SWITCHING BATTERY CHARGES
BCG SERIES

Lovato electric

Switching battery chargers BCG series

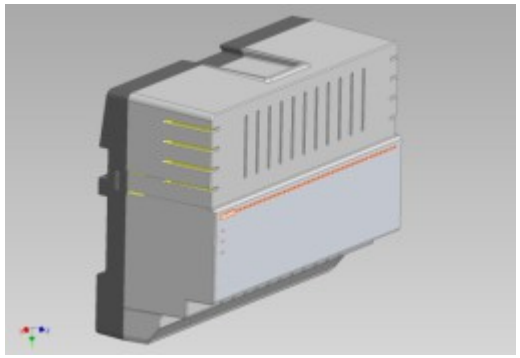
RANGE

Code	Rated battery voltage	Maximum charging current
BCG 06 12	12VDC	6A
BCG 12 12		12A
BCG 05 24	24VDC	5A
BCG 10 24		10A

CODING SYSTEM

BCG 06 12

- Rated battery voltage
- Maximum charging current



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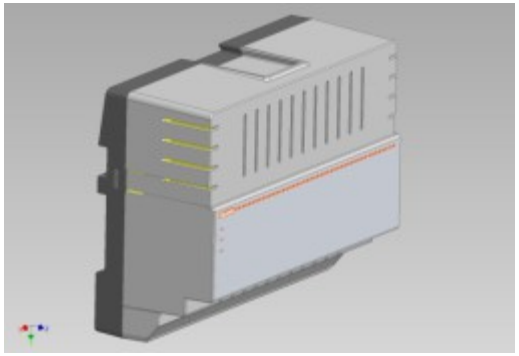
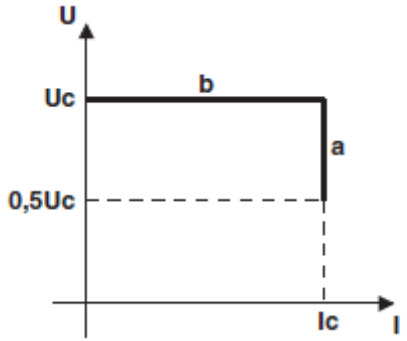


GENERAL CHARACTERISTICS

- Switching technology
- Power supply voltage: 110…240VAC (90…264VAC)
- Charging voltage selectable between two values by dip-switch
  - Lead-Acid batteries
  - Sealed lead-acid batteries
- Maximum charging current setting by external trimmer
  - 20…100% of rated current
- Changeover output for alarming
  - 30VDC 3A
  - Energised if alarms are not present
- Charging working cycle
  constant current / constant voltage (DIN41773)



a - constant current charge
b - constant voltage charge

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ENVIRONMENTAL CHARACTERISTICS

- Working temperature -30…55°C
- Working range 55…70°C with current derating -1,5%In / °C
  The derating is carried out through the external trimmer
- Storage temperature -40…85°C
- Relative humidity 95% (25°C)

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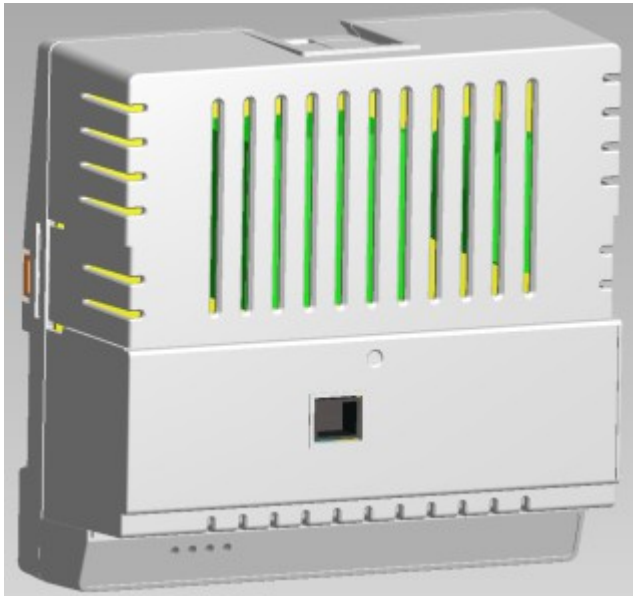
DIMENSIONS

