

ARTICLE

Increasing the power protection for Thomas & Betts data center



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01 ABB's PCS100 Industrial UPS

02 The Baldor diesel generator is providing power to the entire facility

03 600 kVA PCS100 UPS-I bridges the time between the utility failing and the generator starting

Data centers all around the world are forever requiring super critical power protection, so daily operations can run smoothly without any voltage disturbances. In the United States, Thomas & Betts, a recently acquired company by ABB, in Memphis, Tennessee, needed long-term autonomy of greater than 30 minutes against extended outages on the utility, with absolutely no downtime. ABB provided a solution consisting of a PCS100 industrial UPS (UPS-I), a diesel generator, breakers, and surge suppressors to ensure the data center and additional critical areas were not put at risk of complete power failure.

The data center at Thomas & Betts (T&B) headquarters in Memphis, has been protected by a UPS and diesel generator for many years. Although it has served them well, T&B had come to a point where their daily business requirements had outgrown the capabilities of the existing setup. Because of this, and the desire to future proof their infrastructure, it was very apparent that T&B needed to address their power protection solution.

James Holcomb, Director-iTeam Infrastructure for T&B commented on the solution chosen to replace the existing products that were used. "In late 2011, we began discussion about replacement of a couple of major pieces of equipment in the Memphis office including our building generator and the UPS."

The power of collaboration

Holcomb, in partnership with John Fouts, Director of Real Estate for T&B, and Mark Buchanan, the Memphis Facility Manager, specified the capabilities and coverage they needed and made a recommendation to upgrade the requirements. The new building generator, a Baldor 2000 kW generator, would provide power to the entire facility in the event of a power loss rather than just the critical area coverage provided by the current unit.

The existing UPS only provided back-up to the data center and selected critical areas of the building. The new unit, ABB's 600 kVA PCS100 UPS-I, will back up the data center and additional critical areas including the customer service department.

Advanced technology

Short duration power quality events such as voltage dips and swells are taken care of by the PCS100 UPS-I without need for the generator to start. If confronted with an extended event, ABB's PCS100 UPS-I bridges the time between the utility failing and the generator starting. The unit also handles synchronizing with the generator and the synchronizing and reconnection to load the utility when the utility voltage has returned to a normal condition.



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Dave Sterlace (1), T&B's Data Center Market Development Manager further highlighted the benefits of ABB's PCS100 UPS-I. "ABB's PCS100 UPS-I allowed us to meet the efficiency targets without any compromise in system reliability or performance. The PCS100 UPS-I exceeded all my expectations and I am very impressed with the modular design which offers added security through integrated redundancy. An additional bonus of this design I've found that it encompasses easy serviceability."

The complete solution

As a responsible corporation, T&B wanted to minimize their carbon footprint, and one of the most effective ways to do this was with energy efficient solutions. Being a data center, reliability is a non negotiable requirement. Their selection criteria, in order of importance to T&B were, high reliability, high efficiency, and smallest possible footprint. They were surprised that while they almost doubled the capacity of their power protection solution, the overall footprint for the PCS100 UPS-I remained the same as the old UPS solution. With this solution in place, a true, no-break supply in the event of a power failure was achieved.

Additional information

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As well as providing a complete data center solution, ABB provided service such as installation and commissioning, recently completing the commissioning in February this year.

"This was a real win-win for all parties," said Holcomb. "We were able to take advantage of the best in class product offerings and technical capabilities of other businesses inside our new company. We have also offered to be a showcase – a place where the sales teams can bring customers and potential customers to show them a live installation of products and solutions from across the ABB family."

ABB's PCS100 UPS-I has been successfully installed in many data center applications. This year, the power protection team are expanding their portfolio into the MV power range, and will launch the PCS100 MV UPS. This has been designed specifically to provide clean, reliable and efficient power in industry and in large data centers who have sensitive or critical loads.

To find out more about ABB's power protection solutions:

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