

# Intelligent Battery Charger



## Typical Application

**Generator**

**Remote measurement station**

**Mini UPS in industrial applications**

**Battery chargers for automotive and nautical**

*Maximize the performance and life span of your battery*

## Features

**Nominal input voltage : 115—230 Vac**

**Output for connection to Battery**

**Output for connection to Load**

**Fast and Trickle battery charge in according to DIN 41773**

**Warning signal : replace battery, low battery, mains or buffering**

**Overload and short circuit protections**

**Safely isolation in according with EN 60950**

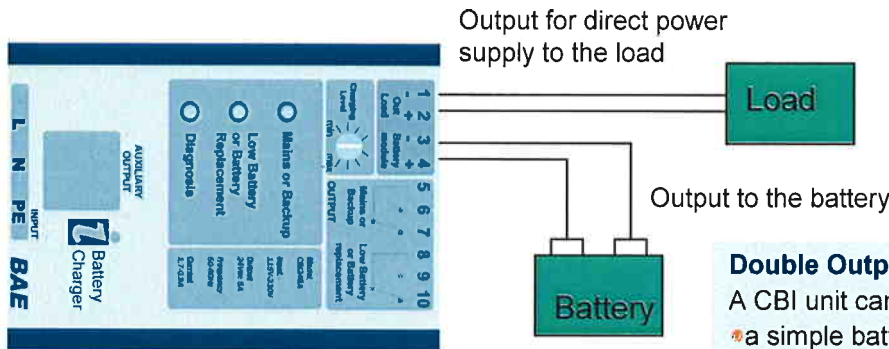
**Degree of protection IP20**

**Rail DIN mounting**

**Optional accessories of temperature sensor for Boost (fast) charging, cable voltage drop compensation and remote repetitions of LEDs**

**BAE**

## Intelligent Battery Charger



### Double Output

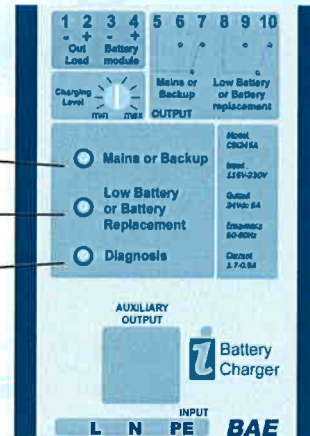
A CBI unit can be used as:

- a simple battery charger or
- an energy stations able to deliver continuous power supply to the load, even if the mains is off, like a UPS

### Display Features

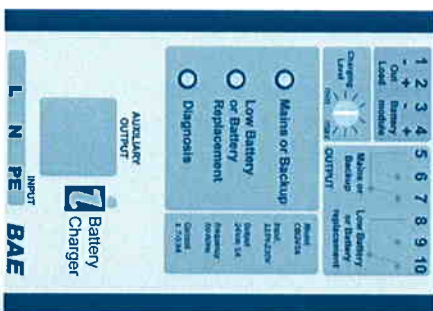
- Clear and straightforward identification of unit's operating status by means of LEDs display

- Mains Loss
- Battery fault alarm, when the mains is ON
- Battery capacity below 30%, when the mains is off
- Two functions :  
Trickle or boost charge
- Fault diagnostics with flashing code



### Signal on Voltage-free Contacts

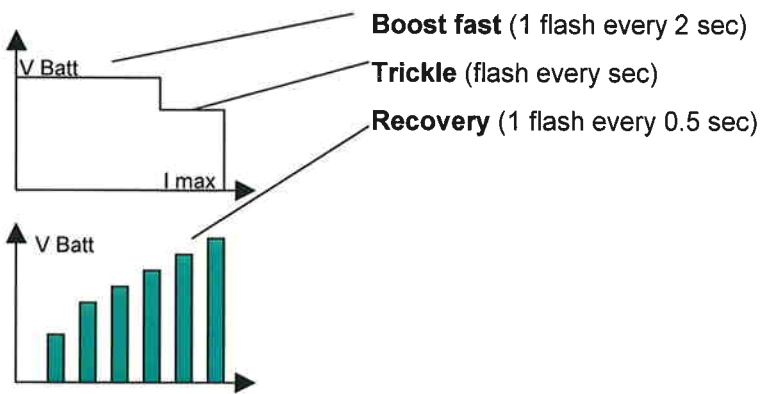
- CBI features the contact signals normally available on low voltage UPS systems



