IAL
Automation und Logistik

RFID integration

Combination with conveyor systems

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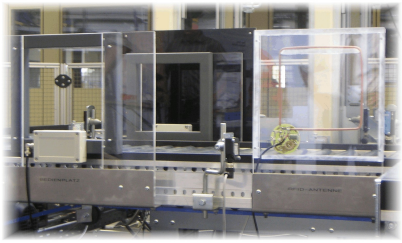
The integration of RFID technology into conveyor systems is attractive for many different business scenarios.

The kind of local data acquisition of inidividual units desired in the conveyor environment requires measurement stations with spacially limited recording areas.



For this reason HF technology (13.56MHz) is usually used. Under certain conditions the alternative UHF technology (868MHz) is preferable.

Potential

In comparison to normal barcode systems, the use of RFID offers several advantages:

- No visual contact to the label is required
- The simultaneous reading of multiple labels is possible
- Dynamic data can be stored on the label and edited

RFID technology thus provides new possibilities in poduct tracking, such as:

- Data acquisition for the contents of packaged and sealed containers
- Storage of individual data directly on the product (example: pharmaceutical industry)
- Implementation of transport control using independent reading and decision-making facilities

Data collection without visual contact is of great significance, especially where the location and form of the transported goods by automatic transport systems is variable.

The possibility of data storage directly on the transponder allows both the use of the data throughout the entire supply chain and also the use of that data for internal purposes in production and shipping.

The use of RFID lessens the demands imposed on the control software of the conveyor system, since the transport unit already has the destination information. At decision points this information about further transport is read and processed.

The destination is reached correctly, even after a restart of the conveyor system or due to a planned or accidental change in the order of the transport units.

Traffic jams and path optimizations can be re-evaluated "just in time" at every decision point. The transport control is carried out similar to routing of data traffice in the world wide web.

Your partner IAL

IAL's RFID system employs the appropriate antennas and readers of different manufacturers, providing a product which allows a seamless intergration into existing transport systems.

The RFID system can be used directly with the conveyor system as a stand-alone unit, whereby the communication with the superordinate PLC is done via TCP/IP.

Different operation modes can be selected for the different application variations.

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RFID by IAL

We have developed a useful multiple phase strategy for the installation of RFID technology, designed to balance costs and benefits for the specific targeted areas:

- Preliminary studies on technical feasibility

  Determination of the requirements, selection of the technical operations (frequency range, hardware, transponders)

- Analysis of the existing business processes

  Identification of possible areas of application and assessment of the benefits of RFID technology compared to in-place solutions (e.g., barcodes)

- Design and implementation

  Integration of the RFID technology into the existing company environment based on the IAL RFID system

- Installation and operation

- Maintenance and support

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