



TELECOM POWER SYSTEM

LTP



Rectifier System / Converter System



Inverter System



LTI2 Inverter System

Pending:  

LTP Power Systems are ruggedly designed in a modular and scalable power arrangements in order to serve in many applications. These flexible systems can accommodate rectifier, converter or inverter modules, in a one shelf arrangement, which makes it an ideal solution for multiple power requirements.

The LTP system can be populated with:

- 4 Rectifier modules (AC/DC) – DC power supply to charge batteries while supplying DC loads
- 4 Inverter modules (DC/AC) – (4) 300VA or 500VA AC power sources
- 3 Rectifiers & 1 Inverter (AC/DC/AC) – Hybrid arrangement provides a DC and AC power solutions in one shelf
- 4 Converter modules (DC/DC) – 130Vdc to 48Vdc power conversion stage

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

Standard Features

- High Frequency Switchmode Circuitry
- Universal Input Range
- Power Factor Correction
- Efficiency >90%
- Forced Load Sharing*
- Modular, Hot Pluggable Design
- Four Module Positions
- DC Distribution (GMT)*
- Automated & Scheduled Battery Testing with Audible Fail Alarm
- Battery Charge Control
- Load and Battery Current Monitoring
- Form "C" Dry Alarm Contacts
- LED Status Indicators
- LCD Display
- 2 Year Warranty

Optional Accessories

- 21X** SNMP Ethernet Module (VLAN Ready with Battery Testing)
- 20X** 7 ft Twist Lock AC Cord (20Amp)
- 08X** Rack Mounting Kits (19" & 23")
- 57V** DC Output Terminals (Bulk)
- 57W** Battery Terminals

*Refers to rectifiers and converters only



Model Number Chart

Model Number	Input		Output			Overall Dimensions H x W x D	Mounting	Shipping Weight		
	Operating	Frequency	Amps	Volts	Range			lbs	kgs	
System Enclosure	LTPE-30-48V-U1	102-264 VAC	45-65 Hz	30	48 VDC	42-57 VDC	5.6" x 19.0" x 9.5" 142.2 x 482.6 x 241.6 mm	4 RU	7.5	3.4
	LTPE-30-24V-U1	102-264 VAC	45-65 Hz	30	24 VDC	21-29 VDC	5.6" x 19.0" x 9.5" 142.2 x 482.6 x 241.6 mm	4 RU	7.5	3.4
	LTPE-30-12V-U1	102-264 VAC	45-65 Hz	30	12 VDC	10.5-14.5 VDC	5.6" x 19.0" x 9.5" 142.2 x 482.6 x 241.6 mm	4 RU	7.5	3.4
	LTPE-30-130V-48V	105-150 VDC	---	30	48 VDC	42-57 VDC	5.6" x 19.0" x 9.5" 142.2 x 482.6 x 241.6 mm	4 RU	7.5	3.4
	LTPE-30-130V-24V	105-150 VDC	---	30	24 VDC	21-29 VDC	5.6" x 19.0" x 9.5" 142.2 x 482.6 x 241.6 mm	4 RU	7.5	3.4
	LTPE-30-130V-12V	105-150 VDC	---	30	12 VDC	10.5-14.5 VDC	5.6" x 19.0" x 9.5" 142.2 x 482.6 x 241.6 mm	4 RU	7.5	3.4
Rectifier	LTR-7.5-48V-U1	102-264 VAC	45-65 Hz	7.5	48 VDC	42-57 VDC	5.6" x 3.2" x 9.0" 142.2 x 81.3 x 228.6 mm	Shelf	4	1.8
	LTR-10-24V-U1	102-264 VAC	45-65 Hz	10	24 VDC	21-29 VDC	5.6" x 3.2" x 9.0" 142.2 x 81.3 x 228.6 mm	Shelf	4	1.8
	LTR-10-12V-U1	102-264 VAC	45-65 Hz	10	12 VDC	10.5-14.5 VDC	5.6" x 3.2" x 9.0" 142.2 x 81.3 x 228.6 mm	Shelf	4	1.8
Converters	LTC-7.5-130V-48V	105-150 VDC	---	7.5	48 VDC	42-57 VDC	5.6" x 3.2" x 9.0" 142.2 x 81.3 x 228.6 mm	Shelf	4	1.8
	LTC-10-130V-24V	105-150 VDC	---	10	24 VDC	21-29 VDC	5.6" x 3.2" x 9.0" 142.2 x 81.3 x 228.6 mm	Shelf	4	1.8
	LTC-10-130V-12V	105-150 VDC	---	10	12 VDC	10.5-14.5 VDC	5.6" x 3.2" x 9.0" 142.2 x 81.3 x 228.6 mm	Shelf	4	1.8

