

EBD BATTERY CHARGER UNIT

PRODUCT SPECIFICATIONS

WHAT IS BATTERY CHARGER UNIT - RECTIFIER?

EBD series Battery charger units have Automatic constant current and constant voltage features, isolation transformer and thyristor controlled industrial type rectifier units.

Managed by microprocessor controlled electronic circuits.

All parameters are adjustable for optimum charging and highest performance in EBD battery charging units to battery type and technical parameters.

System has protection system against over current, over voltage, over temperature, short circuit and peak current.

In EBD series Battery Chargers & Rectifiers an inductor capacitor filter exists at the output. Input and output terminals are in cabinet and protected by suitable fuses.

Battery deep discharge protection unit, DC / DC voltage regulator unit for loads and dry contacts for automation systems are optional features.

The MOD-BUS RTU unit is also an optional feature with the RS485 interface allowing remote monitoring and management of the system.

WHAT ARE THE APPLICATION FIELDS?

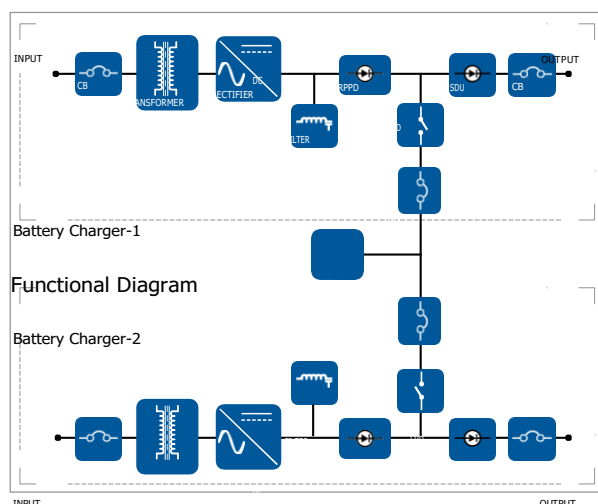
EBD Series Battery Chargers are designed and produced to be used in communication and alarm circuit of ships and yachts, safety systems in business place and residences, petrochemical industry and power electronics applications, training and test laboratories of schools, test laboratories of factories or feeding system of electronic devices. They are also used for DC feeding system and charge of lead acid, nickel cadmium and dry type batteries. In high discharge currents it provides opportunity to turn on and turn off in short periods. It provides appropriate solutions in emergency illuminating, alarm communication circuits, galvanization and in emergency aluminium eloxal facilities, petro chemistry industry and power electronic practices.



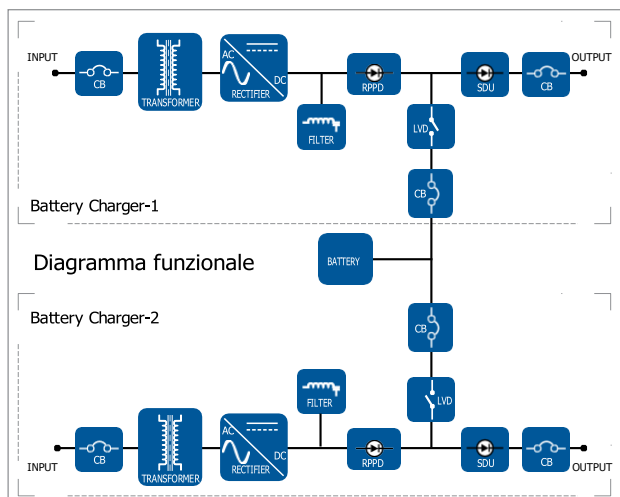
STRUCTURAL SPECIFICATIONS

- Production with single phase and three phase input supply
- Production between range of 12-3000 V DC and 1 A-30.000 A
- Automatic float boost facility
- High productivity through Thyristor-Diode, Transistor technology and microprocessor controlled boards
- Low waviness (ripple 1%), high current and voltage stability
- User friendly, easy and comprehensible LCD display and mimic diagram
- Sound and light warning for all faults and dry contact outputs
- External battery connection
- Battery discharge protection with Low Voltage Disconnect unit (LVD)
- Silicon Dropper unit for voltage regulation of DC supply
- Minimal size, static structure, easy commissioning
- Cabinet design suitable for industrial environment
- Special, durable cabinet, powder coated with standard color RAL-7035, IP21 (IP54 Optional)
- Manual adjusting property for output voltage and output current from LCD
- Automatic battery activation in case of power cuts (Optional)
- Possibility of regulation of charge-voltage-current through battery





