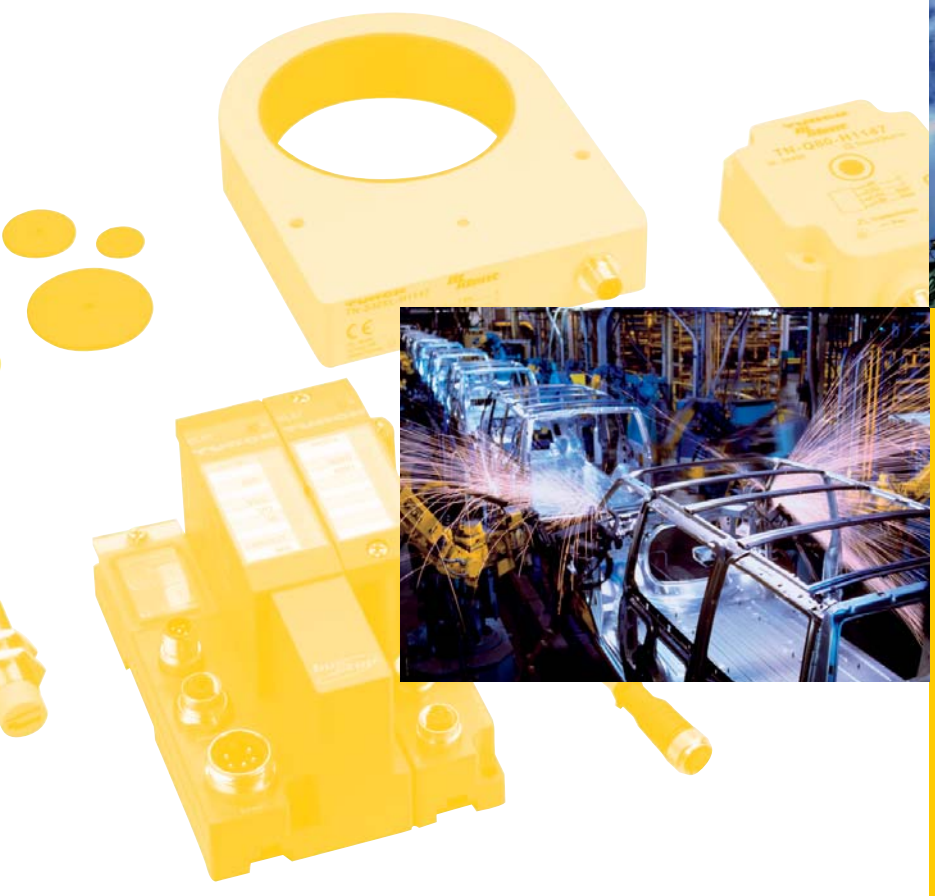
TURCK

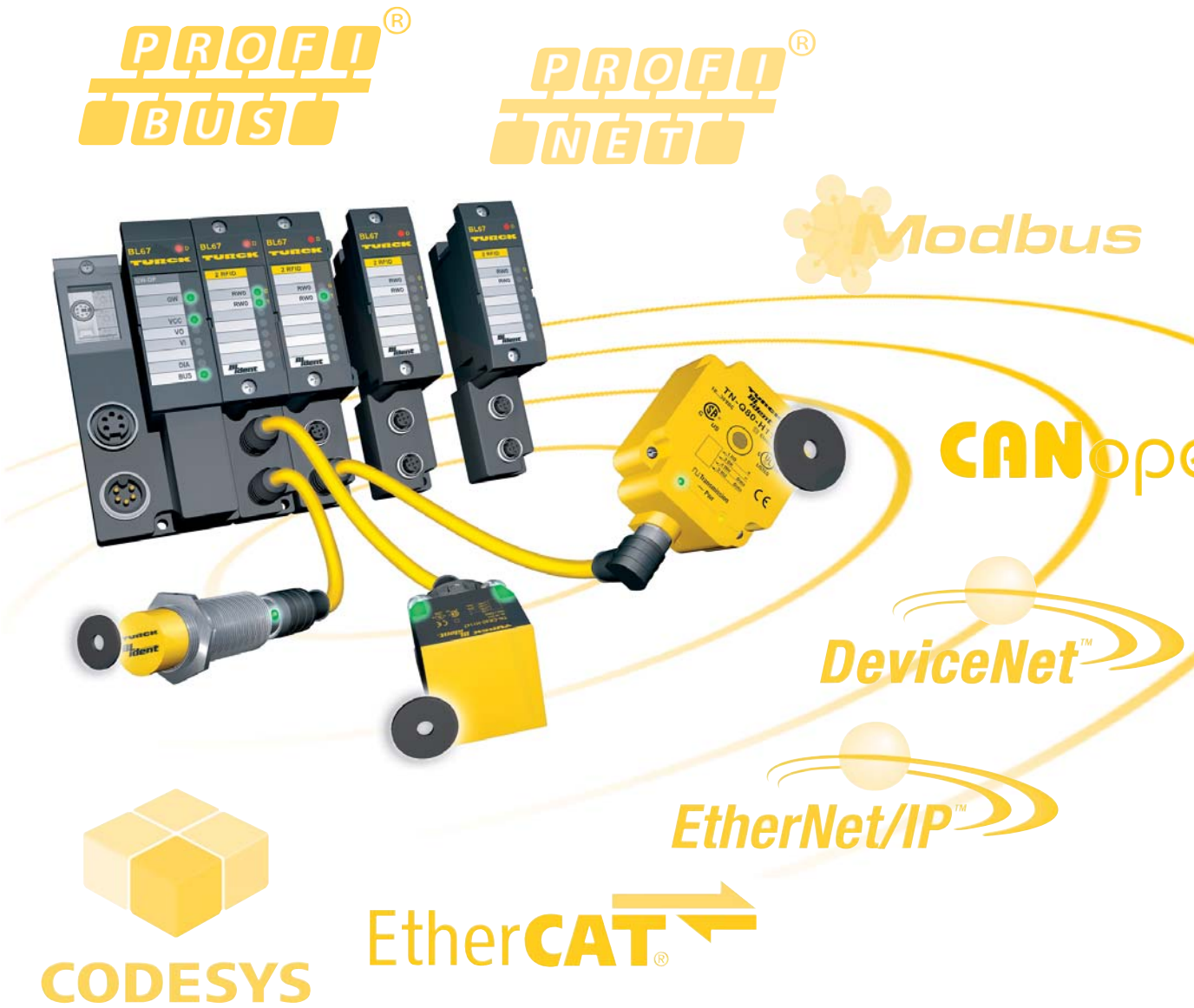
Industrial
Automation

MODULAR
RFID SYSTEM
BL ident®



Sense it! Connect it! Bus it! Solve it!

Easy system integration

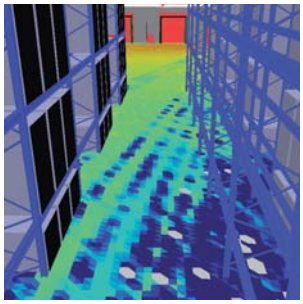


BL ident® – HF-RFID simulator

The simulator is available for download on www.turck.com. It supports you in pre-selecting all the RFID-HF components. You simply enter the parameters of your application and the simulator generates the possibilities and limits of different combinations and the according technical data sheets and documentation.

BL ident® – UHF-RFID simulator

The Ray-Tracer software simulation calculates different UHF-RFID system constellations under almost real frame conditions, based on the predefined environmental conditions. Before installing the hardware, you can determine and filter out the appropriate system components.



BL ident® components

Read/write heads

- Fully encapsulated, rugged HF read/write heads, rectangular and cylindrical design (M18, M30)
- UHF read/write heads designed for industrial use
- Read/write heads for the Ex-area (ATEX) and Food industry applications (Wash-Down, IP69K)
- HF (13.56 MHz) and UHF (840 to 960 MHz) devices
- Read/write ranges, one meter (HF) or several meters (UHF), environment dependent

Connection technology

- Field-wireable fieldbus and power cables
- Connection accessories for bus and power supply
- Field-wireable cables for connection of interface and read/write head
