



Kinetek Controls®

A Kinetek Company®

Mark I High Frequency Battery Charger

KCCA0010 — 36V DC, 21A maximum

KCCA0012 — 48V DC, 16.5A maximum

KCCA0011 — 24V DC, 26A maximum

KCCA0014 — 12V DC, 26A maximum

Kinetek Mark I High Frequency Battery Chargers operate from 105 to 135V AC, 60 Hz power. Chargers are available in the four models/capacities listed above. Sophisticated control circuitry ensures an optimum charging sequence, varying the charging rate to provide a finished charge without stressing battery elements. All Mark I chargers are fully automatic and provide a three-stage charging sequence:

- Main Charge - Maximum current to the battery to a preset voltage level.
- Finish Charge - Regulated voltage level to the battery to a preset current level.
- Equalization Charge - Regulated finish current level until reaching the preset equalizing voltage level at which point the charger enters Adaptive Equalization Mode, regulating output at equalization voltage for a period of time directly proportional to the depth of discharge until charge cycle termination.

This microprocessor controlled charging sequence matches the charging algorithm preferred by battery manufacturers. The high frequency Kinetek design allows the physical size and weight of the charger to be minimized along with heat generation — all models cool through natural convection and require no noisy, failure-prone, cooling fans.

Mark I chargers are compatible with AGM, GEL and Flooded electrolyte battery systems.



Mark I High Frequency Battery Chargers provide battery manufacturer preferred, three-stage charging cycles, maximizing battery life and delivering a properly finished charge everytime.

Features

- Automatic three-stage charging sequence
- Automatic current and voltage limits
- Temperature compensation
- Low ripple voltage (0.1V RMS at full load)
- Durable, continuous, maximum output use
- Programmed charge soft start
- Automatic restart if charging battery is swapped out
- Terminates charge if charge rate falls below a preset value
- Reverse polarity protection
- Standard or customer-supplied charging terminations
- Simple, high visibility LED diagnostics
- Compact size; light weight; quiet operation
- Natural convection cooling
- Optimized charging sequence provides finished charge and maximizes battery life
- Easily accessible, front panel mounted, slow blow fuse, circuit protection
- Drip tight, steel enclosure
- Adaptive equalization mode
- Battery short circuit detection
- Automatic solid state battery disconnect

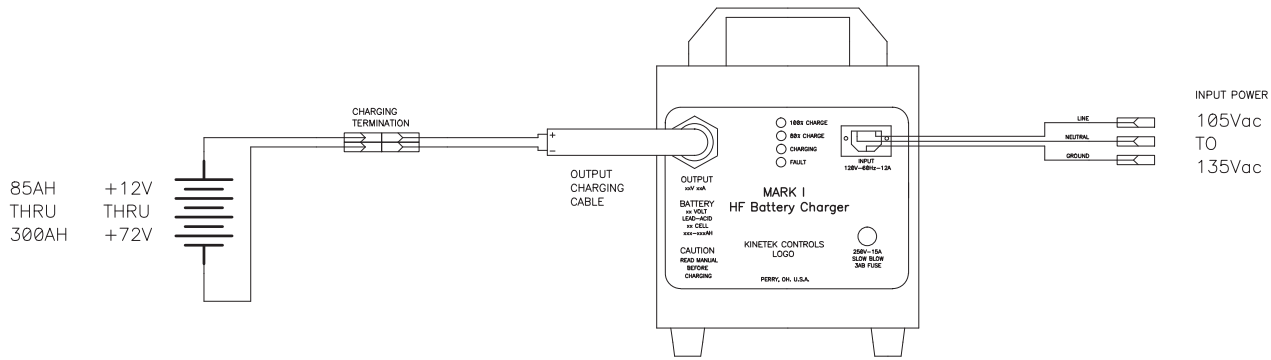
Advantages of High Frequency charger technology and comparison to other technologies

Performance Characteristic	Ferroresonant	SCR (Silicone Controlled Rectifiers)	Switchmode (High Frequency)	Value
Size & Weight	Large and heavy	Large and heavy	Small and light	Ease of use
Noise	Very audible	Audible	Barely audible	Ease of use
Pre-Charge Diagnostics	No	Some	Yes	Insures proper use of charger
Battery Fault Detection	Some	Some	Yes	Insures proper use of charger
3 Step Charging Algorithm	No	Some	Yes	More complete charging cycle, Battery Life (Charging Cycles)
Ability to support customer defined charge algorithms	No	Some	Yes	Customer design flexibility
Consistent and managed current flow & charging voltage	No	Some	Yes	Increase battery life - Battery plates see reduced stress resulting in less heating during charging cycle

Kinetek Controls

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Mark I High Frequency Battery Charger



Specifications

MARK I, STANDALONE CHARGER GENERAL SPECIFICATIONS	
Input	
Voltage Range	105 to 135V AC 60Hz
Current	12A Maximum
Output	
Efficiency	90%
Ripple Voltage	.1V at Full Load
Voltage Accuracy	0.5%
Voltage Stability	± .2V
Current Accuracy	5%
Environmental Conditions	
Ambient Temperature	-20°C to 50°C
Storage Temperature	-40°C to 60°C
Relative Humidity	15% to 95%
Enclosure Type	Drip Tight
Safety Features	
Soft Start to Charging Cycle	Short Circuit Detection
Reverse Polarity Detection and Safeguard	Over Temperature Compensation
Physical Specifications	
Dimensions	7.4" W x 9.4" H x 8" D
Weight	12 lbs.
Housing	Steel
Ventilation	Rear Exposed Heatsink, Bottom Vents, Side Louvers
Power Cord Input	Standard IEC 320 – Front Panel
Output Cable	Reinforced, 2 Conductor – Front Panel
LED Location	Front Panel
Line Fuse	3AG, Slow Blow, 15A Fuse – Front Panel



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