



LTP

DC POWER SYSTEM



Shown Above: LTP-30-48V



Standard Features

- High Frequency Switchmode Circuitry
- Universal Input Range (102-264 VAC)
- Power Factor > 0.99
- Efficiency > 90%
- Forced Load Sharing
- Modular, Hot Pluggable Design
- Four Module Positions
- DC Distribution (GMT)
- Battery Charge Control
- Load and Battery Current Monitoring
- Form "C" Dry Alarm Contacts
- LED Status Indicators
- LCD Display
- 19/23" Rack or Wall Mount
- Two AC Cords (20Amp & 15Amp, 8ft)
- SNMP Ethernet Module (VLAN Ready with Battery Testing)
- 2 Year Warranty

Optional Accessories

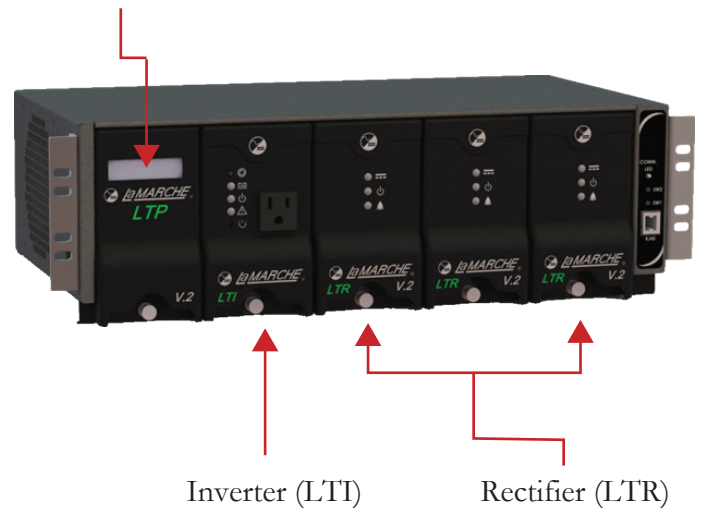
- 19X** AC Cord, 20ft, 20Amp, Hardwired Connections
- 57K** LTPB Connections w/GMT Distribution
- 57V** DC Output Terminals (Bulk Battery & Load Connections)

The La Marche LTP system offers a complete DC power solution in a compact package configuration . LTP system can be installed in standard 19/23 inch rack or cabinet.

The LCD controller allows easy adjustments of output voltage, alarms and communication settings. This advanced controller supports distribution, alarm contacts, battery test, load current and battery charge current limit. The parallel operation nature of the rectifiers is ideal for N+1 redundant installation.

The compact design of the system uses high efficiency rectifiers to reduce space requirements and installation cost. The DC distribution can be comprised of either GMT fuses or output terminals.

Controller + Power Shelf (LTPE)



Rectifier and Inverter

RECTIFIER (LTR)

The LTP rectifier is lightweight and powerful. The rectifier weighs only 4 lbs. and is offered in two models; 7.5Amp/48 Volt DC or 10 Amp/24 Volt DC output. The rectifier contains 3 LED indicators on the front panel (DC On, AC On, Rectifier Failure Alarm). Each rectifier has a protection fuse, as well a blocking diode which isolates the module from the rest of the shelf should it fail.



Rectifier Front Panel Overview

Condition	Symbol	Color	Description
DC On	≡	Green (solid)	Indicates the rectifier is supplying a DC output.
AC On	⏻	Green (solid)	Indicates that correct AC input voltage is present in the rectifier. Operational range is 102 - 264 VAC.
AC Out of Range	⏻	Green (flashing)	Indicates that the AC input voltage is out of range for the rectifier.
Rectifier Failure	⚠	Red (solid)	Indicates a rectifier failure alarm.

