

Intelligent Battery Charger



CBI245A

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 1 : For connection to Battery

OUTPUT 2 : For connection to Load

Fast and Trickle battery charge in according to DIN 41773

Signaling : replace battery, low battery, mains or buffering

Overload and short circuit protections

Safely isolation in according with EN 60950

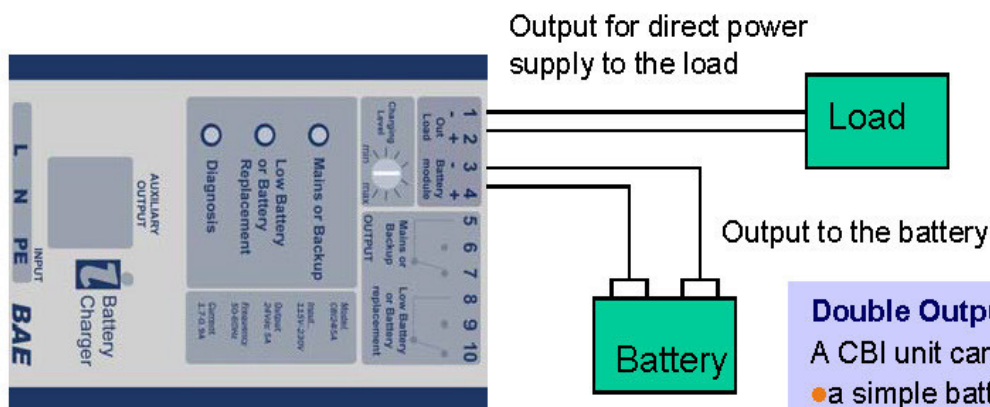
Degree of protection IP20

Rail DIN mounting

BAE

Intelligent Battery Charger

A revolution in Battery Charging



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

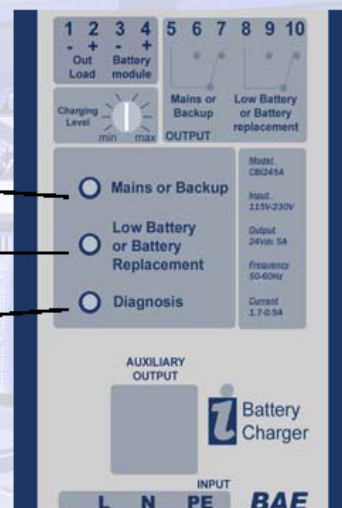
- Clear and straightforward identification of unit's operating status by means of LEDs display

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

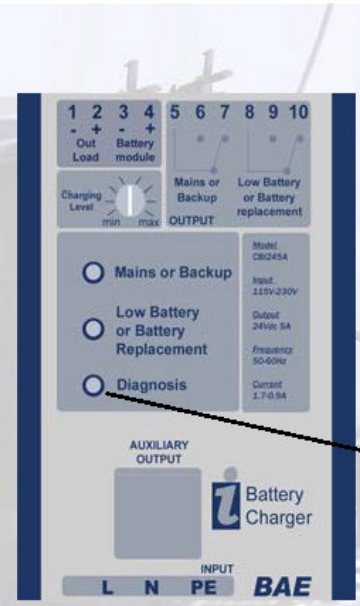
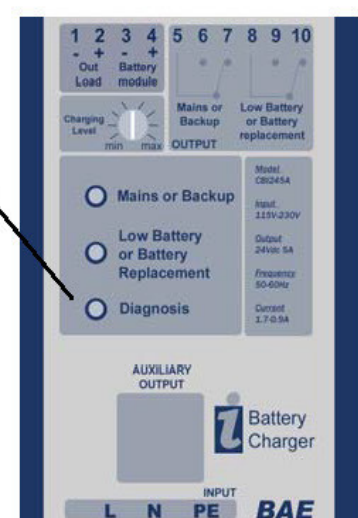
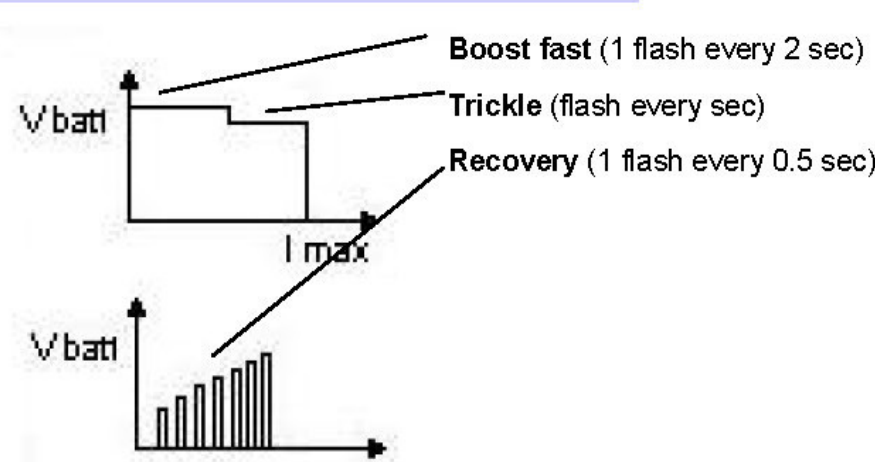
Low Battery – Battery replacement change over NO-NC contact galvanic insulation

