

CBS-031 (3,5A) 12V

CBS-061 (6A) 12V

CBS-061 (6A) 24V



- COMPLIES WITH DIN 41773
- WITH RS485 SERIAL PORT BUILT INTO THE BATTERY CHARGER
- ALSO FOR FITTING WITH OMEGA BAR
- ENERGY SAVING



FEATURES

The battery charger has three charge modes:

1. Fast charge mode, with constant current control.
2. Intermediate charge mode, with voltage control.
3. Maintenance charge mode, with voltage control.

The battery charger has a LED to signal the following conditions:

- Short circuit on the output cables.
- Polarity inversion.
- Battery cable disconnection.

It has a RS485 serial port used to send information about the main operating modes.

It is fitted with a hook for the OMEGA bar.

The battery charger generates heat when it is charging, so take care that ventilation is not blocked by any items nearby. If it is fitted inside a cabinet, we recommend providing ventilation holes or slots to allow dissipation of the heat.

OPERATION

AUTOMATIC CHARGING

Automatic charging takes place at four levels:

1. Rapid charge via current control 3,5A (CBS-031), 6A (CBS-061), until 14 V (28 V) ($\pm 4\%$) are reached in the battery.
2. Intermediate charge via voltage control, until 14,4 V, (28,8 V) ($\pm 4\%$) are reached in the battery.
3. Maintenance charge using a very low current value, but sufficient to maintain the voltage value at 13,5 (o 27 V) ($\pm 4\%$).
 - a. With battery voltage between 13.5 V and 13.7 V (27 V) the battery charger does not carry out adjustments.
 - b. With battery voltage higher than 13,7 V (27,4 V) V the battery charger decreases the supply of current.
 - c. With battery voltage lower than 13.5 V (27 V) the battery charger tries to maintain this voltage by supplying current.
 - d. Starts again with fast charging (point 1) with battery voltage lower than 11,5 V (23V) (+/-4%).
4. Recovery of the battery unloads. The battery is recharged to impulses with pauses of 20 second between a package and the other signals.

SIGNALS

The battery charger has a two-colour LED:

Led	Flashes	Description
GREEN LED	On without flashing	Normal operating mode, mains present and normal battery voltage.
RED LED	1	No mains present.
	2	Battery cable disconnection.
	3	Short circuit on cables.

RS485 PORT

RS485 serial port for sending information about the status of the battery.

The data sent includes:

- Battery voltmeterer
- Load current ammeter
- Battery charger status (see signals)

If there is overloading of the remote repetition terminals or if there is a mains failure, both of the indicators will remain unlit.

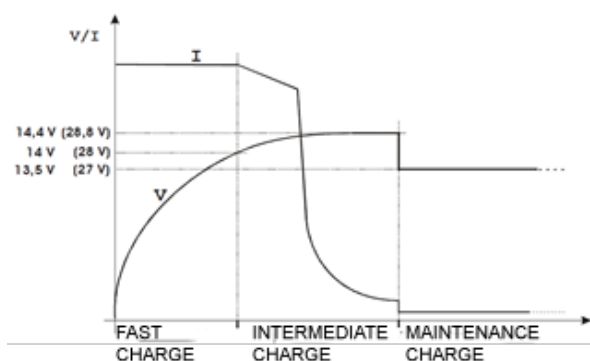
Only authorised and properly trained personnel are allowed to connect the serial port inside the battery charger. Follow the instructions below:

- Disconnect the mains voltage.
- Remove the two terminal boards.
- Remove the cover.
- Insert the connector of the flat cable into the serial connector.
- Replace the cover.
- Replace the terminal boards

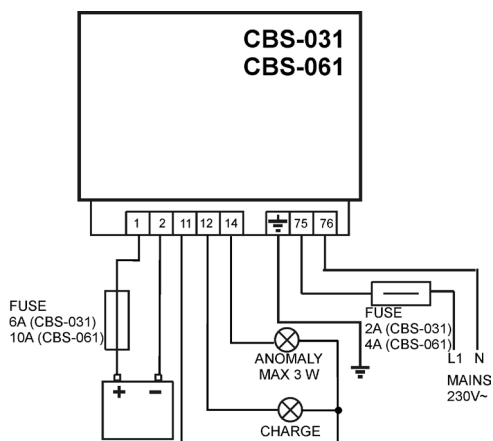


ATTENTION: never connect the battery charger to the power supply if the cover is not in place.

EXAMPLE CHARGING CURVES

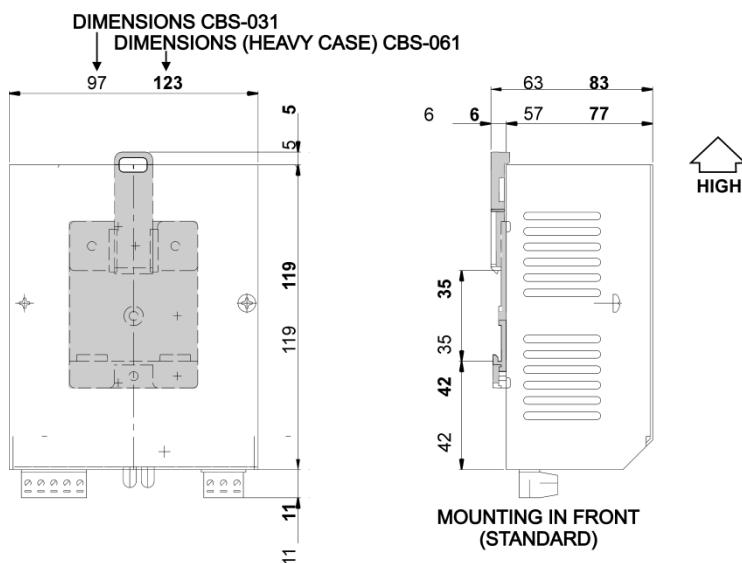


WIRING DIAGRAM



Devices must be provided for disconnection from the mains: for example, switches with contacts opening greater than 3 mm or supply cables and plugs which are also accessible after installation.

