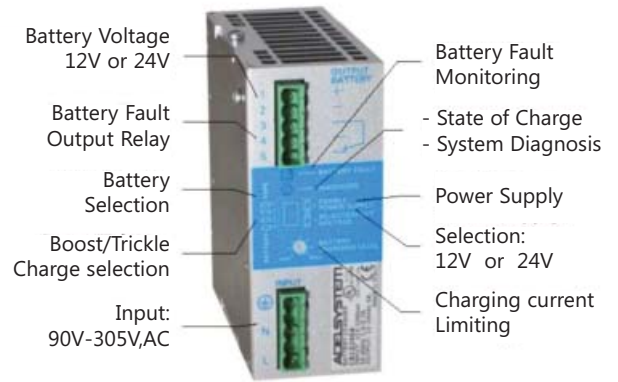


Battery Chargers

CB12245A-UL

Switchmode Charger for 12V or 24V Connections



TECHNICAL FEATURES

Flexibility is the key with these UL Listed battery chargers. 90-305V,AC input. 12V,DC or 24V,DC output. Works with all common battery types. Compact size.

Completely automatic, the battery chargers of the CB Series are micro-processor controlled devices suited to charging most battery types. Based on a 'switching technology' and 'battery care' philosophy these chargers meet the most advanced requirements for battery manufacturers. The battery care concept is based on algorithms that implement rapid and automatic charging, battery charge optimization during time, flat battery recovery and real-time diagnostic during installation and operation. The real-time auto-diagnostic system monitors battery faults such as shorted battery elements, reverse bat-

tery wiring polarity and a disconnected battery. A diagnostic LED on the front panel of the charger displays a fault condition.

Through field-selectable front panel jumpers, the charger can be easily configured for 12V,DC or 24V,DC output. Jumpers on the charger can also be configured for all supported battery types, including open lead acid, sealed lead acid (VRLA – gel), and Ni-Cd. An optional setting for Li-Ion batteries is also available.

The battery chargers are manufactured in a compact, rugged, and lightweight case with DIN rail mounting clips making them easy to install.

- Input: Single-phase 90 to 305V,AC
- Output: Jumper selectable; 12V,DC@6A; 24V,DC@5A
- 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
- Lightweight and compact design
- Switching technology: Semi-resonant
- Four charging levels: Boost, absorption, trickle, recovery
- Protected against short-circuit, inverted polarity, over load
- Signal output (contact free) for fault battery state
- Protection degree: IP20
- DIN Rail mounted
- UL Listed

TECHNICAL DATA

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)	45x105x100 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 Convention

Norms and Certifications

Conforming to: IEC/EN 60335-2-29, EN60950/UL 1236, 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 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



For more information or the latest certifications, please contact:
PC&S, Inc. at +1 (800) 523-9194 or +1 (973) 448-9400
www.pc-s.com

TECHNICAL DATA

Input Data

Nominal Input Voltage (2 x Vac)	115 – 230 – 277
Input Voltage range (Vac)	90 – 305
Inrush Current (Vn and In Load) I'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 – 16 Vdc
Charging. Max I _{bat} < 40°C (In)	5 A ± 5%
Charging. Max I _{bat} > 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 – 7 Vdc
Charging. Max I _{bat} < 40°C (In)	6 A ± 5%
Charging. Max I _{bat} > 40°C (In)	6 A ± 5%

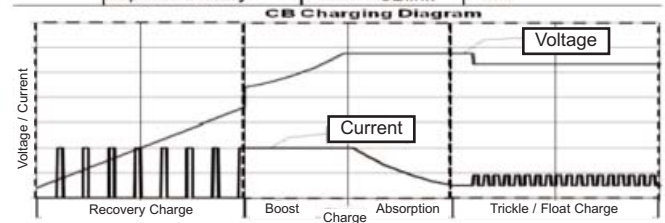
Generic Output Data

Max. time Bust Charge (typ. At In)	15 h
Min. time Bust Charge (typ. At In)	4 min.
Jumper Configuration battery type (V cell) Ni-Cd (optional); when in Trickle Charging mode	2,23;2,25;2,27;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 trickle charge	By Jumper Enabling
Efficiency (50% of In)	90%
Charging current limiting I _{adj}	20 + 100 % / I _n
Quiescent Current	≤ 5 mA
Charging Curve automatic: IUoUo	4 stage
Detection of element in short circuit	Yes
Short-circuit protection)	Yes
Over Load protection	Yes
Over Voltage Output protection	Yes

Charging

Type of charging it is Voltages and current stabilized IUoUo. 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	Trickle - Float	1 Blink/sec	OFF
	Absorption	1 Blink/sec	OFF
	Boost – Bulk	3 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
	Replace Battery	5Blink	ON



All specifications are subject to change without notice.



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For more information and certifications, please contact:

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