The Industry's Most Reliable Filtered Battery Charger / Power Supply



Standard



16 Series CAP
W/Breakers



46 Series CAP
W/Breakers

ABS

c UL us
46LE

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 and unmatched reliability has made this workhorse the standard in the industry and with its customizing features.

Refer to Digital C.A.P. System Data Sheet for complete details.

Standard Features

- Magnetic Amplifier Circuitry
- Separate Float and Equalize Potentiometers provide simple and precise DC Voltage calibration
- Float/Equalize Mode Switching
- Float and Equalize Lights
- Automatic AC Voltage Compensation
- +/- 0.5% DC Voltage Regulation
- Fused AC input and DC output protects Battery and Charger/Power Supply
- Analog DC Ammeter and DC Voltmeter
- Current Limiting Circuitry prevents overload and provides current control from 50 to 120% of rated output (factory set at 115%)
- Output Filtered (With or Without a Battery) - 30mV RMS for Single Phase Models and 100mV RMS for Three Phase Models
- AC Power Failure Relay with Form "C" Contacts
- AC Surge Suppression (MOV)
- NEMA Type 1 Enclosure / IP20
- UL 1012 & C-UL Listed (UL 1481 Listing available)
- 10-year Limited Warranty

MADE IN U.S.A.
Specifications subject to change without notice
P25-DSA12B-1
ECN 21476
06/17

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Specifications

ELECTRICAL

- **AC Input Voltages**
  Single Phase 60Hz: 120, 208, 220, 240, 480 or 600
  Single Phase 50Hz: 220/240, 380 or 415
  Three Phase 60Hz: 208, 240, 480 or 600
  Three Phase 50Hz: 220/240, 380 or 415
  Voltage range: +/- 10% from nominal
  Frequency range: +/- 5%
- **Power Protection**
  AC Fuse, DC Fuse and Current Limit Protection
- **DC Output Amps and Voltages**
  DC Amps: 3 to 400 amperes
  DC Volts: 12, 24, 48, 130VDC (Others available such as 32, 36 & 260VDC)
- **Output Filtering (With or without a battery)**
  30mV RMS for single phase models and 100mV RMS for three phase models
- **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)
- **MTBF**
  Exceeds 250,000 Hours
- **Dimensions**
  Overall dimensions and weights are listed on the last page of this Data Sheet. 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 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.

AGENCY APPROVALS

- **UL Battery Charger**
  File E 319318, Guide BBML
  UL Std. No. 1012
- **C-UL Battery Charger**
  CAN/CSA
  Std. C22.2 No. 107-2
- **UL Fire Alarm System Power Supply**
  File S2768, Guide UTRZ
  UL Std. No. 1481
  Must Specify Accessory Code 09A
  24V output, 240V or less, 60Hz single phase input only.

  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

- **16 Series** (Refer to Digital C.A.P. Systems Data Sheet for complete details)
  LED C.A.P. Systems common features:
  Selectable Display, Multi-Mode Equalize Timer
  Equalize Light
  AC Power Failure Relay w/ (2) sets Form "C"
  Low DC Current Alarm w/ (2) sets Form "C"
  Low DC Voltage 1 Alarm w/ (2)sets Form "C" & Adjustable Time Delay (0-255 sec) (Except Ground Detection Alarms).
  Multi-Mode Equalize Timer with Light adjustable from 1-144 hrs with five selectable modes and various failure alarm & lights.
- **46 Series** (Refer to Digital C.A.P. Systems Data Sheet for complete details)
  2 Line LCD C.A.P. Systems common features:
  Selectable Display, Multi-Mode Equalize Timer
  Equalize Light
  Float Light
  AC Power Failure Relay w/ (2) sets Form "C" (Except 46Q)
  Low DC Current Alarm w/ (2) sets Form "C"
  Low DC Voltage 1 Alarm w/ (2)sets Form "C" & Adjustable Time Delay (0-255 sec) (Except Ground Detection Alarms).
  Multi-Mode Equalize Timer with Light adjustable from 1-144 hrs with five selectable modes and various failure alarm & lights.
  Discrete Alarm LEDs (46A & 46B) Available
- **46A** Discrete Alarm LEDs (with Ground Detection)
  For use with CAP systems 46J, 46U, 46Q, 46T
- **46B** Discrete Alarm LEDs (w/o Ground Detection)
  For use with CAP systems 46E, 46P, 46G, 46L
- **03N** Low DC Current Alarm & Light w/ (1) set Form "C" contacts
- **04J** Electronic Equalize Timer Multi-Mode adjustable from 2-144hrs 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 (130VDC models utilizes two switches)
- **054** AC Power Failure Light
- **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
- **20Q** Equalize Fan Control Relay

METERING & PROTECTION

- **011** AC Breaker Single Pole *(120VAC only)*
- **012** DC Breaker Single Pole
- **016** AC Breaker Two Pole

METERING & PROTECTION CONTINUED

- **017** DC Breaker Two Pole
- **01B** AC Breaker Three Pole *(3-phase input only)*
- **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)*
- **06L** AC Ammeter +/-2% accuracy *(single phase)*
- **06M** AC Voltmeter +/-2% accuracy *(single phase)*
- **14V** AC Voltmeter with switch *(three phase)*
- **14W** AC Ammeter with switch *(three phase)*
- **102** DC Blocking Diode
- **107** DC Surge Protectors *(MOV's)*
- **11L** Lightning Arrestor
- **217** Reverse polarity Protection & LED

MISCELLANEOUS

- **09A** UL1481 (24V output, 240V or less, 60Hz single phase)
- **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 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 22 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 (must order separately)
- **---** Floor Stand (must order separately)
- **---** Special NEMA (3R, 4, 4X and 12) and IP Rated Enclosures

COMMUNICATION PROTOCOLS (Offered only with 46 series C.A.P.)