- Connection and extension cables for food applications
- Max. cable length to read/write head 50 m

Data carriers

- EEPROM data carriers with 128 byte memory, FRAM data carriers of up to 8 kByte for high speeds and nearly unlimited write cycles
- High-temperature data carriers -40… +240 °C, environment dependent
- Data carriers for autoclaves, for high-pressure steam jet cleaning at +121 °C
- Data carriers for direct mounting on metal
- Open standards, worldwide applicable (ISO 15693 und ISO 18000-6C)
- Data carriers for Ex-area applications

Accessories

- Extensive range of accessories for precise and easy mounting of read/write heads and data carriers
- Protective caps and housings for increased protection against weld splinters
- Mobile HF and UHF handhelds for reading and writing of mobile data carriers Available with touch screen, Bluetooth, WLAN, barcode scanner and application software

Easy I/O communication

The 8-byte simple I/O modules for the BL20 and BL67 systems (BL20-2RFID-S, BL67-2RFID-S) reduce the programming effort considerably and allow you to connect *BL ident*® with simple I/O communication and without function modules to all standard control systems available on the market.

Efficient parametrization

The *BL ident*® system is FDT/DTM parametrizable via PACTware®. Read and write commands as well as diagnostic functions can be implemented without control. Use the RDemo and WebConfig software to test, parametrize and configure UHF read/write heads.

