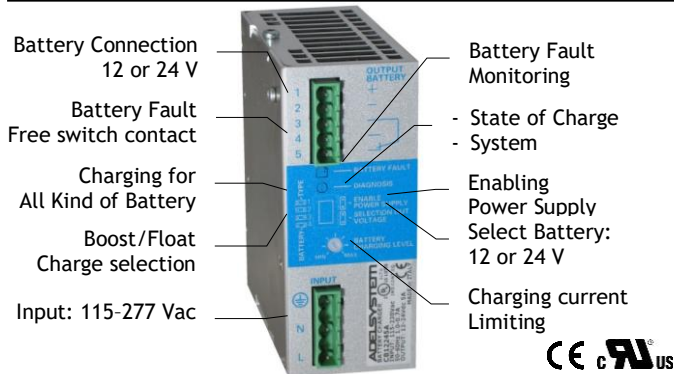


CB12245A Battery Charger

One product for the field: 12 and 24 Vdc



Input: Single-phase 115 ÷ 277 Vac

Output Jumper Selectable: 12 Vdc 6A; 24 Vdc 5 A

Power Supply Function: setting by Jumper

Suited for the following battery types: Open Lead Acid, Sealed Lead Acid, lead Gel, Ni-Cd, Li-Ion (option)

Battery Care for, automatic diagnostic of battery status, short circuit element,

Charging curve IUoUo, constant voltage and current

Switching technology Semi-resonant

Four charging levels: Boost, Absorption, Float, Recovery.

Protected against short circuit, inverted polarity, over Load.

Signal output (contact free) for fault battery state

Protection degree IP20 - DIN rail

Technical features

The CB series is a "Switching technology" and "Battery Care philosophy", since years parts of the core know-how at ADEL system, led to the development of this 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 Auto-diagnostic 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. A rugged casing with bracket for DIN rail mounting provides IP20 protection degree.

Input Data

| | |
|--|---------------------|
| Nominal Input Voltage | 115 – 230 – 277 Vac |
| Input Voltage range | 90 – 305 Vac |
| Inrush Current (Vn and In Load) I ² t | ≤ 16 A ≤ 5 msec. |
| Frequency | 47 – 63 Hz ±6% |
| Input Current (115 – 270 Vac) | 2.4 – 1.2 A |
| Internal Fuse | 4 A |
| External Fuse (recommended) | 10 A (MCB curve B) |

Battery Output 24 Vdc (depend on jumper selection)

| | |
|--|------------|
| Boost charge (Typ. at In) | 28.8 Vdc |
| Recovery Charge | 2 – 18 Vdc |
| Charging. Max I _{batt} < 40°C(In) Input V. 230Vac | 5 A ± 5% |
| Charging. Max I _{batt} < 40°C(In) Input V. 120Vac | 4 A ± 5% |
| Charging. Max I _{batt} > 40°C(In) | 3.5 A ± 5% |

Battery Output 12 Vdc (depend on jumper selection)

| | |
|---|-----------|
| Boost charge (Typ. at In) | 14.4 Vdc |
| Recovery Charge | 2 – 9 Vdc |
| Charging. Max I _{batt} < 40°C (In) | 6 A ± 5% |
| Charging. Max I _{batt} > 40°C (In) | 6 A ± 5% |

Generic Output Data

| | |
|--|--------------------------------------|
| Max. time Boost Charge (typ. At In) | 15 h |
| Min. time Boost Charge (typ. At In) | 4 min. |
| Jumper Configuration battery type (V cell) Ni-Cd (optional); when in Float Charging mode | 2,23; 2,25; 2,3; 1,41-1,5 (20 cell.) |
| Power Supply function | By Jumper Enabling |
| Select Output Voltage 12 or 24 Vdc | By Jumper Enabling |
| Select Boost or float charge | By Jumper Enabling |
| Efficiency (50% of In) | 90% |
| Charging current limiting I _{adj} | 20 ÷ 100 % / I _n |
| Quiescent Current (No input main Voltage) | ≤ 5mA / 0mA V _{bat} <26.3 |
| Charging Curve automatic: IUoU | 4 stage |
| Detection of element in short circuit | Yes |
| Short-circuit protection) | Yes |
| Over Load protection | Yes |
| Over Voltage Output protection | Yes |

Connection and Monitoring

Signal Output (free switch contact)

| | |
|----------------------------|-----|
| Main or Backup Input Power | Yes |
|----------------------------|-----|

| | |
|---------------|-----|
| Low Battery | Yes |
| Fault Battery | Yes |

Type of Signal Output Contact (free switch contact)

Max. current can be switched (EN60947.4.1):

| | |
|--------------------------------------|----------------|
| Max. DC1: 30 Vdc 1 A; AC1: 60 Vac 1A | Resistive load |
| Min.1mA at 5 Vdc | Min. load |

General Data

| | |
|---------------------------------------|----------------------|
| Insulation voltage (In /Out) | 3000 Vac |
| Insulation voltage (In / PE) | 1605 Vac |
| Insulation voltage (Out / PE) | 500 Vac |
| Protection Class (EN/IEC 60529) | IP20 |
| Protection class | I, with PE connected |
| Reliability: MTBF IEC 61709 | > 300.000 h |
| Pollution Degree Environment | 2 |
| Connection Terminal Blocks screw Type | 2,5mm(24-14AWG) |
| Dimensions (w-h-d) | 45x110x100 mm |
| Weight | 0.30 Kg approx. |

Climatic Data

| | |
|-----------------------------------|-----------------|
| Ambient temperature (operation) | -25 ÷ +70°C |
| De Rating T ³ > 50°C | - 2.5%(In) / °C |
| Ambient temperature Storage | -40 ÷ +85°C |
| Humidity at 25 °C no condensation | 95% to 25°C |
| Cooling | Auto Convection |

Norms and Certifications

Conforming to: EN60950/UL1236, Electrical safety,2014/30/UE,EMC Directive,2014/35/UE (Low Voltage), Safety EN IEC 62368-1, DIN41773 (Charging cycle),Emission: IEC 61000-6-3,Immunity: IEC 61000-6-2.CE

Charging

Type of charging it is Voltages and current stabilized IUoU. The state of charging battery and Auto-diagnosis of the systems are identified by a blinking code on a Diagnosis LED and Battery Fault LED:

| | State | Diagnosis LED | Battery Fault LED |
|----------------|---------------------|---------------|-------------------|
| Charging Type | Float | 1 Blink/2sec | OFF |
| | Absorption | 1 Blink/sec | OFF |
| | Boost – Bulk | 2 Blink/sec | OFF |
| | Recovery | 5 Blink/sec | OFF |
| Auto diagnosis | Reverse polarity | 1Blink | ON |
| | Battery No connect | 2Blink | ON |
| | Element in Short C. | 3Blink | ON |