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

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.
Case sizes may differ depending on optional accessories and/or 50Hz input. Please consult factory when dimensions are critical.

	Model Number	DC Amps	DC [1] Fuse Size (Amps)	AC Input Phase	AC Input Current Draw @ 100% Load (Amps)[2] 60Hz Units A 120	D 208	L 220	B 240	C 480	ZD 600	50Hz Units B L 240 / 220	G 380	J 415	Std. [4] Case Size	Shipping Weight (Approximate) lbs	kgs
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	28
	A12B-6-12V	6	15	1	1.5	0.9	0.8	0.8	---	---	0.8 / 0.8	---	---	7	70	32
	A12B-10-12V	10	20	1	2.5	1.4	1.4	1.3	---	---	1.3 / 1.4	---	---	7	80	37
	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
		100	150	3	---	7.5	7.1	6.5	3.3*	2.7*	6.5 / 7.1	4.1*	3.8*	8A	325	148
24 volt systems (12L, 18, 19 or 20NC)	A12B-3-24V	3	10	1	1.5	0.9	0.8	0.8	---	---	0.8 / 0.8	---	---	7	70	32
	A12B-6-24V	6	15	1	3	1.7	1.6	1.5	---	---	1.5 / 1.6	---	---	3	85	39
	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	70	400	182
	A12B-100-24V	100	150	1	51	29	28	26	13	11	26 / 28	16	15	70	450	205
		100	150	3	---	16	15	13	7	6	13 / 15	8.5	8	70	500	227
	A12B-125-24V	125	200	3	---	19	18	17	8.1	6.8*	17 / 18	11	9.4	70	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
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	39
	A12B-6-48V	6	15	1	6	3.5	3.3	3	---	---	3 / 3.3	---	---	3	90	41
	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	72	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
130 volt systems (54 through 60L, 92 through 97NC)	A12B-3-130V	3	10	1	7.5	4.3	4.1	3.8	---	---	3.8 / 4.1	---	---	3	140	64
	A12B-6-130V	6	15	1	15	8.7	8.2	7.5	---	---	7.5 / 8.2	4.7*	---	3	140	64
	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
		20	30	3	---	15	14	13	6.5	10	13 / 14	8.2	7.5	8A	360	164
	A12B-25-130V	25	35	1	*63*	37	35	32	16	14	32 / 35	20	19	8A	355	161
		25	35	3	---	19	18	16	8.1	13	16 / 18	10	9.4	8A	390	177
	A12B-30-130V	30	40	1	*75*	44	41	38	19	16	38 / 41	24	22	8A	390	177
		30	40	3	---	23	21	20	9.8	16	20 / 21	12	11	8A	430	196
	A12B-35-130V	35	50	1	*88*	51	48	44	22	19	44 / 48	28	26	72	505	230
		35	50	3	---	27	25	23	12	9.5	23 / 25	15	14	72	580	264
	A12B-40-130V	40	60	1	*101*	58	55	51	26	21	51 / 55	32	29	72	550	250
		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	250	300	3	---	*188*	*178*	*163*	82	68	*163* / 178	103	95	47	2300	1044
	A12B-300-130V [3]	300	400	3	---	*226*	*214*	*196*	98	82	*196* / 214	124	113	47B	2400	1089
	A12B-400-130V [3]	400	600	3	---	*301*	*285*	*261*	131	109	*261* / 285	165	151	57	2550	1157

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.

*[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 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						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	LEFT	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	38.00	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

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.



46 Series (LCD)



16 Series (LED)

Refer to Digital C.A.P. System Data Sheet for complete details.
Discrete alarm LEDs available.

Model Number Nomenclature

A12B - 15 - 130V - ( ) ( ) 1 - ( ) - ( )

- Model Number
- DC Amps
- DC Volts
- Factory Assigned Accessory Code
- Battery Cell Type
- AC Phase Code
- AC Voltage(s) Codes
- Special Frequency When Required *

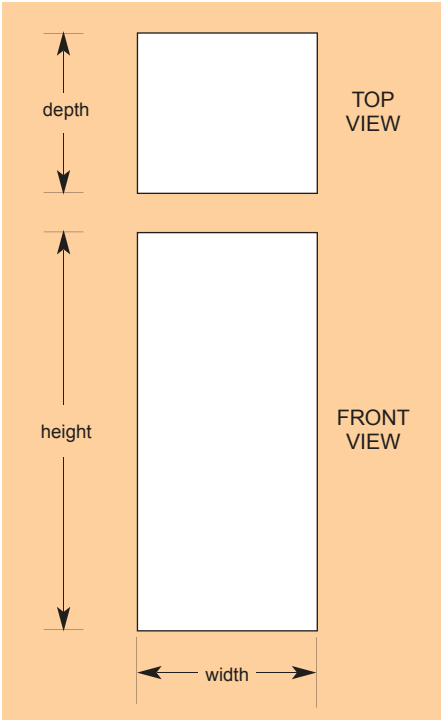
AC Phase Codes
1 - Single Phase
3 - Three Phase

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