



# LaM<sup>A</sup>RCHE®

ISO 9001 CERTIFIED



## 'Constavolt'®

### ENGINE STARTING BATTERY CHARGER

The LaMarche model A40 Battery Charger is renowned throughout the Industry as the Constavolt unit because that's exactly what it does; precise and constant output voltage to charge your Batteries. It has set the standard over the years as the most reliable unit available for Engine Starting applications in the Marine and Standby Service fields where the Batteries are exercised frequently - thus eliminating the need for Battery equalization. Whether your requirement is to charge your Batteries on a small Pleasure Craft or a large Vessel utilizing several Battery banks, the wide range of A40 Constavolt models are offered from 12 to 130 Volts DC to suit your needs.

The Constavolt is a completely automatic, Solid State, constant voltage Battery Charger built to carry continuous and intermittent loads up to 80% of its maximum rated output capacity. It is ideal for applications where it is advantageous to have the Charger permanently connected across the Battery, keeping it fully charged at all times and to simultaneously carry continuous and/or intermittent current loads such as on board peripheral equipment.

The Constavolt is designed and built to charge Flooded Lead-Acid or Nickel-Cadmium Batteries containing a specific number of cells. However, it is not suitable to charge sealed

# A40

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#### Standard Features

- Magnetic Amplifier Circuitry provides increased longevity and worry-free operation
- Automatic AC Input Voltage Compensation +/- 10%
- Automatic Surge Suppression
- Dual AC input and DC output fusing protects Battery and Charger
- Automatic DC Voltage Regulation
- DC Current Limiting Circuitry (typically less than 140%) Eliminates the need for Cranking Disconnect Relay
- 5% Accuracy Analog DC Ammeter
- Charger design prevents Battery from discharging if AC Line Fails
- Complete Isolation of the AC Line from the DC Charging Circuit
- 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
- AC Input Voltages of 120, 208 or 240, single phase
- NEMA 1 Enclosure ANSI 61 Gray Baked Enamel Paint
- All A40 models are U.L. 1564 Listed.  
Units are CSA C22.2 No. 107 Listed (except where noted)
- Industry's unparalleled 10-year Warranty

#### Optional Features

- Built-in Battery Charge Divider to charge 2 or 3 Battery Banks (consult factory - may increase case size)
- External Battery Charge Divider to charge 2 or 3 Battery Banks

Valve-Regulated Batteries since these require output filtering such as a Power Supply (see our model A12B for this type of application).

The operation of the Constavolt is simple - there are no controls to be set for different applications since the amount of loading and the state of charge of the Battery determines the Charger's output current. Once the Battery becomes fully charged, the output current will automatically decrease to a very low Trickle Charge to prevent overcharging of the Batteries.

The reliability and performance of the Constavolt are legendary. The Controlled Magnetic Amplifier circuitry provides years of trouble-free operation - our confidence in the reliability of our A40 Constavolt is reflected by our unparalleled and Industry leading 10-year Warranty. The A40 Constavolt assures the quality, reliability and performance you have come to expect from LaMarche.

