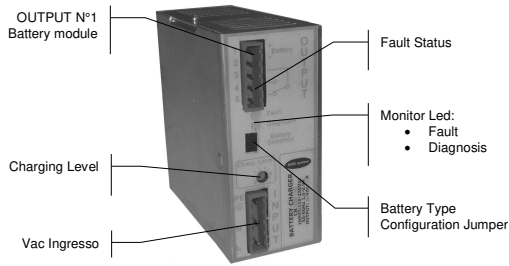


# CB123A

## 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: 115-230-277 Vac
- OUTPUT 1: for connection to Battery
- Fast and trickle battery charge In according to DIN 41773
- Signalling: 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

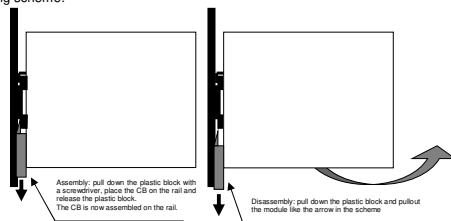
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Battery Charger

### 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 In. 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)

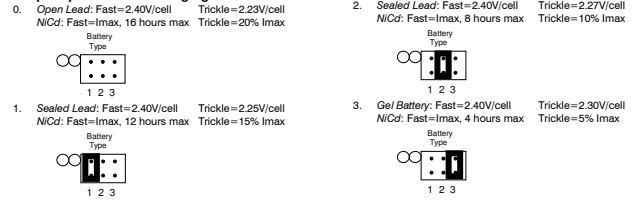
### Diagnosis LED

- 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 = 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)

### Battery Type Configurations

**Caution:** Switch off the system before Setting the jumper.

### Jumpers positions for charging:



### Cable connection

The following cable cross-sections may be used:  
**At the Input:** 0.2÷2.5 mm<sup>2</sup> rigid / flexible  
**At the Output:** 0.2÷2.5 mm<sup>2</sup> 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 internally fuse T 4 A. 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 50°C. For ambient temperature of over 50°C, the output current must be reduced by 2.5 % per °C increase in temperature. Max 70°C.

### Standards and Certification

#### Electrical safety

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

#### General Standard

Emission : EN61000-6-4  
Immunity: EN61000-6-2

All specification are subject to change without notice



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Battery Charger

### Features

#### Input Data

Nominal Input Voltage (2 x Vac)	115-230-277 Vac
input voltage range	90 - 305 Vac
Inrush Current (Vn - in)	≤ 7 < 5 msec.
Frequency	47 - 63 Hz
Input Current (Nominal input Voltage)	0.5 - 0.3 A
Internal Fuse	4 A
External Fuse (recommended)	10 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
Switching on after applying mains voltage	2.5 sec. Max
Current max	3 A
Efficiency	≥ 81 %
Over Load protection	Yes
Minimum Load	No
Short-circuit protection	Yes
Over Voltage Output protection	Yes
Reverse battery protection	Yes
Fault relay contact characteristics	1 A - 30 Vdc

#### Climatic Data

Ambient Temperature (operation)	-10 ÷ +50 °C
Ambient Temperature (Storage)	-25 ÷ +55 °C
Humidity: no moisture condensation	95 % a 25 °C

#### General Data

Isolation Voltage (Input/output)	3000 Vac
Input ground insulation	1605 Vac
Electrical safety	EN 60950
Degree of protection	IP 20
Protection class	I with PE connected
Dimension (w-h-d)	45x110x105
Weight	0.3 Kg approx

In according to 2014/30/UE Electromagnetic Compatibility and 2014/35/UE Low Voltage



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