Maximum transparency for the processes

Industrial Automation

Whether used in industrial production, logistics or QA processes, with the *BL ident*® system from TURCK you cover the entire production process from start to end. All information is centrally available - no matter how rough the application environments are.

The data carriers are mounted on all products or containers and identify intermediate and end production stages during the entire production process.

The read/write heads can be mounted in many ways. They read data before or after relevant production processes or at the end of the production chain. This provides more transparency and gives you the possibility to operate your plant highly efficient and to use the gathered data in many ways. The end product is delivered together with a detailed QM protocol.

www.turck.com

To get all product information, just scan the QR code with a smartphone or webcam.

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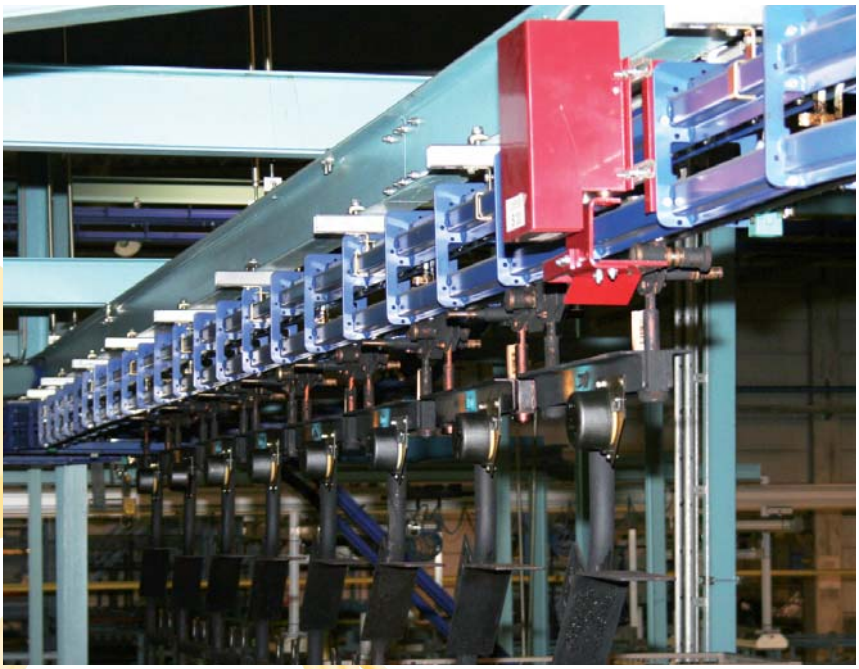
BL ident® – modular RFID system for HF/UHF operation

Data carriers, read/write heads, connection technology and interfaces (gateway and RFID electronic modules) can be combined to a customized BL ident® solution and are easily integrated in existing system configurations. You can choose from extremely fast and almost infinitely writable FRAM data carriers, but also from high-temperature versions for paint-spray lines. *BL ident*® can be integrated in existing system configurations without problems via gateways which are available for all standard fieldbus protocols.

BL ident® operates wear-free and contactless and is insensitive to dirt, water, oils and temperature fluctuations. *BL ident*® is a future-proof investment and interoperable, thanks to the open and worldwide applied standards

BL ident® is an all-in-one RFID system designed for industrial applications. The I/O systems BL67 (field application), BL20 (cabinet mounting) and *BL compact* (field application) are the basic components of the modular concept. Whether deployed in production control, logistics or automation processes: Both technologies, interference immune HF (13.56 MHz, ISO15693) and long range UHF (840…960 MHz, ISO 18000-6C/EPCglobal Class 1 Gen 2) in one identification solution, in *BL ident*® the modular RFID system from TURCK.



Optimized components

BL ident® offers many application-optimized components, such as the high-temperature HF or UHF data carriers for +240 °C, read/write heads for roller conveyors or high-speed applications, as well as components for Food & Beverage or the Ex-area.

Long ranges

BL ident® achieves read/write ranges of up to one meter in the HF range and several meters in the UHF range, depending on the environmental conditions. The data carriers can be read and written on the fly – the FRAM data carriers up to 10^{10} times. With up to 0.5 ms/byte they guarantee fast data transfer.

System assembly

Each *BL ident*® system can be customized to a tailor-made RFID solution that fits in your system. Moreover, it can always be extended if required. Up to 16 read/write heads can thus be connected to a bus node, under appropriate conditions. Additional sensors and actuators can be connected by simply adding further I/O modules.

The product range features components for very demanding application conditions. For example, environments in which many different data carriers have to be installed, read/write heads that are protection rated up to IP69K and extendible IP20/IP67 interfaces (gateways and RFID modules) that are easily connected to the control environment and to matching extension cables.

Data carriers

The *BL ident*® system offers the right data carrier for any application – for example, the extremely small ones (Ø 7.5 mm), devices with FRAM memory with up to 8 kByte for high speed reading and many writing cycles, high-temperature data carriers for temperatures up to + 240 °C and data carriers for direct mounting on metal or Ex-area approved types.

