BATTERY CHARGER

Energy
Power
Conversion

Tailors of the Industry

SD SERIES

CE

BATTERY CHARGER

TELECOM | MARINE | ITS TRAFFIC | MILITARY | POWER PLANTS | OIL & GAS | RAILWAY | ALTERNATIVE

WHY US?

- **RELIABLE & LOW MTBF**

+20 years of design life and over 200000 hrs. MTBF

- **EASY MAINTENENCE AND REPAIR**

Modular board structure and front access with smart component locating topology for the easiest repair and maintenance.

- **SMART CHARGE FACILITY**

Voltage, Current and timer adjustments according to load/battery. Automatic charge & boost inhibit options.

- **RAIN TO DUST ENVIRONMENT**

Its high grade protection level up to IP66 ensure it works on every harsh condition. Coating and plating ensures the resistance of system.

FEATURES

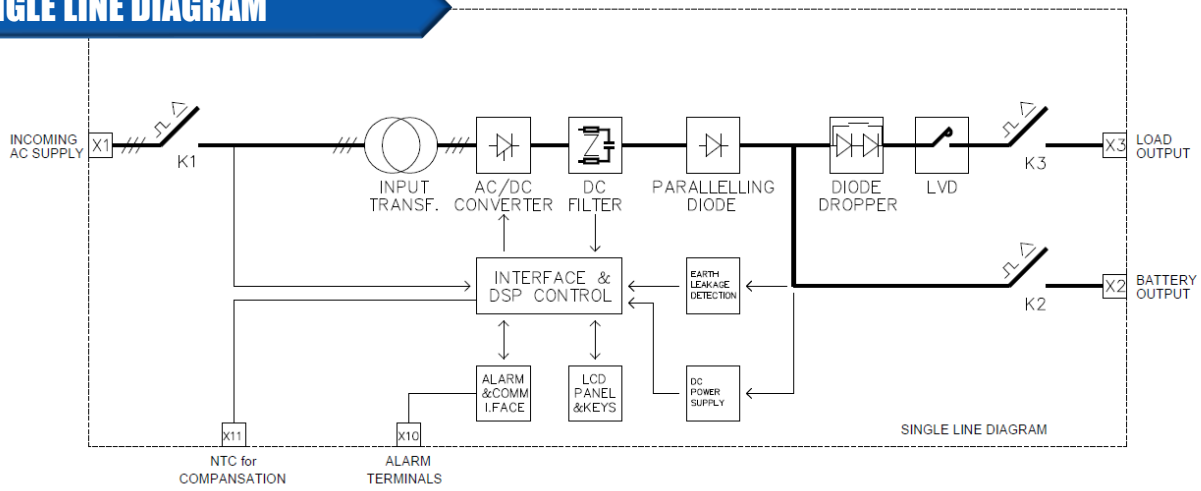
- Input isolation transformer
- Fast control with **DSP** controller
- Thyristor/IGBT technology
- Float boost and equalize charge
- Auto and manual charge mode
- <1% Voltage Ripple (<4% on 1 phase)
- Alarm adjustable dry contacts
- ModBus Protocol - RS232, RS485
- Operation available while mains fail
- Current limiting (adjustable)
- Automatic start & fault recovery
- Smart fault diagnosing
- Modular board structure

OPTIONALS

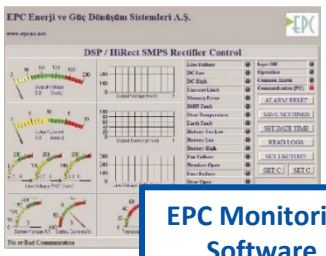
- Analog gauges (V, A, Hz meters)
- Battery discharging facility
- Transducers (4-20mA and 0-10V)
- Enclosure heating
- Fan Failure Monitoring

