

Battery regeneration

SERVICE CHARGERS

▶ BAT/47835 - SERVICE CHARGER



- ➔ Adjustable charger and power supply
- ➔ For all types of batteries
- ➔ Microcomputer controlled
- ➔ Desulphates sulphated batteries

Technical specification	BAT/48163
Mains supply:	50–255 V, (50–200 power limited), 45–65 Hz
Current draw:	max 4,5 A
Power factor:	~1 (PFC)
Max. current:	10 A
Max. voltage:	120 V
Max. power:	800 W
Max. ripple out:	30 mV RMS
Efficiency:	> 86%
Frequency:	> 100 kHz
Cooling:	Temperature-controlled fan
Weight:	1,6 kg
Dimension:	258 x 136 x 89 mm
Protection:	IP20, (Electrically II, with or without earth)
Cables:	One set of laboratory cables is included

Service chargers 12V/50A, 36V/30A, 54V/20A and 72V/15A are also available.

Characteristics

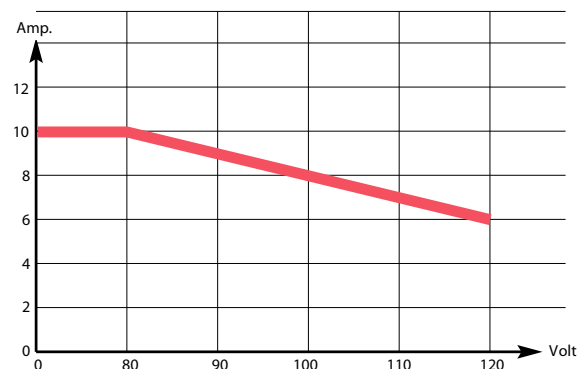
At least 200 V main supply is needed for full power of 800 W.

Areas of use

SMP can be used in a battery workshop to desulphate batteries that has been deeply discharged or not charged for a long time. Thanks to the low weight (1.6 kg) and small dimensions it is also very useful in service workshops and for service technicians who work with batteries, chargers and forklift trucks.

TECHNICAL FEATURES

- Power supply from 0–120 V and 10 A
- Can save batteries that have been discharged for a long time
- Freely adjustable voltage limit
- Freely adjustable current limit
- Can simulate a battery when fault finding on a charger
- Assist to start charger when battery is deeply discharged
- Voltage and current levels to be read from separate clear displays



Battery regeneration

MULTIVOLTAGE BATTERY CHARGER

CONSTANT CURRENT GENERATOR CAN BUS

MULTI VOLTAGE CHARGER

CONSTANT CURRENT GENERATOR

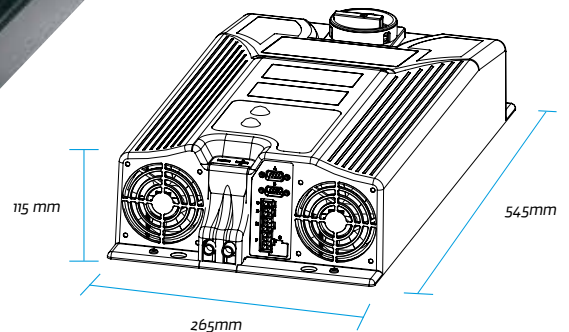
The New Current Generator with CAN BUS is a fully digital device with a double function: constant Current Generator and Battery Charger, with CAN BUS interface. Versatility, efficiency, and on the spot service remain its fundamental points of strength, combined together with the innovative features of CAN BUS chargers: "flash" microprocessor endowing enabling high calculation power and huge storage capacity, regulation of all charging features by a single button, and the possibility to view in historical data concerning previous charge cycles.

AS CURRENT GENERATOR:

Allows recovery of sulphated or total discharged batteries. Using MODE button, a constant current charge can be sustained for a long duration, achieving de-sulphation of batteries.

