

Maximum UPS efficiency in all loading conditions

ABB's Xtra VFI /double conversion mode delivers maximum efficiency by dynamically adjusting the DPA 500 UPS configuration to match the load

Quartino, 15th November, 2016 – ABB has announced a significant new energy-saving feature for its DPA 500 uninterruptible power supply (UPS). In Xtra VFI /double conversion mode, the UPS automatically configures the number of modules that are active to match the load power requirements. Modules that are not needed are switched to standby, ready to transfer to active mode if the load increases. The efficiency improvements achieved by this mode of operation are especially significant in low-load conditions.

When a UPS is operating at significantly under capacity, its energy efficiency can be negatively impacted. With ABB's Xtra VFI operating mode – currently available for the DPA 500 UPS only – this problem is solved. Xtra VFI mode is a smart way to minimize losses and improve efficiency safely when running in double conversion mode.

When Xtra VFI mode is enabled, the UPS automatically adjusts the number of active modules according to the load power requirements. Modules that are not needed are switched to a standby state of readiness, primed to transfer back to active mode if the load increases. The efficiency improvements achieved by this mode of operation are especially significant when the load is less than 25 percent of full UPS system capacity – an operating condition in which traditional UPS systems fare poorly.

The DPA 500 calculates the optimal loading for each of its modules, taking into account the desired redundancy level selection and other set parameters. To ensure smooth operation in each application, the highest expected load step can be set by the user, as can the number of redundant modules that should be active at any time. Hysteresis prevents the modules from switching on or off when close to the threshold. To increase reliability, extend service life and equalize ageing, the system rotates the modules between active and standby mode at fixed intervals.

Should there be a mains failure or other abnormal situation, all modules revert to active mode within milliseconds.

Since its recent introduction to the market, the DPA 500 UPS has proven very popular: ABB's decentralized parallel architecture (DPA) is the most advanced approach to modularized UPS available. With DPA, each standardized module has all the hardware and software needed for autonomous operation. Modules can be swapped without powering off. Systems can be scaled up by simply adding more modules. Because of its very flat efficiency curve, the DPA 500 is very efficient in most operating working regimes and Xtra VFI mode increases this capability even further.

The Xtra VFI feature will be of special interest for large and colocation data center users where energy efficiency is a topic of great interest. A pilot installation of Xtra VFI mode

has been running smoothly and effectively for some time in a large data center in Germany.

ABB (ABBN: SIX Swiss Ex) is a pioneering technology leader in electrification products, robotics and motion, industrial automation and power grids serving customers in utilities, industry and transport & infrastructure globally. For more than four decades, ABB is writing the future of industrial digitalization. With more than 70 million devices connected through its installed base of more than 70,000 control systems across all customer segments, ABB is ideally positioned to benefit from the Energy and Fourth Industrial Revolution. With a heritage of more than 130 years, ABB operates in more than 100 countries with about 135,000 employees. www.abb.com

[For more information please contact:](#)

ABB Power Protection SA

Nicole Nägele, Communication Manager

Via Luserte Sud 9,

Tel: +41 91 850 29 29

nicole.naegle@ch.abb.com