



# LaMARCHÉ®

ISO 9001 CERTIFIED

## A12B

### BATTERY CHARGER / POWER SUPPLY



Unit shown with optional accessories

## THE INDUSTRY'S MOST RELIABLE FILTERED BATTERY CHARGER / POWER SUPPLY

The LaMarche model A12B Series Filtered Battery Chargers / Power Supplies are engineered for the demanding requirements of Switch Gear applications, Process Controls and Communications.

The LaMarche A12B is synonymous with quality, performance and outstanding reliability amongst Electric Utility, Offshore Platform and Industrial users and has withstood the test of time. With its inherent robust design and unmatched reliability, the LaMarche A12B is a stellar performer. When you need a worry free operation, rely on the LaMarche A12B to give you that peace of mind. Its reliability is unmatched with an MTBF (Mean Time Between Failure) in excess of 175,000 hours. It is not surprising that power plant engineers have made this workhorse the standard in the industry throughout the years. We are so confident in the reliability and performance of our A12B Series that we back it up with an unparalleled and industry leading 10-year warranty.

All units incorporate *magnetic amplifier circuitry* coupled with *silicon diode rectifiers* which require virtually no aging adjustments. Designed to carry continuous and intermittent loads up to the maximum

### Standard Features

- Magnetic Amplifier Circuitry provides increased longevity and worry-free operation
- Automatic AC Voltage Compensation
- AC Power Failure Relay with Form "C" contacts
- Fused AC input and DC output protects Battery and Charger/Power Supply
- Separate Float and Equalize Potentiometers provide simple and precise DC Voltage calibration.
- Float/Equalize Mode Switching
- Float & Equalize Lights
- Filtered DC Output (clean power) - the A12B can be used as a Power Supply - less 30mV RMS on single phase units and less than 100mV RMS on three-phase units.
- Current Limiting Circuitry prevents overload and provides current control from 50 to 120% of rated output (*factory set at 115%*).
- +/- 0.5% DC Voltage Regulation
- 2% Accuracy Analog DC Ammeter & DC Voltmeter
- Industry's unparalleled 10-year Warranty

rated output, these fully automatic chargers feature output filtering to 30mV RMS for single phase units and 100mV RMS for three phase units, with current limiting at less than 120%. Each unit is manufactured to charge a specific battery type and number of cells.

The A12B's ability to float or equalize a battery permits periodic equalize charging to increase battery life. It is an effective method for charging batteries used in standby services. Each charger has output voltage controls for adjusting the float and equalize range from 2.12 to 2.4 volts per cell on lead-acid batteries. The A12B's low output ripple makes it an ideal choice for today's Valve-Regulated batteries. The A12B comes equipped with an *AC Power Failure* relay and terminals for connection to a remote alarm system.

With the optional *Digital C.A.P. Systems (Combined Accessory Package)*, you can incorporate the most popular features at time of order - thus reducing the cost per feature and accelerating the manufacturing process, assuring prompt delivery of your charger. With its customizing features, there is virtually no application that the A12B cannot meet to your specific needs.

### LaMarche Manufacturing Company

106 Bradrock Drive, Des Plaines, IL 60018-1967  
Tel: 847-299-1188 Toll Free Fax: 1-888-232-9562  
sales@lamarchemfg.com www.lamarchemfg.com

## SPECIFICATIONS

## ELECTRICAL

## AC Input Voltages

Single Phase 60Hz: 120,208,240,480 or 575  
 Single Phase 50Hz: 220/240,380 or 415  
 Three Phase 60Hz: 208,240,480 or 575  
 Three Phase 50Hz: 220/240,380 or 415

## Output Power Protection

DC Fuse, DC Voltage Regulation and Current Limit Protection

## DC Output Voltages

DC Amps: 3 to 400 amperes  
 DC Volts: 12, 24, 48 & 130VDC (Others available such as 32 & 36VDC)

## Output Filtering

30mV RMS for single phase models and 100mV RMS for three-phase models when connected to a battery with an ampere-hour capacity of four times the output current capacity of the charger.

## DC Voltage Regulation

Plus or minus 0.5% of setting from no load to full load over the specified input voltage, frequency and ambient temperature ranges.

## 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)

## ENCLOSURES

## Dimensions

Overall dimensions and weights are listed herein. Case specifications are subject to change due to innovative product development and design. When space requirements are critical, please consult the factory.

## Mounting

Floor or wall units are available. Mounting flanges are supplied as integral part of cabinet back plate on wall mounted models.

## Finish

Pretreated with three step iron phosphate wash and de-ionized rinse. Finished with environmentally safe water based ANSI 61 gray baked enamel.

