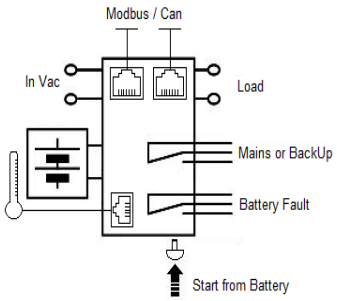
CBI2801224A



Input: Single-phase 115 - 230 - 277 Vac
Output Selectable Load:12 Vdc 15A; 24 Vdc 10A
Output Battery charging: 12 Vdc 15A; 24 Vdc 10A
Suited for the following battery types: Open Lead Acid, Sealed Lead Acid, lead Gel and Ni-Cd
Automatic diagnostic of battery status, Battery Life Test function (internal Battery Impedance)
Charging curve IUoU, constant voltage and current
Four charging levels: Boost, Absorption, Trickle, Recovery
Protected against short circuit and inverted polarity
Signal output: for battery Fault, Mains or Back-UP
Modbus RTU for all parameter battery and system
Protection degree IP20 ; Space saving

Technical features

Power Management: Thanks to the All In One units (DC-UPS), it will be possible to optimize power management. The available power is automatically allocated between load and battery, supplying power to the load is the first priority of the unit thus it is not necessary to double the power, because also the power going to the battery will go to the load if the load so requires. The maximum available current on the load output is 3 times the value of the device rated current In.

Battery Care: it's the concept base on algorithms that implement rapid and automatic charging, four state of charge, battery charge optimization during time, flat batteries recovery and real time diagnostic during installation and operation. The Real Time Auto-diagnostic system, monitoring battery faults such as, battery Sulfated, elements in short circuit, accidental reverse polarity connection, disconnection of the battery, they can easily be detected and removed by help of Blink Code of Diagnosis Led; during the installation and after sell. The continuous monitoring of battery efficiency, reduces battery damage risk and allows a safe operation in permanent connection. Each device is suited for all battery types, by means of jumpers it is possible setting predefined curves for Open Lead Acid, Sealed Lead Acid, Gel, Ni-Cd(option). They are programmed for two charging levels, boost and trickle, but they can be changed to single charging level by the user. A rugged casing for DIN rail mounting, IP20 protection degree. They are extremely compact and cost-effective.

Interconnections: The platform communication for ADELSYSTEM devices allows the connection of all components in a simple but very powerful way. A protocol communication based on MODbus-RTU or CANbus technology. You can select any of the two buses depending on the application. It allows to communicate with all the accessories provided by ADELSYSTEM and to develop an independent system for electrical continuity. At the same time, it allows monitoring and control all parameters in the system, even from the other side of the world, by means of application tools on the cloud. ADELSYSTEM allows you to implement very simple but sophisticated monitoring and control for your energy system and opens your mind to new ways to approach your applications.

Norms and Certifications

In Conformity to: IEC/EN 60335-2-29 Battery chargers; EN60950 / UL60950-1 and CSA C22.2 No. 60950-1-07 (Information Technology Equipment) – Safety – Part1: General Requirement. Electrical safety; EN54-4 Fire Detection and fire alarm systems; 89/336/EEC EMC Directive; 2014/35/UE (Low Voltage); DIN41773 (Charging cycle); Emission: IEC 61000-6-3; Immunity: IEC 61000-6-2. CE.

Climatic Data

Ambient temperature (operation)	**-25 ÷ +70°C**
De Rating Tª > 50°C	**- 2.5%(In) / °C**
Ambient temperature Storage	**-40 ÷ +85°C**
Humidity at 25 °C no condensation	**95% to 25°C**
Cooling	**Auto convention**

General Data

Insulation voltage (IN/OUT)	**3000 Vac**
Insulation voltage (input / ground)	**1605 Vac**
Insulation voltage (Output / ground)	**500 Vac**
Protection Class (EN/IEC 60529)	**IP20**
Reliability: MTBF IEC 61709	**> 300.000 h**
Pollution Degree Environment	**2**
Connection Terminal Blocks screw Type	**2,5mm(24–14AWG)**
Connection Terminal	**IEC**
Protection class (PE Connected)	**I, with PE**
Dimensions (w-h-d) (Approx.)	**100x115x135 mm**
Weight (Approx.)	**0.85 kg**

