



*Battery Charger / Power Supply “Constavolt”*

*The Industry’s Most Reliable  
Filtered Battery Charger / Power Supply*



Unit Shown: A12B with 52 Data Logging Package



The La Marche model A12B Series Filtered Battery Chargers / Power Supplies are engineered for the demanding requirements of Switchgear applications, Process Controls and Communications. The magnetic amplifier circuitry is designed to carry continuous and intermittent loads up to the maximum rated output.

Its robust design, unmatched reliability and many customizable features have made this workhorse the standard charger in the industry.

This series of A12B charger assists with NERC PRC-005-6 as it is equipped with Data Logging capability. The charger maintains a record of all the monitored parameters in the DC system. The Data log file is saved in an Excel format and is easily accessible through a micro SD card.

**Standard Features**

Magnetic Amplifier Technology

2 Line LCD Display

Discrete Alarm LEDs and Form-C Contacts

Advanced Data Logging (Event/Time Based)

Field upgradable Firmware Capability

Downloadable Configurations and Settings Files

Field Assignable Alarm Relay Contacts

Float/Equalize Modes

Multi-Mode Equalize Timer

AC Input and DC Output Breaker Protection

AC/DC Surge Suppression (MOV)

Automatic AC Voltage Compensation

±0.5% DC Voltage Regulation

Adjustable Current Limit Protection (50% to 120%)

Output Filtering in compliance with NEMA PE5 (Battery Eliminator) and IEEE P2405 (Level 2)

NEMA Type 1 Enclosure / IP20

UL 1012 & C-UL Listed  
(UL 1481 listing available with 46 series)

5-Year Full Warranty  
10-Year Magnetics Warranty

La Marche Mfg. (A U.S. Company)  
106 Bradrock Drive, Des Plaines, IL 60018  
Tel: 847.299.1188 Fax: 847.299.3061  
sales@lamarchemfg.com  
www.lamarchemfg.com



# Specifications

ELECTRICAL	Available AC Input Voltage Ratings	Single Phase: 60Hz: 120, 208, 220, 240, 480 or 600 50Hz: 220/240, 380 or 415 Three Phase: 60Hz: 208, 240, 480 or 600 50Hz: 220/240, 380 or 415												
	AC Input Voltage Range	+10% to -12% from nominal												
	AC Input Frequency Range	±5%												
	Available DC Output Ratings	DC Amps: 3 to 400 amperes DC Volts: 12, 24, 48, 130VDC (Others available such as 32, 36 & 260VDC)												
	DC Output Range (Min.)	<table border="1"> <thead> <tr> <th colspan="2">Lead Acid</th> <th colspan="2">Ni-Cad</th> </tr> <tr> <th>Float (V/Cell)</th> <th>Equalize(V/Cell)</th> <th>Float (V/Cell)</th> <th>Equalize(V/Cell)</th> </tr> </thead> <tbody> <tr> <td>2.12 - 2.35</td> <td>2.2 - 2.45</td> <td>1.35 - 1.45</td> <td>1.5 - 1.6</td> </tr> </tbody> </table>	Lead Acid		Ni-Cad		Float (V/Cell)	Equalize(V/Cell)	Float (V/Cell)	Equalize(V/Cell)	2.12 - 2.35	2.2 - 2.45	1.35 - 1.45	1.5 - 1.6
	Lead Acid		Ni-Cad											
	Float (V/Cell)	Equalize(V/Cell)	Float (V/Cell)	Equalize(V/Cell)										
	2.12 - 2.35	2.2 - 2.45	1.35 - 1.45	1.5 - 1.6										
Output Filtering (with or without a battery)	30mV RMS for 12, 24, 48Vdc models and 130Vdc single phase models 100mV RMS for 130Vdc three phase models													
DC Voltage Regulation	±0.5%													
Power Protection	AC Breaker, DC Breaker and Current Limit Protection													
MECHANICAL	Dimensions	Varies by size. Refer to the available models chart												
	Mounting	Varies by Enclosure size												
	Finish	Pretreated with a seven stage iron phosphate wash, sealer and deionized rinse. Then coated with an environmentally safe and durable ANSI 61 gray Polyester TGIC Minite powder finish.												
	Audible Noise	Less than 65dBA at any point 5 feet from any vertical surface of the unit												
	MTBF	Exceeds 250,000 Hours												
MONITORING	Display	2 Line LCD Display												
	Data Logging	Events and Time Based (*.CSV File on micro SD Card)												
	LED's	<ul style="list-style-type: none"> <li>·Float                    ·Equalize                    ·LV/End of Discharge    ·HV/HV Shutdown</li> <li>·AC ON                ·AC FAIL                    ·Low DC Current        ·Overload/Current Limit</li> <li>·Summary            ·Charger Fail            ·Positive Ground        ·Negative Ground</li> </ul>												
	Alarm Contacts (2) Form-C Dry Contacts (Field Assignable / Default Listed)	<ul style="list-style-type: none"> <li>·Summary            ·AC Power Failure    ·High DCV                ·High DCV Shutdown</li> <li>·Low DCV            ·Low DC Current        ·Positive Ground        ·Negative Ground</li> </ul>												
	Optional Communications	DNP 3.0, MODBUS, MODBUS RTU, SNMP and IEC 61850												
ENVIRONMENTAL	Operating Temperature	0° to 50°C (32° to 122°F)												
	Storage Temperature	-40° to 85°C (-40° to 185°F)												
	Relative Humidity	0% to 95% (non-condensing)												
STANDARDS AND COMPLIANCE	Industrial Battery Chargers	NEMA PE5 and IEEE P2405												
	UL Battery Charger	UL Std. No. 1012 File E 319318, Guide BBML												
	C-UL Battery Charger	CAN/CSA Std. C22.2 No. 107-2												
	UL Fire Alarm System Power Supply	UL Std. No. 1481 (Available with 46 series only. Must Specify Accessory Code 09A Available on 240V or less.)												