## AGENCY APPROVALS

**U.L. Industrial Battery Charger**  
 File E 25701, Guide BBHZ  
 Std.No.1564

**U.L. Fire Alarm System / Power Supply Application**  
 File S2768, Guide UTRZ  
 Std.No. 1481

## CSA Rectifiers

File LR14209, Std. C22.2 No. 107

## Notes:

All models where appropriate will carry the Battery Charger U.L. and CSA listings. When **Fire Alarm** and **Power Supply Listings** are required, you must specify this requirement at the time of order. *Not all models can be U.L. or CSA approved.* Accessories, type of charger and rating will determine U.L. and CSA approval. Consult our factory if U.L. or CSA approvals are required.

## OPTIONAL ACCESSORIES

## ALARM &amp; CONTROL

- 16E, 16G, 16J, 16L, 16P & 16T Digital C.A.P. Systems  
*(please refer to Digital C.A.P. Systems data sheet for complete details)*  
 Digital C.A.P. (Combined Accessory Package) Systems featuring a Selectable LED Display, a Multi-Mode Equalize Timer with Light adjustable from 1-144 hrs with five selectable modes; Standard, 7-day, 14-day, 30-day and Equalize after Low DC Voltage. AC Pilot Light, AC Power Failure Form "C" contacts (except 16H) Low DC Current & Light, Low DC Voltage & Light, Low DC Voltage 2 & Light, High DC Voltage & Light and High DC Voltage Shutdown.
- 03N Low DC Current Alarm & Light w/ (1) set Form "C" contacts
- 04J Electronic Equalize Timer Multi-Mode adjustable from 1-144hrs with five selectable modes; Standard, 7-day, 14-day, 30-day and Equalize after Low DC Voltage.
- 050 Ground Detection Switch 3-position with DC Voltmeter indication (130VDC models utilizes two switches)
- 051 Ground Detection Alarm with Reset Pushbutton and (1) set form "C" Positive and (1) set form "C" Negative contacts
- 052 Ground Detection Lights (Positive and Negative)
- 053 Ground Detection Switch & Lights 3-position with DC Voltmeter indication (130VDC models utilizes two switches)
- 054 AC Power Failure Light
- 060 AC Pilot Light Neon Bulb *(LED included with Digital C.A.P. Systems)*
- 068 Sonalert with Silence Switch Audible Alarm
- 16C Hi/Lo-2 Combination Alarm High/Low DC Voltage, Field Calibrations & Adjustments, Individual Lights and (2) Form "C" contacts for each alarm
- 10G Forced Load Sharing *(with same model number only)*
- 103 Remote Sensing
- 162 Summary Alarm *(for use with discrete components only)*

## METERING &amp; PROTECTION

- 011 AC Breaker Single Pole *(120VAC only)*
- 012 DC Breaker Single Pole
- 016 AC Breaker Two Pole *(208VAC and above only)*
- 017 DC Breaker Two Pole
- 01B AC Breaker Three Pole *(3-phase input only)*
- 06G Zero Center Ammeter w/ Battery & Load Terminals *(under 250A units)*
- 06L AC Ammeter +/- 2% accuracy *(single phase only)*
- 06M AC Voltmeter +/- 2% accuracy *(single phase only)*
- 102 DC Blocking Diode
- 105 DC Dual Fusing
- 107 DC Surge Protectors *(MOV's)*
- 140 AC Switch Single Pole *(60A Maximum)*
- 141 AC Switch Two Pole *(60A Maximum)*
- 143 AC Switch Three Pole *(60A Maximum)*

## MISCELLANEOUS

- 09A U.L. 1481 Listing
- 092 Tropicalization (magnetics only) Single phase
- 093 Tropicalization (magnetics only) Three phase
- 10B USCG (U.S. Coast Guard) Accessories
- 10L Battery & Load Terminals without meter *(under 250A units)*
- 11F 30mV Filtering for 3-phase units
- 38G ABS (American Bureau of Shipping) Modifications
- Floor Stand *(wall mounted cabinets only - shipped separately)*
- Drip Shield *(shipped separately)*

Notes: Discrete Alarms are not available in conjunction with Digital C.A.P. (Combined Accessory Package) systems. Typically, when ordering two or more discrete components, the Digital C.A.P. system listed above provides a more economical approach.

# PERFORMANCE AND RELIABILITY

Must specify one only battery type and number of cells from range shown above. Please consult factory for other available cell ranges if desired range not shown.

