

Reference report

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Efficient meter logistics with RFID: Automated recording at SachsenNetze



 www.sachsen-netze.de

About SIGMA

As a renowned system house group, the SIGMA Group acts as a system integrator and partner of renowned providers in the IT sector. The more than 80 employees of the group form a competent team at the locations Chemnitz and Dresden. With know-how, competence and more than 30 years of experience we offer our customers reliable and powerful IT solutions.

About our AutoID and RFID solutions

AutoID and RFID solutions for production, logistics and supply chain. Our customers appreciate us as competent, innovative partner, to accompany them from the initial problem analysis until the goal with commitment. Many years of project experience of our employees form the foundation for effective AutoID and RFID solutions for production, logistics and supply chain.

About SachsenNetze

SachsenNetze is the electricity and gas grid operator in Dresden and eastern Saxony. As part of the SachsenEnergie group of companies, SachsenNetze ensures reliable energy distribution in the grid area with a modern and efficient infrastructure.

Initial situation and challenges

SachsenNetze, a company of the SachsenEnergie Group, has implemented an innovative RFID solution for meter reading that replaces the previous manual processes.

The electricity and gas network operator regularly receives meter deliveries comprising various types of meters such as heat, water, gas and electricity meters. Each delivery contains a large number of meters, which are delivered in tightly packed pallets. Before automation, the meters were recorded manually using barcode scanners. The invisible positioning of many meters posed a particular challenge: Some meters are stored in the middle of the pallets and covered by other packages, which made reliable recording considerably more difficult. This manual process was time-consuming and prone to errors, especially with high delivery volumes.

RFID technology: the key to automation

To overcome these challenges, SachsenNetze decided to introduce an RFID system. Each meter delivered is provided with an RFID label by the manufacturer, which stores the individual serial number assigned to the respective consumer. When passing through an RFID gate, the transponders are read, the serial numbers are automatically transferred to the ERP system and the meters are inventoried. The employee is also shown the number of meters recorded in a results display. This process replaces manual scanning and enables complete documentation of the serial numbers.

Challenges during the introduction of the RFID system

The integration of RFID technology brought with it a number of challenges that were successfully resolved:

- **High packing density:** The close arrangement of many meters and RFID transponders on a pallet led to overlapping during bulk reading.
- **Material:** Meters made of metal influenced the readability of the RFID tags.
- **Variety of meter types:** Different meter types, supplied in different quantities and packing densities, placed additional demands on the technology.

Successes of the project

- **Increased efficiency:** Automated data capture in bulk saves time and minimizes errors compared to manual data capture.
- **Process reliability:** With the help of a high degree of automation, even concealed meters are recorded quickly and reliably.
- **Efficient system utilization:** The combination of modern technology and trained personnel ensures smooth processes.

Outlook

The RFID system offers further potential for optimization. In future, meters that are returned after being used in the field will be checked by the RFID gate. The comparison with open receivables in the ERP system enables an automated decision to be made as to whether the meters can be stored or released for scrapping. This will further increase transparency and efficiency in meter logistics.

This is what our customer says...

„The manual recording of our meters was very time-consuming and error-prone due to the high quantities and dense packaging. Thanks to RFID technology, this process is now fully automated. We benefit from a significant increase in efficiency and greater data reliability.“

Ralf Müller, Device management, SachsenNetze GmbH