

eBC Single & Three Phase Battery Chargers

The eBC range of battery chargers for use in a wide range of applications requiring DC charging from manufacturing and emergency lighting systems to leisure equipment. The eBC range of chargers are of modular structure using microprocessor based control systems driving thyristor and diode based power sections.

Suitable for charging Lead Acid, Nickel Cadmium & Dry type batteries. The eBC range covers DC voltages of 12-450V and currents from 1A to 1000A



- Product range 12 – 450V, 1 – 1000A (Multi Parallel)
- Single Phase and Three Phase input versions
- Automatic float boost charging facility
- Less than 1% Ripple
- Microprocessor based control system
- Intuitive LCD display and simple mimic diagram
- Audio and visual outputs for alarms or trips
- External battery connection
- Battery discharge protection with low voltage disconnect unit
- Silicon dropper unit for regulation of DC supply
- Manual control function through the LCD for DC voltage & current



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Technical Specifications for eBC Battery Charger

Model Range	eBC 1 phase & 3 phase
kVA Range	1 phase 24 – 200V DC kVA, 3 phase 24V – 200V DC
Power Factor	0.6
Input	
Voltage	220 V 1 phase & 380V 3 phase + neutral
Voltage Tolerance	±15%
Frequency	50Hz ±5%
Protection	Circuit breaker
Output	
Voltage	24/48/110/220 V DC dependent on unit specification
Frequency	50Hz ±5%
Voltage Adjustment Range	± 20%
Nominal Current	Rating dependent
Current Limit Adjustment	5A < to unit FLC rating
Battery Charging System	Automatic constant current/constant voltage control programmable automatic and manual boost charge – float charge control
Battery Type	Nickle-Cadmium (Ni-Cd), Lead Acid, Dry Type
Protection	
Silicon Dropper	Output voltage regulation and restriction for battery charger and power supply circuits
LVD Unit	Automatic load disconnect to protect against over discharge of batteries
RPDD Unit	Reverse polarity protection
Automation Unit	Auxiliary contacts for external alarm functions
Efficiency	>0.86
Crest Factor	3:1
Overload	0-100% load continuous, 115% load, electronic current limiting
Protection	Electronic warning and protection for high output voltage, low output voltage, over temperature, overload, earth leakage fault
Communication	Auxiliary contact for all status, warning alarms and trip alarms
LCD Display	Input voltage, output voltage, output current, battery current, boost charge time, set values for LVD, warnings for overcurrent, over temperature and input failure
Connection	Optional error recording module available Suitable terminals for input, output and auxiliary contacts
Environmental Protection	
Operational Temperature	-10 deg C to +40 deg C
Maximum Altitude	<3000 m
Maximum Humidity	<90 % Non condensing
Acoustic Noise	<50 db
Enclosure Specification	
Type	Indoor (External option available)
IP Rating	IP21
Standard Colour	RAL 7035
Base	Plinth
Cooling	Temperature controlled fans



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eBC Ratings – Dimensions and Weights

Input	Model	Output Voltage	Output Current (Amps)	Dimensions (CM)			Weight KG
				Width	Depth	Height	
1 Phase	eBC1/24/50	24	50	70	50	140	180
	eBC1/24/100	24	100	70	50	140	200
	eBC1/24/150	24	150	70	50	140	220
	eBC1/24/200	24	200	70	50	140	250
	eBC1/48/50	48	50	70	50	140	220
	eBC1/48/100	48	100	70	50	140	250
	eBC1/48/150	48	150	80	60	140	260
	eBC1/48/200	48	200	80	60	140	300
	eBC1/110/50	110	50	70	50	140	250
	eBC1/110/100	110	100	70	50	140	300
	eBC1/110/150	110	150	80	60	140	340
	eBC1/110/200	110	200	80	60	140	380
	eBC1/220/50	220	50	70	50	140	300
	eBC1/220/100	220	100	70	50	140	380
	eBC1/220/150	220	150	90	70	160	420
	eBC1/220/200	220	200	90	70	160	460
3 Phase	eBC3/24/100	24	100	70	50	140	180
	eBC3/24/150	24	150	70	50	140	200
	eBC3/24/200	24	200	70	50	140	220
	eBC3/48/100	48	100	70	50	140	200
	eBC3/48/150	48	150	70	50	140	220
	eBC3/48/200	48	200	70	50	140	250
	eBC3/110/50	110	50	80	60	140	300
	eBC3/110/100	110	100	70	50	140	250
	eBC3/110/150	110	150	70	50	140	300
	eBC3/110/200	110	200	80	60	140	340
	eBC3/220/50	220	50	70	50	140	250
	eBC3/220/100	220	100	70	50	140	300
eBC3/220/150	220	150	90	70	160	380	
eBC3/220/200	220	200	90	70	160	420	



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TECHNICAL DATA

Efficient Power Solutions

eBC Options

Non-standard input voltage value	xxxV	eBC battery charger units can be produced for any required input voltage value
Non-standard input voltage range	XS,M,L,XL	eBC battery charger units can be produced for different input voltage ranges. Maximum input rang -60% +40%
Non-standard output voltage value	xxxV	eBC battery charger units can be produced for any required output voltage value
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 the eBC battery charger units can be adjusted by the LCD panel. Maximum adjusting range is +/-15%
Non-standard frequency	FRQ	eBC battery charger units can be produced for 60Hz networks
Output protection CB	OCB	Optional CB may be added to the charger output to provide additional protection
Special enclosure	K	eBC battery charger units can be produced for both indoor and outdoor applications in special cabinets having different IPXX protection classes, e.g. IP54
Input/output EMC filter	EMC	
Input/output surge protector	ESD	High voltage protection and surge arrester can be added to both the input and output of the eBC battery charger (CLASS-I, CLASS-II, CLASS III) must be given with the order
Auxiliary contacts	C	NO-NC auxiliary contactor terminals can be installed for ON-OFF
Non-standard input/output terminal	T	According to site specification installation requirements, input & output terminals can be designed and located as required on the cabinet
Special design and accessories	SPM	The eBC can be designed and constructed to meet specific customer requirements and technical specifications
Parallel connection management units	PCM	Up to 4 eBC units can be connected in parallel for special high power applications. A PCM unit is used for management and synchronisation when units are connected in parallel
Low voltage disconnect units	LVD	Low voltage disconnect for battery discharge protection
SDU	SDU	Silicon Dropper for voltage regulation of DC supply
Input VM/AM	VM/AM	Analogue / Digital voltmeter or ammeter for input
Output VM/AM	VM/AM	Analogue / Digital voltmeter or ammeter for input
Output distribution circuit breaker	CB	Desired number of distribution circuit breakers for specified output
Battery Rack	BR	Battery rack can be installed if required

The above are not included in the standard unit price. Details of any options required must be confirmed at the time of order. All options may not be suitable for a particular model or application. 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. Efficient Power reserve the right to change without giving prior notice. The technical specifications in this brochure are for the eBC model. Please ask your sales representative for details and technical specifications for our extensive power management range.



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