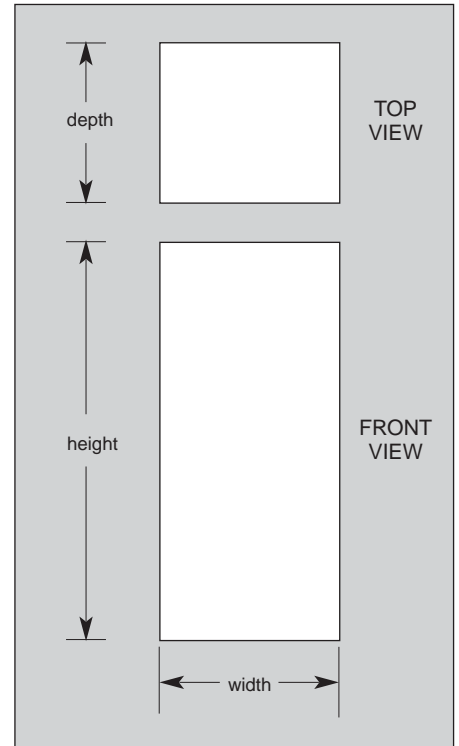
	Model Number	DC Amps	DC Fuse Size (Amps) <sup>(1)</sup>	AC Input Phase	AC Input Current Draw @ 100% Load <sup>(2)</sup> (Amps)									Std. Case Size <sup>(5)</sup>	Shipping Weight (Approximate)	
					60Hz Units					50Hz Units <sup>(3,4)</sup>					lbs	kgs
					A 120	D 208	L 220	B 240	C 480	E 575	B L 240 / 220	G 380	J 415			
12 volt systems (6L, 9 or 10NC)	A12B-3-12V	3	10	1	0.8	0.4	0.4	0.4	---	---	0.4 / 0.4	---	---	7	60	27.2
	A12B-6-12V	6	15	1	1.5	0.9	0.8	0.8	---	---	0.8 / 0.8	---	---	7	70	31.8
	A12B-10-12V	10	20	1	2.5	1.4	1.4	1.3	---	---	1.3 / 1.4	---	---	7	80	36.3
	A12B-15-12V	15	25	1	3.8	2.2	2.1	1.9	---	---	1.9 / 2.1	---	---	3	90	40.8
	A12B-20-12V	20	30	1	5	2.9	2.7	2.5	---	---	2.5 / 2.7	---	---	3	95	43.1
	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	47.6
	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	70.3
	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	77.1
	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	81.7
	A12B-75-12V	75	100	1	19	11	11	9.4	4.7*	3.9*	9.4 / 11	5.9*	5.4*	6	225	102.1
A12B-100-12V	100	150	3	---	7.5	7.1	6.5	3.3*	2.7*	6.5 / 7.1	4.1*	3.8*	8A	325	147.4	
24 volt systems (12L, 19 or 20NC)	A12B-3-24V	3	10	1	1.5	0.9	0.8	0.8	---	---	0.8 / 0.8	---	---	7	70	31.8
	A12B-6-24V	6	15	1	3	1.7	1.6	1.5	---	---	1.5 / 1.6	---	---	3	85	38.6
	A12B-10-24V	10	20	1	5	2.9	2.7	2.5	---	---	2.5 / 2.7	---	---	3	95	43.1
	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	45.4
	A12B-20-24V	20	30	1	10	5.8	5.5	5	2.5*	2.1*	5 / 5.5	3.2*	2.9*	6	155	70.3
	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*	6	170	77.1
	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*	6	180	81.7
	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	86.2
	A12B-40-24V	40	60	1	21	12	11	10	5*	3.2*	10 / 11	6.3*	5.8*	6	205	93.0
	A12B-50-24V	50	80	1	26	15	14	13	6.3*	5.2*	13 / 14	7.9	7.2	6	240	108.9
	A12B-60-24V	60	80	1	31	18	17	15	7.5	6.3*	15 / 17	9.5	8.7	6	265	120.2
	A12B-75-24V	75	100	1	38	22	21	19	9.4	7.8	19 / 21	12	11	70	400	181.4
	A12B-100-24V	100	150	1	51	29	28	26	13	11	26 / 28	16	15	70	450	204.1
	A12B-125-24V	125	200	3	---	19	18	17	8.1	6.8*	17 / 18	11	9.4	70	525	238.1
A12B-150-24V <sup>(4)</sup>	150	200	3	---	23	22	20	9.8	8.2	20 / 22	13	12	72	630	285.8	
A12B-200-24V <sup>(4)</sup>	200	250	3	---	30	29	26	13	11	26 / 29	17	16	27	825	374.2	
A12B-250-24V <sup>(4)</sup>	250	300	3	---	38	36	33	17	14	33 / 36	21	19	27	880	399.2	
A12B-300-24V <sup>(4)</sup>	300	400	3	---	46	43	40	20	17	40 / 43	25	23	27	940	426.4	
A12B-400-24V <sup>(4)</sup>	400	600	3	---	61	57	53	26	22	53 / 57	33	31	47	1350	612.4	
48 volt systems (24L, 36, 37 or 38NC)	A12B-3-48V	3	10	1	3	1.7	1.6	1.5	---	---	1.5 / 1.6	---	---	7	85	38.6
	A12B-6-48V	6	15	1	6	3.5	3.3	3	---	---	3 / 3.3	---	---	3	90	40.8
	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	63.5
	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	81.7
