



CBI2801224B DC UPS



Features:

- Input: Single-phase 230 - 500 VAC
- Output Load: power supply 12 VDC; 15 A / 24VDC; 10A
- Output: Battery charging 12 VDC; 15 A / 24VDC; 10A
- Suited for the following battery types:
Open Lead Acid, Sealed Lead Acid, lead Gel and Ni-Cd (option)
- Automatic diagnostic of battery status.
- Switching technology, output voltage 10-14.4 VDC / 22-28.8 VDC
- Three charging levels: Boost, trickle and recovery
- Protection degree IP20 - DIN rail mountable

INPUT

OUTPUT

PROTECTION

LOAD OUTPUT

BATTERY OUTPUT

OTHERS

Cat. No.

CBI2801224B

Nominal Input Voltage Voltage range Inrush Current ($V_n - I_n$ nom. Load). I^2t Frequency Input Current (115 - 230 VAC) Internal fuse (factory replaceable) External Fuse (recommended) MCB curve B	230 ~ 400 ~ 500 VAC 180-264 / 330-550 VAC $\leq 16 A \leq 5$ msec 47 - 63 Hz 2.2 -1.4 -1.0 A 4 A 16 A
Output Voltage (V_n) / Nominal Power (W) Output Current I_n Efficiency (at 50% of rated current) Turn-On delay after applying input voltage Start up with Strong Load (capacitive load) Dissipation power load max	12 / 24 VDC / 270W (jumper selection) 15 A @ 12VDC / 10A @ 24VDC ≥ 91 % 1 sec. (max) Yes, Unlimited 28 W
Short-circuit protection Over Load protection Over Voltage Output protection Over Temperature protection	Yes Yes Yes (typ. 35 VDC) Yes
Output voltage (at I_n) Nominal current I_{load} Continuous current (without battery) $I_{load} = I_n$ Continuous current (with battery) $I_{load} = I_n + I_{batt}$ Max. Current Output Load (Main) I_{load} (4 sec.) Max. Current Output Load (Back Up) I_{load} (4 sec.) Push Button or Remote Input Control (RTCONN cable) Time Buffering; min (switch output off without main input) Protection alarm against total discharge Threshold alarm for battery almost flat	10-14.4 / 22-28.8 VDC $1.1 \times I_n \pm 5\%$ 15 A @ 12VDC / 10A @ 24VDC 30 A @ 12VDC / 20A @ 24VDC max. 45 A @ 12VDC / 30A @ 24VDC max. 30 A @ 12VDC / 20A @ 24VDC max. Start From Battery Without Main 0.5,2,5,10,15,20,30,45,60, ∞ 10-11 / 20-21V DC battery 9-10 / 19-20V DC battery
Boost charge (25 °C) (at I_n) Max. time Bust Charge Min. time Bust Charge Trickle charge (25 °C) (at I_n) Jumper Configuration battery type (V cell) Ni-Cd (optional) Recovery Charge Charging current max I_{batt} Charging current limiting I_{adj} Reverse battery protection Sulfated battery check Detection of element in short circuit Quiescent Current Charging Curve automatic: I_{UoUo} Remote Input Control (RTCONN cable)	14.4 @ 12VDC / 28.8 @ 24VDC 15 h 1 min. 13.8 @ 12VDC / 27.6 @ 24VDC 2.23; 2.25; 2.27; 2.30; NiCd: 1.50 / element 2 ~ 18 / 2 ~ 24VDC 15 A @ 12VDC / 10A @ 24VDC $\pm 5\%$ 10 - 100 % / lbatt Yes Yes by Jumper Yes ≤ 100 mA 4 stage Boost / Trickle
Ambient temperature (operation) De Rating $T_a > 50^\circ C$ Ambient temperature Storage Humidity at 25°C no condensation Cooling MTBF (IEC 61709)	-25 - +70°C - 2.5%(In) / °C -40 - +85°C 95% Auto convention > 300.000 h

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DC UPS

The Altech DC-UPS system is built to optimize power management. The available power is automatically allocated between load and battery, supplying power to the load is the first priority. For high inrush applications the charging power will reroute automatically to the load. In this case the maximum available current on the load output is two times the value of the device rated current.

The Battery Care concept based on algorithms that achieve rapid and automatic charging, battery optimization during charging time, flat batteries recovery and real time diagnostic The Real Time Auto-diagnostic system, monitors battery faults, sulfated battery, short circuit battery elements, reverse polarity connection, battery disconnect. This conditions are detected and identified by the number of blinks of the diagnosis Led.

