

FAQs

All-in-One DC-UPS Backup

I have a DC control system, why would I want a DC UPS backup?

At the moment, your DC control system switches off once power is dropped offline. It is only a power supply unit. The all-in-one DC-UPS Backup system, available from Altech as the CBI Solution, provides the standard backup module, but also includes a power supply unit, battery charger, and battery care module—all of which can be connected to a computer for off-site monitoring. Microprocessor control is key to any new system's capabilities.

Is this solution suitable for a variety of battery types?

Yes, the solution works with open/sealed lead acid, lead gel, and optionally Ni-Cd, Ni-MH, and Li Ion batteries. The system has a battery-select-jumper that allows the user to set predefined charging curves for those battery types, or other charging curves can be loaded into the device from a portable PC. Options include recovery, boost, and trickle charge. Plus, every CB device is built inside a rugged and environmentally safe metal case with a DIN rail mounting bracket for ease of installation.

What does the microprocessor control do for the system?

Microprocessor-controlled battery charging means that the system is constantly monitored and charging is adapted to the most effective conditions. If a device is disconnected from the main power source, the battery will supply the load until the battery voltage drops to a 1.5 V-per-cell level—which prevents the battery from deep discharge. Using specific algorithms, the battery's condition is instantly detected and an appropriate charging mode is chosen by the system. A real-time diagnostics system continuously monitors the charging progress, which checks for possible faults such as elements in short circuit, accidental reverse polarity connections, or disconnection of the battery. Anomalies are indicated through a battery fault LED and a flashing code of the diagnosis LED.

How does a smart system help in power management?

Using the All-in-One DC-UPS Backup Solution makes it possible to smart-manage your available power by automatically allocating between load and battery. Supplying power to the load is the first

priority of the CBI system. This means that it is not necessary to double the power, because all power will go to the load if the load needs it. Therefore, the load output will not be affected by battery conditions.

What if the batteries are completely discharged?

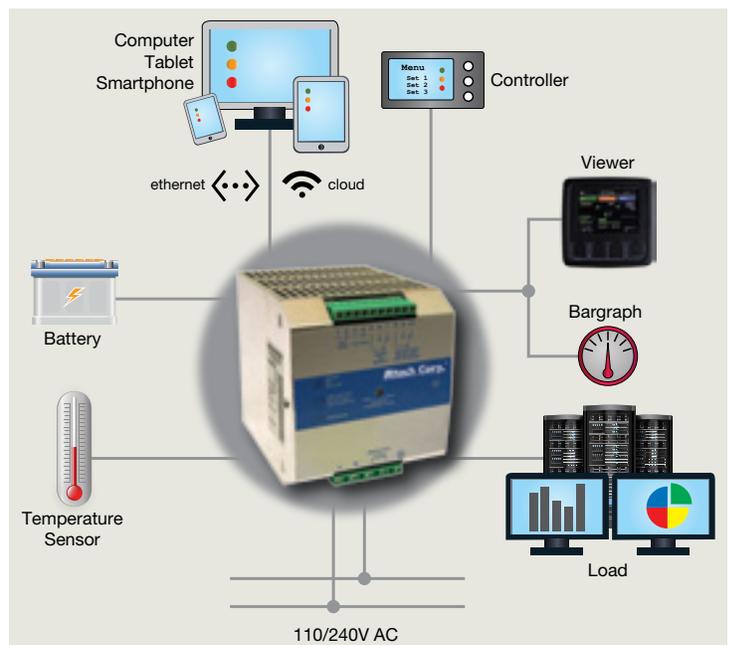
The automatic multi-stage operation optimizes and adapts to the battery status as part of the microprocessor control of the system. The DC-UPS system in most cases can recharge deeply discharged batteries even when their voltage is close to zero, thus allowing for recharging and complete recovery of flat batteries.

Is the All-in-One DC-UPS Backup Solution available in a variety of input and output voltages?

Actually, the unit really shows its flexibility by accepting a wide range of input voltages, such as 120, 230, and 277 Vac as a tough universal input voltage which makes this product usable anywhere in the world without any additional settings. A high voltage input version for 400 and 500 Vac is also available. Output voltages are assigned or can be selected before installation for any voltage between 12 and 24 Vdc, plus 48 Vdc units are available as standard versions from stock.

What type of monitoring is available for the system?

There is a clear definition of each system operation via LED indications and relay contacts for main or back-up, battery fault, and flat battery



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signaling. LED display signals indicate input main on/off, battery fault, low battery, and type of battery charge mode. Plus, there are remote link capabilities to drive the devices from boost, bulk-to-trickle, and trickle-to-float charge, or you can permanently boost or bulk charge the system using a jumper.

What types of diagnostics are included?

First of all, this backup solution continuously tests the internal impedance status of the system to avoid any risk of damages, as well as provide permanent, reliable, and safe connection of the battery to the power supply. Through the use of a battery stimulation circuit, algorithms are used to recognize sulphated batteries or batteries with a short-circuited cell. Additional checks include checking for accidental disconnection of the battery cables, test of wire connection impedance, battery in open circuit, reverse polarity check, battery voltage connection check, and end of charge check.

What types of safety and EMC compliance are available for this DC UPS system?

Most units would comply with UL 508 and UL/EN 60950 for industrial applications, UL 1950, IEC/EN 60335-2-29 for battery charging standards, EN 54-4 for fire detection and safety, EEC89/336 EMC Directive, and many others.

What types of communication protocols are available for this DC UPS system?

Most units have a built-in MOD Bus or CANbus protocol accessible through an RJ45 connector. Some units are also available with the J1939 CANbus protocols for direct communication with Gen Sets.

That's a lot of extra functionality. Does it affect the efficiency of the unit?

Not at all. The CBI All-in-One DC-UPS Solution provides a high efficiency value of up to 91% through its superior switching technology. See the diagram for an illustrated understanding of this unit's capabilities.



Power Out?

NOT with the **Altech CBI**

While others offer a 2-3 components solution ...
... only Altech offers the CBI All-In-One solution.

BENEFITS

- 1 Power Supply Unit
- 2 Battery Charger
- 3 Battery Care Module
- 4 Backup Module



INPUT
110-230-277V AC

OUTPUT*
12V up to 35A
24V up to 20A
48V up to 10A
* other configurations on request



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