

REC-MAK SD Series Battery Chargers

127V / 100 Amper DC Supply



MAK 
POWER SYSTEMS
www.mak-powersis.de

- High Frequency PWM Newest Technology
- Thyristor Technology or IGBT Technology 1 Millisecond R. Time
- Micro Chip Controlled, Fast and Precisely, Efficient
- Perfect DC Supply for Industrial Solutions
- 2 Years Warranty & 10 Years Spare Part Availability
- High Efficiency up to 96%
- Thyristor or IGBT Switch Mode Optional
- Wide Input Voltage Range for Usage in Rural Areas
- Advanced Protection and Data Logging for Industrial Usage
- Short Circuit, Overload, Over Voltage & Over Temperature Protection
- Unlimited Number of Paralleled Modules
- Selectable Output Voltage Values "Lower Than Ordered Unit"
- 6 Pulse, 12 Pulse or Switch Mode Technology
- Input 230V / 400V or 108V / 220V & 50Hz / 60Hz Options
- Constant Voltage or Current Option
- Small Footprint, Easy Maintenance & Robust & Anti Rust Cabinet
- Easy Monitoring Voltage, Current, from Screen
- Warning LEDs and Dry Contact as Optional
- Wall Mount or Stand Alone or With Wheel Optional
- Customized Production, Higher Voltage & Current Values



Marine Applications



GSM Stations & Radars



Automation Panels

*12Volt - 24Volt - 48Volt - 72Volt - 108Volt - 127Volt - 220Volt / * 50Amper - 80Amper - 100Amper - 150Amper - 200Amper - 400Amper - 600Amper





REC-MAK SD Series DC Supply

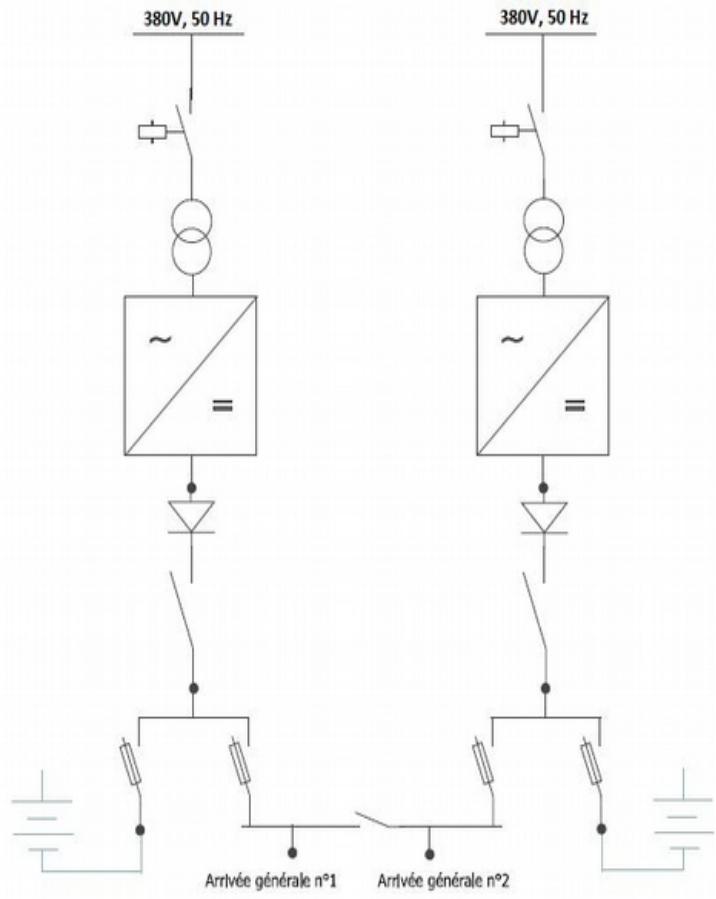
DC Supply

TC-MAK series battery chargers are developed for charging high capacity batteries used in forklifts, GEL batteries, traction batteries electrical earth movers etc... and designed for both individual for your electrical vehicles or industrial use. User friendly control panel and easy operating system is very practical to connect, control. Since the battery charger is electrically smart micro chips controlled charging operation is very safe, easy and extends your lead acid battery life. Day-off charging function enables the battery fully charged when it is not used and increase the life time of the battery. There is no need for any adjustments with Plug and play function and charging starts automatically when the battery is connected.