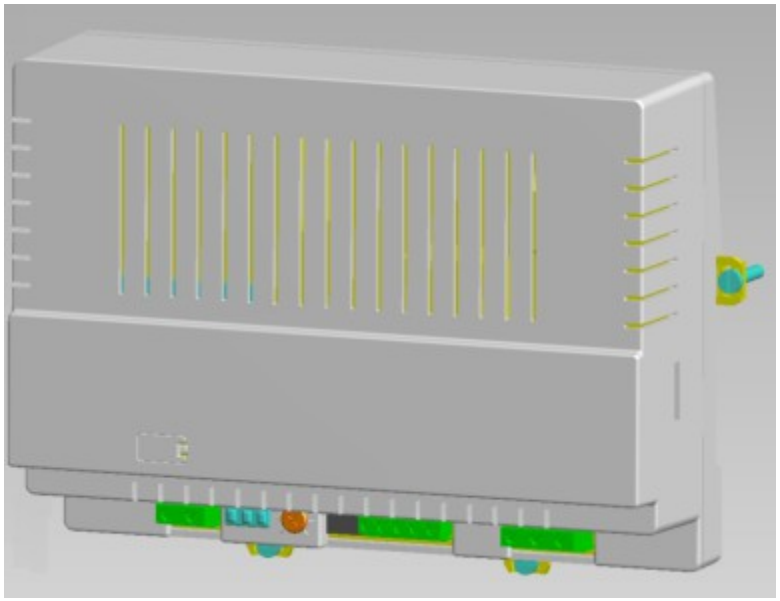
BCG 06 12
BCG 05 24

148 x 145 x 63 mm



BCG 12 12
BCG 10 24

198 x 145 x 63 mm



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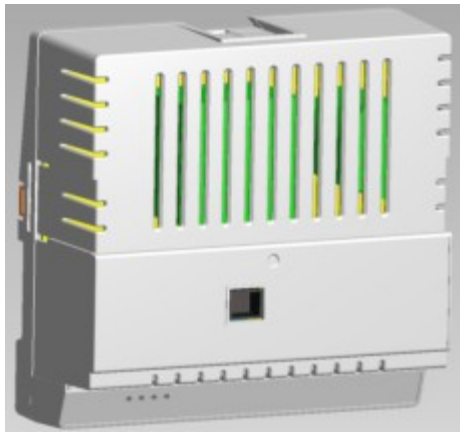
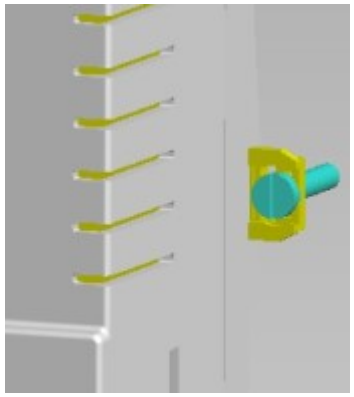
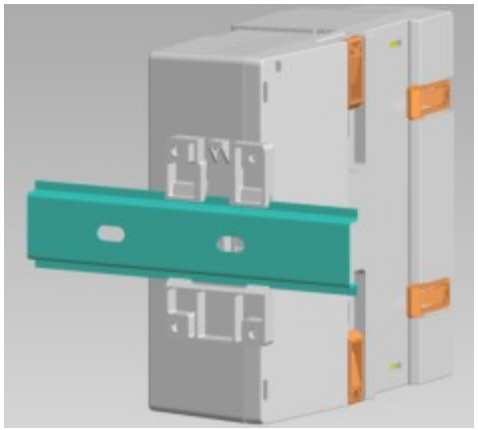
MOUNTING

- DIN rail mounting
- Screw fixing system







Tool for vertical mounting with accessory BCGX00

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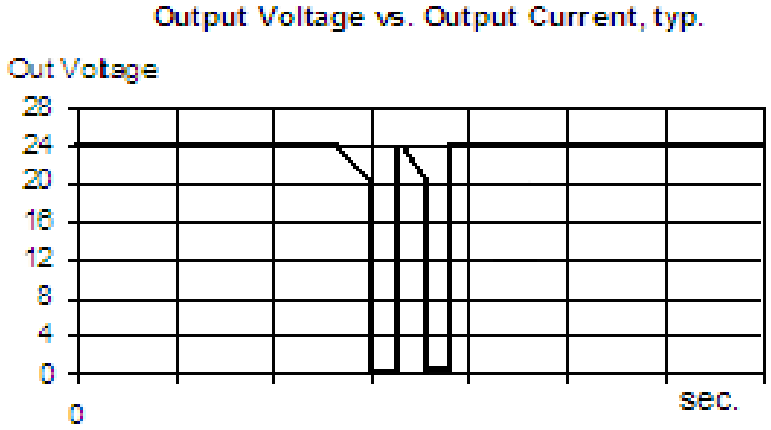
PROTECTIONS

- Input fuse at AC side
- Output protection to save the battery (in case of battery charger malfunction)
- Short circuit at output side (hicc-up mode)
- Reverse polarity

Automatic reset when the anomaly is removed



Hicc-up mode

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SIGNALLING

Relay output

- Changeover contact activated if alarms are not present
- Deactivation in case of:
  - absence of AC power supply
  - short circuit at output side
  - overload

4 LEDs

- POWER ON: AC power supply is present
- CHARGE: charging in progress (charging current > 30% of set value)
- ALARM: alarms are present (relay output OFF = led ON)
- REV: reverse polarity

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SETTING AND COMMANDS

- Accessible trimmer on the front to set the maximum charging current.
  Setting 20…100% of the rated value.

- Charging voltage selection through dip-switch between two values
  for batteries made with different technology.

- External contact for boost function.
  The output voltage is kept fixed and higher than the rated one while the contact is close.
  Used to avoid oxidation.

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CONFORMITY AND OMOLOGATIONS

Product standards: EN60950-1 (industrial application)

Low voltage side (battery):

- double insulation;
- SELV circuit.
  In case of failure the voltage never overtakes the charging voltage.

cURus omologation in progress

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SELLING POINTS

- selectable output voltage to charge both lead-acid and sealed lead acid batteries (dip-switch setting);
- the current can be adjusted from 20 to 100% of rated value through an external trimmer placed on front of the device;
- external contact for boost function;
- protection against overload with Hicc-up function;
- 4 status LEDs (power on, alarm, charging in progress, reverse polarity);
- relay output contact for fault signalling

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SWITCHING versus LINEAR TECHNOLOGY

SWITCHING TECHNOLOGY

Advantages:

- Small dimensions and low weight
- High efficiency
- Low heat dissipation.

Disadvantages:

- Complex circuit design
- Harmonic and electromagnetic noise generation to be filtered.

LINEAR TECHNOLOGY

Advantages:

- Simple circuit design.

Disadvantages:

- Large volume and high weight
- Low efficiency
- High heat dissipation.

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Thanks for your attention!

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