Model Number	LTR-10-12V-U1	LTR-10-24V-U1	LTR-7.5-48V-U1
Input Voltage	102 - 264 VAC	102 - 264 VAC	102 - 264 VAC
Input Current	1.5 / 0.7A	2.8 / 1.5A	3.8 / 2.3A
Input Frequency	45 - 65 Hz	45 - 65 Hz	45 - 65 Hz
Input Connections	Hot Pluggable	Hot Pluggable	Hot Pluggable
Output Voltage	12V	24V	48V
Output Current	10A	10A	7.5A
Indicators	DC LED AC LED Alarm LED	DC LED AC LED Alarm LED	DC LED AC LED Alarm LED
Power Factor	> .99	> .99	> .99
THD	< 5%	< 5%	< 5%
Efficiency	≥ 90%	≥ 90%	> 93%
Load Regulation	< ±0.5%	< ±0.5%	< ±0.5%
Line Regulation	< ±0.1%	< ±0.1%	< ±0.1%
Noise	< 32 dBnC	< 32 dBnC	< 32 dBnC
Protection	Fuse and blocking diode	Fuse and blocking diode	Fuse and blocking diode
Temperature	Operating: -15° to 50°C (5° to 122° F) Storage: -40° to 85°C (-40° to 185° F)	Operating: -15° to 50°C (5° to 122° F) Storage: -40° to 85°C (-40° to 185° F)	Operating: -15° to 50°C (5° to 122° F) Storage: -40° to 85°C (-40° to 185° F)
Relative Humidity	0 to 95% non-condensing	0 to 95% non-condensing	0 to 95% non-condensing
Cooling	Fan Assisted	Fan Assisted	Fan Assisted
Dimensions (H x W x D)	5.6" x 3.2" x 9.0" 142.2 x 81.3 x 228.6mm	5.6" x 3.2" x 9.0" 142.2 x 81.3 x 228.6mm	5.6" x 3.2" x 9.0" 142.2 x 81.3 x 228.6mm
Weight	4 lb (1.8kg)	4 lb (1.8kg)	4 lb (1.8kg)
Mounting	Shelf	Shelf	Shelf

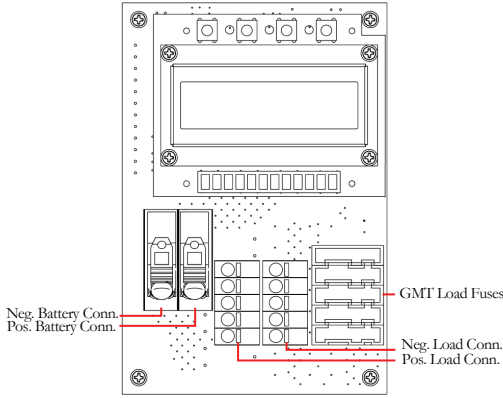
INVERTER (LTI)

The LTI inverter has a 120VAC output at 500W maximum with a 45-55VDC input range. The input current is approximately 7 DC amps at full load. The inverter includes an On/Off button, three LED indicators (Low DC Voltage, AC On, Overload) and a voltage adjustment. The output of the inverter is connected via a NEMA 5-15R receptacle located on the front of the module. None of the inverter alarms interconnect with the systems distribution.

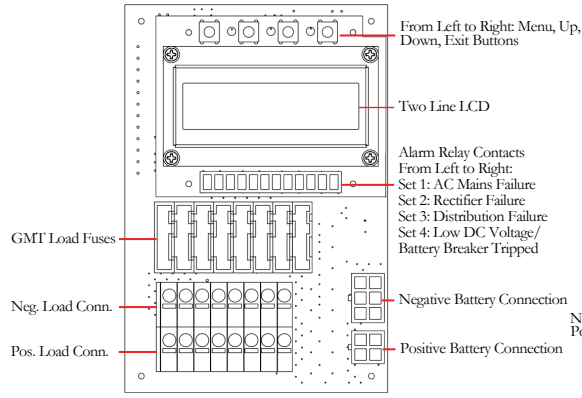


Condition	Symbol	Color	Description
LTI-500-48V-A1	Low DCV Alarm	⏻	Indicates that the DC voltage is below 45 VDC. Indicates that the inverter is producing AC output.
	Low DCV Cutoff	⏻	Indicates that the DC voltage is below 44 VDC. The inverter is OFF
	High DCV Alarm	⏻	Indicates that the DC voltage is above 55 VDC. Indicates that the inverter is producing AC output
	High DCV Cutoff	⏻	Indicates that the DC voltage is above 56 VDC. The inverter is OFF
	Overload	⚠	Indicates that the Inverter load is larger than 500 Watts. The inverter is OFF
	Short	⚠	Indicates the inverter has a short circuit. The inverter is OFF