Model Number	Output			Input			Overall Dimensions H x W x D	Mounting	Shipping Weight		
	Nominal Power Rating	Nominal Voltage	Frequency	Amps	Volts	Range			lbs	kgs	
Inverter	LTI-300-48V-A6	300 VA	120 VAC	60 Hz	7	48 VDC	42-57 VDC	5.6" x 3.2" x 9.0" 142.2 x 81.3 x 228.6 mm	Shelf	3.5	1.6
	LTI-500-48V-A6	500 VA	120 VAC	60 Hz	12	48 VDC	42-57 VDC	5.6" x 3.2" x 9.0" 142.2 x 81.3 x 228.6 mm	Shelf	3.5	1.6
	LTI2-1K-48V-A6	1000 VA	120 VAC	60 Hz	24	48 VDC	42-57 VDC	3.5" x 17.1" x 14.6" 88.9 x 434.3 x 370.8 mm	Stand-alone 2RU	15	6.8
	LTI2-1.5K-48V-A6	1500 VA	120 VAC	60 Hz	36	48 VDC	42-57 VDC	3.5" x 17.1" x 14.6" 88.9 x 434.3 x 370.8 mm	Stand-alone 2RU	15	6.8
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	6.5	3.0
	LTPB-2-48V	---	48 VDC	---	---	---	---	12.0" x 19.0" x 15.8" 304.8 x 482.6 x 401.3 mm	7 RU	14	7.4
	LTPB-1-24V	---	24 VDC	---	---	---	---	5.6" x 19.0" x 8.8" 142.2 x 482.6 x 223.5 mm	4 RU	6.5	3.0
	LTPB-2-24V	---	24 VDC	---	---	---	---	12.0" x 19.0" x 15.8" 304.8 x 482.6 x 401.3 mm	7 RU	14	7.4
	LTPB-1-12V	---	12 VDC	---	---	---	---	5.6" x 19.0" x 8.8" 142.2 x 482.6 x 223.5 mm	4 RU	6.5	3.0
	LTPB-2-12V	---	12 VDC	---	---	---	---	12.0" x 19.0" x 15.8" 304.8 x 482.6 x 401.3 mm	7 RU	14	7.4
Battery	P24B-12-12V	---	---	---	12 AH	12 VDC	---	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	---	---	---	18 AH	12 VDC	---	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	---	---	---	26 AH	12 VDC	---	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	---	---	---	35 AH	12 VDC	---	6.2" x 5.2" x 7.8" 157.5 x 132.0 x 198.1 mm	LTPB-2	26	11.8