Signal Output Contacts

Main or Backup Power	Yes
Battery Power Low	Yes
Battery Fault	Yes
Max. Current Rating (Resistive Load)	1A 30 VDC/60 VAC
Minimum Permissible Current Rating	1mA @ 5 VDC

RJ45 Connection Input/Output

Temp. Comp. Battery (with ext. probe)	Yes – (Aux 1)
ModBus / Can Bus	Yes – (Aux 2)
ModBus / Can Bus	Yes – (Aux 3)

Environment

Insulation voltage (IN/OUT)	3000 VAC
Insulation voltage (input / ground)	1605 VAC
Insulation voltage (Output / ground)	500 VAC
Protection Class (EN/IEC 60529)	IP20
Pollution Degree Environment	2
Connection TB, Screw Terminal	2.5 mm ² (24-14 AWG)
Protection class (Ground Connected)	Class I
Dimensions (WxHxD)	115x115x135 mm
2.95x4.53x5.32 in	
Weight (approx.)	0.85 kg (1.9 Lbs)

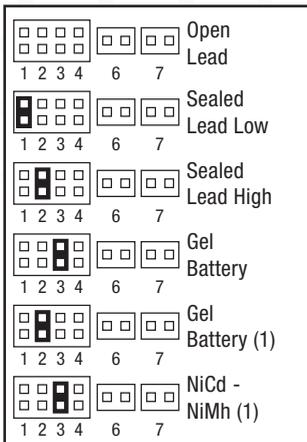
Safety and EMC

Battery charger standard compliance	IEC/EN 60335-2-29
Safety standards compliance:	EN60950 / UL1950 / CE
Fire Detection and alarm compliance	EN54-4
EMC Directive	89/336/EEC
Charging cycle	DIN41773
Emission	IEC 61000-6-4
Immunity	IEC 61000-6-2

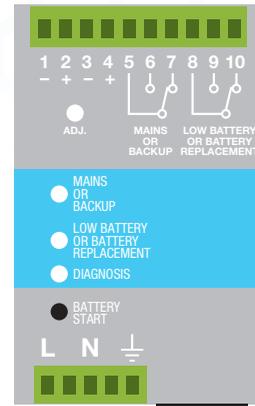
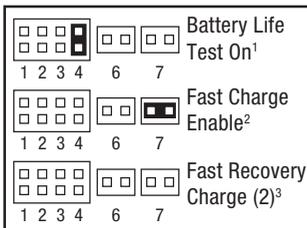
The Altech DC-UPS system is designed to charge and monitor all battery types, by selecting the battery type via jumpers. The predefined curves include Open Lead Acid, Sealed Lead Acid, Gel, Ni-Cd (optional) battery types. The charging curve are programmed to automatically switch between Recovery Charge, Boost charge and Trickle charge. The continuous battery efficiency monitoring, reduces battery damage risk and allows a safe operation in permanent connection.

A compact and rugged metal case with DIN rail mounting bracket provide an easy installation and an IP20 protection.

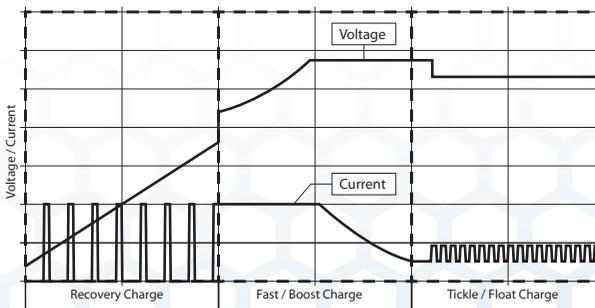
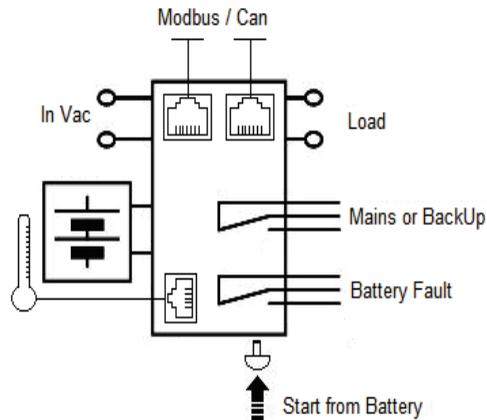
Jumper for Battery Type Selection



Jumper for Functional Setting



- 1 Jumper present: life test enabled.
- 2 Jumper present: fast test enabled.
- 3 Jumper present: fast recovery charge enabled only for size 3. Possibility to recharge the battery also when the voltage is close to zero with the maximum power of the device.



PSC Class 2 Series Compact Housing

PSA Flex Series 1 Phase

PSB Flex Series 2 & 3 Phase

PS-S Slim Series Plastic Housing

PS Low Profile Series Plastic Housing

PS Industrial Series 1, 2 & 3 Phase

PS C & W Series 1 and 2 Phase

CBI Type DC UPS Systems

CB Type Battery Chargers

Accessories

Appendix