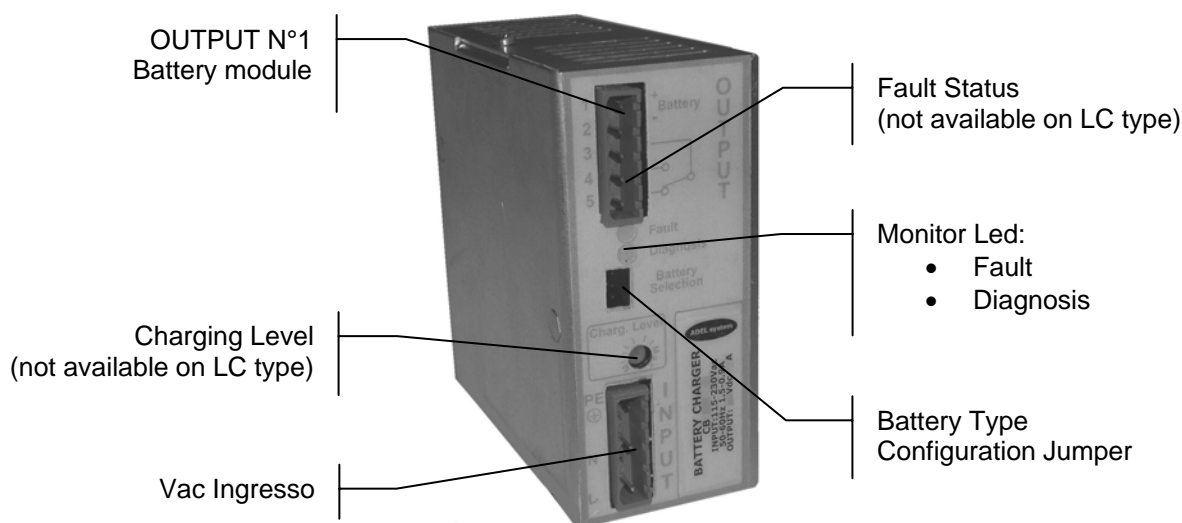


CB123A – CB123ALC

Intelligent Battery Charger

Thank you for having chosen one of our products for your work. We are certain that it will give the utmost satisfaction and be a notable help on the job.

General Description:



Application

CB battery charger is a range of microprocessor-power supplies which correctly charge sealed lead-acid and nickel-cadmium batteries at all time maximizing performance and life span.

Charge the battery in multi-stage principle, Fast and Trickle and automatically the device, check the battery quality in a lifetime to prevent any risk of damage to the battery and allow leaving the charger permanently connected. Before begin the operations of installation consult the manual.

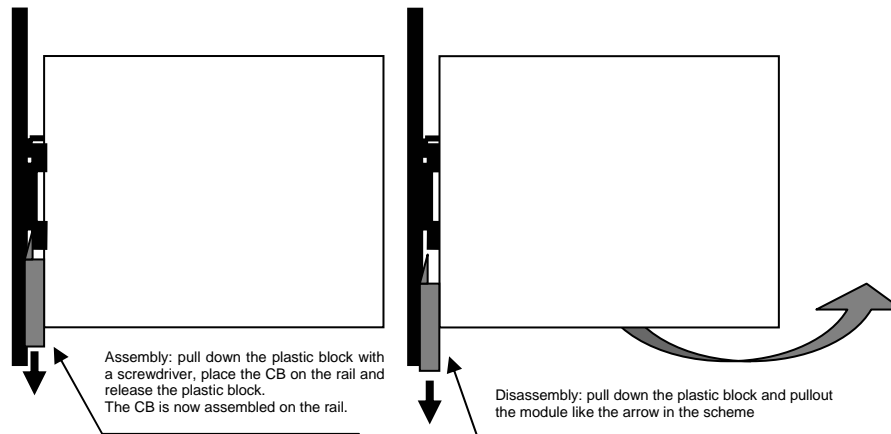
Mains Characteristic

- Nominal Input Voltage: 115 - 230 Vac
- OUTPUT 1: for connection to Battery
- Fast and trickle battery charge in according to DIN 41773
- Signaling: fault status of the battery (not available on LC type)
- Overload and short circuit protections
- Power limited Battery output
- Safety isolation in according with EN 60950
- Degree of protection IP20
- Rail DIN mounting

Instruction Manual

Rail mounting:

- The module must be mounted in vertical position.
- Other modules must have a minimum vertical distance of 10 cm to this power supply in order to guarantee sufficient auto convection.
- Mounting scheme:



Caution: Switch off the system before connecting the module. Never work on the machine when it is live.

Functional Characteristics

Charging Level Current: With trimmer from 20% to 100% of I_n . Select the max. battery charge current estimated from 10 to 20% of the nominal capacity

Battery Module (Output 1) 1-2 Pin: Battery input.

Low Battery or Battery replacement: In normal condition with battery in good status:
led fault off and contact close (3-4),
Any fault status of the battery: led fault on and contact open (3-4)
Not available on the LC type.

