li> <li>10.5V – 11.2V</li> </ul>	<ul style="list-style-type: none"> <li>Below 21V<sup>1</sup></li> <li>21V – 22.4V</li> </ul>	<ul style="list-style-type: none"> <li>Below 42V<sup>1</sup></li> <li>42V – 44.8V</li> </ul>	<ul style="list-style-type: none"> <li>Below 84V<sup>1</sup></li> <li>84V – 89.6V</li> </ul>
	11.2V – 11.6V	22.4V – 23.2V	44.8V – 45.2V	89.6V – 90.4V
	11.6V – 12.1V	23.2V – 24.2V	45.2V – 48.4V	90.4V – 96.8V
	12.1V – 12.5V	24.2V – 25V	48.4V – 50V	96.8V – 100V
	Above 12.5V	Above 25V	Above 50V	Above 100V

<sup>1</sup>Blinking

Load Usage Icon				
LCD Display	Function			
	Output overload alarm; inverter has surpassed 100% capacity			
	0% to 25%	25% to 50%	50% to 75%	75% to 100%
				

Operating Mode Icon		
LCD Display	Name	Function
	AC Mains	AC Mains Source Availability
	AC-DC	Charger Source Availability
	DC-AC	Inverter Source Availability
	Mute	<ul style="list-style-type: none"> <li>ON: Mute Enabled</li> <li>OFF: Mute Disabled</li> </ul>
	Alarm	Error Indicator

### 3.1.3 Panel key/LCD Setting Detail

Button	Name	Operation Description						
	Mute/ Operation Mode Menu	<ul style="list-style-type: none"><li>Long press for 1 second: Enable Mute (1 beep)</li><li>Long press for 1 second: Disable Mute (2 beeps)</li><li>Long press for 5 seconds: Operation Mode Selection (Select Using ▲/▼)*</li></ul>						
		Grid Priority Mode		Energy-Saving Mode			Battery Priority Mode	
								
		<i>*Operation mode changes will take effect after restarting the inverter.</i>						
	Up/Charge Current Menu	Long press for 5 seconds: Charge Current Selection (Charger Output Current) LCD icon  will display active Charge Current (Select Using ▲/▼)						
		C0	C1	C2	C3	C4	C5	C6
		0A	5A	10A	15A	20A	25A	30A
	Down/Charge Voltage Menu	Long press for 5 seconds: Charge Voltage Selection (Charger Output Voltage) LCD icon  will display active Charge Voltage (Select Using ▲/▼)						
		<u>Charge Mode</u>		<u>Battery Type</u>			<u>Charge Voltage</u>	
		U0		Gel U.S.A.			13.7VDC	
		U1		A.G.M.1			13.4VDC	
		U2		A.G.M.2			13.7VDC	
		U3		Sealed Lead Acid			13.6VDC	
		U4		Gel European			13.8VDC	
		U5		Vented Lead Acid			13.8VDC	
		U6		Calcium (Open)			13.6VDC	
		U7		Equalize Mode: 15.5V for 4 hours				
	ON/OFF	<ul style="list-style-type: none"><li>ON: Long press for 2 seconds. After 1 beep, inverter will power up</li><li>OFF: Long press for 2 seconds. After internal click, inverter will power down</li></ul>						

### 3.2 Operating Modes

The FT series inverter has 3 operating modes which can accommodate for various priorities, whether it be prioritizing the AC mains source, inverter source, or the low energy consumption. Below are the three available priority modes:

**Grid Priority Mode:** 

In Grid Priority Mode, the inverter starts with the AC mains input supply. Under normal operation, the FT will supply power to the load and at the same time, charge the connected battery. When the AC mains input is abnormal, the inverter will transfer the connected load to the battery.

**Energy-Saving Mode:** 

In Energy-Saving Mode, the FT will turn on and will detect for load. When the load is greater than 5% of the rated output, the inverter will begin to power up the load. When inverter detects no load, the output will be off and the inverter will cycle through a load detection every 10 seconds. The load detection feature allows for lower battery energy consumption.

**Battery Priority Mode:** 

In Battery Priority Mode, the FT starts with AC mains supply under normal operation, but not charging connected battery. When the battery is connected to the external charging device (like solar charging system) after adequate power charged, inverter will automatically switch to battery mode through internal relay to supply power to the connected load. If connected battery voltage is under acceptable range, the inverter will switch to battery mode rightaway after power up.

## 4 Service

All work inside the FT inverter should be performed by qualified personnel. La Marche is not responsible for any damages caused by an unqualified technician.