**Notes:** All models where appropriate will carry the U.L. and C-U.L. Battery Charger listing. When U.L. Fire Alarm System Power Supply Listings are required, you must specify this requirement at the time of order.

Not all models can be U.L. approved. Accessories, type of charger and rating will determine U.L. approval.

Consult our factory if U.L. approvals are required.

# Optional Accessories

## ALARM & CONTROL

- 050/** Ground Detection Switch 3-position with DC Voltmeter
- 06D** indication (130VDC models utilizes two switches)
- 10G** Forced Load Sharing (with same model number only)
- 103** Remote Sensing
- 20Q** Equalize Fan Control Relay

## METERING & PROTECTION

- 01M** DC Breaker two Pole High Interrupting - 22KAIC (up to 250VDC)
- 01C** AC Breaker two Pole High Interrupting - 65/35/18KAIC (240/480/600VAC)
- 01D** AC Breaker two Pole High Interrupting - 100/65/25KAIC (240/480/600VAC)
- 01F** AC Breaker three Pole High Interrupting - 65/35/18 KAIC (240/480/600VAC)
- 01G** AC Breaker three Pole High Interrupting - 100/65/25KAIC (240/480/600VAC)
- 06G** Zero Center Ammeter w/Battery & Load Terminals (under 250A units)
- 19V** Digital AC Voltage & Current metering (1%)
- 102** DC Blocking Diode
- 11L** Lightning Arrestor
- 217** Reverse polarity Protection & LED
- 03T** Low Voltage Battery Disconnect
- 03S** Low Voltage Load Disconnect
- 068** Audible Alarm w/ Silence Switch

## COMMUNICATION PROTOCOLS

- 21J** IEC 61850 (Ethernet )
- 21P** DNP 3.0 Communications (RS232/RS485/Ethernet)
- 21Q** MODBUS Communications (RS232/RS485/Ethernet)
- 21S** MODBUS RTU Serial Data Port (RS232/RS485)
- 21X** SNMP V3/Web Browser (Ethernet )

## MISCELLANEOUS

- 092** Tropicalization (magnetics only) Single Phase
- 093** Tropicalization (magnetics only) Three Phase
- 10B** USCG (U.S. Coast Guard) Accessories
- 10L** Battery & Load Terminals (under 250A units)
- 11F** 30mV Filtering for 130V 3-phase units
- 38G** ABS (American Bureau of Shipping) Modifications
- 38J** ABS (38G) & USGC (10B) Single Phase
- 38K** ABS (38G) & USGC (10B) Three Phase
- 11V** Temperature Compensation (Internal Probe)
- 11W** External Temperature Probe 24 ft
- 38D** Copper Ground Bus Bar
- 095** Heat Shrinkable Wire Markers with Point to Point Wiring Diagram
- 09W** Heat Shrinkable Wire Markers with Electrical Schematic
- 09L** Physical Parts Location Drawing
- 097** SIS Wire (#16 AWG and larger) Markers
- 080** Drip Shield
- Floor Stand (must order separately)
- Special NEMA (3R, 4, 4X and 12) and IP Rated Enclosures

