



# 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

<b>Input Data</b> 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)
<b>Battery Output (Battery Care)</b> 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.)
<b>General Data</b> 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 $> 300.000 \text{ hours}$ 2 2,5mm(24-14AWG) 45x105x100 mm (1.78 x 3.94 x 3.94 in.) 0.3 Kg (0.65 lbs) approx.
<b>Climate Data</b> 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
<b>Norms and Certifications</b> 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
<b>Signal Output (free switch contact)</b> Main or Backup Power Low Battery Fault Battery	Yes Yes Yes
<b>Type of Signal Output Contact</b> Max. current can be switched (EN60947.4.1): Max. DC1: 30 VDC 1 A; AC1: 60 VAC 1A Min. 1mA at 5 VDC	Resistive load Min load

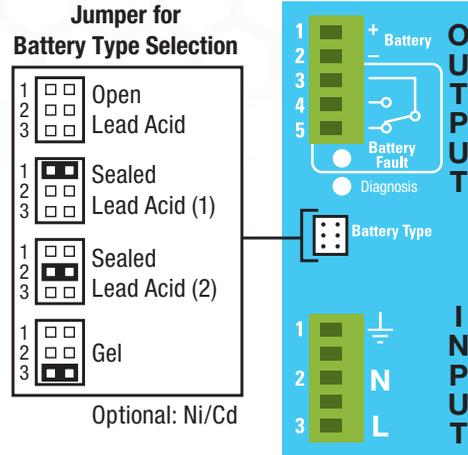
\*Special order required

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

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## Technical Features

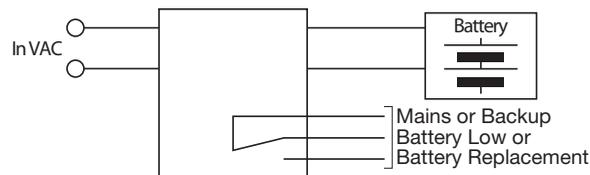
The CB series battery chargers are designed with advanced multi-stage battery charging method, completely automatic and suited to meet the most advanced requirements of battery manufacturers. The Battery Care concept is based on algorithms that implement rapid and automatic charging, battery charge optimization 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