Before working inside the FT, ensure the AC power is off at the main breaker box and the battery has been removed from the inverter's DC input terminals, either by removing the battery cables or exercising the battery disconnect. Verify that no voltage is present by using a voltmeter at all input and output terminals.

### 4.1 Performing Routine Maintenance

Although minimal maintenance is required with La Marche inverters, routine checks and adjustments are recommended to ensure optimum system performance.

#### Yearly

1. Confirm air vents are open. Remove dust and debris from interior of unit.
2. Verify all connections are tight.
3. Perform a visual inspection on all internal components.
4. Check front panel meters for accuracy and LED operation.

## Appendix A: Technical Specifications

Model		1kW			2kW			3kW		4kW		5kW			6kW		8kW	
Battery	Rated Voltage (VDC)	12V	24V	48V	12V	24V	48V	24V	48V	24V	48V	24V	48V	96V	48V	96V	48V	96V
	Current Draw @ Full Load (ADC)	95A	47A	24A	189A	95A	47A	142A	71A	189A	95A	235A	118A	59A	142A	71A	189A	95A
	Charge Current	30A (default) C0-C6 can be set																
	Battery Type	U0-U7 can be set																
Input	AC Voltage Range	90-132VAC / 170-275VAC																
	Frequency	45-65Hz																
Output	Voltage Range	120VAC, 208VAC, 220VAC, AND 240VAC; ±5% (Inverter Mode)																
	Frequency	50/60Hz; ±1% (Inverter Mode)																
	Output Current (230VAC Model)	4.5A			9.1A			13.6A		18.2A		22.7A			27.3A		36.3A	
	Output Current (110VAC Model)	9.1A			18.2A			27.2A		36.4A		45.2A			54.6A		72.7A	
	Output Wave	Pure Sine Wave																
	Switching Time	<10ms (Typical Load)																
	Efficiency	> 85% (80% Resistive Load)																
	Overload	110-120% (30 Seconds); > 130% (1 Second)																
	Protection	Battery over/undervoltage, overload, short circuit protection, over-temperature protection, etc.																
Operating Ambient Temperature		-15°C – +50°C																
Storage Ambient Temperature		-20°C – +60°C																
Operating/Storage Ambient		0-90% (No Condensation)																
Dimensions		19.2 x 10 x 7									22 x 12 x 8							
Weight (lbs)		28.6			35.2			39.7		59.5		66.1			92.06		103.6	

## Appendix B: Power Cabling Guide

Use the following formulas and table to determine proper wire size for minimal voltage drop. At distances exceeding 10 feet, the DC wire size should be chosen to keep the voltage difference between the inverter's DC input terminals and the battery at less than 1/2 volt when the inverter is fully loaded.

### Table of Conventions:

*CMA* = Cross-section of wire in circular MIL area

*A* = Ultimate drain in amperes

*LF* = Conductor loop feet

*MaxAmp* = Maximum allowable amperes for given voltage drop

*AVD* = Allowable voltage drop

*K* = 11.1 for commercial (TW) copper wire

= 17.4 for aluminum

### Calculating Wire Size Requirements:

$$CMA = \frac{A \times LF \times K}{AVD}$$

### Calculating Current Carrying Capacity of Wire:

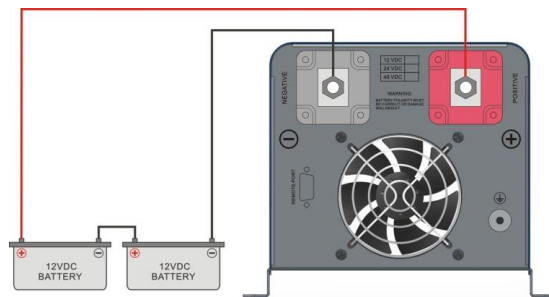
$$MaxAmp = \frac{CMA \times AVD}{LF \times K}$$

Size (AWG)	Area CIR.MILS	Size (MCM)	Area CIR.MILS
18	1620	250	250000
16	2580	300	300000
14	4110	350	350000
12	6530	400	400000
10	10380	500	500000
8	16510	600	600000
6	26240	700	700000
4	41740	750	750000
3	52620	800	800000
2	66360	900	900000
1	83690	1000	1000000
0	105600	1250	1250000
00	133100	1500	1500000
000	167800	1750	1750000
0000	211600	2000	2000000