DIMENSIONS AND INSTALLATION



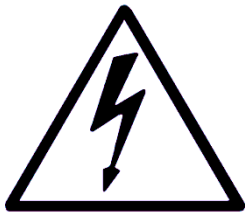
- During the charging phase the equipment heats up. One must therefore ensure that the natural flow of air is not obstructed by nearby objects.
- If the equipment is installed in a closed cabinet, holes or slits should be provided so that the heat can escape.

TECHNICAL SPECIFICATIONS

	CBS-031 12V	CBS-061 12V	CBS-061 24V
Power supply			
From mains	85Vac ÷ 265Vac		185Vac ÷ 265Vac
Frequency	50 / 60 Hz		
Maximum current absorption	60W	110W	220W
Insulation class	1		
Efficiency at full charge	75%	88%	
Energy saving (power consumption with no charge)	1,5W	2W	
Battery voltage			
Output voltage	13.7Vdc	13.7Vdc	27.4Vdc
Rated charge current	3.5A		6A
Self-consumption in a blackout	15mA	18mA	36mA
Output voltage 11	14Vdc	14Vdc	28Vdc
Rated charge current 11, 12 and 14	3W		
Minimum battery capacity	30Ah	60Ah	
Battery types for connection	Open lead acid, sealed lead acid, 6 cell gel		
Other			
Terminal board	8 pin screw type		
Protection class	IP 00		
Temperature limits	-10 ÷ 50°C		
Weight	350gr	600gr	700gr
Dimensions (LxHxW)	135 x 97 x 63mm		135 x 123 x 83mm

WARNING

Use only for keeping batteries charged. For use in starter circuits for diesel and petrol engines and for gen-sets, motor-driven pumps, motor-driven compressors, etc. Built for installation in an electric panel only.



Attention: Parts powered with dangerous voltages

The battery charger can only be accessed by authorised and properly trained personnel. Maintenance and functions programming should only be attempted after disconnecting the system from the mains supply. As an additional protection measure, we recommend grounding the system phases. Notwithstanding the above, only authorised and properly trained personnel can undertake the following operations with the system powered:

- visual inspection of the panel connections and markings;
- taking voltage and/or current measurements

Equipment must be used with the proper electrical protection for the above tasks.



Attention: Compliance with the following recommendations is obligatory

- Always make connections as shown in the wiring diagram.
- Check the consumption of the connected devices is in line with the described technical specifications.
- The installation must always guarantee adequate dissipation of heat.
- Always install the device at a lower position than any other devices that produce or dissipate heat.
- Do not attempt to charge non-rechargeable batteries.
- When charging lead-acid batteries, put the batteries in a ventilated area.
- Connection to the mains power supply must comply with national standards.
- It is mandatory to earth the equipment via the appropriate terminal.
- Connect the device to the battery with no additional branching of the wires.
- Do not let cuttings of copper wire or other metal residue fall onto the device.
- Disconnect the device's output terminals before handling the battery.
- The installer must ensure protection against direct/indirect contact according to current legislation concerning electrical systems using up to 1000 V in AC and 1500 V in DC (for Italy CEI 64-8).

THIS BATTERY CHARGER IS NOT SUITABLE FOR WORKING IN THE FOLLOWING CONDITIONS:

- If the room temperatures exceeds the limits specified in the technical data sheet.
- If abrupt shifts in temperature and air pressure produce exceptional condensation.
- If there is high pollution caused by dust, fumes, vapour, salts and corrosive or radioactive particles.
- If there is high radiation of heat due to direct sunlight, ovens or the like.
- If you suspect the presence of mould or pests.
- If there is a risk of fire or explosion.
- If the device may be subject to major impact or vibration.
- If the device is protected by barriers or housing whose protection rating is below IP40.

ELECTROMAGNETIC COMPATIBILITY

This battery charger will only work if it is installed in systems that comply with regulations for CE marking. It complies with immunity requirements specified in EN61326-1, however, this does not rule out the possibility that malfunction could occur in extreme cases occurring in specific situations. The installer is responsible for checking that the level of perturbation does not exceed that specified in standards.

OPERATION AND MAINTENANCE

We recommend the following maintenance on a weekly basis:

- checking the signals;
- checking the battery status;
- checking the wires are connected firmly and the condition of the terminals.

IN THE ABSENCE OF OUR WRITTEN DECLARATION ATTESTING TO THE CONTRARY, THIS DEVICE SHOULD NOT BE USED AS A CRITICAL COMPONENT IN EQUIPMENT OR SYSTEMS VITAL TO THE LIFE OF PEOPLE OR OTHER LIVING THINGS.

INFORMATION FOR ORDERING

Type	CBS-031 12V	Item Code	00010440
	CBS-061 12V		00010444
	CBS-061 24V		00010445

ACCESSORIES KIT

Type	KIT MU-CBS-030/060	Item Code	40804415
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CONFORMITY