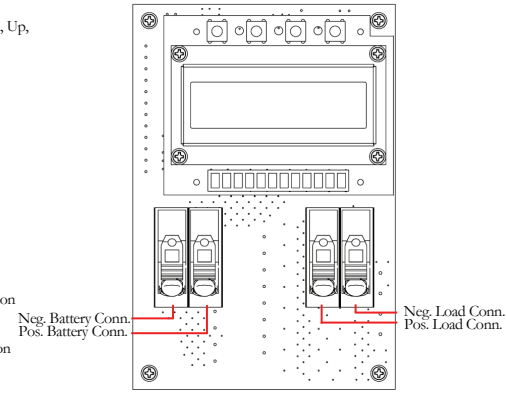
Controller/Distribution Options



Standard
Controller with GMT Fuse
& Bulk Battery Connections

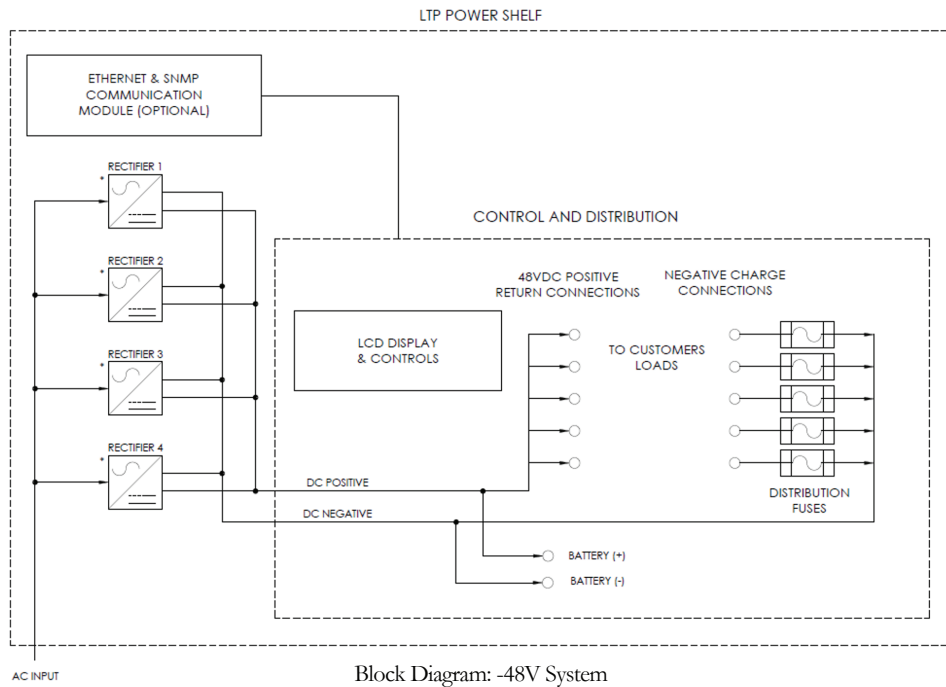


Option 57K
LTPB Connections w/GMT Distribution
Positive Common (-48V Systems)



Option 57V
Controller with Bulk Load
& Battery Connections

LTP Standard Controller Block Diagram



Fuse Information

When ordering, please specify

- Fuse Part Number: P8-K1-A (X)
X = Fuse Rating
- Available sizes:
0.25, 0.5, 1, 2, 3, 5, 10

Ordering Information

When ordering, please specify

- La Marche Model number
- DC Voltage
- Battery Amp Hour Rating
- Number & Type of Battery cells

Enclosure and Controller

ENCLOSURE

Model Number	Output Nominal Voltage	Overall Dimensions H x W x D	Mounting	Shipping Weight	
				lbs	kgs
LTPE-30-48V-U1	48 VDC	5.6" x 19.0" x 8.8" 142.2 x 482.6 x 223.5 mm	4 RU	10	4.5
LTPE-30-24V-U1	24 VDC	5.6" x 19.0" x 8.8" 142.2 x 482.6 x 223.5 mm	4 RU	10	4.5
LTPE-30-12V-U1	12 VDC	5.6" x 19.0" x 8.8" 142.2 x 482.6 x 223.5 mm	4 RU	10	4.5