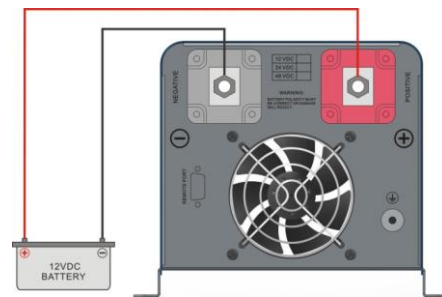
**Table 2 - Wire Size/Area Table**

## Appendix C: Example Wiring Diagram

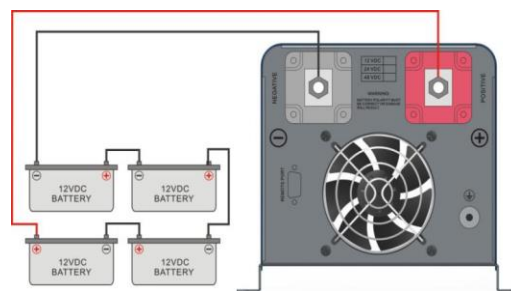
## Battery Connections



## 12VDC Series Battery Wiring

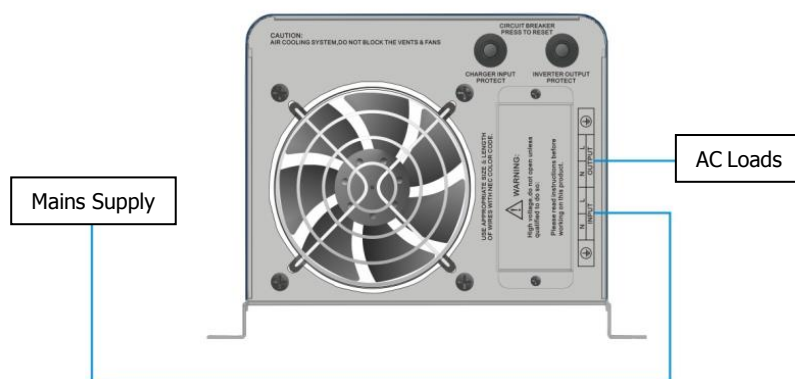


## 24VDC Series Battery Wiring



## 48VDC Series Battery Wiring

## AC Mains Input & AC Output Connections



## **Appendix D: Manufacturer's Warranty**

All La Marche Manufacturing Co. equipment has been thoroughly tested and found to be in proper operating condition upon shipment from the factory and is warranted to be free from any defect in workmanship and material that may develop within one (1) year from date of purchase under normal use.

If the equipment proves defective within a one year period, it shall be replaced without charge after examination at our factory, providing such defect in our opinion, is due to faulty material or workmanship and not caused by tampering, abuse, misapplication, or improper installation.

Should the equipment require major replacement or repair, the equipment must be returned to the La Marche factory to have the inspections, parts, replacements, and testing performed by factory personnel. Should it be necessary to return a piece of equipment to the factory, the customer or Sales representative must first obtain an RMA (Return Material Authorization) from the factory. If upon inspection at the factory, the defect was due to faulty material or workmanship, all repairs will be made at no cost to the customer during the warranty period.

All internal maintenance to be performed by La Marche.

La Marche reserves the right to honor the warranty with a replacement unit.

In accepting delivery of the equipment, the purchaser assumes full responsibility for proper installation, installation adjustments, and service arrangements. Should minor adjustments be required, the local La Marche Sales Representative should be contacted to provide this service.

All sales are final. Only standard La Marche units will be considered for return. A 25% restocking fee is charged when return is a factory authorized. Special units are not returnable.

In no event shall La Marche Manufacturing Co. have any liability for consequential damages, or loss, damage, or expense directly or indirectly arising from the use of the products, or any inability to use them either separately or in combination with other equipment or materials, or from any other cause. In addition, any alterations of equipment made by anyone other than La Marche Manufacturing Co. render this warranty null and void.

La Marche Manufacturing Co. reserves the right to make revisions in the current production of equipment and assumes no obligation to incorporate these revisions in earlier models.

The failure of La Marche Manufacturing Co. to object to provisions contained in customers' purchase orders or other communications shall not be deemed a waiver of the terms or conditions hereof, nor acceptance of such provisions.

The above warranty is exclusive, supersedes, and is instead of all other warranties, expressed or implied, including any implied warranty of merchantability or fitness. No person, agent, or dealer is authorized to give any warranties on behalf of the Manufacturer, nor to assume for the Manufacturer any other liability in connection with any of its products unless made in writing and signed by an official of the manufacturer.

**Appendix E: Document Control and Revision History**

Part Number: 144911  
Instruction Number: P25-LFT-1  
Issue ECN: 22891 – 05/21

22999 – 08/21	22891 – 05/21		