



## Two Data Centres, One Solution

*Major German retailer chain Edeka selected Eaton UPS solutions for its data centres.*

To learn more about Eaton 9390 UPS, visit [www.eaton.com/powerware](http://www.eaton.com/powerware)

A completely secure and reliable power supply is a key element in constructing a data centre. As servers become ever more efficient, the demand for solutions which limit energy and cooling costs is booming.

Major German retailer chain Edeka faced these challenges when updating its data centre in Rottendorf, Germany. In co-operation with selected partners, including Eaton®, the company implemented a state-of-the-art UPS solution. The experiences were so convincing that Edeka selected the same UPS solution for its brand new data centre in Würzburg, too.

Edeka Group has a staff of over 27,000, and its armada of 320 lorries delivers fresh goods to shops everyday. Co-ordination requires an advanced IT infrastructure with an outlet management system, logistics program, and much more. These tasks are divided between the company's two data centres in Rottendorf and Würzburg. Data storage is managed with Storage-Area-Network with approximately 140 terabytes per centre. The two centres are connected by a 16km-long Dark-Fibre cable.

### Wanted – Just One Partner

The complexity of data centre projects makes it sensible to purchase a complete turnkey solution from a contractor company that coordinates all components, subcontractors and workers. This is what Edeka did, using the expertise of Alltronic, a nationally acclaimed IT construction company. Also, Edeka's criteria for UPS selection were clear: high reliability, security in cases of power failures, and energy efficiency with low running costs.

The extensive security concept implemented in the Rottendorf data centre included a central UPS system to cover cases of power failures and to filter disturbances in utility power, reserve power with UPS batteries delivering 18 minutes runtime and a diesel generator that is activated 60 seconds after power failure.

### Quality is Always Affordable

A centralised UPS solution is especially useful in data centres as it enables easy configuration and adding of new systems. Further more, a centralised solution is the most cost-effective – reasons enough for Edeka to purchase an Eaton 9390 UPS, a part of Powerware® series, with 160 kVA performance from Eaton.

Today, the trend in large-scale installations is to use UPS devices with IGBT rectifier technology without a transformer, because this solution excels with high efficiency ratio combined with low heat dissipation. Special attention should also be paid on the quality of

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Powering Business Worldwide

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components. That ensures reliability and prolonged lifespan. "In this respect, our experiences with Eaton UPS devices have been very good", says Jürgen Allmis, CEO of Alltronic.

### Trust in the System

The 9390 UPS has been developed with a particular attention to the needs of highly critical company assets. Transformerless design with High-Speed-Front-End-IGBT rectifier enables accurate control over input power factor which is taken to the value of 0.99 with 9390 design. Double-conversion topology offers the highest protection possible, eliminating all major power disturbances, such as power surges and fluctuations. The output power rated at 0.9 power factor accommodates high power factor load requirements, and makes the 9390 an excellent companion for modern day servers and other data centre equipment.

There is also a further benefit of using a system without a transformer: the modern IGBT rectifiers in Eaton UPS systems minimize the total input harmonic current distortion (THD) to less than 4.5 percent, enhancing compatibility with upstream power systems, especially genera-

tors. Consequently, this minimises auxiliary generator sizing requirements and provides more power to the servers. High (94 percent) efficiency of the UPS reduces the total cost of ownership: low heat dissipation and energy loss enables Edeka to reduce energy and cooling costs. In turn, this reduces UPS component wear, making the UPS more reliable and considerably reducing the need for maintenance and spare parts.

### Result

"After all the problems we had with the previous UPS system, I can only express my gratitude that now, finally, we have a system that works as it should. This really gives me peace of mind", says Michael Grötschel, Edeka's IT manager responsible for the data centres.

Edeka Group is very satisfied with its UPS solution that was first implemented in the updated Rottendorf centre and a few months later in the brand new Würzburg data centre.

"It was all ideal for us. At the planning stage of the new data centre, we already had a complete, ready solution available that we only needed to implement again. This saved us so much time and money", says Grötschel.



Eaton 9390 UPS, 160 kVA