The charger consists of economic, environment-friendly, and reliable DC power supplies that use the resonant converter technology, operating at high frequencies. They have a high input power factor along with very low output voltage ripples. They have a high input power factor along with very low output voltage ripples. They are used extensively for charging lead-acid and as customized nickel cadmium batteries; at telecom and power distribution sites, or wherever DC power is needed.

Useable Areas:

- Telecom systems,
- Ni-Cd and Lead,
- Acid batteries charger,
- Energy distribution stations,
- Power stations,
- Emergency lighting systems,
- Natural gas distribution control stations
- DC uninterruptible power systems



General Specifications

These systems are produced in variety options.

For example; parallelly working rectifiers, inverters, STS and battery group mounted in same cabin .

SMPS, Hi-rect and rectifier systems which includes the battery group.

Parallelly working rectifiers with battery group.

Parallelly working inverters, rectifiers and static by-pass systems with battery working.

Systems which has Battery group, rectifiers, inverters and distribution fuses.



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INPUT	Voltage	Three Phase 380 Volt 50Hz	
	Voltage Tolerance	± 15%	
	Frequency	50/60 Hz.	
	Frequency Tolerance	±10%	
	Power Factor	1-Phase: 0.98 (THD 4%) / 3-Phase: 0.92 (THD 30%)	
OUTPUT	Voltage	127Vdc, -10% ... +35% (front panel selectable)	
	Current	100A	
	Current Limiting	I nom x 102% front panel selectable between 0 and 102%	
	Ripple	<0.5%	
	Voltage Regulation	±0.5 % at float charge, ±1% at boost charge	
	Efficiency	3- Phase: >92% / 1- Phase: >85%	
	Protections	Input, output (thermal/magnetic) fuses, Advanced short circuit protection, Over voltage protection, Over current protection, Automatic restart	
	BATTERY	Battery Charge Modes (Adjustable Charging voltages)	Automatic charge, boost charge: 2,4 V / Cell Float Charge: 2.25 V / Cell
Boost Charge Time		Increment able by 1 hour up to 24 hours	
LCD Properties		2,16 character wide display, showing: Output voltage & current, Output voltage high/low, Load (%), Log Records up to 200 logs with Real Time Clock Calendar, AC (if available), Fault, Current limiting,	
Displays		Automatic charge, Float charge, Boost charge, Common alarm	
Alarms		Common relay contact output for AC input low, DC output low and over heat	
Operation and control		Via menu selections from buttons on front panel	
Endurable Dielectric Voltage		2000 V Input-Output 2000 V Input-Chassis 500 V Output - Chassis (For PS with output voltage <50 V) 1000 V Output - Chassis (For PS with output voltage >50 V)	
GENERAL FEATURES		Case Dimensions (WxDxH)	Rectifier: 600mm x 600mm x 1800mm / Distribution Panel 600mm x 600mm x 1800mm
		Protection Class	IP20
		Audible Noise 1m.	50dBA
	Cooling	Mandatory cooling (Fan)	
	Weight	Rectifier: 230kg / DistributionPanel: 160kg	
	Operation Temperature	0°C.....40°C	
	Storing Temperature	-20°C... 70°C	
	Relative Humidity	98% (Non-condensing)	
STANDARDS	Standards	VDE,DIN 41773 (Battery charge characteristics) ANSI-NEMA PE 5 TS 2000 EN 62040-1, 2,	

* 1 Phase Input max output power

** 3 Phase Input max output power