INSTRUCTION AND USER MANUAL

AUTOMATIC BATTERY CHARGER
FOR LEAD BATTERIES
TYPE **CBS-010**

THREE CHARGING LEVELS
- **RAPID** WITH CURRENT CONTROL
- **INTERMEDIATE** } WITH VOLTAGE CONTROL
- **MAINTENANCE** }

• DIN BAR HOOK MOUNTING
OR WITH SCREWS.

OPERATION

Automatic charging takes place at three levels:
- Rapid charge via current control 1A until 13,4 V (26,8 V) are reached in the battery.
- Intermediate charge via voltage control, until 13,5 V (27 V) are reached in the battery.
- Maintenance charge using a very low current value, but sufficient to maintain the voltage value at 13,5V (27 V).

The **red warning indicator (LED)** is lit when the charge is normal.

The **red warning indicator (LED)** is off in mains failure mode.

The **flashing red warning indicator (LED)** is on in maintenance mode.

Polarity inversion: **this condition causes the battery charger to break.**

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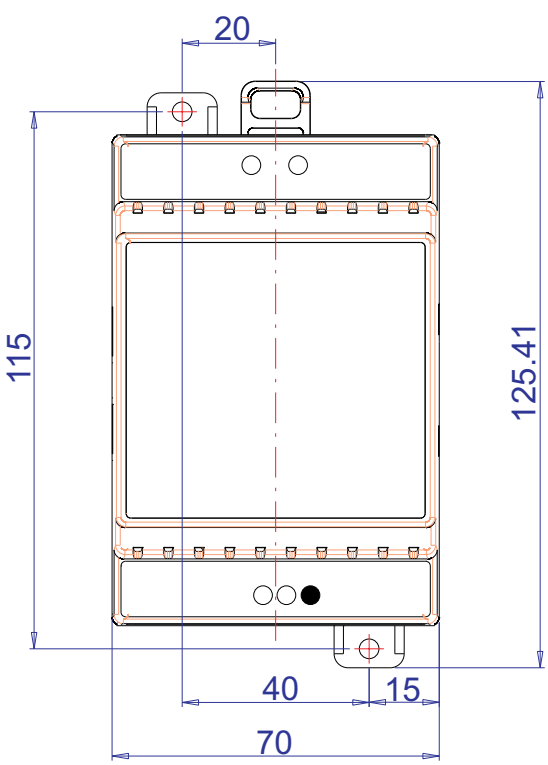
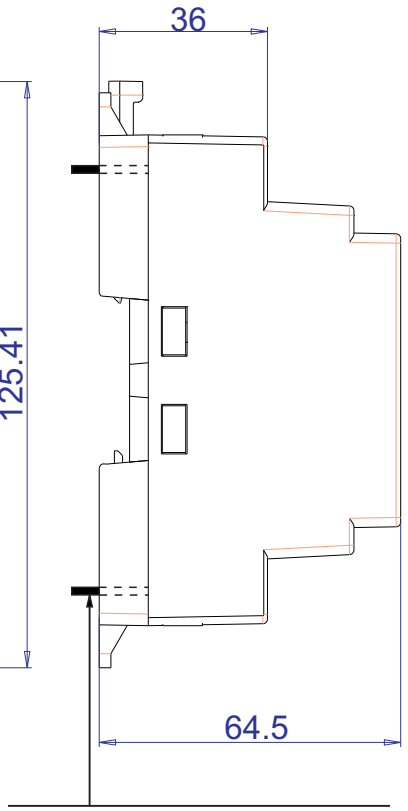
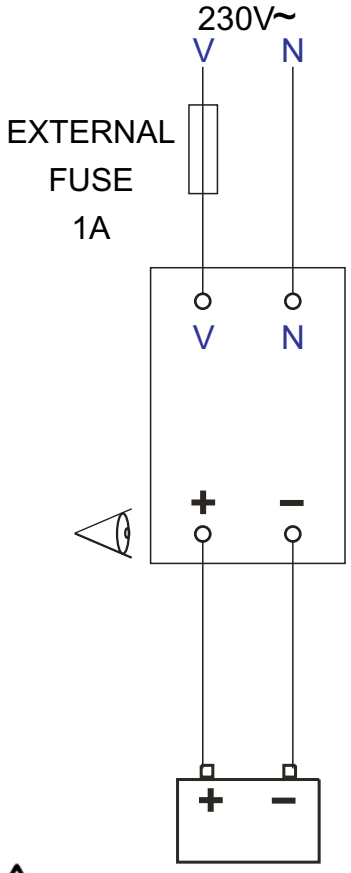
DIMENSIONS





Break the four supports when the mounting is on DIN h8bar.

