

# **USC SERIES**

#### HIGH FREQUENCY ULTRA SERIES CHARGER





The La Marche Ultra Series Charger is a High Frequency Switch Mode charger specifically developed for Batteries and Super Capacitors used in Engine Starting applications. This programmable charger is designed to charge various types of chemistries, such as Lead Acid, Nickel Cadmium Super Capacitors and LIFEP04 Technology.

The USC series incorporates Power Factor Correction (PFC) Circuitry with a wide input voltage range. The user friendly interface allows the user to navigate easily through the configuration menu. The two line LCD displays Output DC Voltage & Current and Alarm Status. The front of the unit provides four status LED indicators for the overall status of the system.

The case is designed using primed 16 Ga galvanized steel with powder coat finish for maximum strength against corrosion, while its weight gives the customer easy handling and installation, without the necessity of a second person. Case is equipped with knockouts, for optional cable entry, either from the sides or the bottom. Removable cover, located on the front, gives access to the customer connections, temperature probe, as well as, the alarm terminals.

### **Standard Features**

Microprocessor Controlled High Frequency Charging Technology

Single Phase AC Input (102-264 VAC, 45-65Hz)

Complete Isolation from AC to DC

Float and Equalize Battery Charging Mode

Super Capacitor Module Charging Mode

Filtered Output for VRLA (Gel-Cell & AGM) Batteries

Input & Output Protection Fuses

Adjustable Current Limit from 50% to 105%

LCD Digital Voltmeter & Ammeter

Conformal Coated Circuit Boards

Temperature Compensation (Internal) with Disable Option

External Temperature Probe 24 feet

Alarms with LED Indicators and Form "C" Dry Type Relay Contacts

IP20/NEMA Type 1

Meets NFPA 110 and ANSI C62.41A

UL and CUL 1236

2-Year Warranty

## **Optional Accessories**

21S Modbus Communication

080 Drip Shield (IP22/NEMA Type 2)

11Y External Temperature Probe 100 feet





#### Model Number Chart

Model Number	AC Input (100% load)		DC Output		Overall Dimensions	Case No.	Net Weight*	
	Volts (Nominal)	Amps	Volts (Nominal)	Amps	WxDxH	Case 140.	lbs	kgs
USC-10-12V-U1	120 240	1.5 0.8	12	10	7.9 x 4.1 x 11.0 in 201 x 105 x 279.4 mm	104	5	2.9
USC-20-12V-U1	120 240	3.1 1.6	12	20	7.9 x 4.1 x 11.0 in 201 x 105 x 279.4 mm	104	5	2.9
USC-30-12V-U1**	120 240	4.4 2.3	12	30	9.6 x 4.6 x 15.9 in 244 x 117 x 404 mm	107	11.3	5.1
USC-10-24V-U1	120 240	2.6 1.4	24	10	7.9 x 4.1 x 11.0 in 201 x 105 x 279.4 mm	104	5	2.9
USC-20-24V-U1**	120 240	5.2 2.7	24	20	9.6 x 4.6 x 15.9 in 244 x 117 x 404 mm	107	11.3	5.1
USC-30-24V-U1**	120 240	7.8 3.8	24	30	9.6 x 4.6 x 15.9 in 244 x 117 x 404 mm	107	11.3	5.1
USC-20-48V-U1**	120 240	10.6 5.3	48	20	9.6 x 9.9 x 15.9 in 244 x 152 x 404 mm	205	18	8.1
USC-6-130V-U1**	120 240	8.6 4.3	130	6	9.6 x 4.6 x 15.9 in 244 x 117 x 404 mm	107	11.3	5.1
USC-12-130V-U1**	120 240	17.2 8.6	130	12	9.6 x 9.9 x 15.9 in 244 x 152 x 404 mm	205	18	8.1

<sup>\*</sup> Weight does not include shipping packaging

### **Charger Specifications**

• AC Input

Single Phase Input

AC Input Range (102 - 264 VAC, 45 - 65 Hz)

DC Input Range (105 - 140 Vdc)

• DC Output

10A/12V, 20A/12V, 30A/12V, 10A/24V, 20A/24V, 30A/24V 20A/48V, 6A/130V, 12A/130V

• Power Factor

0.99

• Load Regulation

<±0.5%

Output Filtering (with or without connected battery)
 <1% of Output Voltage</li>

• Input Protection

Fuse with Surge and Transient Protection

AC Over Voltage Protection

• Output Current Limit

Factory set at 100%, adjustable from 50-105%

• Output Protection

Fuse with Surge Protection

Blocking Diode

• Thermal Protection

• Short Circuit Protection

• LCD Digital Display

DC Output Voltmeter and Ammeter (1%)

• LED Indicators

AC ON Equalize Float Fault

• Alarm Contacts

Charger Fail High DC Voltage AC Fail Low DC Voltage

Summary

#### • Environmental

Operating: -40° to 65°C (-40° to 149°F) (Derated up to 70°C)

• LIFEP04

Adjustable

• SUPERCAP

Adjustable

Charger Profile

Charger Profile

Storage: -40° to 85°C (-40° to 185°F)

Relative Humidity: 0 to 95% non condensing

Battery Charging Voltage Range

Float\*:

Lead Acid 2.12-2.30 Volt/Cell

NiCad 1.39-1.45 Volt/Cell

Equalize\*:

Lead Acid 2.25-2.40 Volt/Cell

NiCad 1.45-1.60 Volt/Cell

\* Doesn't apply to Supercapacitor or LIFEP04

• Mounting

Wall Mount

Cooling

Fan Assisted

Cable Entry
Left / Right / Bottom

Enclosure

NEMA 1

Standards

UL / CUL 1236

ANSI C62.41A

EN 60335-1 (Electrical Safety)

IEC 60335-2-29 (Electrical Safety)

IEC 60068-2-6 (Sinusoidal Vibration)

EN 55011 (Radiated EMI)

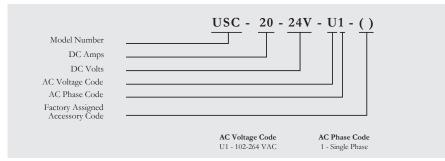
IEC 1000-4-2 (Electrostatic Discharge)

IEC 1000-4-4 (Electrical Fast Transient)

# Front Display Panel



# Model Number Nomenclature





<sup>\*\*</sup> UL pending