

TPS Battery Charger / Power Supply



Above Photo shows unit with optional *Informer Package*

TruPowerSource A Controlled Ferroresonant Technology

The versatility of the LaMarche TRUPowerSource Charger makes it suitable for a wide range of usage. From switch-gear applications to process control, the *TPS* will meet your requirements.

The LaMarche TRUPowerSource Charger—the optimum in Controlled Ferroresonant Design Technology. Designed to provide trouble free service and require little maintenance, the TRUPowerSource boasts a Mean Time Between Failure (MTBF) in excess of 175 thousand hours at 50°C, assuring longevity and a higher return for your dollar.

The TRUPowerSource Controlled Ferroresonant Design provides several inherent advantages such as voltage regulation, high efficiency, high power factor, and short circuit protection.

Specifications are subject to change without notice. Please contact La Marche for current information



La Marche Manufacturing Company

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TRUPowerSource Controlled Ferroresonant Battery Charger / Power Supply

Standard Features

- Recognized LaMarche Quality and Reliability
- Controlled Ferroresonant Design
- Precision Circuitry and Components
- Automatic AC Voltage Compensation
- 100% Duty Cycle
- Current Limiting Circuitry
- Float/Equalize Potentiometers, Lights and Switch
- AC Power Failure with light and form "C" Contact
- Load Sharing
- Input / Output Circuit Breakers*
- DC Voltage Regulation
- AC/DC Surge (MOV) Protection
- 2% Analog DC Metering
- Local / Remote Sensing
- Local / Remote Equalize

Optional Accessories

The *Informer* – Combined Accessory Package

This package incorporates a microprocessor based alarm and feature circuit board. Together, they provide the most comprehensive variety of features available in the industry. The selectable Digital Ammeter/Voltmeter provides +/-1% accuracy, to assure that what you see is what you get.

Output Circuit Breaker *

A 2 pole output circuit breaker can be supplied as an option on 75 Amp and larger units.

Blocking Diode**

* DC Output Breakers are Standard on 6 – 50 amp models, Larger units have an Output Fuse as Standard

** Units with blocking diodes are not UL Listed

TPS Battery Charger / Power Supply Specifications

Regulation

Steady State

Plus or minus ½% of the setting from no load to full load over the specified input voltage, frequency and ambient temperature ranges.

Dynamic Response (on battery)

Maximum voltage transient will not exceed +/-5% of initial steady-state voltage for a step change from 20% to 100% of the full rated load. Recovery to steady-state voltage regulation range does not exceed 200ms and all transient behavior disappears within 500ms.

Audible Noise

Less than 65dBA at any point 5 feet from any vertical surface of the charger/power supply.

Filtering

Single Phase units are 30mv. RMS and three phase units are 100mv. RMS when connected to a battery with an amp-hour capacity of four times the rated output current capacity of the charger/power supply.

Protection

Current Limit

The chargers have an inherent magnetic current limiting feature. Electronic current limiting control circuitry provides for an adjustable value of 90 to 115% of the rated output current.

AC Breaker – Single Phase Units

A two pole breaker opens both legs of the AC service to 208 and 240. Breaker opens phase side of 120VAC service.

AC Breaker – Three Phase Units

A three pole breaker opens all three legs of the AC service.

DC Breaker

Single Phase units through 50 amps are equipped with a 2 pole circuit breaker as standard equipment.

DC Fuse

All three phase units and single phase units over 50A are equipped with a DC rated fuse as standard equipment. Optional DC breaker is available on these models.

Environmental

Operating Temperature

0-50 C

Storage Temperature

-40 –85 C

Humidity

0-95% Relative Humidity (Non-condensing)

Cooling

Convection cooled

Load Sharing

Load sharing terminal located inside of unit on a terminal strip. When connected in series, LaMarche units are forced to share the load within +/-5% for individual unit outputs greater than 10% of the rated output.

Enclosures

All enclosures are NEMA 1, ANSI 61 gray in color. The single phase models can be Floor, Rack, or Wall mounted. The standard single phase enclosure comes equipped with mounting flanges that can be easily adjusted for wall or rack mounting. Mounting Brackets for floor mounting are also supplied but can be removed when enclosure is mounted in a relay rack.

The three phase models are floor mount

Current Walk In

Output current will gradually increase after the charger is turned on, eliminating surges and overshoot.

DC Output Panel

Equalize Indicator

A yellow LED illuminates when the charger is in the "equalize" mode.

Float Indicator

A green LED illuminates when the charger is in the "float" mode.