Input Data

Nominal Input Voltage (2 x Vac)	**115 – 230 – 277**
Input Voltage range (Vac)	**90 – 305**
Inrush Current (Vn – In nom. Load) I^2t	**≤ 16 A ≤ 5 msec.**
Frequency	**47 ÷ 63 Hz**
Input Current (115 – 230 Vac)	**5.5 – 3 A**
Internal fuse (not replaceable)	**6.3 A**
External Fuse (recommended) MCB curve B	**16 A**

General Output Data

Select Output Voltage 12 or 24 Vdc. By:	**Jumper Enabling**
Turn-On delay after applying mains voltage	**1 sec. (max)**
Start up with Strong Load (capacitive load)	**Yes, Unlimited**
Efficiency (at 50% of rated current)	**≥ 91 %**
Residual Ripple	**≤ 60 mVpp**
Dissipation power load max (W)	**28**
Continuous current (without battery) $I_{load=} I_n$	**I_n A**
Continuous current (With battery) $I_{load=} I_{n+} I_{batt}$	**2 x I_n**
Max. current Output Load (Main) $I_{load\ (4\ sec.)}$	**3 x I_n max.**
Max. current Output Load (Back Up)$I_{load\ (4\ sec.)}$	**2 x I_n max.**
Push Button or Remote Input Control (RTCONN cable)	**Start From Battery Without Main**
Time Buffering; min (switch output off without main input)	**0.5;2;5;10;15; 20; 30; 45;60;∞**
Short-circuit protection	**Yes**
Over Load protection	**Yes**
Over Voltage Output protection	**Yes (typ. 35 Vdc)**
Overheating Thermal protection	**Yes**

Load Output 24 Vdc (jumper selection)

Output voltage (at I_n)	**22 - 28.8 Vdc**
Nominal current $I_n = I_{load}$	**10 A ± 5% I_n**
Threshold alarm Battery almost flat	**20 – 21 Vdc batt**
Protections against total discharge	**19 – 20 Vdc batt**

Load Output 12 Vdc (jumper selection)

Output voltage (at I_n)	**10 - 14.4 Vdc**
Nominal current $I_n = I_{load}$	**15 A ± 5% I_n**
Threshold alarm Battery almost flat	**10 – 11 Vdc batt**
Protections against total discharge	**9 – 10 Vdc batt**

Battery Output

Output Voltage Battery	**Follow Out Load**
Boost charge (25 °C) (at I_n)	**2.4 V/cell.**
Max. time Bust Charge	**15 h**
Min. time Bust Charge	**1 min.**
Jumper Configuration battery type (V cell) Ni-Cd (optional); when Trickle Charging mode	**2.23;2.25;2.27;2.3; NiCd:1.5 (20 cell.)**
Charging current max I_{batt}	**In ± 5%**
Charging current limiting I_{adj}	**10 ÷ 100 % / I_{bat}**
Reverse battery protection	**Yes**
Sulfated battery check	**Yes (by Jumper)**
Detection of element in short circuit	**Yes**
Quiescent Current on the battery	**≤ 100 mA**
Charging Curve automatic: IUoU	**4 stage**
Remote Input Control (RTCONN cable)	**Boost /Trickle**

Signal Output (free switch contacts)

Main or Backup Power	**Yes**
Low Battery	**Yes**
Fault Battery	**Yes**

Type of Signal Output Contact

Max. Current can be switched (EN60947.4.1):	
Max. DC1: 30 Vdc 1 A; AC1: 60 Vac 1A	Resistive load
Min.1mA at 5 Vdc	Min permissive load

Signal Input / Output (RJ45)

Temp. Comp. Battery (with external probe)	**Yes (Aux 1)**
Modbus / Canbus	**Yes..(Aux 2)**
Modbus / Canbus	**Yes (Aux 3)**

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