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Intelligent Battery Charger

Three Charging modes

- Mode switching occurs automatically



Diagnosis of battery status

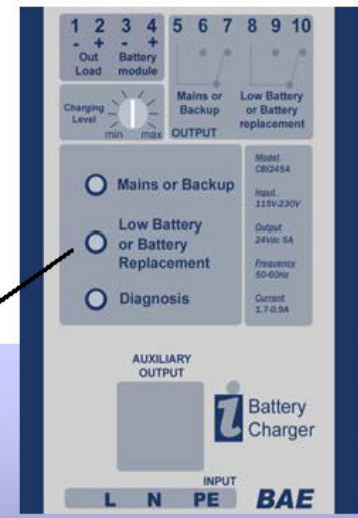
- CBI makes installation and maintenance easier.
- A flashing sequence code allows to discriminate among various possible malfunctions.

- 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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A revolution in Battery Charging

Features

CBI245A

Input Data

Nominal Input Voltage (2 x Vac)	110- 230 Vac
Input voltage range	93 - 264 Vac
Inrush Current (Vn – In)	≤ 14 ≤ 5 msec.
Frequency	47 - 63 Hz
Input Current (Nominal input Voltage)	1,5 - 0.9 A
Internal Fuse	F 4 A
External Fuse (recommended)	Fast 6 A

Output Data

Output Voltage Battery Bulk Charge / Nominal Current	Max 28.8 Vdc / 5 A
Output Voltage Battery Trickle Charge / Nominal Current	Max 27.0 Vdc / 5 A
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)	0.3 A
Type battery up to	50 Ah
Start up with capacity load	≤ 30.000 μF
Switching on after applying mains voltage	2,5 sec. max
Current max.	1.1 x I _N ± 5%
Residual Ripple	≤ 60 mV _{pp}
Minimum Load	No
Efficiency	≥ 81 %
Short-circuit protection	Yes
Over Load protection	Yes
Over Voltage Output protection	Yes
Reverse battery protection	Yes

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
Electrical safety	EN 60950
Degree of protection	IP 20
Protection class	I with PE connected
Dimension (w-h-d)	65x115x135
Weight	0.6 Kg approx

CBI2410A

Input Data

Nominal Input Voltage (2 x Vac)	115 / 230 Vac
Input voltage range	93 - 132 187 - 264 Vac
Inrush Current (Vn – In)	≤ 14 ≤ 5 msec.
Frequency	47 - 63 Hz
Input Current (Nominal input Voltage)	3,5 - 1.6 A
Internal Fuse	F 6 A
External Fuse (recommended)	Fast 6 A

Output Data

Output Voltage Battery Bulk Charge / Nominal Current	Max 28.8 Vdc / 10 A
Output Voltage Battery Trickle Charge / Nominal Current	Max 27 Vdc / 10 A
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)	0.3 A
Type battery up to	100 Ah
Start up with capacity load	≤ 30.000 μF
Switching on after applying mains voltage	2,5 sec. max
Current max.	1.1 x I _N ± 5%
Residual Ripple	≤ 60 mV _{pp}
Minimum Load	No
Efficiency	≥ 81 %
Short-circuit protection	Yes
Over Load protection	Yes
Over Voltage Output protection	Yes
Reverse battery protection	Yes

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
Electrical safety	EN 60950
Degree of protection	IP 20
Protection class	I with PE connected
Dimension (w-h-d)	100x115x135
Weight	0.85 Kg approx

CBI126A

Input Data

Nominal Input Voltage (2 x Vac)	110- 230 Vac
Input voltage range	93 - 264 Vac
Inrush Current (Vn – In)	≤ 14 ≤ 5 msec.
Frequency	47 - 63 Hz
Input Current (Nominal input Voltage)	1,1 - 0.6 A
Internal Fuse	F 4 A
External Fuse (recommended)	Fast 6 A

Output Data

Output Voltage Battery Bulk Charge / Nominal Current	Max 14.4 Vdc / 6 A
Output Voltage Battery Trickle Charge / Nominal Current	Max 13.5 Vdc / 6 A
Adjustment range of charge (In adj)	20 - 100% In
Output voltage in Backup mode	13.5 - 11 Vdc
Type of charging characteristic	U/I
End of charging voltage (Bulk charge)	Max 14.4 Vdc
End of charging current (Bulk charge)	0.3 A
Type battery up to	50 Ah
Start up with capacity load	≤ 30.000 μF
Switching on after applying mains voltage	2,5 sec. max
Current max.	1.1 x I _N ± 5%
Residual Ripple	≤ 60 mV _{pp}
Minimum Load	No
Efficiency	≥ 81 %
Short-circuit protection	Yes
Over Load protection	Yes
Over Voltage Output protection	Yes
Reverse battery protection	Yes

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
Electrical safety	EN 60950
Degree of protection	IP 20
Protection class	I with PE connected
Dimension (w-h-d)	65x115x135
Weight	0.6 Kg approx

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



Available Models

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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