Metering

Standard model charger is equipped with a rugged taut-baud ammeter and voltmeter, +/-2% accuracy at full scale. The optional Informer Alarm Package provides 1% digital metering.

Input Specifications

AC Voltage: +/- 10%

Frequency: 60Hz +/- 5%
50Hz units are optional.
Please consult factory as enclosure size may change. 50Hz units are not UL Listed.

Optional Informer Accessory Package features

- Switch selectable 1% combination digital volt / amp meter
- Adjustable 0-144 hour Equalize timer with light and multi-mode options.
- AC On indicator (Green).
- AC Power Failure indicator (Red) and single form "C" contact.
- Equalize indicator (Amber).
- Float indicator (Green).
- Low DC Voltage indicator (Red) and 2 form "C" contacts.
- High DC Voltage indicator (Red) and 2 form "C" contacts.
- High DC Voltage Shutdown indicator (Red).
- Low DC Current indicator (Red) and 2 form "C" contacts.
- Positive Ground Detection indicator (Red) and 2 form "C" contacts.
- Negative Ground Detection indicator (Red) and 2 form "C" contacts.
- Summary / Rectifier Failure indicator (Red) and 2 form "C" contacts.*

* Summary / Rectifier Failure Alarm will indicate if there is a High DC Voltage Shutdown or a simultaneous Low DC Voltage Alarm and Low DC Current Alarm.



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TPS Battery Charger / Power Supply Specifications

24VDC Model Specifications

Model Number	AC Volts	Input Amps	DC Volts		Case No.	Approx. Weight	BTU's / Hour
			Output	Amps			
TPS-6-24V-A1	120	2	24V	6A	4B	90	98
TPS-12-24V-A1	120	4	24V	12A	4B	90	195
TPS-20-24V-ABD1	120/208/240	7/4/3	24V	20A	4B	100	325
TPS-25-24V-ABD1	120/208/240	8/5/4	24V	25A	4	125	407
TPS-30-24V-ABD1	120/208/240	10/6/5	24V	30A	4	150	488
TPS-35-24V-ABD1	120/208/240	12/7/6	24V	35A	4	154	569
TPS-50-24V-ABD1	120/208/240	17/10/8	24V	50A	4	175	813
TPS-75-24V-ABD1	120/208/240	25/15/13	24V	75A	4	211	1220
TPS-100-24V-ABD1	120/208/240	34/19/17	24V	100A	9	225	1627

48VDC Model Specification

Model Number	AC Volts	Input Amps	DC Volts		Case No.	Approx. Weight	BTU's / Hour
			Output	Amps			
TPS-6-48V-A1	120	4	48V	6A	4B	90	195
TPS-12-48V-A1	120	8	48V	12A	4B	110	390
TPS-20-48V-ABD1	120/208/240	14/8/7	48V	20A	4	150	650
TPS-25-48V-ABD1	120/208/240	17/10/8	48V	25A	4	150	813
TPS-30-48V-ABD1	120/208/240	20/12/10	48V	30A	4	155	976
TPS-35-48V-ABD1	120/208/240	24/14/12	48V	35A	4	180	1138
TPS-50-48V-ABD1	120/208/240	34/19/17	48V	50A	4	205	1627
TPS-75-48V-ABD1	120/208/240	50/29/25	48V	75A	9	295	2440
TPS-100-48V-BLD1	208/220/240	39/37/34	48V	100A	9	321	3254

130VDC Model Specifications

Model Number	AC Volts	Input Amps	DC Volts		Case No.	Approx. Weight	BTU's / Hour
			Output	Amps			
TPS-6-130V-ABD1	120/208/240	10/6/5	130V	6A	4	140	488
TPS-12-130V-ABD1	120/208/240	20/12/10	130V	12A	4	175	976
TPS-20-130V-ABD1	120/208/240	34/19/17	130V	20A	4	225	1627
TPS-25-130V-ABD1	120/208/240	42/24/21	130V	25A	4	250	2033
TPS-30-130V-ABD1	120/208/240	50/29/25	130V	30A	9	319	2440
TPS-35-130V-ABD1	120/208/240	59/34/29	130V	35A	9	372	2847
TPS-50-130V-BLD1	208/220/240	49/46/42	130V	50A	9	532	4067
TPS-75-130V-BD3	208/240	37/32	130V	75A	72	660	4714
TPS-75-130V-C3	480	16	130V	75A	72	660	4714
TPS-100-130V-BD3	208/240	49/42	130V	100A	72	800	6286
TPS-100-130V-C3	480	21	130V	100A	72	800	6286

Note:

- 1) BTU's on single phase units based on 85% Efficiency and 88% Efficiency on 3 phase units.
- 2) Input Amps are at Nominal AC Input and at 100% of rated load.
- 3) Number cells and type of battery **MUST** be specified when ordering.

