



# CB12245A Battery Charger



E353241

## Features:

- Input: Single-phase 115 - 230 - 277 VAC
- Output: Battery charging 12 VDC; 24 VDC (switch select)
- Suited for the following battery types:  
Open Lead Acid, Sealed Lead Acid, lead Gel and Ni-Cd (option)
- Automatic diagnostic of battery status. Charging curve IUoUo, constant voltage and current
- Switching technology, output voltage 14.4 VDC / 28.8 VDC
- Four charging levels: Boost, Absorption, Trickle, Recovery.
- Protected against short circuit, reversed polarity, over load.
- Signal output (contact free) for fault battery state
- Protection degree IP20 - DIN rail mountable

## INPUT

## BATTERY OUTPUT

## GENERAL DATA

## ENVIRONMENT

## SAFETY & EMC

## OTHERS

### Cat. No.

### CB12245A

#### Input Data

Nominal Input Voltage (2 x VAC)  
Input Voltage range (VAC)  
Inrush Current (Vn and In Load) I2t  
Frequency  
Input Current  
Internal Fuse  
External Fuse (recommended)

115 ~ 230 ~ 277 VAC  
90 ~ 305 VAC  
 $\leq 16 \text{ A} \leq 5 \text{ msec.}$   
47 ~ 63 Hz  $\pm 6\%$   
2.4 A - 115 VAC; 1.2 A 230 VAC  
4 A  
10 A (MCB curve B)

#### Battery Output (Battery Care)

Boost charge (25°C) (typ. at  $I_n$ )  
Max. time Bust Charge (typ. at  $I_n$ )  
Min. time Bust Charge (typ. at  $I_n$ )  
Trickle charge (25°C) (typ. at  $I_n$ )  
Recovery Charge  
Charging. Max  $I_{batt}$  ( $I_n$ )  
Efficiency (50% -  $I_n$ )  
Charging current limiting  $I_{adj}$   
Quiescent Current  
Charging Curve automatic: IUoUo  
Detection of element in short circuit  
Short-circuit protection  
Over Load protection  
Over Voltage Output protection  
Jumper Configuration battery type  
(V cell) Ni-Cd (optional)

14.4 VDC / 28.8 VDC (jumper section)  
15 h  
4 min.  
13.75 VDC / 27.5 VDC  
2 ~ 7 VDC / 2 ~ 16 VDC  
6A@12V / 5A@24V DC  
90%  
20 - 100 %  $I_n$   
 $\leq 100 \text{ mA}$   
3 stage  
Yes  
Yes  
Yes  
Yes  
2.23;2.25;2.27;2.3;  
1.41-1.5 (20 elem.)

#### General Data

Insulation voltage (In / Out)  
Insulation voltage (In / PE)  
Insulation voltage (Out / PE)  
Protection Class (EN/IEC 60529)  
Protection class  
Reliability: MTBF IEC 61709  
Pollution Degree Environment  
Connection Terminal Blocks screw Type  
Dimensions (W-H-D)  
Weight

3000 VAC  
1605 VAC  
500 VAC  
IP20  
I, with PE connected  
> 300.000 hours  
2  
2,5mm(24-14AWG)  
45x105x100 mm (1.78 x 3.94 x 3.94 in.)  
0.3 Kg (0.65 lbs) approx.

#### Climate Data

Ambient temperature (operation)  
De Rating  $T_a > 50^\circ\text{C}$   
Ambient temperature Storage  
Humidity at 25°C no condensation  
Cooling

- 40C to +70C (-40F to +158F)\*  
- 2.5%(In) / °C  
-40 - +85°C (-40~185°F)  
95% to 25°C  
Auto Convection

#### Norms and Certifications

Conforming to:

IEC/EN 60335-2-29, EN60950/UL1950, Electrical safety, 89/336/EEC, EMC Directive, 2006/95/EC (Low Voltage), DIN41773 (Charging cycle), Emission: IEC 61000-6-4, Immunity: IEC 61000-6-2, CE

#### Signal Output (free switch contact)

Main or Backup Power  
Low Battery  
Fault Battery

Yes  
Yes  
Yes

#### Type of Signal Output Contact

Max. current can be switched (EN60947.4.1):  
Max. DC1: 30 VDC 1 A; AC1: 60 VAC 1 A  
Min. 1mA at 5 VDC