AS BATTERY CHARGER:

Allows the recharge of batteries from 2 to 96V nominal, with adjustable current from 0 to 50 A, and selectable time from 1 to 100 hours.



TECHNICAL FEATURES

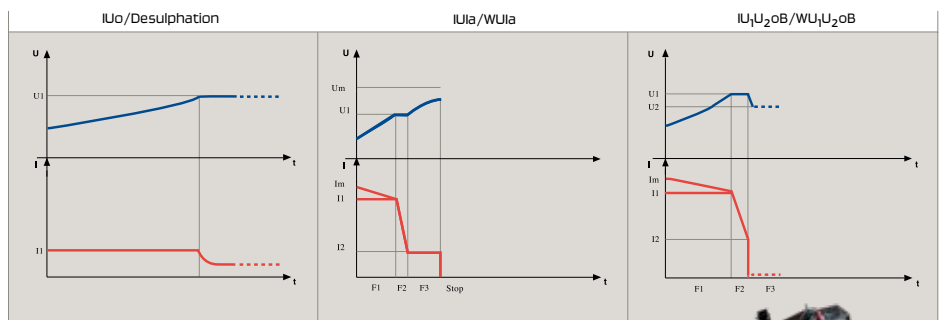
THREE-PHASE CURRENT GENERATOR Mod. NG7 CAN BUS

- Input voltage: 400 VAC \pm 15 % Three phase
- Input frequency: 50 - 60 Hz
- Minimum power absorbed: < 10 W
- Current absorbed from the battery: < 0,5 mA
- Operating temperature: from -20 to + 50°C
- Output short-circuit protection
- Inverse polarity protection (fuse)
- Programmable operating mode: Battery Charger/ Current Generator
- Visualization by display of the parameters: Voltage, Current, charged Ah, Time left to the end of charge (Charger mode) or Time spent (Current Generator mode)
- Charging curve: programmable (Charger mode)
- Dynamic compensation of the voltage drop on the output cable (Charger mode)
- Auxiliary contacts for beginning and end of charge
- Accuracy on output voltage: \pm 0,5%
- Acoustic and visual alarm
- Cooling: forced
- Case: Metal base, cover in self-extinguishable ABS
- Size: 545 x 265 x 115 mm
- Weight: 9 Kg.
- Enclosure class: IP20
- **CE** In conformity with the requirements of the Low Voltage Directive and of the Directive EMC.

BAT/17254

Battery Voltage	VAC	Charging time			Type	I1	IMAX	Code	Mains
		10 h	11 - 12 h	13 - 18 h					
2 V -> 96 V	400	50 - 400	450 - 520	560 - 950	2-96 50	50	60	G9MRCG-D70D0X	1 A -> 15 A

Charging curves specimen



Programming without PC

By pressing the MODE button the user can select between Charger and Current Generator mode. On the digital panel the following parameters can be displayed:

Charging mode:

- Battery type
- Battery voltage
- Curve type
- Battery capacity in Ah

Current generator mode:

- Battery voltage
- Current
- Desulphation/charging time

ACCESSORIES

BAT/42209

A support to place the Charger on the ground.



Battery regeneration

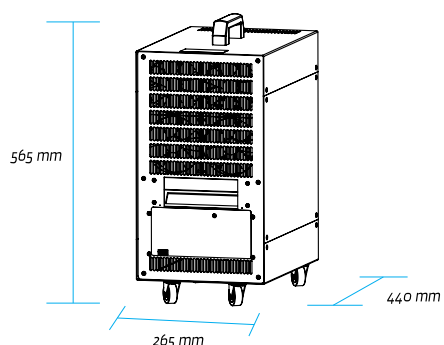
BATTERY DISCHARGERS

AT CONSTANT CURRENT



BATTERY DISCHARGER

The battery discharger, with constant current, is a portable device that can determine the efficiency of a battery, new or used, it can measure the Ah supplied by the battery before reaching the level at which it is considered discharged (typically 1,7V/Cell).