DC Voltage	24V	48V	130V
Number of Cells	12L or 20NC	24L or 37NC	58L or 60L or 92NC
Float (Lead)	2.12 to 2.3 V/C		
Equalize (Lead)	2.25 to 2.40 V/C		
Float (Ni-Cad)	1.39 to 1.45 V/C		
Equalize (Ni-Cad)	1.50 to 1.60 V/C		



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TPS Battery Charger / Power Supply Specifications

Available 50 Hz Models

24VDC Model Specifications

Model Number	AC Volts	Input Amps	DC Volts		Case No.*	Approx. Weight	BTU's / Hour
			Output	Amps			
TPS-20-24V-5BL1	220/240	3.7/3.4	24V	20A	4	110	325
TPS-25-24V-5BL1	220/240	4.6/4.2	24V	25A	4	138	407
TPS-30-24V-5BL1	220/240	5.5/5.0	24V	30A	4	165	488
TPS-35-24V-5BL1	220/240	6.4/5.9	24V	35A	4	170	569
TPS-50-24V-5BL1	220/240	9.2/8.4	24V	50A	4	193	813
TPS-75-24V-5BL1	220/240	13.8/12.6	24V	75A	4	233	1220
TPS-100-24V-5BL1	220/240	18.3/16.8	24V	100A	9	248	1627

48VDC Model Specification

Model Number	AC Volts	Input Amps	DC Volts		Case No.*	Approx. Weight	BTU's / Hour
			Output	Amps			
TPS-20-48V-5BL1	220/240	7.3/6.7	48V	20A	4	165	650
TPS-25-48V-5BL1	220/240	9.2/8.4	48V	25A	4	165	813
TPS-30-48V-5BL1	220/240	11.0/10.1	48V	30A	4	171	976
TPS-35-48V-5BL1	220/240	12.8/11.8	48V	35A	4	198	1138
TPS-50-48V-5BL1	220/240	18.3/16.8	48V	50A	4	225	1627
TPS-75-48V-5BL1	220/240	27.5/25.2	48V	75A	9	325	2440
TPS-100-48V-5BL1	220/240	36.7/33.6	48V	100A	9	354	3254

130VDC Model Specifications

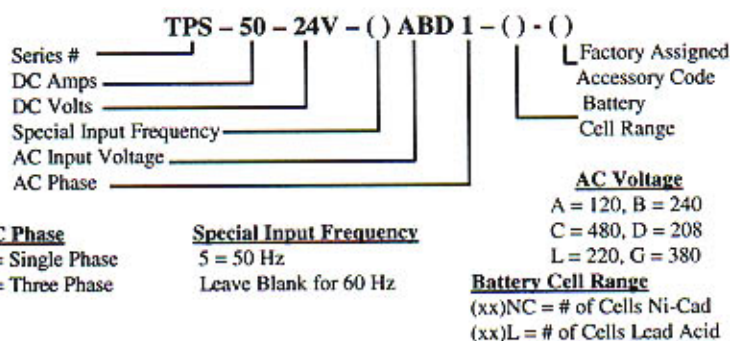
Model Number	AC Volts	Input Amps	DC Volts		Case No.*	Approx. Weight	BTU's / Hour
			Output	Amps			
TPS-6-130V-5BL1	220/240	5.5/5.0	130V	6A	4	154	488
TPS-12-130V-5BL1	220/240	11.0/10.1	130V	12A	4	193	976
TPS-20-130V-5BL1	220/240	18.3/16.8	130V	20A	4	233	1627
TPS-25-130V-5BL1	220/240	22.9/21.0	130V	25A	4	275	2033
TPS-30-130V-5BL1	220/240	27.5/25.2	130V	30A	9	352	2440
TPS-35-130V-5BL1	220/240	32.1/29.4	130V	35A	9	410	2847
TPS-50-130V-5BL1	220/240	45.9/42.0	130V	50A	9	586	4067
TPS-75-130V-5G3	380	20.0	130V	75A	72	727	4714
TPS-100-130V-5G3	380	26.7	130V	100A	72	882	6286

* Case sizes are subject to change on 50Hz units

Note:

- 1) BTU's on single phase units based on 85% Efficiency and 88% Efficiency on 3 phase units.
- 2) Input Amps are at Nominal AC Input and at 100% of rated load.
- 3) 50 Hz units are not UL Listed.

Model Number Format



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