Diagnosis LED

- Normal conditions:
 - Very fast blinking = recovery charging (when the battery is too low, Under 7 Vdc)
 - Fast blinking = fast charge
 - Slow blinking = trickle charge (floating charge)
- Error conditions, Led Fault on and Led Diagnosis:
 - 1 blinking = Batteria Reverse polarity battery; Bad input voltage battery.
 - 2 blinking = Battery not connected.
 - 3 blinking = Short circuit battery element
 - 5 blinking = Bad battery.(Internal impedance Bad or Bad battery wire connection)

All specification are subject to change without notice



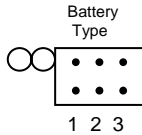
Battery Type Configurations



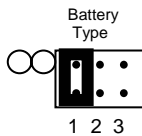
Caution:
Switch off the system before Setting the jumper.

Jumpers positions for charging:

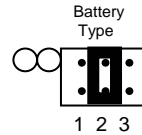
0. *Open Lead*: Fast=2.40V/cell Trickle=2.23V/cell
NiCd: Fast=I_{max}, 16 hours max Trickle=20% I_{max}



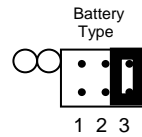
1. *Sealed Lead*: Fast=2.40V/cell Trickle=2.25V/cell
NiCd: Fast=I_{max}, 12 hours max Trickle=15% I_{max}



2. *Sealed Lead*: Fast=2.40V/cell Trickle=2.27V/cell
NiCd: Fast=I_{max}, 8 hours max Trickle=10% I_{max}



3. *Gel Battery*: Fast=2.40V/cell Trickle=2.30V/cell
NiCd: Fast=I_{max}, 4 hours max Trickle=5% I_{max}



Cable connection

The following cable cross-sections may be used:

At the Input: 0.2÷2.5 mm² rigid / flexible

At the Output: 0.2÷2.5 mm² rigid / flexible

Strip the connection ends: 7mm

Input: The input connection is made by the screw connections L, N, PE ⊕.

Protection

On the primary side: the device is equipped with an internal fuse T 4 A/250Vac. If the internal fuse is activated, it is most probable that there is a fault in the device. If happen, the device must be checked in the factory

On the secondary side Battery and load: The device is electrically protected against short circuits and overload.

Inversion polarity: the module is protected against inversion of battery polarity.

Over current and output short circuit: the unit limits the output power at max. 36W in normal rating.

Battery Test: Automatic. Check polarity and battery. Every 4 hours in trickle charge, make the test of the battery quality. The fault is signalized with relay commutation and diagnosis led blinking.

Short circuit and overload

The output current to the battery is selected with the Charge Level trimmer. The maximum power – load of 36W limits the current to the battery.

Thermal behavior

The device supplies the nominal output current at ambient temperature of up to 50°C. For ambient temperature of over 50°C, the output current must be reduced by 1% per °C increase in temperature. Max 60°C.

Standards and Certification

Electrical safety

The device must be installed in accordance with EN60950. The device must have a suitable isolating facility outside the power supply unit, via which can be switched to idle.

General Standard

Immunity in accordance with EN50082-2, level 3, class B

Radio interference suppression in accordance with EN 55011 class A (industrial areas)

All specifications are subject to change without notice



Features

Input Data

Nominal Input Voltage (2 x Vac)	115 Vac	230 Vac
Input voltage range	93 ÷ 264 Vac	
Inrush Current (Vn – In)	≤ 16 ≤ 5 msec.	
Frequency	47 ÷ 63 Hz	
Input Current (Nominal input Voltage)	0.64 A	0.34 A
Internal Fuse	F 4 A	
External Fuse (recommended)	Fast 4 A	

Output Data

Output Voltage Battery Bulk Charge / Nominal Current	Max 14.4 Vdc / 3 A	
Output Voltage Battery Trickle Charge / Nominal Current	Max 13.75 Vdc / 3 A	
Adjustment range of charge (In adj)	20 ÷ 100% In	
Type of charging characteristic	U/I	
End of charging voltage (Bulk charge)	Max 14.4 Vdc	
Suggested Battery Type up to (for recharging in 10 - 14 hours)	30 Ah	
Switching on after applying mains voltage	2.5 sec. Max	
Current max	3 A	
Efficiency	≥ 81 %	
Over Load protection	Si	
Reverse battery protection	Si	
Fault relay contact characteristics	1 A – 30 Vdc	

Climatic Data

Ambient Temperature (operation)	-10 ÷ +50 °C
Ambient Temperature (Storage)	-25 ÷ +85 °C
Humidity; no moisture condensation	95 % a 25°C

General Data

Isolation Voltage (Input/ output)	3000 Vac
Input ground insulation	1605 Vac
Electrcal safety	EN 60950
Degree of protection	IP 20
Protection class	I with PE connected
Dimension (w-h-d)	45x100x100
Weight	0.3 Kg approx

In according to EMC 89/336/EEC and Low voltage 93/68/EEC



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