MAK POWER SYSTEMS

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BATTERY CHARGING RECTIFIERS

Rectifiers are designed by today's technology for charging batteries and for the DC energy necessity of the equipments which are supplied with the direct current. Common usage areas are telecommunication, energy distribution stations, land and marine transport vehicles, industrial and military foundations and all kinds of battery charging applications. Rectifiers have completely electronic structure and they check the output current and voltage by power part with thryristor. To provide the minimum ripples, the output part is equipped with the filter containing capacitors and shock inductors.

GENERAL SPECIFICATIONS

- Thryristor phase control technology
- Voltage controlled automatic charge
- Usage as a DC power source
- Single phase and three phase wide power range
- High efficiency and reliablity
- Modular structure
- Electronic protections

Customized Product

up to 1,2 kW

up to 10 kW

up to 33 kW

Charger Plus 1kW - 44kW Charger (NiCd, GEL, AGM, Traction Batt.)

MODEL* (See Below Tables)	1 PHASE	3 PHASE
INPUT		
Voltage	220 VAC ± %10	380 VAC ± %10
Frequency	50 – 60 Hz ± %5	
OUTPUT		
Voltage Range (Vdc)	24,48,110	24,48,110,220
Voltage Regulation	± 2%	
Output Currents (A)	10, 12, 15, 20, 30, 50, 100	30, 50, 60, 100, 150, 200, 250, 300,400, 600
Ripple	< 5%	
Efficiency	>80%	
GENERAL		
Control	Microprocessor Controlled	
Protections	Short Circuit, Over Current, Over Temperature, Ouput Voltage Low/High, DC Ground Missing Warning, Overload Warning Contact	
Battery Charge Mode	Automatic Charge Float Charge : 2.25V/Cell (Depends Battery Type)	
Display	128x64 Graphic LCD, 4 key, 6 pcs LED	
Control	ON/OFF Switch at Front Panel	
Isolation	Input-Output: 2000 V, Input-Ground: 500V Output Voltage less than 50 V, Input-Ground: 500V Output Voltage more than 50 V, Input-Ground: 500V	
ENVIRONMENTAL		
Operating Temperature	0 to 40 °C	
Storage Temperature	-20 to 70 °C	
Relative Humidty	0-95% (Non-condensing)	
Cooling	Forced Cooling with Fan	
Protection Level	IP20	
Acoustic Noise	<55 dBA	
PHYSICAL		
Dimensions (WxDxH) cm	Up to 1.2 kW: 42x44x39, Up to 10 kW: 47x87x58 Up to 33 kW: 65x110x70, Ask for other types	
STANDARDS		
Harmonized Standards	EN50178, EN 61204 ,EN61204-3	

AVAILABLE SINGLE PHASE MODELS

V \ A	10	12	15	20	30	50	100
24	1024-10	1024-12	1024-15	-	-	1024-50	1024-100
48	1048-10	-	-	1048-20	-	1048-50	1048-100
110	-	-	-	1110-20	1110-30	1110-50	-

AVAILABLE THREE PHASES MODELS

V \ A	30	50	60	100	150	200	250	300	400	600
24	3024-30	3024-50	-	3024-100	3024-150	3024-200	3024-250	3024-300	-	-
48	3048-30	3048-50	-	3048-100	-	3048-200	-	3048-300	3048-400	3048-600
110	3110-30	3110-50	3110-60	3110-100	-	3110-200	3110-250	3110-300	-	-
220	3220-30	3220-50	-	3220-100	3220-150	3220-200	-	-	-	-

*Other models can be manufactured per request.