

GREEN POWER UPS NOW AVAILABLE IN 320 & 400 KVA UNITS

Delphys Green Power UPS range for market-leading efficiency combined with maximum availability

Where innovation is driving the transition to green technologies aimed at reducing energy consumption, data centers play a primary role in the challenge of reducing CO₂ emissions and halving energy costs without sacrificing availability of service.

With over 85 years' experience in power management and 40 years' in uninterruptible power supply systems, the R&D department of SOCOMECS UPS is continually working to create innovative solutions capable of meeting three primary requirements of data centers. Firstly, increasing system availability in order to minimise the risk of downtimes, secondly, reducing energy costs whilst ensuring the same level of availability, and finally, reducing environmental impact through optimisation and intelligent consumption of resources.

SOCOMECS latest example of this ongoing innovation is their extension of the Delphys Green Power range. Building on the strength and popularity of the Delphys Green Power 160 kVA and 200 kVA, this range is now available in 320 kVA and 400 kVA, three-phase, dual conversion, true on-line UPS units. This range now offers increased performance to ensure maximum availability with the best certified efficiency on the market up to a system size of 1.6 MVA

Maximum availability for various architectures

Data Centers are Mission Critical systems, where reliable electrical protection plays a vital role in ensuring Business Continuity. IT Managers, however, need flexible UPS systems that can be adapted to the various types of architecture they want, to ensure maximum system availability.

Delphys Green Power UPS range has been upgraded with new functions and extended with new sizes (320 and 400 kVA) for the specific purpose of meeting a wide range of availability requirements. With the new Delphys Green Power range, it is possible to configure a variety of power and redundancy architectures up to a maximum power of 1.6 MVA and with the option of choosing between distributed or centralised bypass. The latter is recommended for large installations that require better short-circuit capacity of the bypass and a better MTBF (Mean Time Before Failure) for the entire system.

Low energy costs for high-reliability architectures

The basic characteristic of the Green Power range is its efficiency, which is among the highest on the market in true on-line mode (96% verified by Bureau Veritas) and remains almost constant for the entire load curve. To ensure low consumption for end-users, however, it is also necessary to ensure high efficiency for parallel architectures, without sacrificing the benefits of redundancy. Delphys Green Power therefore incorporates a special Energy Saver mode for high-reliability architectures with partial loads subject to frequent power variations. In a 2N architecture, for example, Energy Saver keeps in operation only the UPS units strictly necessary for ensuring N+1 redundancy, and switches the others on only if necessary. Redundancy is guaranteed, but the units are made to work in conditions of maximum efficiency: maximum efficiency with maximum availability.

Optimisation of batteries

The batteries play a key role in the operativity of the UPS and in environmental concerns, in terms of availability, investment and disposal. The protection of a Mission Critical load is essentially based on the guaranteed back-up time necessary for business continuity specified by the Data Center's administrators. Incorrect operation of the batteries could compromise back-up time or even reduce it to zero and the problem might not be discovered until back-up power was actually needed.

Economic and environmental factors also warrant attention: if batteries malfunction, they are probably replaced early, giving rise to disposal problems. Battery monitoring is traditionally left to the self-tests run by the UPS, or to preventative maintenance. Often, however, self-tests are not comprehensive and maintenance work is carried out too late, with the result that battery health is adversely affected.

Delphys Green Power maximises its battery lifetime with two interactive devices: BHC Interactive (Battery Health Check), a 24/7 system that constantly monitors the string current, voltage and temperature of the battery, and sends an alert in any event of a possible malfunction; EBS (Expert Battery System), a charging system that manages the batteries on the basis of ambient temperature, or the findings of BHC Interactive, and attempts to recover the batteries where appropriate, thus maximising their lifetime. This system also provides precise indications about scheduled or non-scheduled maintenance to be carried out, with a level of detail extending to individual modules.

Battery optimisation goes a step further: the wide range of voltages of the DC BUS makes it possible to choose from a wide range of battery string configurations, thus offering maximum freedom in the choice of back-up times, as well as reduced costs.

Flexible back-up

The elimination of single failure points is a goal that constantly guides the development of static UPS systems. The most traditional approach is to allocate each UPS its own batteries. In the event of a failure of one of the two, the healthy component would also become unserviceable. Shared battery architecture prevents this from happening and increases designers freedom. The redundancy level of the UPS units can be different from and independent of that of the batteries.

Take for example, an architecture based on N+1 UPS and 2N batteries. In the event of a first failure at the UPS, the redundancy of the batteries would remain available to the remaining UPS units and vice versa. Shared battery architecture increases design flexibility and system reliability.

SOCOMECS also proposes Virtual-JNC, the virtual server shutdown client. Suitable for VMWare ESX(i) and MS Windows Virtual Server R2, a single Virtual-JNC controls the shutdown of all the virtual machines on the same physical server. The result is a tougher, more reliable process that maximises human resources in the management of multiple virtual servers.

The Delphys Green Power range is compatible with all communication protocols and supports the remote communication services proposed by SOCOMECS UPS, therefore guaranteeing round-the-clock monitoring of the UPS 365 days a year, with user assistance in system monitoring questions.

These are all new features designed to reduce economic and environmental costs on the Data Center environment, whilst guaranteeing higher flexibility for the configuration of the electrical protection architecture according to the level of availability desired by the end user.

The SOCOMECS Group - an overview

SOCOMECS is an independent industrial group, specialising in the availability, control and safety of low voltage electrical energy for industry and the service sector.

Founded in 1922, the company bases its development on two complementary industrial activities:

- Electrical Switching and Protection Systems (*switches, fuse switches, changeover switches, cutout switches, electronic monitoring and protection, enclosures, cabinets, etc.*)
- Uninterruptible Power Supply systems (*inverters, load transfer modules, rectifier/chargers, harmonic compensators, 400 Hz converters, etc.*)

With 2500 personnel in 22 subsidiaries worldwide, SOCOMECS has complete control over the design, production and marketing of its products.

Nine industrial sites (4 in France, 1 in Italy, 1 in Tunisia, 1 in India, 2 in China) operate using the Group's primary areas of technological expertise, guaranteeing consistent quality of production and adherence to deadlines

In 2009, the SOCOMECS Group achieved a turnover of 310 million euros.

For further information: www.socomec.com