



**La MARCHÉ**  
ISO 9001:2015 CERTIFIED

## A12B 52 Series

### 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 parameters in the DC system. The Data log file is in an Excel format and is easily accessible through a saved monitored 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

Float/Equalize Modes

Field Assignable Alarm Relay Contacts

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

Made in U.S.A

Specifications subject to change without notice

P25-DSA12B-2  
ECN 23229  
07/22

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# Specifications

<b>ELECTRICAL</b>	<b>Available AC Input Voltage Ratings</b>	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												
	<b>AC Input Voltage Range</b>	+10% to -12% from nominal												
	<b>AC Input Frequency Range</b>	±5%												
	<b>Available DC Output Ratings</b>	DC Amps: 10 to 400 amperes DC Volts: 12, 24, 48, 130VDC (Others available such as 32, 36 & 260VDC)												
	<b>DC Output Range(Min.)</b>	<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										
<b>Output Filtering (with or without a battery)</b>	30mV RMS for 12, 24, 48Vdc models and 130Vdc single phase models 100mV RMS for 130Vdc three phase models													
<b>DC Voltage Regulation</b>	±0.5%													
<b>Power Protection</b>	AC Breaker, DC Breaker and Current Limit Protection													
<b>MECHANICAL</b>	<b>Dimensions</b>	Varies by size. Refer to the available models chart												
	<b>Mounting</b>	Varies by Enclosure size												
	<b>Finish</b>	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 Minitel powder finish.												
	<b>Audible Noise</b>	Less than 65dBA at any point 5 feet from any vertical surface of the unit												
	<b>MTBF</b>	Exceeds 250,000 Hours												
<b>MONITORING</b>	<b>Display</b>	2 Line LCD Display												
	<b>Data Logging</b>	Events and Time Based (*.CSV File on micro SD Card)												
	<b>LED's</b>	<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>												
	<b>Alarm Contacts (2) Form-C Dry Contacts (Field Assignable / Default Listed)</b>	<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>												
	<b>Optional Communications</b>	DNP 3.0, MODBUS, MODBUS RTU, SNMP and IEC 61850												
<b>ENVIRONMENTAL</b>	<b>Operating Temperature</b>	0° to 50°C (32° to 122°F)												
	<b>Storage Temperature</b>	-40° to 85°C (-40° to 185°F)												
	<b>Relative Humidity</b>	0% to 95% (non-condensing)												
<b>STANDARDS AND COMPLIANCE</b>	<b>Industrial Battery Chargers</b>	NEMA PE5 and IEEE P2405												
	<b>UL Battery Charger</b>	UL Std. No. 1012 File E 319318, Guide BBML												
	<b>C-UL Battery Charger</b>	CAN/CSA Std. C22.2 No. 107-2												
	<b>UL Fire Alarm System Power Supply</b>	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. Consult our factory if U.L. approvals are required. Not all models can be U.L. approved. Accessories, type of charger and rating will determine U.L. approval.

# Optional Accessories

## ALARM & CONTROL

- 050/** Ground Detection Switches with DC Voltmeter
- 06D** Indication
- 10G** Forced Load Sharing (with same model number only)
- 103** Remote Sensing
- 20Q** Equalize Fan Control Relay\*
- 19U** Adjustable Ground Detection Sensitivity\*

## 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)
- 19V** Digital AC Voltage & Current metering (1%)\*
- 102** DC Blocking Diode
- 11L** Lightning Arrestor
- 434** Reverse Polarity Protection
- 068** Audible Alarm w/ Silence Switch\*

\* Unit must be equipped with 52E Series

## 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 Ethernet \*

## MISCELLANEOUS

- 092** Tropicalization (magnetics only) Single Phase
- 093** Tropicalization (magnetics only) Three Phase
- 10B** USCG (U.S. Coast Guard) Accessories
- 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
- 11Y** External Temperature Probe 100 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

