Amperis battery regenerator

- Quick regenerations
- Expanded lifespan of batteries
- The Most Energy Efficient technology available.
- Universal charger for all types of batteries (multivoltage, multi-layer and multi-chemical)

amperis

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The objective of the equipment is to increase the useful life of the battery avoiding the loss of capacity by eliminating the sulfation with success
The Amperis Battery Regenerator combines the efficiency of the universal and programmable MMF charger, with the reliabity of the Amperis battery discharger. It works with batteries of any type and supports applications of any type (formation, conditioning, recovery, desulphation and regeneration). It has a very complete set of charging curves. In addition, the user can program new curves in a simple way.

Applications:

- Eliminate battery sulphation
- Battery formation and testing.
- Conditioning and analysis of batteries.
- Starter batteries, stationary batteries, traction batteries, Ni-Cad batteries

Optional equipment:

- Submersible probe for battery temperature.
- Enclosure type IP54 or NEMA 3R.
- Extended data-logger with miniUSB port or Bluetooth.

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Technical specifications of the MMF charger:

AC INPUT	
TYPE	MMF Universal Battery Charger
STANDARD VOLTAGES	Single-phase 220-230-240 VAC ± 10% Three-phase 220-240, 400, 440, 480, 600 VAC ± 10% Frequency 50/60 Hz ± 5 Hz
EFFICIENCY	>90%
POWER FACTOR	>90%
DC OUTPUT	
STANDARD VOLTAGES	From single battery cell to 600 VDC.
CURRENT RATINGS	From 50A to 500A
CHARGING CURVE	Completely configurable by the user.
PROTECTION	
WRONG BATTERY AND REVERSE POLARITY	The charger remains in stand-by mode and gives an error message.
ELECTRONIC OVERLOAD PROTECTION	Complete protection in case of output short circuit or overload.
ANTI-ARCING	WITHOUT AUXILIARY WIRES: When the battery is connected, no arcing is generated at the connectors. If the battery is disconnected while it's being charged, arcing is possible, (it's necessary to turn off the charger before to disconnect the battery). WITH AUXILIARY WIRES (RECOMMENDED): Full Anti-arcing protection in case of battery disconnection, even while the charge is in progress.
POWER-ON SELF-TEST	Self-test at each power-up (<10s). In the event of an error, an error message is displayed.
BLACK-OUT FOR BATTERY DISCONNECTION	Smart management of AC input blackouts, resetting to the exact point by completing the charging cycle. Data saved in the history log.
AUTOMATIC SHUTDOWN	The charger is switched off (<3s) in case of disconnection of the battery during the charging process.
ON BATTERY	An independent safety timer turns the charger off in case of malfunction of the control panel.
MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS	
DIMENSIONS (W x H x D mm)	CABINET A: 500 x 900 x 440 (mm) CABINET B: 620x 1050 x 550 (mm)
ENCLOSURE TYPE	Steel enclosure.
COOLING	FORCED VENTILATION with active fan control.
AUDIBLE NOISE	< 65 dBA at 1 meter.
ENCLOSURE PROTECTION	IP21 (Standard) IP54 (Optional)
AMBIENT TEMPERATURE	Operation: -10/+50 ºC Storage: -10/+70 ºC
ALTITUDE	< 2000 m (According to EN62040-3)
USER INTERFACE AND CONNECTIVITY	
USER INTERFACE	LCD Display + LEDs, keyboard and audible alarm.
CONNECTIVITY	AInternal storage of 200 cycles (expandable to 600 with miniUSB, optional) BLUETOOTH Wireless extension.
STANDARDS	
QUALITY	ISO 9001:2015
MARKING	CE
EMC	IEC EN 61000-6-2, IEC EN 61000-6-4

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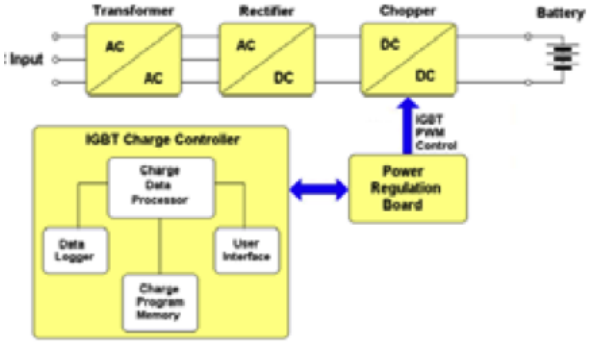
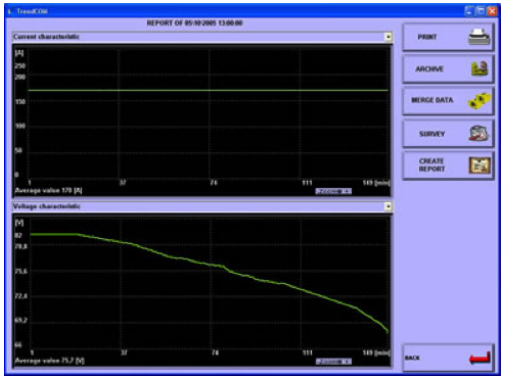
SAFETY	IEC EN 50178, IEC EN 62040-1
TEST RUN	IEC EN 62040-3
NORTH AMERICAN STANDARDS	UL 1564 “Industrial Battery Chargers” CSA 22.2 107.2-01 “Battery Chargers” cCSAus Listed

NOTE: Reported Efficiency and Power Factor values are AVERAGE values, measured over the entire charging cycle. Peak Efficiency and Power Factor are higher.





Screenshot of the battery discharger software.

Technical specifications of the discharger:	
POWER SUPPLY	
TYPE	Automatic battery discharger
NOMINAL TENSION RANGE	85-135 ó 180-250VAC single-phase
MAXIMUM POWER	250W, 50/60 Hz
MECHANICAL CHARACTERISTICS	
DIMENSIONS (A x L x P mm)	325x560x550
ENCLOSURE TYPE	2 mm steel enclosure. With 4 wheels for easy transportation RAL 7032
REFRIGERATION	Forced ventilation.
CONTROL AND MEASURE	
USER INTERFACE	Digital display with: battery voltage (V), battery current (A), discharged capacity (Ah), programmed test stop voltaje and programmed discharge time.
CONTROLS	Three buttons (SET, +, -) for programming and control. Two potentiometers for current regulation.
MAXIMUM DISCHARGE TIME	48h
PC INTERFACE	RS-232, USB (upon request), PC TrendCom software for data capture, analysis and printing.

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The following table shows all available models of the MMF battery charger:

MODEL	VOLTAGE	CURRENT
A-00	0-48V	0-50A
A-50	2-48V	0-50A
A-100	2-48V	0-1OOA
A-150	2-48V	0-150A
A-200	2-48V	0-200A
A-300	2-48V	0-300A
B-00	0-80V	0-50A
B-50	2-80V	0-50A
B-100	2-80V	0-1OOA
B-150	2-80V	0-150A
C-00	0-96V	0-50A
C-50	2-96V	0-50A
C-100	2-96V	0-1OOA
C-150	2-96V	0-150A
C-200	2-96V	0-200A
D-00	0-200V	0-80A
D-80	50-200V	0-80A
E-00	0-400V	0-50A
E-50	50-400V	0-50A

In this table the models of the discharger are reflected according to the voltage of the battery:

MODELOS ESTANDAR	
TENSIÓN DE LA BATERÍA	**CORRIENTE DE DESCARGA MÁXIMA**
12-48V	100A
12-48V	200A
12-96V	200A
24-135V	150A
48-220V	75A

For other configurations, contact the Amperis offices.

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