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

Specifications

RECTIFIER	Model Number	LTR-10-12V-U1	LTR-10-24V-U1	LTR-7.5-48V-U1	LTC-7.5-130V-48V
	Input Voltage	102 - 264 VAC	102 - 264 VAC	102 - 264 VAC	105 - 150 VDC
	Input Current	1.5 / 0.7A	2.8 / 1.5A	3.8 / 2.3A	3.8 / 2.3A
	Input Frequency	45 - 65 Hz	45 - 65 Hz	45 - 65 Hz	---
	Input Connections	Hot Pluggable	Hot Pluggable	Hot Pluggable	Hot Pluggable
	Output Voltage	12V	24V	48V	48V
	Output Current	10A	10A	7.5A	7.5A
	Indicators	DC LED AC LED Alarm LED	DC LED AC LED Alarm LED	DC LED AC LED Alarm LED	DC IN DC OUT Alarm LED
	Power Factor	> .99	> .99	> .99	---
	THD	< 5%	< 5%	< 5%	---
	Efficiency	≥ 90%	≥ 90%	> 93%	> 93%
	Load Regulation	< ±0.5%	< ±0.5%	< ±0.5%	< ±0.5%
	Line Regulation	< ±0.1%	< ±0.1%	< ±0.1%	< ±0.1%
	Noise	< 32dBmC	< 32dBmC	< 32dBmC	< 32dBmC
	Protection	Fuse and blocking diode	Fuse and blocking diode	Fuse and blocking diode	Fuse and blocking diode
	Temperature	Operating: 0° to 50°C (32° to 122° F) Storage: -40° to 85°C (-40° to 185° F)	Operating: 0° to 50°C (32° to 122° F) Storage: -40° to 85°C (-40° to 185° F)	Operating: 0° to 50°C (32° to 122° F) Storage: -40° to 85°C (-40° to 185° F)	Operating: 0° to 50°C (32° 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	0 to 95% non-condensing	
Cooling	Fan Assisted	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	5.6" x 3.2" x 9.0" 142.2 x 81.3 x 228.6mm	
Weight	4lb (1.8kg)	4lb (1.8kg)	4lb (1.8kg)	4lb (1.8kg)	
Mounting	Shelf	Shelf	Shelf	Shelf	
INVERTER	Model Number	LTI-300-48V-A6	LTI-500-48V-A6	LT12-1K-48V-A6*	LT12-1.5K-48V-A6*
	Output Power	300 VA	500 VA	1000 VA	1500 VA
	Nominal Output Voltage	120 VAC	120 VAC	120 VAC	120 VAC
	Frequency	60 Hz	60 Hz	60 Hz	60 Hz
	Output Waveform	Pure Sine Wave	Pure Sine Wave	Pure Sine Wave	Pure Sine Wave
	Input Connections	Hot Pluggable	Hot Pluggable	Terminal Block	Terminal Block
	Input DC Voltage	48V (42 - 56V)	48V (42 - 56V)	48V (42 - 56V)	48V (42 - 56V)
	Nominal DC Current	7A	12A	24A	36A
	Efficiency	> 85%	> 85%	> 90%	> 90%
	Voltage Regulation	±1%	±1%	±1%	±1%
	Load Power Factor	0.8 to 1	0.8 to 1	0.8 to 1	0.8 to 1
	Crest Factor	3:1	3:1	3:1	3:1
	Output Connections	NEMA - 5-15R Receptacle (front)	NEMA - 5-15R Receptacle (front)	4 x NEMA - 5-15R Receptacle (rear) Terminal Block (rear)	4 x NEMA - 5-15R Receptacle (rear) Terminal Block (rear)
	Switch ON/OFF	Yes	Yes	Yes	Yes
	DC to AC Isolation	Yes	Yes	Yes	Yes
	Indicators	Output Power ON DC Voltage Out of Range Alarm	Output Power ON DC Voltage Out of Range Alarm	Output Power ON DC Voltage Out of Range Alarm Fan Failure	Output Power ON DC Voltage Out of Range Alarm Fan Failure
Protection	Input/Output Fuses Low Input Voltage Shutdown w/ Auto Recovery High Input Voltage Shutdown Over Temperature Protection Overload Protection	Input/Output Fuses Low Input Voltage Shutdown w/ Auto Recovery High Input Voltage Shutdown Over Temperature Protection Overload Protection	DC Input Breaker Low Input Voltage Shutdown w/ Auto Recovery High Input Voltage Shutdown Over Temperature Protection Overload Protection	DC Input Breaker Low Input Voltage Shutdown w/ Auto Recovery High Input Voltage Shutdown Over Temperature Protection Overload Protection	
Temperature	Operating: 0° to 50°C (32° to 122° F) Storage: -40° to 85°C (-40° to 185° F)	Operating: 0° to 50°C (32° to 122° F) Storage: -40° to 85°C (-40° to 185° F)	Operating: 0° to 50°C (32° to 122° F) Storage: -40° to 85°C (-40° to 185° F)	Operating: 0° to 50°C (32° 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	0 to 95% Non-condensing	
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	3.5" x 17.1" x 14.6" 88.9 x 434.3 x 370.8 mm	3.5" x 17.1" x 14.6" 88.9 x 434.3 x 370.8 mm	
Weight	3.5lb (1.6kg)	3.5lb (1.6kg)	15lb (6.8kg)	15lb (6.8kg)	
Mounting	Shelf	Shelf	Rack 19" (23", wall - with optional mounting brackets)	Rack 19" (23", wall - with optional mounting brackets)	

* Refer to LTI2 data sheet for more details.

POWER SHELF	GENERAL	Capacity	Four slots to hold either rectifiers, converters or inverters	
		Dimension (H x W x D)	5.6" x 19" x 9.5" 442.24 x 482.6 x 241.3mm	
		Weight	7.5lbs	
		Mounting	Wall Mount Optional Rack Mounting Kit (19" or 23")	
		Connections*	AC - side entry, IEC 60320 C20 socket. AC cable included (7ft, twist lock L5-20P to locking type IEC 60320 C19EI) DC - Load and Battery connections are done 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	
		Features	Separate Current Limits for Load and Battery Charge Battery Test (automatic and manual mode, accessible via settings menu) Adjustments via Settings Menu Alarms Integrated Load Distribution	
		Connections	Load Connections Battery Connection 4 Alarm Relay Connections	
		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, Enable/Disable	
	Distribution	Up to 8 load positions with individual GMT fuses (10Amp max.)		
OPTIONAL 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 Assignable System Name 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 SQD Data Base		
BATTERY BOX	Battery Disconnect Breaker with Trip Alarm monitored via LTP controller			
	Rack or Wall Mount			
	Slots for up to four 12AH, 18AH, 26AH or 35AH batteries			
	Distribution connection			

*Screw-type input terminal for converters

Typical LTP Systems