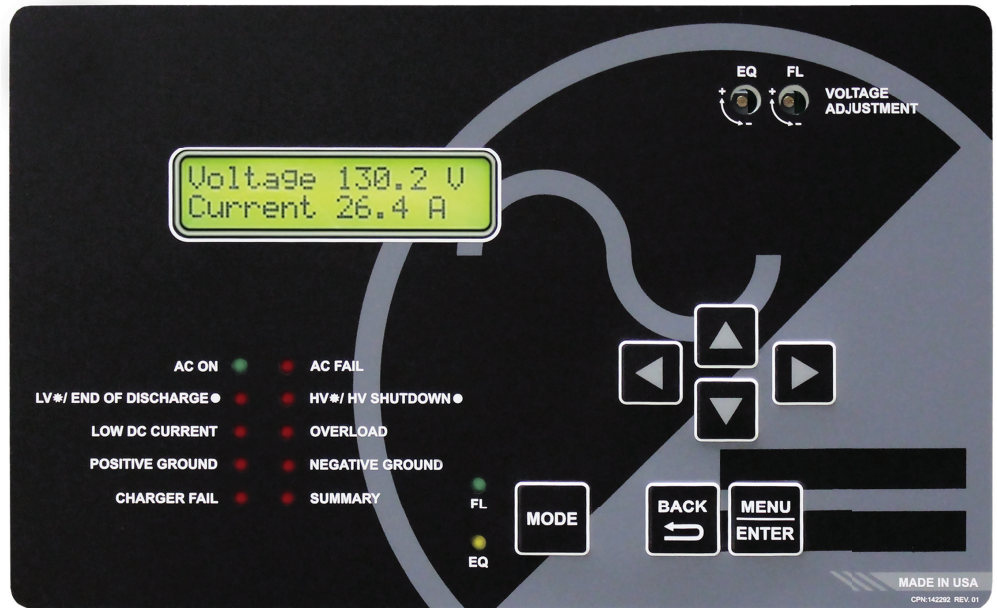
# Available Packages

	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

Please consult factory for other available cell ranges if desired range not shown.

Must specify only one battery type and number of cells from range shown above.