BATTERY CHARGER

SINGLE LINE DIAGRAM



COMMUNICATION INTERFACES



EPC Monitoring Software

RS485 Converter

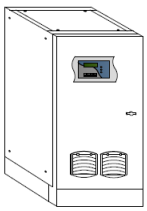
Touch Panel

LCD + LED Panel

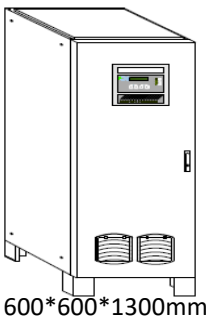
TCP/IP

SNMP

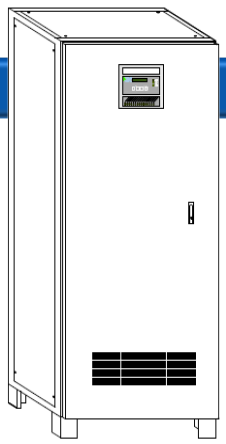
STANDARD CABINET SIZES



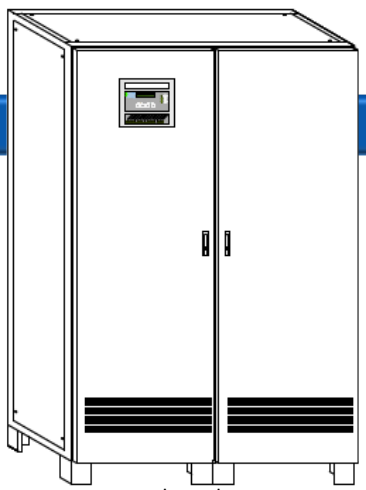
500*450*1000mm



600*600*1300mm



600*600*1900mm



1200*800*2100mm

BATTERY CHARGER

MODEL	SD1	SD3
INPUT		
Voltage	110VAC to 275 ± 15% VAC	190VAC to 600 ± 15% VAC
Frequency	50, 60 or 400Hz ± 10%	
Rectifier Type	Half Bridge / Full Bridge	6 pulse / 12 pulse
Power Factor	0.7	0.8 (6 pulse)/ 0.9 (12 pulse)
OUTPUT		
Output Voltage (VDC)	12V / 24V / 48V / 60V / 110V / 125V /220V / 250V / 400V / 600V	
Output Current	10 to 1000A	10 to 5000A
Efficiency	83% to 90%	85% to 94%
Voltage Regulation	<0,5%	
Current Regulation	<2%	
Overload	Protection: **Current Limiting**	
Ripple	<4%	<1%
Battery Type	VRLA / OPzV / OPzS / NiCad	
Battery Charge Voltage	VRLA / OPzV / OPzS : 2,25 (Float) per cell NiCad : 1,42 (Float) – 1,5 to 1,7 (Boost/equalize) per cell	
Battery Charge Current	VRLA / OPzV / OPzS : 10-15% of Battery Capacity (adjustable) NiCad : 20% of Battery Capacity (adjustable)	
Boost Charge Timer	0-20 hrs. adjustable (with Auto Boost inhibit)	
Voltage Adj. Range	80% to 140% of Nominal Voltage	
Isolation	1500, 2000 or 3000VAC input&output/chassis	
PHYSICAL CHARACTERISTICS		
Protection Degree	Standard: IP20, **(OPT: 21 to 66)**	
Cooling System	Forced Ventilation **(OPT: Natural cooling, Water cooling, Smart Fans)**	
Cable Entry	Standard: Bottom **(OPT: Top, Rear, Side)**	
Cabinet Color	Standard: RAL7032,7035 **(OPT: Others)**	
ENVIRONMENT		
Operating Temperature	0 to 50C°	
Storage Temperature	-25 to 70C°	
Relative Humidity	0 to 95% (non-condensing)	
Operating Altitude	1000m from MSL (1% derate each 100m after 1000m)	
Acoustic Noise	<65dB	
Isolation Resistance	200MΩ	
COMMUNICATIONS		
Standard Comm.	RS232, Dry Contact x4 to x16 **(OPT: RS485, TCP, SNMP and IEC61850)**	
Paralel Operation	Passive: Infinite **(Active: up to 3)**	
HMI	LED/LCD Panel **(OPT: HMI Touch Panel, Mimic Panel)**	
PROTECTIONS		
Battery Protections	Temperature Compensating Charge / LVD	
Input/output Protections	Auxiliary Trip Contacts / TMS or LS/G Breakers AC or DC Earth Fault / DROPPER (or DC/DC Conv.)	
Internal Protection	Phase Sequence Protection / SCR Protection Rapid Fuses	
STANDARDS		
IEC 60146-1-1:2009	Semi Conductor Converters – Specification of basic requirements	
IEC 60335	Household and similar electrical appliances – Safety - Part 1: General requirements	
IEC 61204	Low-Voltage power supply devices , DC output performance characteristics	
Others	IEC61100-6-2/4, EN60529, EN50178 (Decleration)	

Product properties may change without a notice*

Values based on this Datasheet indicates the selectable design. Not adjustable ranges.