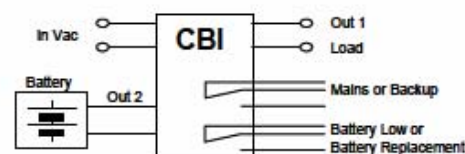


CBI242A

24 V 3 A Intelligent Battery Charger & Power Supply Unit

CoolPower
Solutions

- Universal Input Range 93-264VAC, 47-63 Hz
- Output 1: Load power supply 24 VDC, 3 A
- Output 2: Battery charging 24 VDC, 3 A
- Suited for the following battery types: Open Lead Acid, Sealed Lead Acid, lead Gel and Ni-Cd (option)
- Automatic diagnostic of battery status. Charging curve UI, constant voltage and constant current Battery Life Test function
- Switching technology, output voltage 22-28,8VDC
Three charging levels: Boost, Trickle and Recovery
- Protected against short circuit and inverted polarity
- Signal output (contact free) for discharged or damaged battery
- Signal output (contact free) for mains or Back-up
- Protection degree IP20 - DIN rail or bracket mounting



Technical features

The CBI series is a range of microprocessor control battery chargers able to optimize charging and discharging cycles while ensuring extended battery life. Boost and trickle charging are under micro-processor supervision. Continuous monitoring of battery efficiency reduces battery damage risk and allows a safe operation also in case of permanent connection. They are suited for several battery types, Open Lead Acid, Sealed Lead Acid, Lead Gel and Ni-Cd. They are programmed for two charging levels, boost and charge, but they can be changed to single charging level by the user.

Suitable for recharging, supply and recharging, supply and Back-Up battery module. A rugged casing with bracket for DIN rail mounting provide IP20 protection degree.

Charging curve selection

By means of jumpers. Predefined curves for Open Lead Acid, Sealed Lead Acid, Gel, Ni-Cd(option) or Single charging level

Type of Signal Output Contact

Maximum current can be switched: 1 A – 30 VDC.

Installation

The device must be installed according to EN 60950 norm, with a proper isolation switch.

Electrical specifications

Input Data

| | |
|--------------------------------|--------------|
| Voltage Range | 93 - 264 VAC |
| Frequency | 47 - 63 Hz |
| Internal Fuse, not replaceable | Yes |

Output Data

| | |
|------------------------------------|--------------|
| Output Voltage (Vn) / Current (In) | 24 VDC / 3 A |
| Minimum Load | No |
| Efficiency at 50% of rated Current | ≥81% |
| Short-circuit Protection | Yes |
| Over Load Protection | Yes |
| Over Voltage Output Protection | Yes |

Battery Output

| | |
|---------------------------------------|-----------------|
| Boost Charge (25°C at In) | 28.8 VDC |
| Trickle Charge (25°C at In) | 27.5 VDC |
| Output 2: Battery Charging Current | 3 A ± 5% |
| Setting Range of Charging Current | 20 - 100% of In |
| Recovery Charge | Yes |
| Jumper Charging Configuration | Yes |
| Reverse Battery Protection | Yes |
| Sulfated Battery Check | Yes |
| Detection of Element in Short Circuit | Yes |

Load Output

| | |
|--|-------------------------------------|
| Output Voltage (at In) | 22 – 28.8 VDC |
| Max Nominal Current | 1.1 x 3 A ± 5% |
| | $I_n = I_{load} + I_{batt}$ (120 W) |
| Output 1: Load Current Main I_{load} | 9 A max |
| Output 1: Load Current Backup I_{load} | 6 A max |

Signal Output (free switch contacts)

| | |
|----------------------|-----|
| Main or Backup power | Yes |
| Low Battery | Yes |
| Fault Battery | Yes |

Signal Input / Output (RJ45)

| | |
|----------------------------------|------------------------|
| Temperature Compensation Battery | Option with ext. Probe |
| Voltage Drop Compensation | Option with ext. Cable |
| Remote Monitoring Display | Option |

Climatic Data

| | |
|---------------------------------------|-------------|
| Range of ambient working Temperature | -10 - +50°C |
| Range of ambient stocking Temperature | -25 - +85°C |
| Max Relative Humidity, w/o condens. | 95%, 25°C |

General Data

| | |
|------------------------------------|----------------------|
| Insulation Voltage (Input/Output) | 3000 VAC |
| Insulation Voltage (Input/Ground) | 1605 VAC |
| Insulation Voltage (Output/Ground) | 500 VAC |
| Protection degree | IP20 |
| Protection class | I, with PE connected |
| Dimensions (WxHxD) | 65 x 115 x 135 mm |

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Battery Modules

| Model | HOLDER1.2 | HOLDER3.2 | HOLDER7.2 | HOLDER12 |
|-----------------------------|-------------------------------------|---------------|----------------|----------------|
| Output Vn - In | 24 V – 1.2 Ah | 24 V – 3.2 Ah | 24 V – 7.2 Ah | 24 V – 12 Ah |
| Features | | | | |
| End-of-charge Vdc (trickle) | 27.5 (20°C); 27 (30°C); 26.5 (40°C) | | | |
| Max. charging current | 0.30 A | 0.80 A | 1.7 A | 3.0 A |
| Short-circuit protection | Yes | Yes | Yes | Yes |
| Protection Fuse | 25 A | 25 A | 25 A | 25 A |
| Working Temperature | +5...+40°C | +5...+40°C | +5...+40°C | +5...+40°C |
| Stocking Temperature | -20...+50°C | -20...+50°C | -20...+50°C | -20...+50°C |
| Self-discharge rate | 20 °C 15% per month | | | |
| Generic Data | | | | |
| Dimension (WxHxD) | 170x100x80 mm | 170x140x90 mm | 170x155x120 mm | 170x155x120 mm |
| Weight (approx) | 0.55 kg | 1.2 kg | 2.2 kg | 2.2 kg |
| Protection class | IP20 | IP20 | IP20 | IP20 |
| Assembly using 4 holes | For hanging onto M4 screws | | | |
| Buffering Time (min) | | | | |
| Load : 1.5 A | 30 | 60 | 180 | 600 |
| Load : 3 A | 10 | 40 | 90 | 260 |
| Load : 5 A | 4 | 20 | 40 | 120 |
| Load : 7 A | 2 | 10 | 30 | 60 |
| Load : 10 A | - | 5 | 20 | 45 |