	A12B-20-48V	20	30	1	21	12	11	10	5*	4.2*	10 / 11	6.3*	5.8*	6	205	93.0
	A12B-25-48V	25	35	1	26	15	14	13	6.3*	5.2*	13 / 14	7.9	7.2	6	240	108.9
	A12B-30-48V	30	40	1	31	18	17	15	7.5	6.3*	15 / 17	9.5	8.7	6	265	120.2
	A12B-40-48V	40	60	1	41	24	22	21	10	8.4	21 / 22	13	12	6	275	124.7
	A12B-50-48V	50	80	1	51	29	28	26	13	11	26 / 28	16	15	8A	355	161.0
	A12B-60-48V	60	80	3	---	18	17	16	7.8	6.5*	16 / 17	9.9	9	8A	400	181.4
	A12B-75-48V	75	100	3	---	23	22	20	9.8	8.2	20 / 22	13	12	72	525	238.1
	A12B-100-48V	100	150	3	---	30	29	26	13	11	26 / 29	17	16	72	625	283.5
	A12B-125-48V	125	200	3	---	38	36	33	17	14	33 / 36	21	19	72	700	317.5
	A12B-150-48V <sup>(4)</sup>	150	200	3	---	46	43	40	20	17	40 / 43	25	23	72	850	385.6
A12B-175-48V <sup>(4)</sup>	175	250	3	---	53	50	46	23	19	46 / 50	29	27	27	1000	453.6	
A12B-200-48V <sup>(4)</sup>	200	250	3	---	61	57	53	26	22	53 / 57	33	31	27	1150	521.6	
A12B-250-48V <sup>(4)</sup>	250	300	3	---	76	71	66	33	28	66 / 71	42	38	47	1400	635.0	
A12B-300-48V <sup>(4)</sup>	300	400	3	---	91	86	79	40	33	79 / 86	50	46	47	1700	771.1	
A12B-400-48V <sup>(4)</sup>	400	600	3	---	121	114	105	53	44	105 / 114	66	61	47	1800	816.5	
130 volt systems (58 or 60L, 92, 93, 96 or 97NC)	A12B-3-130V	3	10	1	7.5	4.3	4.1	3.8	---	---	3.8 / 4.1	---	---	3	140	63.5
	A12B-6-130V	6	15	1	15	8.7	8.2	7.5	---	---	7.5 / 8.2	4.7*	---	6	175	79.4
	A12B-10-130V	10	20	1	26	15	14	13	6.3*	5.2*	13 / 14	7.9	7.2	6	225	102.1
	A12B-15-130V	15	25	1	38	22	21	19	9.4	7.8	19 / 21	12	11	6	250	113.4
	A12B-20-130V	20	30	1	51	29	28	26	13	11	26 / 28	16	15	6	270	122.5
	A12B-25-130V	25	35	1	63	37	35	32	16	14	32 / 35	20	19	8A	355	161.0
	A12B-30-130V	30	40	1	76	44	41	38	19	16	38 / 41	24	22	8A	390	176.9
	A12B-35-130V	35	50	1	88	51	48	44	22	19	44 / 48	28	26	72	505	229.1
				3	---	27	25	23	12	9.5	23 / 25	15	14	72	580	263.1
	A12B-40-130V	40	60	1	101	58	55	51	26	21	51 / 55	32	29	72	550	249.5
				3	---	30	29	26	13	11	26 / 29	17	16	72	625	283.5
	A12B-50-130V	50	80	3	---	38	36	33	17	14	33 / 36	21	19	72	645	292.6
	A12B-60-130V	60	80	3	---	46	43	40	20	17	40 / 43	25	23	27	865	392.4
	A12B-75-130V	75	100	3	---	57	54	49	25	21	49 / 54	31	29	27	930	421.9
	A12B-100-130V	100	150	3	---	76	71	66	33	28	66 / 71	42	38	27	1040	471.7
	A12B-125-130V	125	200	3	---	94	89	82	41	34	82 / 89	52	48	47	1500	680.4
	A12B-150-130V <sup>(4)</sup>	150	200	3	---	113	107	98	49	41	98 / 107	62	57	47	1800	816.5
	A12B-175-130V <sup>(3,4)</sup>	175	250	3	---	132	125	114	57	48	114 / 125	72	66	47	1950	884.5
A12B-200-130V <sup>(3,4)</sup>	200	250	3	---	151	142	131	66	55	131 / 142	83	76	47	2100	952.6	
A12B-250-130V <sup>(3,4)</sup>	250	300	3	---	188	178	163	82	68	163 / 178	103	95	47	2300	1043.3	
A12B-300-130V <sup>(3,4)</sup>	300	400	3	---	226	214	196	98	82	196 / 214	124	113	47	2400	1088.6	
A12B-400-130V <sup>(3,4)</sup>	400	600	3	---	301	285	261	131	109	261 / 285	165	151	57	2550	1156.7	