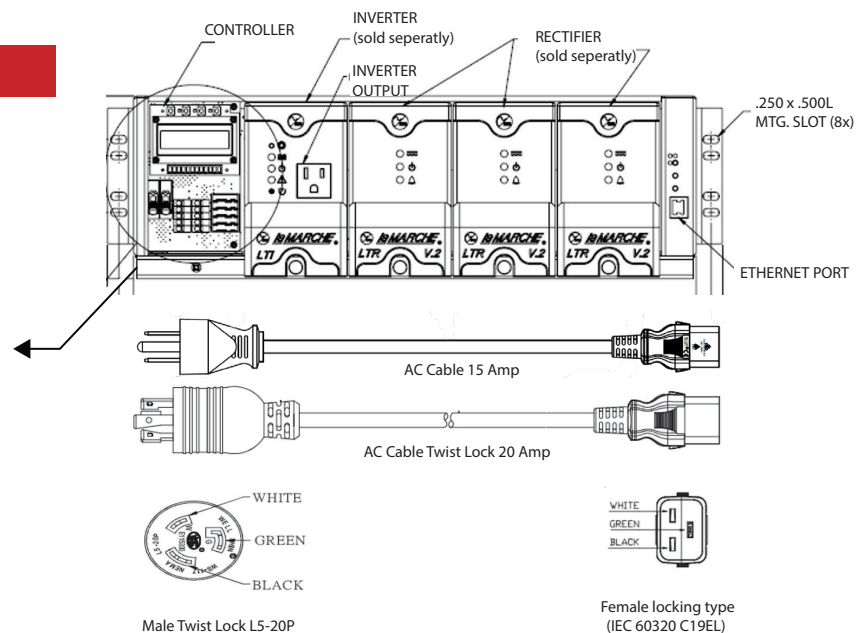
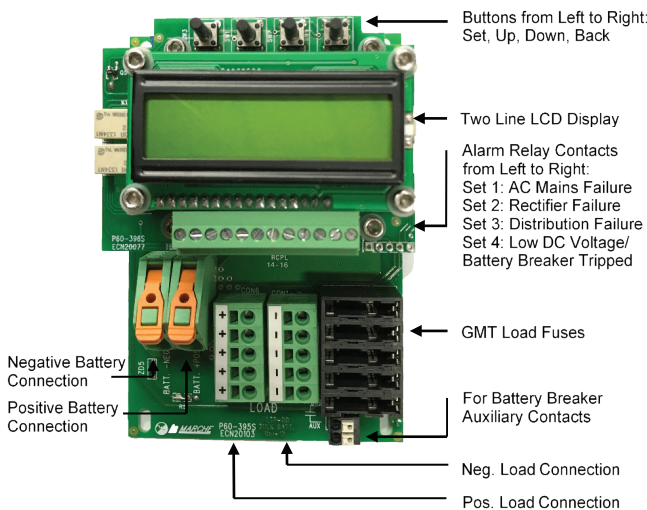


Shown Above: LTPE-30-48V-U1

	Model	LTPE-30-12V-U1	LTPE-30-24V-U1	LTPE-30-48V-U1
GENERAL	Capacity		Four slots to hold rectifiers	
	Dimension (H x W x D)		5.6" x 19" x 9.5" 142.24 x 482.6 x 241.3mm	
	Weight		7.5 lbs	
	Mounting		19/23" Rack or Wall Mounting	
	Connections		Two AC cable included (8Ft Female locking type (IEC 60320 C19EL) to Male 5-15P (15Amps) and Male Twist-Lock L5-20P (20Amps)) DC - Load and Battery connections are made via controller/distribution assembly RJ-45 - optional communications (web interface)	
CONTROLLER/DISTRIBUTION	Display		2 x 16 Character LCD	
	Metering		DC Volts, Load Current, Battery Charging Current Separate Current Limits for Load and Battery Charge*	
	Features		Battery Test (automatic and manual mode, accessible via settings menu) Adjustments via Settings Menu Alarms Integrated Load Distribution (except option 57V)	
	Alarms		LCD Notifications & Form "C" Contacts for: AC Mains Failure, Distribution Fuse Open, Rectifier Failure, Low DC Volts Latching Audible Alarm for Automatic Battery Test with Enable/Disable Feature Battery Breaker Trip Alarm (shares relay with Low Voltage alarm with Enable/Disable feature)	
	Adjustments (via settings menu)		Output Voltage, Battery Charging Current*, Alarms Enable/Disable	
	Distribution		Refer to page 3	
WEB INTERFACE	Supported Network Type		WAN, LAN, VLAN	
	Protocol		TCP/IP, SNMP	
	Server Based Monitoring Features		Monitoring of System Parameters and Alarms Remote Battery Test Device Naming Convention Compatible with Server Based Monitoring Provided by La Marche Mfg.	
	Server Based Monitoring Features (Optional service provided by La Marche)		Multiple System Management/Monitoring Email Notifications Configurable with SQL Data Base	

* available with option 57K only.