BAT/14934 FSIA11

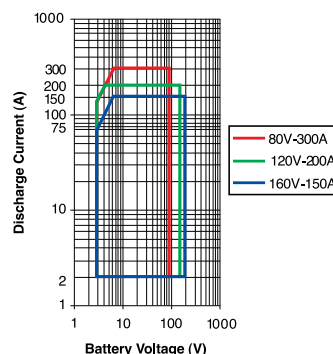
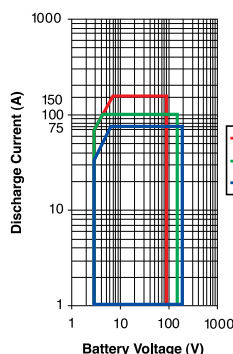
Code	Type	Nominal voltage	Maximum voltage	Adjustable discharging current	Case
FSIA11	80V 150A max	80V	96V	1 - 150A	A
FSPD11	120V 100A max	120V	160V	1 - 100A	A
FSSA11	160V 75A max	160V	192V	1 - 75A	A
FSPD15	220V 50A - 120V 100A max	220-120V	264-160V	1 - 50A - 1 - 100A	A
FSIC11	80V 300A max	80V	96V	2 - 300A	A+B
FSPE15	120V 200A max	120V	160V	2 - 200A	A+B
FSSB15	160V 150A max	160V	192V	2 - 150A	A+B

These models are available with optional isolated port **RS232**, the last two characters of the code are replaced with the characters "15" (ex: **FSIA11** becomes **FSIA15**), except on model 120V 100A becoming **FSPD17**.

TECHNICAL FEATURES

- Input Voltage: 230 VAC
- Input frequency: 50 - 60 Hz
- Absorbed power: 150W
- Tolerance of reading value: $\pm 15\%$
- Thermal protection
- Inverse polarity protection
- Over voltage protection
- Serial port RS232 (not isolated)
- Size: 565 x 265 x 440 mm
- Weight: 26 kg

DISCHARGING FEATURES



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BATTERY REGENERATORS

THE MOST PROFESSIONAL
PIECE OF BATTERY
MAINTENANCE EQUIPMENT
FOR YOUR WORKSHOP!



80% of the batteries breaking down and losing capacity are sulphated, but can be restored with the correct equipment. Want to extend the lifespan of your batteries? The electrical high-frequency pulsation process of our battery regenerators will restore them quickly and easily. You get the ability to reuse old and sulphated batteries in no time. It's also ideal to use for annual maintenance. From starter to stationary and even Ni-Cad batteries: our versatile regenerator is ready to patch them up.

WHAT IS SULPHATION?

When using batteries small sulphate crystals form. But no panic: these are normal and not harmful at all. But during prolonged charge deprivation, the amorphous lead sulphate converts to a crystalline form that deposits on the negative plates. This leads to the development of larger crystals. These reduce the battery's active material that is responsible for high capacity and low resistance.

Sulphation build-up can simply not be avoided. It's a process that accelerates over time. Why? There are several reasons:

- The battery was inactive for too long.
- The battery was discharged too deeply.
- The wrong charger was used.
- A bad cell was left untreated.
- The battery has reached too high/low temperatures.
- The charge cycles weren't observed.

LUCKILY FOR YOU, OUR REGENERATOR IS READY TO HELP:

- Save money
- Offer professional battery maintenance services to your clients
- Applicable to following industries: forklift, MEWP, ground support golfcarts, cleaning, telecom, UPS and solar power
- Combination of battery discharger and charger, 2-in-1
- Detailed test reports
- Extended lifespan of batteries
- Quick regenerations
- Free analysing software
- Wireless connection between regenerator and computer
- Possibility to monitor the regenerator process via smartphone or laptop.
- 18-month warranty
- CE certified, MET-certified (US market)

For more information on the Energic Plus battery regenerator range, visit the Energic Plus website: www.energicplus.com