

BHG-12



V.1.02

Description

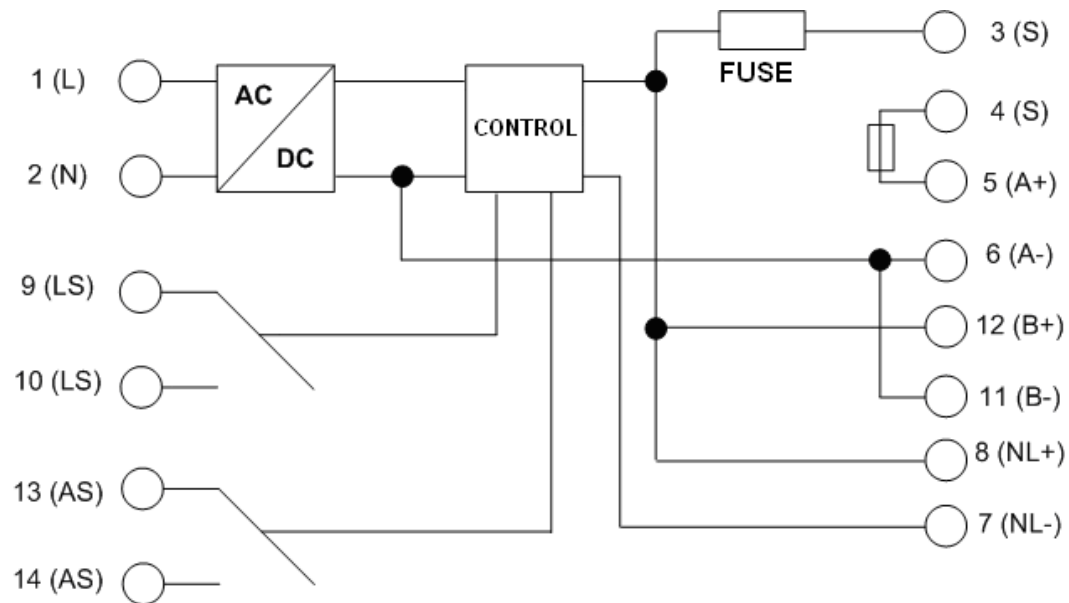
The device has the following functions:

- Charger for sealed lead-acid batteries with 12 V nominal voltage and capacitances from 1Ah to 15Ah.
- Negative polarity and short-circuit protection for emergency light in the cabin (min 500mA) and protection for battery charge.
- Terminals for auxiliary power from battery
- Free contact for mains voltage (cabin light)
- Free contact for battery in order
- Status display with 4 LEDs
- Internal protection

Charge of batteries takes place according to I / U - curve. Monitored error detections are as follows:

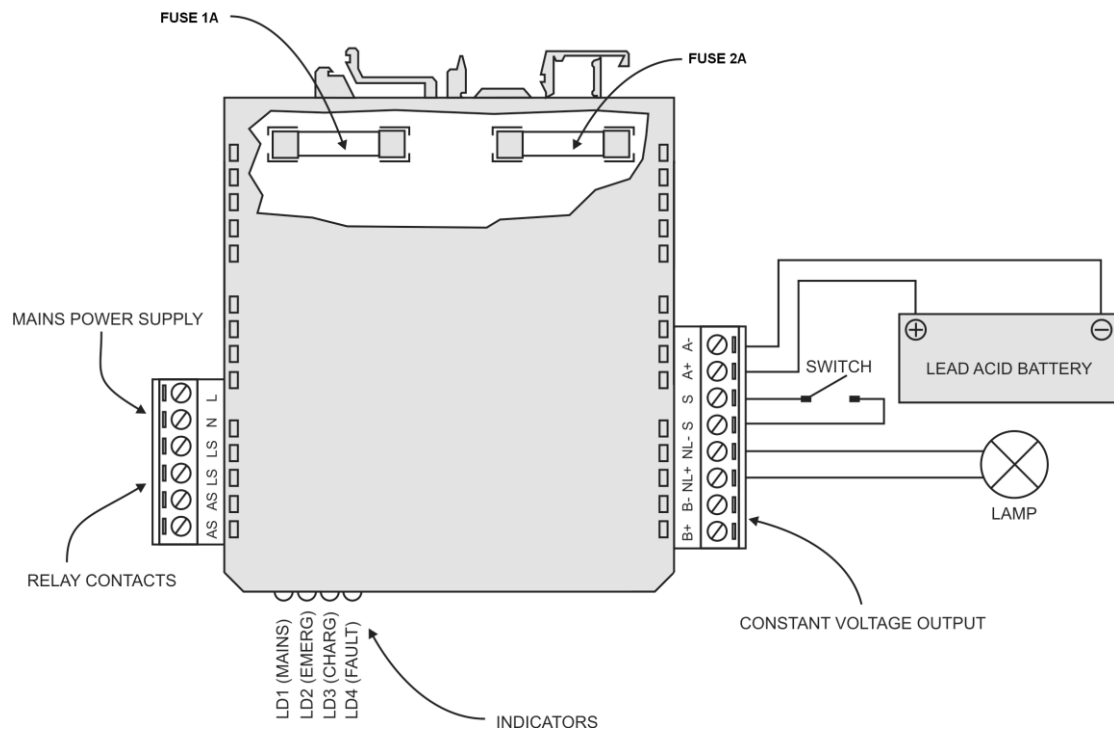
- Wrong polarity battery, defective battery (no charge)
- Over discharged battery (small charge current)

Block Diagram



Description of terminals

| | |
|-------------------|--------------------|
| 1 (L) / 2 (N) | 93 – 264 VAC, 50Hz |
| 3 (S) / 4 (S) | Switch |
| 5 (A+) / 6 (A-) | Battery |
| 7 (NL-) / 8 (NL+) | Emergency light |
| 9 (LS) / 10 (LS) | Mains ON/OFF |
| 11 (B-) / 12 (B+) | Auxiliary power |
| 13 (AS) / 14 (AS) | Battery OK |



Description of LEDs

| LED | Name | Function | Explanation |
|----------------|----------------------|-------------|--|
| LD1 (green) | Mains | Off | There is no mains |
| | | On | Mains OK |
| LD2 (green) | Emergency light | Off | Emergency light off |
| | | On | Emergency light on |
| LD3 (green) | Charge | Off | No charging (battery foul, not working, wrong polarity, periodic charging) |
| | | On | Battery under charge |
| LD4 (red) | Low current charging | Off | Battery OK |
| | | Blink 2,5Hz | Battery not working |
| | | On | Battery under charge with low current |

Functions of Relays

| Relay | Name | Operation |
|-------|------|---|
| K1 | LS | On when there is mains supply (LD1 on) |
| K2 | AS | On when battery OK and under charge (LD4 off) |

Battery protection

Extensions

There is an RS-232 circuit for future use.

Technical Specifications

| | |
|--|---|
| Mains supply | 93-264 VAC, 50 Hz Transfer 20ms Internal fuse |
| Charging voltage 12 V | max 13,8V (1%), max 250 mA (sum of A+ and B+) |
| Charging voltage general | Low charging current 25 mA (battery voltage 2V – 9,8 V) Short-circuit protection Overvoltage protection Internal fuse Wrong polarity protection Max waving 60 mVpp |
| Charge | I/V curve |
| Battery type | Lead-acid batteries |
| Lowest battery voltage | 2V |
| Output for emergency light | min 500 mA, protection for short-circuit connection |
| Lowest battery voltage for emergency light | 9,8 V (+- 0,3V) |
| Relays | Type RE030012 (12V) ή RE030024 (24V) |
| Indications | 4 LEDs |
| Isolation voltage | Primary/Secondary \geq 3KV |
| Electronic specification | EN 60598-2-22, EN 61347-2-7, EN 60335-2-29, EN 81-50:2014 |
| EMV | EN 12015 , EN 12016 |
| Temperature | 60 °C |
| Case protection | IP 20 |
| Dimensions | 45mm x 75 mm x 105 mm |
| Mounting | Standard DIN |