CONNECTIONS



WARNING DO NOT REVERSE THE POLARITY

THIS CONDITION CAUSES THE BATTERY CHARGER TO BREAK

- 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.
- During the charging phase the equipment heats up. One must therefore ensure that the natural flow of air is not obstructed by nearby objects.

TECHNICAL DATA

Battery voltage:	**12V**	**24V**
Power supply:	**230V~ 185÷265V 50/60Hz**	**230V~ 185÷265V 50/60Hz**
Nominal charge current:	**1A**	**1A**
Connectable battery:	**6 cells lead/acid (minimum capacity 10 Ah)**	**12 cells lead/acid (minimum capacity 10 Ah)**
Maximum absorbed power at 230V:	**20W**	**40W**
Full charging output:	**70%**	**70%**
Circuit loading in absence of mains supply:	**12mA at 12V**	**6mA at 24V**
Degree of protection:	**IP00**	**IP00**
Temperature range:	**- 10 ÷ 50 °C**	**- 10 ÷ 50 °C**
Weight:	**75 g**	

NOTICES

Used only to maintain the battery charge. Used in the starting circuits of diesel and petrol engines, such as those used in genset units, close-coupled pumps, compressor motors, etc. Constructed for installation only inside the electric panel.

Warning:
Adhere closely to the following advice

- Install in such a way that there is always adequate heat disposal.
- Always install under other equipment which produces or spreads heat.
- Adhere to the instructions indicated for installation.
- Do not try to recharge non rechargeable batteries.
- When charging lead batteries, place the battery in a well-aired area.
- The connection to the mains must be made in accordance with the national installation rules.
- Connect the equipment to the battery without other conductor cutouts.
- Disconnect the equipment output terminals before any interventions on the battery.
- Make sure that no copper conductor cuttings or other waste material fall inside the equipment.

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

- Where the environmental temperature is outside the limits indicated in the technical sheet.
- Where the air pressure and temperature variations are so rapid as to produce exceptional condensation.
- Where there are high levels of pollution caused by dust, smoke, vapour, salts and corrosive or radioactive particles.
- Where there are high levels or heat from radiation caused by the sun, ovens or the like.
- Where attacks from mould or small animals are possible.
- Where there is the risk of fire or explosions.
- Where the equipment can receive strong vibrations or knocks.
- Where the equipment is protected by barriers or casing with protection level less than IP20.

ELECTROMAGNETIC COMPATIBILITY

This battery charger functions correctly only if inserted in plants which conform with the CE marking standards; it meets the exemption requirements of the standard EN61326-1 but it cannot be excluded that malfunctions could occur in extreme cases due to particular situations. The installer is responsible for checking whether the levels of disturbance are above those consented by the regulations.

CONDUCTION AND MAINTENANCE

The following maintenance operations should be performed every week:
- check that the indicators function;
- check the batteries;
- check that the conductors are tight, check the condition of the terminals.

UNLESS WE MAKE A WRITTEN DECLARATION STATING THE CONTRARY, THIS BATTERY CHARGER IS NOT SUITABLE FOR USE AS A CRITICAL COMPONENT IN EQUIPMENT OR PLANTS RESPONSIBLE FOR KEEPING PERSONS OR OTHER LIVING BEINGS ALIVE.

YOUR ELECTRICAL TECHNICIAN CAN ASK ANY QUESTIONS ABOUT THIS BATTERY CHARGER BY TELEPHONING OUR TECHNICIAN

NOTICES

Warning: Components carrying dangerous voltage levels

Only assigned and suitably trained personnel are allowed to have battery charger access.
No maintenance operations are permitted unless the plant has been disconnected from the mains and from the battery.
The phases should be earthed and short-circuited as a safety measure.

Notwithstanding what is stated above, only assigned and trained personnel, when the plant is live, can perform the following operations:
· visual inspection of the battery charger, the connections and the markings;
· measurement of voltage and/or current values.
These operations must, in any case, be performed using a tool which guarantees the appropriate electrical protection.

ORDERING DATA

TYPE	CODE
CBS-010 12V	00010101
CBS-010 24V	00010102

CONFORMITY DECLARATION

CE

ELCOS s.r.l. assumes full responsability for declaring that the equipment:

type **CBS-010**

installed and used in the ways and for the purposes described in the instruction and user manual, is in conformity with the following directives:

- 2006/95/CE related to the electrical materials destined to be used within certain voltages limits
- 2004/108/CE related to the electromagnetic compatibility and that repeals the directive 89/336/CEE,
- 2011/65/UE on the restriction of the use of certain hazardous substances in electrical and electronic equipment,

because it is built and functions in accordance with the harmonized Standards: EN61010-1, EN60529, EN61326-1, EN61326/A1, EN61000-3-2, EN61000-3-3, EN61000-3-3/A1, EN61000-4-3, EN61000-4-6, EN61000-4-6/A1, EN61000-4-11.

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