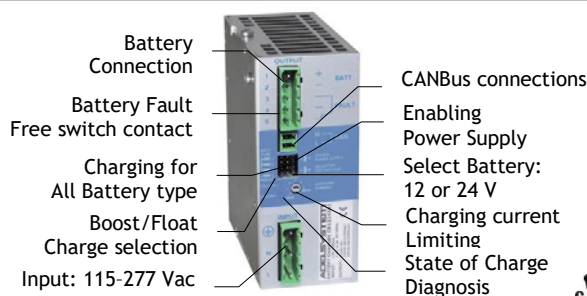


CB12245AJ Battery Charger

One product for 12 and 24 Vdc field



Input: Single-phase 115 - 230 - 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 IUoU, constant voltage and current

Switching technology Semi-resonant

Charging type: 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

CANBus J1939

Technical features

The CB series is a "Switching Technology" and "Battery Care Philosophy" that has been part of ADEL's core system know-how for years, leading to the development of this advanced, multi-stage, fully automatic battery charging method and Power Supply function if enabled, are suitable to meet the most advanced requirements of the battery manufacturers. The Battery Care concept is based on algorithms that implement rapid and automatic charging, optimization of battery charging over time, recovery of discharged batteries, and real-time diagnostics during installation and operation. The real-time self-diagnosis system, which monitors battery faults such as shorted elements, accidental reverse polarity connections, and battery disconnections, can be easily detected and removed with the help of the flashing code of the diagnosis LED, during installation and after sale. Each device is suitable for all types of batteries. Preset curves can be set for open lead acid, sealed lead acid, gel, Ni-Cd. The sturdy housing is developed for DIN rail and wall mounting applications.

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 Charger Output 24 Vdc (depend on jumper selection)

Recovery Charge	2 – 20 Vdc
Charging Current Max I _{batt} < 40°C(In) Input V. 230Vac	5 A ± 5%
Charging Current Max I _{batt} < 40°C(In) Input V. 120Vac	4 A ± 5%
Charging Current Max I _{batt} > 40°C(In)	3.5 A ± 5%

Battery Charger Output 12 Vdc (depend on jumper selection)

Recovery Charge	2 – 10 Vdc
Charging Current Max I _{batt} < 40°C (In)	6 A ± 5%
Charging Current Max I _{batt} > 40°C (In)	6 A ± 5%

Battery Tester

Short circuit Element Detection	Yes
Battery Impendancy (Life test)	No
Reverse polarity protection	Yes
Battery Disconnected (Protection No Spark)	Yes
Battery Voltage Wrong	Yes
End of charge control	Yes

Power Supply Output 24Vdc (If enabled by Jumper)

Output voltage (at In)	22 - 28.2 Vdc
Nominal current In = Iload	3.5 - 5 A ± 5% In

Power Supply Output 12Vdc (If enabled by Jumper)

Output voltage (at In)	11 - 14.4 Vdc
Nominal current In = Iload	6 A ± 5% In

Generic Output Data

Max.Time Bulk charge (Typ. at In)	15 h
Min.Time Bulk charge (Typ. at In)	4 min.
Float Charge: Jumper Configuration battery type	2.23; 2.25; 2.3; V/cell
Float Charge Ni-Cd	1.2 V/cell
Float Charge Li-ion	3.45 V/cell
Fast Charge - Boost Charge (Lead Acid)	2.4 V/cell
Fast Charge - Boost Charge (Ni-Cd)	1.5 V/cell
Fast Charge - Boost Charge (Li-ion)	3.65 V/cell
End of charging current (Bulk & Absorption charge)	6% charging current
Charging current limiting I _{adj}	20 ÷ 100 % / I _n
Quiescent Current	≤ 5mA
Remote Charge Input Control	Bulk / Float
Power Supply function	By Jumper Enabling
Output Voltage 12 or 24 Vdc Selection	By Jumper Enabling
Boost charge Enabling	By Jumper Enabling
Efficiency (50% of In)	90%
Dissipation Power load max	20.5W
Residual Ripple	≤ 60 mVpp
Quiescent Current (No input main Voltage)	≤ 5mA / 0mA Vbat < 26.3
Charging Curve automatic: IUoU	5 stage
Detection of element in short circuit	Yes

Short-circuit protection	Yes
Over Load protection	Yes
Overheating Thermal Protection	Yes
Over Voltage Output protection	(Typ. 35Vdc)

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):

Resistive load:	Max. DC: 30 Vdc 1 A; AC: 60 Vac 1A
Min. load:	Min. 1mA at 5 Vdc

Can (connection)

CanBus	J1939
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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)	45x110x105 mm
Weight	0.30 Kg approx.
Safety Standard Approval	CE

Climatic Data

Ambient temperature (operation)	-25 ÷ +70°C
De Rating Ta > 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
Auto Derating	Yes Up to 50 °C

Accessory

ADELViewSystem

Norms and Certifications

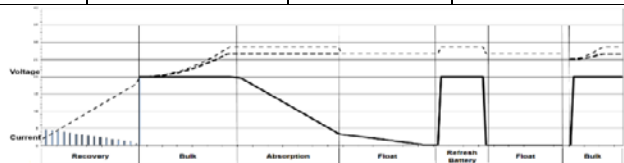
- Conforming to Low Voltage Directive (LVD) 2014/35/UE
- Electrical safety: IEC/EN 62368-1
- Conforming to Electromagnetic Compatibility (EMC) Directive 2014/30/UE
- Emission: IEC/EN 61000-6-3
- Immunity: IEC/EN 61000-6-2
- UL 1236 Recognized – BBGQ2 Battery chargers (UL file: E353241)

Charging

Type of charging it is Voltages and Current stabilized IUoU DIN41773 (Charging cycle).

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



ADELSYSTEM

All specifications are subject to change without notice
CB12245AJ_R13.doc

HELIOS
POWER SOLUTIONS

heliosps.com

Australia
sales-au@heliosps.com
+61 2 7200 9200

New Zealand
sales-nz@heliosps.com
+64 9 835 0700

Specifications subject to change.

Asia
sales@heliosps.asia
+65 6871 4140

Middle East
sales@heliosps.asia
+971 4 401 8484