CONTROLLER



Battery Box and Batteries



Shown Above: LTPB-1-48V

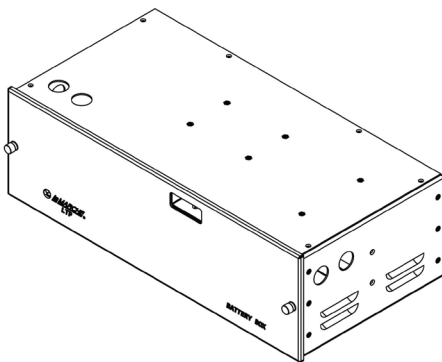
Battery Box Standard Features

- Battery Breaker
- 19" Rack or Wall Mount
- Slots for up to four batteries (series connection)
- NEMA 1
- Wiring for parallel configuration of battery boxes

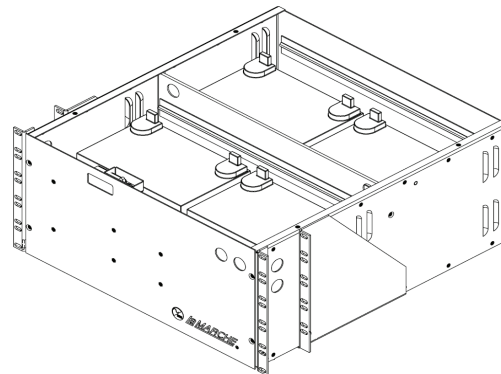
	Model Number	Volts	AH Rating	Overall Dimensions	Battery Enclosure	Weight	
						lbs	kgs
Battery	P24B-12-12V	12 VDC	12 AH	3.9" x 3.9" x 6.0" 99.0 x 99.0 x 152.4 mm	LTPB-1	9.2	4.2
	P24B-18-12V	12 VDC	18 AH	6.6" x 3.0" x 7.13" 167.6 x 76.2 x 181.1 mm	LTPB-2	12.6	5.7
	P24B-26-12V	12 VDC	26 AH	4.9" x 6.9" x 6.5" 124.5 x 175.3 x 165.1 mm	LTPB-2	17.1	7.8
	P24B-35-12V	12 VDC	35 AH	6.2" x 5.2" x 7.8" 157.5 x 132.0 x 198.1 mm	LTPB-2	26	11.8

	Model Number	Output Nominal Voltage	Overall Dimensions H x W x D	Mounting	Shipping Weight	
					lbs	kgs
Battery Enclosure	LTPB-1-48V	48 VDC	5.6" x 19.0" x 8.8" 142.2 x 482.6 x 223.5 mm	4 RU	10	4.5
	LTPB-2-48V	48 VDC	8.7" x 19.0" x 19.0" 221.0 x 482.6 x 482.6 mm	5 RU*	22	10
	LTPB-1-24V	24 VDC	5.6" x 19.0" x 8.8" 142.2 x 482.6 x 223.5 mm	4 RU	10	4.5
	LTPB-2-24V	24 VDC	8.7" x 19.0" x 19.0" 221.0 x 482.6 x 482.6 mm	5 RU*	22	10
	LTPB-1-12V	12 VDC	5.6" x 19.0" x 8.8" 142.2 x 482.6 x 223.5 mm	4 RU	10	4.5
	LTPB-2-12V	12 VDC	8.7" x 19.0" x 19.0" 221.0 x 482.6 x 482.6 mm	5 RU*	22	10

* 5 RU - Horizontal rack-mount arrangement requires an additional bracket kit SP3K-LTPBB2-1
Vertical rack-mount or wall-mount arrangement is 11 RU



LTP Battery Box 1



LTP Battery Box 2