

Conceptpower DPA

The modular UPS for medium-sized critical applications.



ABB's Conceptpower DPA is a true online double conversion modular UPS designed for medium-sized critical applications. The Conceptpower DPA's robust, proven modular architecture provide a very flexible power configuration based on 30/40/50 kVA modules that can be added as power requirements grow. This eliminates oversizing, reduces energy costs and minimizes upfront capital investment.

Each DPA module is self-contained and can be online-swapped at any time, so nothing has to be transferred to the bypass or switched off – making routine maintenance safe and easy. A Conceptpower DPA UPS can be expanded step-wise up to 1.5 MVA.

The result of a UPS failure can be expensive, or even catastrophic, and for this reason, the most critical loads should be protected by the very best UPS design - decentralized parallel architecture (DPA). DPA provides not only the best availability, but also the best serviceability, scalability and flexibility. Taken together, these features deliver a low total cost of ownership.

Conceptpower DPA architecture

If one part of a UPS that is based on a centralized parallel architecture fails, the whole UPS can fail. With the Conceptpower DPA, on the other hand, the UPS is modularized and each module has all the hardware and software needed for autonomous operation - rectifier, inverter, battery converter, static bypass switch, back-feed protection, control logic, display, and mimic diagram for monitoring and control.

The modular architecture of Conceptpower DPA is ideal for N+1 redundancy, ie, when one more module is installed in addition to the minimum number required to supply the critical load. If one module fails, the others take up the load.

DPA makes Conceptpower DPA a very robust UPS with an extremely low failure rate.

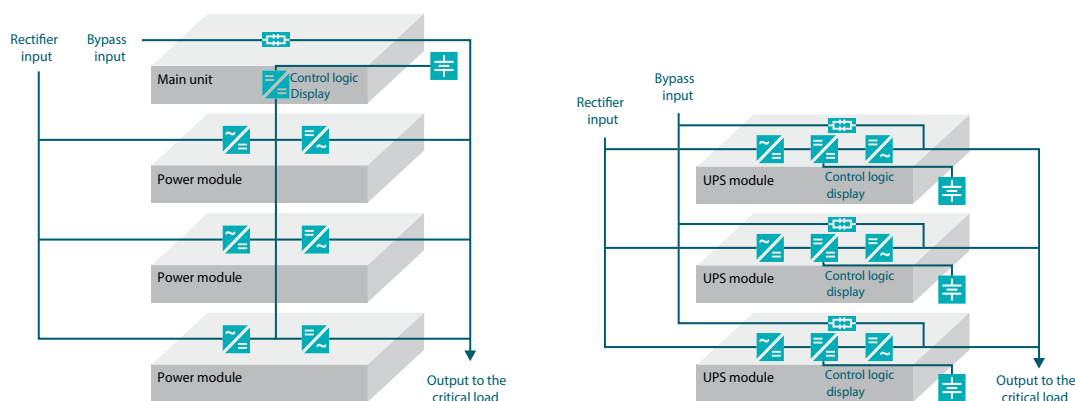


Figure: each UPS module has all the hardware and software required for autonomous operation; there are no shared critical elements.

Scalability

As UPS power requirements grow, the modular nature of Conceptpower DPA makes it really easy to add modules and increase the power capabilities. So, the initial configuration does not have to be oversized to cater for future expansion and the user only cables, powers and cools what is currently needed.

Online-swapping and serviceability

Conceptpower DPA's modules can be removed or inserted without risk to the critical load and without the need to power down or transfer to raw mains supply. This unique aspect of modularity directly addresses continuous uptime requirements, significantly reduces MTTR, reduces inventory levels of specialist spare parts and simplifies system upgrades. This approach pays off when it comes to serviceability as the service personnel do not need special skills.

Energy and space costs

Conceptpower DPA has excellent energy efficiency (up to 95.5 percent true online efficiency and ≥ 98 percent in Eco-mode) and its efficiency curve is very flat, so there are significant savings in every working regime. A Conceptpower DPA modular rack has a small footprint and when extra modules are added, no extra floor space is taken up.

Standardized modules

Conceptpower DPA modules are standardized. This keeps costs low as modular systems with standardized connections can be pre-wired, tested and field-configured at the factory.

Conceptpower DPA for mission critical processes

Highly dependable UPSs are increasingly mission-critical for many parts of industry. Conceptpower DPA is a proven mature product that delivers unparalleled UPS availability and the serviceability, scalability, flexibility and low energy usage - made possible by the modular DPA approach. An ultimate UPS architectures available for those users whose critical electrical loads represent a valuable commercial asset that must be kept powered at all costs.