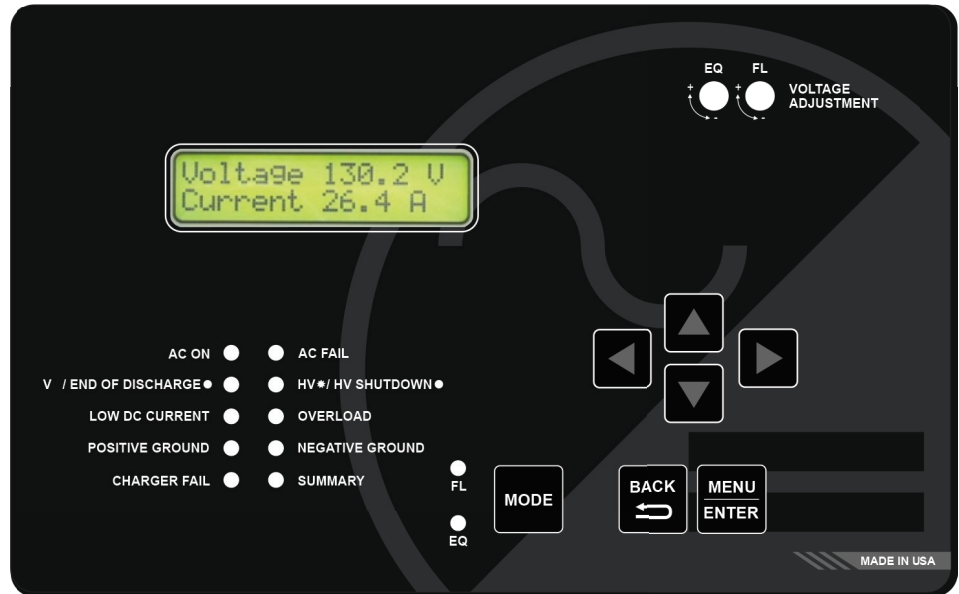
## Available Packages

	SINGLE PHASE	THREE PHASE
PACKAGE #1 STANDARD	52E Digital Monitoring with Data Logging 016 AC Breaker Two Pole 017 DC Breaker Two Pole	52E Digital Monitoring with Data Logging 01B AC Breaker Three Pole 017 DC Breaker Two Pole
PACKAGE #2	52E Digital Monitoring with Data Logging 016 AC Breaker Two Pole 017 DC Breaker Two Pole 10G Forced Load Sharing 102 DC Blocking Diode	52E Digital Monitoring with Data Logging 01B AC Breaker Three Pole 017 DC Breaker Two Pole 10G Forced Load Sharing 102 DC Blocking Diode
PACKAGE #3	52E Digital Monitoring with Data Logging 016 AC Breaker Two Pole 017 DC Breaker Two Pole 21P* DNP 3.0 Communications 21Q* MODBUS Communications 21J* IEC 61850 Ethernet Communications	52E Digital Monitoring with Data Logging 01B AC Breaker Three Pole 017 DC Breaker Two Pole 21P* DNP 3.0 Communications 21Q* MODBUS Communications 21J* IEC 61850 Ethernet Communications

\*Pick only one communication option: 21P or 21Q or 21J.

## User Interface

- ✓ Voltage
- ✓ Current
- ✓ Active Alarms
- ✓ Last 10 Data Log Events
- ✓ Equalize Cycle Status
- ✓ Real - Time Clock
- ✓ Equalize Cycle Settings
- ✓ Alarms Thresholds and Delays
- ✓ Data Logging Settings
- ✓ Communications Settings
- ✓ Password Protected Menu
- ✓ Firmware Field Upgrade
- ✓ LEDs Test



## Advanced Data Logging

A12B 52-Series is equipped with a time & event based data-log with a battery backup for real-time-clock stamp, written to a removable micro-SD card. This allows trending the health of your DC system, and provides knowledge of the history leading up to the event.