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Made in USA

### A40 Models

Model Number	DC Output			AC Input Current Draw* @ 100% Load (Amps)			Case No.	Shipping Weight (Approximate)		
	Amps	Volts	Fuse Size	A 120	D 208	B 240		lbs	kgs	
12 VDC 6L, 9 or 10NC	A40-10-12V	10	12V	20A	2.5	1.4	1.3	05	23	10.4
	A40-20-12V	20	12V	35A	5	2.9	2.5	2	55	24.9
	A40-30-12V	30	12V	50A	7.5	4.3	3.8	2	65	29.5
	A40-40-12V	40	12V	70A	10	5.8	5	2	74	33.6
	A40-60-12V	60	12V	100A	15	8.7	7.5	7	112	50.8
	A40-75-12V <sup>(1)</sup>	75	12V	130A	19	11	9.4	3	120	54.4
A40-100-12V <sup>(1)</sup>	100	12V	150A	26	15	13	6	170	77.1	
24 VDC 12L, 19 or 20NC	A40-10-24V	10	24V	20A	5	2.9	2.5	2	61	27.7
	A40-20-24V	20	24V	35A	10	5.8	5	2	72	32.7
	A40-30-24V	30	24V	50A	15	8.7	7.5	7	107	48.5
	A40-40-24V	40	24V	70A	21	12	10	7	110	49.9
	A40-60-24V	60	24V	100A	31	18	15	3	160	72.6
	A40-75-24V <sup>(1)</sup>	75	24V	130A	38	22	19	3	200	90.7
A40-100-24V <sup>(1)</sup>	100	24V	150A	51	29	26	8A	300	136.1	
32 VDC 16L	A40-10-32V	10	32V	20A	6.7	3.9	3.3	2	66	29.9
	A40-20-32V	20	32V	35A	14	7.7	6.7	2	73	33.1
	A40-30-32V	30	32V	50A	21	12	10	7	108	49.0
	A40-40-32V	40	32V	70A	27	16	14	3	145	65.8
	A40-60-32V	60	32V	100A	41	24	21	3	195	88.5
	A40-75-32V <sup>(1)</sup>	75	32V	130A	51	29	26	8A	300	136.1
130 VDC 60L/92NC	A40-10-130V	10	130V	20A	26	15	13	3	155	70.3
	A40-20-130V	20	130V	35A	51	29	26	6	175	79.4
	A40-30-130V	30	130V	50A	76	44	38	8A	330	149.7

All above models designed for optimal performance at 60Hz. They will operate at 50Hz with reduced performance. Consult factory for units designed specifically at 50Hz. Must specify one only battery type and number of cells. Please consult factory for other available cell ranges if desired range not shown.  
 \*AC Current Draws based @ 100% load and standard battery cells of 6L(12V), 12L(24V), 16L(32V), 60L(130V). Maximum Current Draw is typically 140% of ratings shown.  
<sup>(1)</sup> Denotes units not CSA Listed.

### Ordering Information

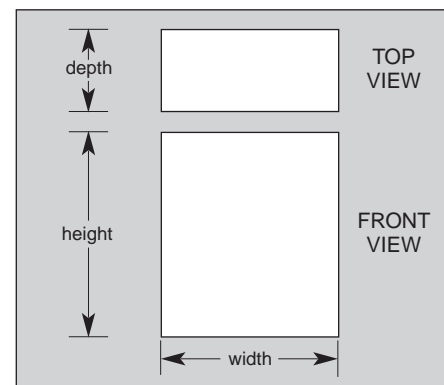
When ordering, please specify:

- LaMarche Model Number A40
- 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  
 Built-in 2 or 3 Battery Charge Divider (may increase case size)  
 External 2 or 3 Battery Charge Divider

### Case Specifications

Case No.	Overall Dimensions						Cable Entry (when facing unit)		Mounting
	Width		Depth		Height		AC input	DC output	
	in	mm	in	mm	in	mm			
05	8.000	203	7.000	178	13.000	330	Bottom Right	Bottom Right	Wall
1	10.375	264	7.875	200	16.250	413	Right	Left	Wall
2	12.812	326	10.000	254	17.125	435	Right	Left	Wall
3	15.375	391	11.000	280	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	825	Right	Left	Floor

Case sizes may differ depending on optional accessories. Please consult factory when dimensions are critical. Dimensions shown above are overall footprint. Detailed dimensions drawings are available for mounting purposes.



### Optional External Charge Dividers

Model Number	Number of Batteries	DC Range		Case No.	Shipping Weight (Approximate)	
		Amps	Volts		lbs	kgs
CD40-20/30-12/32-N2	2	10-30	12-32	05	10	4.5
CD40-20/30-12/32-N3	3	10-30	12-32	05	11	5.0
CD40-40/60-12/32-N2	2	40-60	12-32	1	14	6.4
CD40-40/60-12/32-N3	3	40-60	12-32	1	15	6.8
CD40-75/100-12/32-N2	2	75-100	12-32	2	23	10.4
CD40-75/100-12/32-N3	3	75-100	12-32	2	25	11.3

All above models are configured for Negative Common. For Positive Common, part number changes as follow: CD40-20/30-12/32-P2. Consult Factory for availability of Charge Dividers built in the A40 Charger case (size may increase).

Specifications subject to change without notice

### Model Number Nomenclature