TECHNICAL SPECIFICATIONS OF EBD SINGLE PHASE BATTERY CHARGER UNITS																
MODEL	EBD1P 24V 50A	EBD1P 24V 100A	EBD1P 24V 150A	EBD1P 24V 200A	EBD1P 48V 50A	EBD1P 48V 100A	EBD1P 48V 150A	EBD1P 48V 200A	EBD1P 110V 50A	EBD1P 110V 100A	EBD1P 110V 150A	EBD1P 110V 200A	EBD1P 220V 50A	EBD1P 220V 100A	EBD1P 220V 150A	EBD1P 220V 200A
Power Factor	0,8 (optional 0,9)															
INPUT																
Voltage	220 V AC Single Phase + Neutral (Other grid voltages optional)															
Voltage Tolerance	± 15%															
Frequency	50Hz ± 5% (60HZ optionally)															
Protection	Suitable circuit breaker															
OUTPUT																
Nominal Output	24 VDC				48 VDC				110 VDC				220 VDC			
Output Voltage Adjust.	± 20%															
Nominal Output	50 A	100 A	150 A	200 A	50 A	100 A	150 A	200 A	50 A	100 A	150 A	200 A	50 A	100 A	150 A	200 A
Current Limit	5A-50A	5A-100A	5A-150A	5A-200A	5A-50A	5A-100A	5A-150A	5A-200A	5A-50A	5A-100A	5A-150A	5A-200A	5A-50A	5A-100A	5A-150A	5A-200A
Battery Charging System	Automatic constant current / constant voltage control with microprocessor based boards Programmable automatic and manuel BOOST charge - FLOAT Charge control															
Battery Type	Nickel-Cadmium (Ni-Cd), Lead Acid, Dry Type															
PROTECTION																
Silicon Dropper	Output voltage regulation and restriction for battery charger and power supply circuits applications with “Silicon Dropper”															
LVD Unit	Automatic low voltage disconnection units to protect the batteries from deep discharge, (optional)															
RPDD Unit	Reverse polarity protection															
Automation Unit	Dry contacts for all kind of warnings (optional)															
Efficiency	0,9															
Crest Factor	3:1															
Overload	0% - 100% load operates continuously, 115% load electronic current limiting															
Protection	electronic warning and protection for; high output voltage, low output voltage over temperature and over load, thyristor failure, earth leakage,...etc.															
Communication	Dry contact output for all fault and status information															
LCD Display	Input voltage, output voltage, output current, battery current, boost charge time and set values for LVD can be seen on LCD display. Additionally; written warnings for over current, over temperature, input failure and general failure (failure record optionally)															
Connection	Suitable terminals for input, output, battery and alert contact															
ENVIRONMENTAL CONDITIONS																
Operating	-10 °C ~ +40 °C (optional cooling units on request)															
Altitude	< 3000 m															
Humidity	90% none condensed															
Acoustic Noise	< 50 dB															
CABINET SPECIFICATIONS																
Dimensions (WxDxH)	60x60x130				60x60x180											
Weight (kg)	270	300	330	350	320	330	350	400	320	400	420	570	400	570	540	570



TECHNICAL SPECIFICATIONS OF EBD THREE PHASE BATTERY CHARGER UNITS

MODEL	EBD3P 24V 100A	EBD3P 24V 150A	EBD3P 24V 200A	EBD3P 48V 100A	EBD3P 48V 150A	EBD3P 48V 200A	EBD3P 110V 50A	EBD3P 110V 100A	EBD3P 110V 150A	EBD3P 110V 200A	EBD3P 220V 50A	EBD3P 220V 100A	EBD3P 220V 150A	EBD3P 220V 200A
Power Factor	0,8 (optional 0,9)													
INPUT														
Voltage	380 V AC Three Phase + Neutral (Other grid voltages optional)													
Voltage Tolerance	± 15%													
Frequency	50Hz ± 5% (60HZ optionally)													
Protection	Suitable circuit breaker													
OUTPUT														
Nominal Output	24 VDC			48 VDC			110 VDC			220 VDC				
Output Voltage Adjust.	± 20%													
Nominal Output	100 A	150 A	200 A	100 A	150 A	200 A	50 A	100 A	150 A	200 A	50 A	100 A	150 A	200 A
Current Limit	5A-100A	5A-150A	5A-200A	5A-100A	5A-150A	5A-200A	5A-50A	5A-100A	5A-150A	5A-200A	5A-50A	5A-100A	5A-150A	5A-200A
Battery Charging System	Automatic constant current / constant voltage control with microprocessor based boards Programmable automatic and manuel BOOST charge - FLOAT Charge control													
Battery Type	Nickel-Cadmium (Ni-Cd), Lead Acid, Dry Type													
PROTECTION														
Silicon Dropper	Output voltage regulation and restriction for battery charger and power supply circuits applications with “Silicon Dropper”													
LVD Unit	Automatic low voltage disconnect units to protect the batteries from deep discharge, (optional)													
RPDD Unit	Reverse polarity protection													
Automation Unit	Dry contacts for all kind of warnings (optional)													
Efficiency	0,9													
Crest Factor	3:1													
Overload	0% - 100% load operates continuously, 115% load electronic current limiting													
Protection	electronic warning and protection for; high output voltage, low output voltage over temperature and over load, thyristor failure, earth leakage,...etc.													
Communication	Dry contact output for all fault and status information													
LCD Display	Input voltage, output voltage, output current, battery current, boost charge time and set values for LVD can be seen on LCD display. Additionally; written warnings for over current, over temperature, input failure and general failure (failure record optionally)													
Connection	Suitable terminals for input, output, battery and ale art contact													
ENVIRONMENTAL CONDITIONS														
Operating	-10 °C ~ +40 °C (optional cooling units on request)													
Altitude	< 3000 m													
Humidity	90% none condensed													
Acoustic Noise	< 50 dB													
CABINET SPECIFICATIONS														
Dimensions (WxDxH)	60x60x130			60x60x180										
Weight (kg)	2700	300	330	300	330	370	400	375	400	500	375	400	570	630