	Model Number	DC Amps	DC Fuse Size (Amps) <sup>(1)</sup>	AC Input Phase	AC Input Current Draw @ 100% Load (Amps) <sup>(2)</sup>										Std. Case Size <sup>(4)</sup>	Shipping Weight (Approximate)		
					60Hz Units						50Hz Units					lbs	kgs	
					A 120	D 208	L 220	B 240	C 480	ZD 600	240	B / L 220	G 380	J 415				
<b>12 volt systems (6L, 9 or 10NC)</b>	A12B-10-12V	10	20	1	2.5	1.4	1.4	1.3	---	---	1.3	/	1.4	---	---	3	90	41
	A12B-15-12V	15	25	1	3.8	2.2	2.1	1.9	---	---	1.9	/	2.1	---	---	3	90	41
	A12B-20-12V	20	30	1	5	2.9	2.7	2.5	---	---	2.5	/	2.7	---	---	3	95	44
	A12B-30-12V	30	40	1	7.5	4.3	4.1	3.8	1.9*	1.6*	3.8	/	4.1	2.4*	2.2*	3	105	48
	A12B-40-12V	40	60	1	10	5.8	5.5	5	2.5*	2.1*	5	/	5.5	3.2*	2.9*	6	155	71
	A12B-50-12V	50	80	1	13	7.2	6.8	6.3	3.1*	2.6*	6.3	/	6.8	4.0*	3.6*	6	170	78
	A12B-60-12V	60	80	1	15	8.7	8.2	7.5	3.8*	3.1*	7.5	/	8.2	4.7*	4.3*	6	180	82
	A12B-75-12V	75	100	1	19	11	11	9.4	4.7*	3.9*	9.4	/	11	5.9*	5.4*	6	225	103
	A12B-100-12V	100	150	1	25	14	14	13	6.3*	5.2*	13	/	14	7.9	7.2	8A	315	143
A12B-200-12V	200	250	3	---	7.5	7.1	6.5	3.3*	2.7*	6.5	/	7.1	4.1*	3.8*	8A	325	148	
					---	15	14.2	13	6.6	5.4*	13	/	14.2	8.2	7.6	72	500	227
<b>24 volt systems (12L, 18, 19 or 20NC)</b>	A12B-10-24V	10	20	1	5	2.9	2.7	2.5	---	---	2.5	/	2.7	---	---	3	95	44
	A12B-15-24V	15	25	1	7.5	4.3	4.1	3.8	1.9*	1.6*	3.8	/	4.1	2.4*	2.2*	3	100	46
	A12B-20-24V	20	30	1	10	5.8	5.5	5	2.5*	2.1*	5	/	5.1	3.2*	2.9*	3	120	55
	A12B-25-24V	25	35	1	13	7.2	6.8	6.3	3.1*	2.6*	6.3	/	6.8	4.0*	3.6*	3	135	62
	A12B-30-24V	30	40	1	15	8.7	8.2	7.5	3.8*	3.1*	7.5	/	8.2	4.7*	4.3*	3	145	66
	A12B-35-24V	35	50	1	18	11	9.6	8.8	4.4*	3.7*	8.8	/	9.6	5.5*	5.1*	6	190	87
	A12B-40-24V	40	60	1	21	12	11	10	5*	3.2*	10	/	11	6.3*	5.8*	6	205	93
	A12B-50-24V	50	80	1	26	15	14	13	6.3*	5.2*	13	/	14	7.9	7.2	6	240	109
	A12B-60-24V	60	80	1	31	18	17	15	7.5	6.3*	15	/	17	9.5	8.7	6	265	121
	A12B-75-24V	75	100	1	38	22	21	19	9.4	7.8*	19	/	21	12	11	72	400	182
	A12B-100-24V	100	150	1	51	29	28	26	13	11	26	/	28	16	15	72	450	205
		100	150	3	---	15	14.2	13	6.6	5.4*	13	/	14.2	8.2	7.6	72	500	227
	A12B-125-24V	125	200	3	---	19	18	17	8.1	6.8*	17	/	18	11	9.4	72	525	239
	A12B-150-24V	150	200	3	---	23	22	20	9.8	8.2	20	/	22	13	12	72	630	286
	A12B-200-24V	200	250	3	---	30	29	26	13	11	26	/	29	17	16	27	825	375
	A12B-250-24V	250	300	3	---	38	36	33	17	14	33	/	36	21	19	27	880	400
A12B-300-24V	300	400	3	---	46	43	40	20	17	40	/	43	25	23	27	940	427	
A12B-400-24V	400	600	3	---	61	57	53	26	22	53	/	57	33	31	47	1350	613	
<b>48 volt systems (24L, 36, 37 or 38NC)</b>	A12B-10-48V	10	20	1	10	5.8	5.5	5	2.5*	2.1*	5	/	5.5	3.2*	2.9*	3	140	64
	A12B-15-48V	15	25	1	15	8.7	8.2	7.5	3.8*	3.1*	7.5	/	8.2	4.7*	4.3*	3	180	82
	A12B-20-48V	20	30	1	21	12	11	10	5*	4.2*	10	/	11	6.3*	5.8*	6	205	93
	A12B-25-48V	25	35	1	26	15	14	13	6.3*	5.2*	13	/	14	7.9	7.2	6	240	109
	A12B-30-48V	30	40	1	31	18	17	15	7.5	6.3*	15	/	17	9.5	8.7	6	265	121
	A12B-40-48V	40	60	1	41	24	22	21	10	8.4	21	/	22	13	12	6	275	125
	A12B-50-48V	50	80	1	51	29	28	26	13	11	26	/	28	16	15	8A	355	161
	A12B-60-48V	60	80	3	---	18	17	16	7.8	6.5*	16	/	17	9.9	9	8A	400	182
	A12B-75-48V	75	100	3	---	23	22	20	9.8	8.2	20	/	22	13	12	72	525	239
	A12B-100-48V	100	150	3	---	30	29	26	13	11	26	/	29	17	16	72	625	284
	A12B-125-48V	125	200	3	---	38	36	33	17	14	33	/	36	21	19	27	700	318
	A12B-150-48V	150	200	3	---	46	43	40	20	17	40	/	43	25	23	27	850	386
	A12B-175-48V	175	250	3	---	53	50	46	23	19	46	/	50	29	27	27	1000	454
	A12B-200-48V	200	250	3	---	61	57	53	26	22	53	/	57	33	31	27	1150	522
A12B-250-48V	250	300	3	---	76	71	66	33	28	66	/	71	42	38	47	1400	635	
A12B-300-48V	300	400	3	---	91	86	79	40	33	79	/	86	50	46	47	1700	772	
A12B-400-48V	400	600	3	---	121	114	105	53	44	105	/	114	66	61	47	1800	817	
<b>130 volt systems (54 through 60L, 92 through 97NC)</b>	A12B-10-130V	10	20	1	26	15	14	13	6.3*	5.2*	13	/	14	7.9	7.2	6	225	103
	A12B-15-130V	15	25	1	38	22	21	19	9.4	7.8	19	/	21	12	11	6	250	114
	A12B-20-130V	20	30	1	51	29	28	26	13	11	26	/	28	16	15	6	270	123
		25	35	1	63	37	35	32	16	14	32	/	35	20	19	8A	360	164
	A12B-25-130V	25	35	3	---	19	18	16	8.1	13	16	/	18	10	9.4	8A	355	161
		30	40	1	75	44	41	38	19	16	38	/	41	24	22	8A	390	177
	A12B-30-130V	30	40	3	---	23	21	20	9.8	16	20	/	21	12	11	8A	390	177
		35	50	1	88	51	48	44	22	19	44	/	48	28	26	72	505	230
	A12B-35-130V	35	50	3	---	27	25	23	12	9.5	23	/	25	15	14	72	580	264
		40	60	1	101	58	55	51	26	21	51	/	55	32	29	72	550	250
	A12B-40-130V	40	60	3	---	30	29	26	13	11	26	/	29	17	16	72	625	284
	A12B-50-130V	50	80	3	---	38	36	33	17	14	33	/	36	21	19	72	645	293
	A12B-60-130V	60	80	3	---	46	43	40	20	17	40	/	43	25	23	27	865	393
	A12B-75-130V	75	100	3	---	57	54	49	25	21	49	/	54	31	29	27	930	422
	A12B-100-130V	100	150	3	---	76	71	66	33	28	66	/	71	42	38	27	1040	472
	A12B-125-130V	125	200	3	---	94	89	82	41	34	82	/	89	52	48	47	1500	681
	A12B-150-130V	150	200	3	---	113	107	98	49	41	98	/	107	62	57	47	1800	817
	A12B-175-130V	175	250	3	---	132	125	114	57	48	114	/	125	72	66	47	1950	885
	A12B-200-130V	200	250	3	---	151	142	131	66	55	131	/	142	83	76	47	2100	953
	A12B-250-130V <sup>(5)</sup>	250	300	3	---	188	178	163	82	68	163	/	178	103	95	47	2300	1044
A12B-300-130V <sup>(3)(5)</sup>	300	400	3	---	226	214	196	98	82	196	/	214	124	113	47B	2400	1089	
A12B-400-130V <sup>(3)(5)</sup>	400	600	3	---	301	285	261	131	109	261	/	285	165	151	57	2550	1157	

