



Engine Starting Battery Charger

The La Marche model A40/A40F battery chargers are renowned throughout the industry as the Constavolt because of their reliability and their precise and constant output voltage to charge your batteries. 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 charged at all times and to simultaneously carry continuous and/or intermittent current loads such as onboard peripheral equipment.

“Constavolt”

Standard Features

- Magnetic Amplifier Circuitry
- Automatic DC Voltage Regulation
- Automatic AC Input Voltage Compensation +/- 10%
- Automatic Surge Suppression
- AC input and DC output fusing protects battery and charger
- Analog DC Ammeter
- DC Current Limiting Circuitry
- Charger design prevents battery from discharging if AC line fails
- AC to DC Isolation
- Model A40F is filtered for Valve-Regulated batteries
- A40/A40F models are UL 1564 Listed & C-UL Listed
- 10-Year Limited Warranty

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

A40 / A40F Models

	Model Number All Models Available As A40F	DC Output			AC Input Current Draw* at 100% Load (Amps)			A40 Case No.	A40 Shipping Weight (Approximate)		A40F Case No.	A40F Shipping Weight (Approximate)	
		Amps	Volts	Fuse Size	A 120	D 208	B 240		lbs	kgs		lbs	kgs
12VDC 6L, 9 or 10NC	A40-10-12V	10	12V	20A	2.5	1.4	1.3	05	30	13.6	2	46	20.9
	A40-20-12V	20	12V	35A	5	2.9	2.5	2	54	24.5	7	66	30.0
	A40-30-12V	30	12V	50A	7.5	4.3	3.8	2	65	29.5	3	90	40.9
	A40-40-12V	40	12V	70A	10	5.8	5	2	74	33.6	4	133	60.5
	A40-60-12V	60	12V	100A	15	8.7	7.5	7	98	44.5	6	168	76.4
	A40-75-12V	75	12V	130A	19	11	9.4	3	123	55.9	6	187	85.0
	A40-100-12V	100	12V	150A	26	15	13	6	165	75.0	8A	260	118.2
24VDC 12L, 19 or 20NC	A40-10-24V	10	24V	20A	5	2.9	2.5	2	61	27.7	7	73	33.2
	A40-20-24V	20	24V	35A	10	5.8	5	2	72	32.7	7	84	38.2
	A40-30-24V	30	24V	50A	15	8.7	7.5	7	98	44.5	3	117	53.2
	A40-40-24V	40	24V	70A	21	12	10	7	105	47.7	3	136	61.8
	A40-60-24V	60	24V	100A	31	18	15	3	150	68.2	4	213	96.8
	A40-75-24V	75	24V	130A	38	22	19	3	210	95.5	6	274	124.5
	A40-100-24V	100	24V	150A	51	29	26	8A	300	136.4	8A	374	170.0
32VDC 16L	A40-10-32V	10	32V	20A	6.7	3.9	3.3	2	61	27.7	7	73	33.2
	A40-20-32V	20	32V	35A	14	7.7	6.7	2	72	32.7	3	90	40.9
	A40-30-32V	30	32V	50A	21	12	10	7	98	44.5	3	117	53.2
	A40-40-32V	40	32V	70A	27	16	14	3	140	63.6	4	187	85.0
	A40-60-32V	60	32V	100A	41	24	21	3	170	77.3	6	234	106.4
	A40-75-32V	75	32V	130A	51	29	26	8A	250	113.6	8A	291	132.3
130 VDC 60L / 92NC	A40-10-130V	10	130V	20A	26	15	13	3	155	70.5	4	183	83.2
	A40-20-130V	20	130V	35A	51	29	26	6	175	79.5	6	181	82.3
	A40-30-130V	30	130V	50A	76	44	38	8A	330	150.0	8A	343	155.9

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. 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.

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

Note: All above models are configured for Negative Common. For Positive Common, part number changes as follow: CD40-20/30-12/32-P2.

Optional Internal Charge Dividers

- 100 To charge 2 batteries with a negative common
- 10U To charge 2 batteries with a positive common
- 10I To charge 3 batteries with a negative common
- 10V To charge 3 batteries with a positive common

Note: Consult factory may increase case size.

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	279	23.750	603	RIGHT	LEFT	WALL/FLOOR
4	19.000	483	15.000	381	25.875	657	RIGHT/TOP/BOTTOM	LEFT/TOP/BOTTOM	WALL/FLOOR/RACK
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

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

Model Number Nomenclature

A40(F) - 10 - 12V - () () 1 - () - ()			
Model Number	Factory Assigned Accessory Code		
DC Amps	Battery Cell Range		
DC Volts	AC Phase Code		
	AC Voltage Code		
	Special Frequency When Required*		
Model Number	AC Voltage Codes	Special Frequency Code	Battery Cell Type Code
A40 - Unfiltered	A - 120	5 - 50Hz	12V - 6L, 9N, 10N
A40F - Filtered	D - 208	* 60Hz standard unless special code is entered	24V - 12L, 19N, 20N
AC Phase Codes	B - 240		32V - 16L
1 - Single Phase			130V - 60L, 92N

Battery Charger Sizing Guidelines

- Required Battery Backup Time (Hours)
- DC Output Voltage
- Ampere Hour Capacity of Battery
- Allowable Recharge Time From Full Discharge (Hours), Where Applicable
- Continuous and Intermittent DC Loads (Amps) and Duration (Time)

Ordering Information When ordering, please specify:

- La Marche Model Number A40 or A40F
- DC Amps
- DC Volts
- Special Frequency, When Required
- AC Voltage Code
- AC Phase Code
- Battery Cell Type Code
- Optional Accessories (Option Code)