

# UNIVERSAL BATTERY CHARGERS



**THE MOST RELIABLE MANUAL CONTROLLED CHARGER FOR BATTERY FORMATION, CONDITIONING, TESTING AND DESULFATION**

Technology:	<b>IGBT-HF Hybrid Converter</b>
Current ratings:	<b>From 0 to 600 Amps</b>
Voltages:	<b>AC input from 208 to 600 VAC DC output from 12 to 400 VDC</b>



## Product Description

The MVC is a universal battery charger, manually controlled .

It can operate with batteries of any type, from individual cells to complete packs, and it can be programmed to support applications of any type (Formation, Conditioning, Recovery, Desulfation and Regeneration).

It is based on a new power conversion technology, featuring an unprecedented combination of very high efficiency, unity power factor (PFC), universal capabilities and precise charge control.

The MVC features a very complete set of manual settings, and the user can control output current, following a very simple procedure.

More over, the MVC is suitable to charge battery type that require perfectly constant current and virtually zero ripple.

The MVC is equipped with ammeter and voltmeter panel, digital timer that can be set and voltage and current knobs that allowed a personal control of the output current.

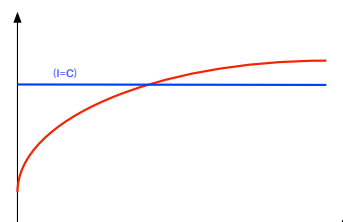
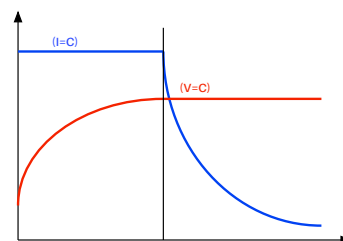
Even on a very bad battery sulfations, this charger can recharge battery that have virtually no DC voltage to their standard value with selecting right values and recharge time.

## Typical Applications

- ◆ Battery Formation
- ◆ Battery Service Shops
- ◆ Battery Testing Laboratories
- ◆ Battery Desulfation

## Main Features

- **Rugged Construction** for maximum reliability in heavy duty industrial applications
- **Wide Input Range available:** Standard models cover European and North American AC Input values
- **Wide Power Range available:** Standard models from 1 to 36 kW, Output voltages up to 600 Vdc, Output current up to 600 Amp
- **Charging curve IUa**
- **Intelligent electronic protection system** (includes soft-start, battery polarity reversal, output short circuit and over-temperature)
- **Digital timer programmable up to 99h59m**, with one minute steps
- **Wide selection of analog and digital instruments** included in front panel: voltmeters, ammeters, timers, potentiometers and status LEDs.
- Charging curves available following user adjustment:



## Product Specifications

AC INPUTS	
Standard Voltages	220-240, 480 or 600 Vac, Three Phase $\pm$ 10%
	Frequency 50/60 Hz $\pm$ 5%
Efficiency at full load	> 90%
Power Factor	> 0.92
DC OUTPUT	
Standard Battery Voltages	From 2 cells to maximum output DC voltage nominal
Current Output Ratings	100, 150, 200 up to 400 Amps
PROTECTION	
Reverse battery polarity	If the battery polarity is reversed, the charger remains in stand-by mode and the output DC fuse does not break.
Output short-circuit	The MVC can work continuously at constant current with the output in short circuit, if a short circuit occurs during operation, the peak currents is limited to 125% of the maximum rated current value. Then, the MVC will recover the control of the current to the original setup value. protection against output short circuit or overload.
Overtemperature	Controlled by a thermal sensor in the unit
Power On Self Test	Automatic safe 10 seconds self test when powered, if fault, unit remains in standby mode.
Battery connect/disconnect	No power at output until battery connected, safe connection. While operating, current have to be limited at none before disconnecting.
MECHANICAL	
External dimensions	Standard cabinet A: 500 x 440 x 900 H (mm), 19.68 x 17.33 x 35.45 H(in).
	Large cabinet B: 620 x 550 x 1050 H (mm), 24.40 x 21.65 x 41.34 H (in).
Enclosure type	Steel 2mm with hinged door.
Cooling	Forced ventilation with active fan control

CONTROL AND METERING	
Output metering	Standard: Analog voltmeter and ammeter
	Optional: Digital voltmeter and ammeter
Output control configuration	A) Fixed output voltage and current limit (both adjustable by internal potentiometers) B) Adjustable output voltage and current limit by external potentiometers C) Up to 12 output voltages, selectable by external knob and adjustable current limit with external potentiometer (Standard MVC version) D) Interface to remote control output current and voltage (0-10V signal)
Timers	A) No timer B) Digital timer 0-99 hours (230 Vac Input)
Front Panel LEDs	Standby/Auto-test (yellow) In Service (green) Thermal protection (red) Reverse polarity protection (red) Digital meter option: Low output voltage, High output voltage, Low output current and high output current
Available options	Audible alarms Remote voltage sensing terminals Remote shutdown terminals Distribution panel Instruments for AC input metering Ground fault alarms
STANDARD MODELS (NORMALLY STOCK)	
IHF-MVC-64803-48/100	480/600 Vac, 3 phases input / Max. Output: 48 Vdc, 100 Amperes
IHF-MVC-64803-80/100	480/600 Vac, 3 phases input / Max. Output: 80 Vdc, 100 Amperes
OPTIONAL MODELS (CUSTOM ORDERS)	
IHF-MVC-64803-48/150	480/600 Vac, 3 phases input / Max. Output: 48 Vdc, 150 Amperes
IHF-MVC-42403-48/100	240/480 Vac, 3 phases input / Max. Output: 48 Vdc, 100 Amperes
IHF-MVC-42403-48/150	240/480 Vac, 3 phases input / Max. Output: 48 Vdc, 150 Amperes
IHF-MVC-42403-80/100	240/480 Vac, 3 phases input / Max. Output: 80 Vdc, 100 Amperes