<sup>(1)</sup> Optional DC Breaker when ordered in lieu of standard fuse(s) may slightly differ in ratings. AC Draws shown with asterisk \* are not available with Optional AC Breaker.  
<sup>(2)</sup> 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.  
<sup>(3)</sup> Denotes units not U.L. Listed <sup>(4)</sup> Denotes units not C.S.A. Listed Note: 50Hz units are neither U.L. nor CSA listed.  
<sup>(5)</sup> Case sizes shown are for standard 60Hz units and may differ depending on optional accessories and/or 50Hz input. Please consult factory when dimensions are critical.

### Case Specifications

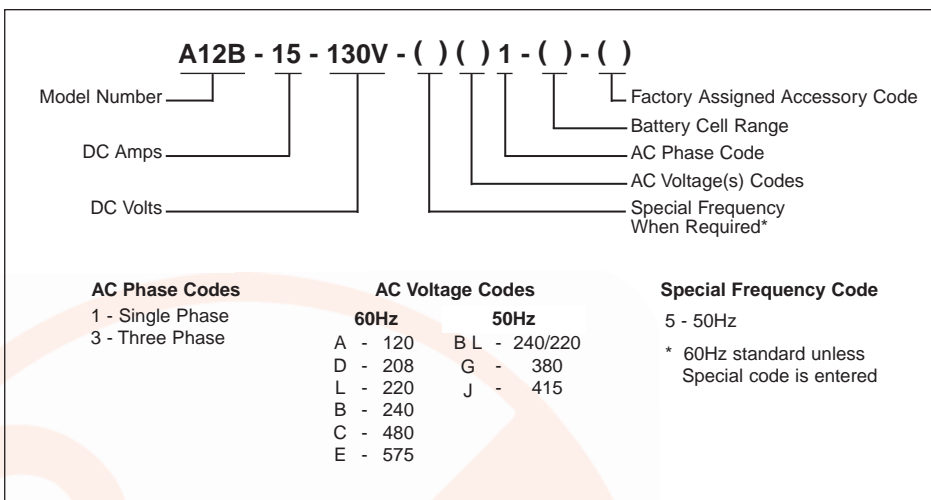
Case No.	Overall Dimensions					
	Width		Depth		Height	
	in	mm	in	mm	in	mm
3	15.375	391	11.000	279	23.750	603
6	25.580	650	13.935	354	28.000	711
7	14.250	362	10.625	270	19.875	505
8A	27.200	691	15.250	387	32.500	826
27	27.312	694	25.875	657	56.125	1426
47	38.000	965	39.375	1000	70.000	1778
57	60.000	1524	36.000	914	80.000	2032
70	27.000	686	19.000	483	41.000	1041
72	27.000	686	23.500	597	44.500	1130

Case No.	Cable Entry (when facing unit)		Mounting
	AC input	DC output	
3	Right	Left	Wall / Floor
6	Right / Top / Bottom	Left / Top / Bottom	Wall / Floor
7	Right	Left	Wall / Floor
8A	Right	Left	Floor
27	Top	Top	Floor
47	Top / Bottom	Top / Bottom	Floor
57	Bottom	Bottom	Floor
70	Right / Bottom	Left / Bottom	Floor
72	Right / Bottom	Bottom	Floor



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:

- LaMarche Model Number A12B
- Input Voltage, Frequency, Phase
- Number and Type of Battery Cells
- Ampere Hour Capacity of Battery
- Intermittent DC Loads and Duration
- Continuous DC Load
- Allowable Recharge Time from Full Discharge (where applicable)
- Optional Accessories
- Verify AC Input Current Draw

Specifications subject to change without notice