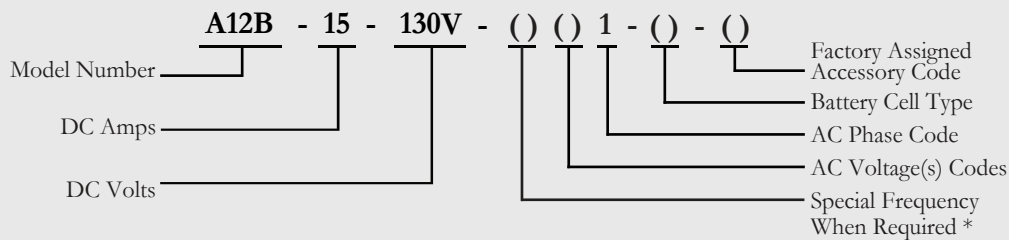
- (1) Optional DC Breaker when ordered in lieu of standard fuse(s) may slightly differ in ratings. AC Draws shown with asterisk\* when equipped with AC Breaker, a series fuse is included.
- (2) AC Current Draws based @ 100% load and standard battery cells of 6L (12V), 12L (24V), 24L (48V) and 60L (130V). Maximum Current Draw is 120% of ratings shown. AC Current draws shown in Italics have high current draws for their specific input voltages - verification of input power requirement should be done prior to ordering.
- (3) Denotes units not U.L Listed
- (4) Case sizes shown are for standard 60 Hz units and may differ depending on optional accessories and/or 50Hz input. Please consult factory when dimensions are critical.
- (5) Denotes units not UL 1481 Listed.

## 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
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



### AC Phase Codes

- 1 - Single Phase
- 3 - Three Phase

### AC Voltage Codes

- | 60Hz     |              | 50Hz |
|----------|--------------|------|
| A - 120  | BL - 240/220 |      |
| D - 208  | G - 380      |      |
| L - 220  | J - 415      |      |
| B - 240  |              |      |
| C - 480  |              |      |
| ZD - 600 |              |      |

### Special Frequency Code

- 5 = 50Hz
- \* 60Hz standard unless special code is entered

### Battery Cell Type

- L = Lead Acid
- LR = VRLA
- N = Nickel Cadmium

## Ordering Information

### When ordering, please specify:

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