Resistive load  
Min load

\*Special order required

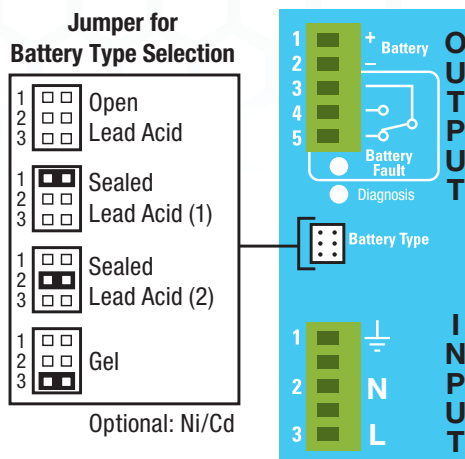
For the latest on Altech Power Supply specifications please visit [www.altechcorp.com/power](http://www.altechcorp.com/power).

# CB12245A Battery Charger

**Altech Corp.®**

## Technical Features

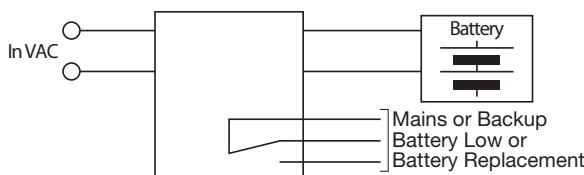
The CB series battery chargers are designed with advanced multi-stage battery charging method, completely automatic and suited to meet the most advanced requirements of battery manufacturers. The Battery Care concept is based on algorithms that implement rapid and automatic charging, battery charge optimization during time, flat batteries recovery and real time diagnostic during installation and operation. The Real Time Autodiagnostic system, monitoring battery faults such as, elements in short circuit, accidental reverse polarity connection, disconnection of the battery, they can easily be detected and removed by help of Blink Code of Diagnosis Led; during the installation and after sell. Each device is suited for all battery types, by means of jumpers it is possible setting predefined curves for Open Lead Acid, Sealed Lead Acid, Gel, Ni-Cd(option). They are programmed for two charging levels, boost and trickle. A rugged casing with bracket for DIN rail mounting provide IP20 protection degree. They are extremely compact and cost-effective.



## Charging

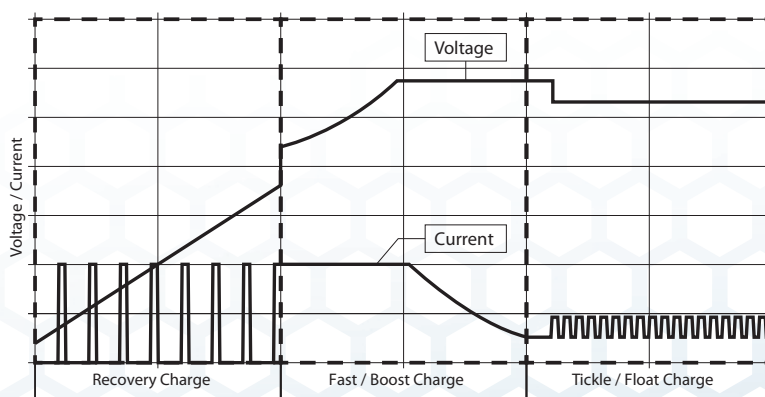
Automatic multi-stage charging and real time diagnostic allow fast recharge and recovery of deep discharged batteries, adding value and reliability to the system hosting. Type of charging is Voltages and current stabilized IUoUo. The state of charging battery and Autodiagnosis of the systems are identified by a flashing code on a Diagnosis LED and Fault Battery LED:

## Wiring Diagram



State	Diagnosis LED	Battery Fault LED
Charging		
Trickle	1 Blink/sec	OFF
Absorption	1 Blink/sec	OFF
Boost	3 Blink/sec	OFF
Recovery	5 Blink/sec	OFF
Auto diagnosis		
Reverse polarity	1 Blink	ON
Battery No connect	2 Blink	ON
Element in Short C.	3 Blink	ON
Replace Battery	5 Blink	ON

## CB Charging Diagram



PSC Class 2 Series  
Compact Housing

PSA Flex Series  
1 Phase

PSB Flex Series  
2 & 3 Phase

PS-S Slim Series  
Plastic Housing

PS Low Profile Series  
Plastic Housing

PS Industrial Series  
1, 2 & 3 Phase

PS C & W Series  
1 and 2 Phase

CB Type  
DC UPS Systems

CB Type  
Battery Chargers

Accessories

Appendix