OPTIONS

OPTION	CODE	DESCRIPTION
Non-standard input voltage value	xxxV	EBD series battery chargers can be produced at any required input voltage value that must be stated clearly by the order confirmation.
Non-standard input voltage range	XS,M,L,XL	EBD series battery chargers can be produced at different input voltage ranges. The required ranges levels must be stated clearly by the order confirmation. Maximum input voltage range: -60%, +40%
Non-standard output voltage value	xxxV	EBD series battery chargers can be produced at any required output voltage value that must be stated clearly by the order confirmation.
Non-standard output voltage tolerance	R	Output voltage tolerances of battery chargers can be +/-1%, +/-2%, -3%, +/-5%.
Adjustable output voltage	ADJ	Output voltage of EBD series battery chargers can be adjusted by the LCD panel. Maximum adjusting range is +/-15%
Non-standard frequency	FRQ	EBD series battery chargers are produced to function under 60 Hz network frequency.
Output protection CB	OCB	Optional CB may be added to the battery charger output to provide additional protection.
Special Enclosure	K	EBD series battery chargers can be produced both INDOOR and OUTDOOR in special cabinets having different IPXX protection classes.
Input/Output EMC Filter	EMC	Specially designed EMC-Filters can be added optionally to the both input and output of EBD series battery chargers. Filter specifications must be stated by offer/order.
Input/Output Surge protector	ESD	High-Voltage Protection and Surge Arrester can be added to the both input and output of EBD series battery chargers. The required protection classes and the specifications (CLASS-I, CLASS-II, CLASS-III) must be given with the order.
Dry contacts	C	NO-NC dry contactor sockets can be applied for ON-OFF and Automatic By-pass modes of the battery charges.
Non-standard Input/Output terminal	T	According to the various customer needs. Input and output terminals can be designed and located specially on the cabinet. The required terminal drawings must be supplied together with the offer/order.
Special design and accessories	SPM	EBD series battery chargers can be designed specially with respect to direct customer needs and technical specifications. All special requirements and detailed technical drawings and specifications for accessories must be provided by the customer at the offer/order stage.
LDV Unit	LVD	Low voltage disconnect for Battery discharge protection.
SDU Unit	SDU	Silicon dropper unit for voltage regulation of DC supply.
Input VM/AM	VM/AM	Analog / digital voltmeter or ammeter for input.
Output VM/AM	VM/AM	Analog / digital voltmeter or ammeter for output.
Battery VM/AM	VM/AM	Analog / digital voltmeter or ammeter for the batteries.
Output Distribution CB	CB	Desired number of distribution CB for output can be applied.
Battery Rack	BR	Battery racks can be installed if required in the order.

NOTES & OPTIONS

- Any optional demands are not included in the prices. Please give in detail the options that you demand.
- All of the optional demands for every model may not be met, please keep in touch with your sales representative for suitable options.
- The technical specifications given in this brochure are to be used as a guide. K-FACTOR has the right to change without giving prior information. Please contact your sales representative to get the recent information.
- The technical specifications in this brochure are for EBD series battery chargers. Please ask for different models and different technical specifications to your sales representative.
- EBD series battery chargers given in this brochure are easy for installation also in case of need our engineers are ready for help-desk freely.

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