- Mains on – Back UP change over NO-NC contact galvanic insulation
- Low Battery – Battery replacement change over NO-NC contact galvanic insulation

### Three Charging modes

- Mode switching occurs automatically



### Diagnosis of battery status

- CBI makes installation and maintenance easier.
- A flashing sequence code allows to discriminate among various possible malfunctions.

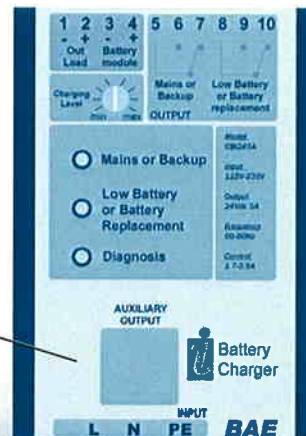


- 1 flash = Reverse polarity, wrong battery voltage
- 2 flashes = Disconnected battery
- 3 flashes = Battery element in short circuit
- 4 flashes = Overload
- 5 flashes = Battery to be replaced

### Accessories

- All CBI units can be made available with the following options:

- Temperature sensor for Boost (fast) charging
- Cable voltage drop compensation
- Remote repetition of LEDs



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## Features

### Input Data

Nominal Input Voltage (2 x Vac)	110 – 230 Vac
Input voltage range	93 – 264 Vac
Inrush Current (Vn – In)	<= 14 <= 5msec
Frequency	47 – 63 Hz
Input Current (Nominal input Voltage)	1.5 – 0.9 A
Internal Fuse	F4A
External Fuse (recommended)	Fast 6A

### Output Data

Output Voltage Battery Bulk Charge / Nominal Current	Max 28.8 Vdc / 5A
Output Voltage Battery Trickle Charge / Nominal Current	Max 27.0 Vdc / 5A
Adjustment range of charge (In adj)	20 – 100% In
Output voltage in Backup mode	27 – 22 Vdc
Type of charging characteristic	U / I
End of charging voltage (Bulk charge)	Max 28.8 Vdc
End of charging current (Bulk charge)	0.3A
Type battery up to	50Ah
Start up with capacity load	<= 30,000 microF
Switching on after applying mains voltage	2.5 sec max
Current Max	1.1 x In +/- 5%
Residual Ripple	<=60 mVpp
Minimum Load	No
Efficiency	>= 81%
Short Circuit Protection	Yes
Over Load Protection	Yes
Over Voltage Output protection	Yes
Reverse battery protection	Yes

### Climate Data

Ambient Temperature (operation)	-10 to 50°C
Ambient Temperature (storage)	-25 to 85°C
Humidity no moisture condensation	95% a 25°C

### General Data

Isolation Voltage (Input / Output)	3000Vac
Input ground insulation	1605Vac
Electrical safety	EN 60950
Degree of protection	IP 20
Protection class	I with PE connected
Dimension (w-h-d)	65 x 115 x 135
Weight	0.6 kg approx
In according to EMC 89/336/EEC and Low voltage 93/68/EEC	CE

**Input:110–230Vac**

**Output: 12 Vdc**

- CBI123A
- CBI126A
- CBI1210A
- CBI1215A

**Input:110–230Vac**

**Output: 24 Vdc**

- CBI243A
- CBI245A
- CBI2410A
- CBI2415A

**Input:110–230Vac**

**Output: 48 Vdc**

- CBI482A
- CBI485A

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