	A	B	C	D	E	F	G	H
2	Created on 04/17/2019 at 02:35:19							
3	Charger Serial Number 123456-01							
4	Firmware P525DS0001 052620							
5	<b>Date</b>	<b>Time</b>	<b>DCV (V)</b>	<b>DCA (A)</b>	<b>BATTERY (V)</b>	<b>PROBE #1 (C)</b>	<b>PROBE #2 (C)</b>	<b>Event</b>
6	4/17/2019	2:35:19	131.2	23.5	131.1	27.3	-----	Reset to Defaults
7	4/17/2019	2:36:29	125.6	23.5	125.5	27.3	-----	198 #1 Board OK
8	4/17/2019	2:36:29	125.6	23.5	125.5	27.3	-----	Low Voltage Alarm OK
9	4/17/2019	2:36:29	125.6	23.5	125.5	27.3	-----	End of Discharge Alarm OK
10	4/17/2019	2:36:30	136.2	0	136.1	27.3	-----	High Voltage Alarm FAIL
11	4/17/2019	2:36:30	0	0	0	27.3	-----	Charger Failure Alarm OK

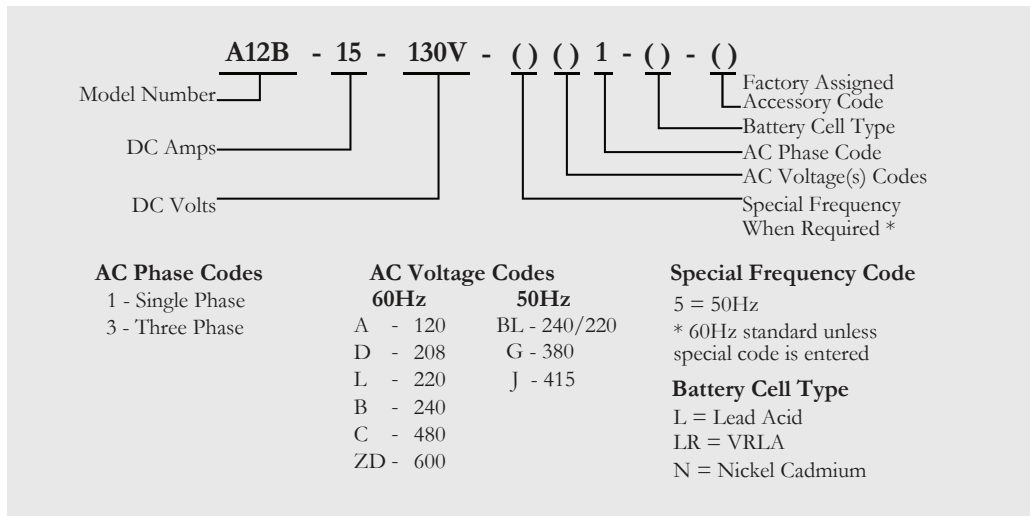


# Case Specifications

Case No.	Overall Dimensions						Cable Entry (when facing unit)		
	Width		Depth		Height		AC Input	DC Output	Mounting
	in	mm	in	mm	in	mm			
3	15.375	391	11.000	279	23.750	603	Right	Left	Wall/Floor
6	25.580	650	13.935	354	28.000	711	Right/Top Bottom	Left/Top Bottom	Wall/Floor
7	14.250	362	10.625	270	19.875	505	Right	Left	Wall/Floor
8A	27.200	691	15.250	387	32.500	826	Right/Top Bottom/Side	Left/Top Bottom/Side	Floor
27	27.312	694	25.875	657	56.125	1426	Top	Top	Floor
47	38.000	965	39.375	1000	70.000	1778	Top/Bottom	Top/Bottom	Floor
47B	38.000	965	46.750	1188	71.125	1807	Top/Bottom	Top/Bottom	Floor
57	60.000	1524	36.000	914	80.000	2032	Bottom	Bottom	Floor
70	27.000	686	19.000	483	41.000	1041	Right/Bottom	Left/Bottom	Floor
72	27.000	686	23.500	597	44.500	1130	Right/Bottom	Bottom	Floor

**Notes:** Case sizes may differ depending on optional accessories and / or 50Hz input. Please consult factory when dimensions are critical. Dimensions shown above are overall footprint. Detailed dimensions drawings are available for mounting purposes.

## Model Number Nomenclature



### Ordering Information

When ordering, please specify:

- La Marche Model Number A12B
- Input Voltage, Frequency, Phase
- Number and Type of Battery Cells
- Amp Hour Capacity of Battery
- Intermittent DC Loads and Duration
- Continuous DC Load
- Allowable Recharge Time from Full Discharge (where applicable)
- Package Number or for Custom Order
- Optional Accessories
- Verify AC Input Current Draw