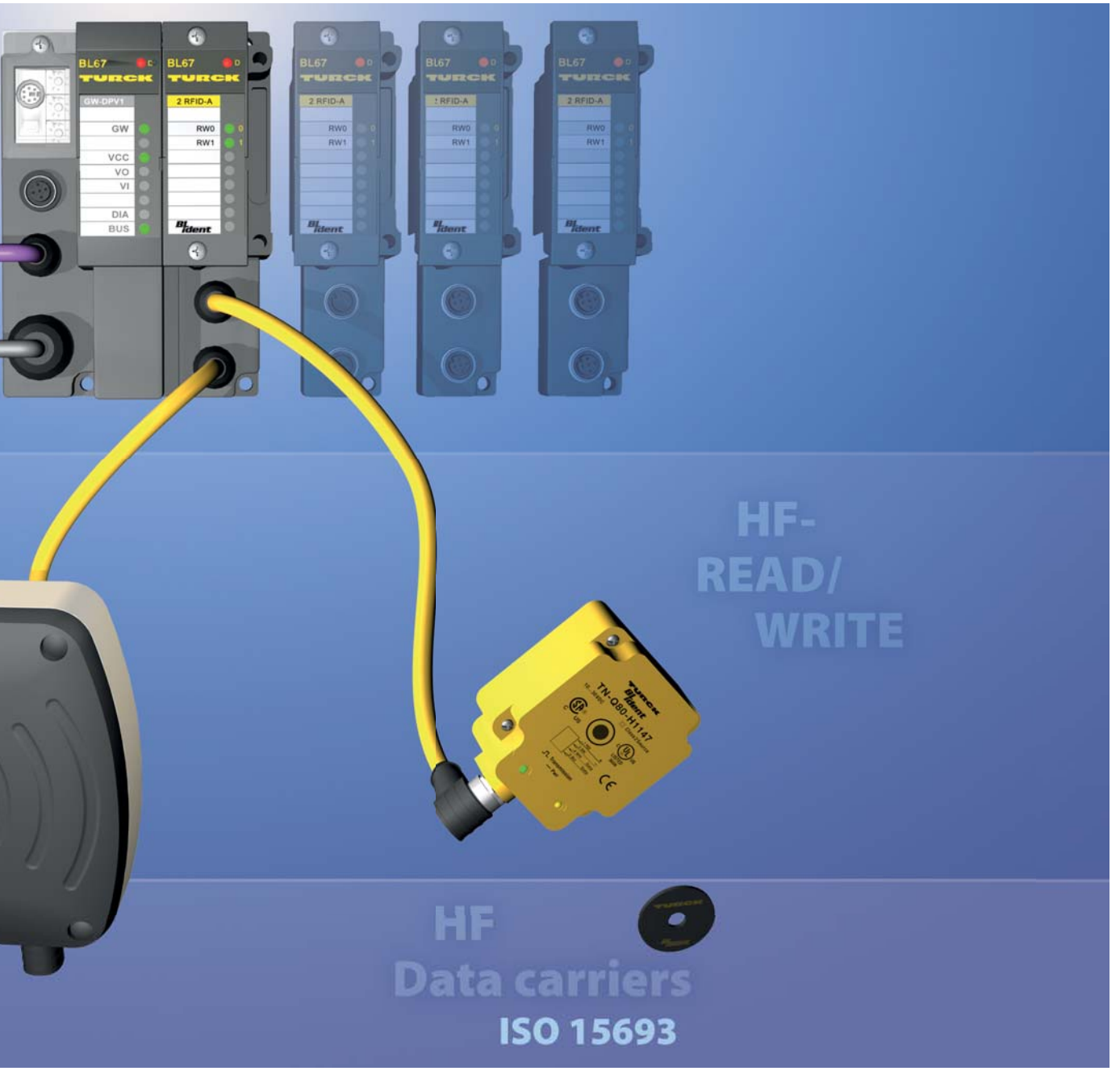
We also offer customized solutions, thanks to the open and worldwide applied standards (ISO 15693 und ISO 18000-6C)

Flexibly connected to the system

BL ident® can be connected to the control level via the IP20 and IP67 rated interfaces, using the approved fieldbus standards. For complex applications use CoDeSys-programmable gateways. They fulfill local control tasks in the field.

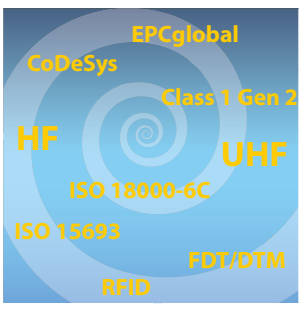
HF and UHF – parallel operation

Both technologies, interference immune HF (13.56 MHz, ISO15693) and long range UHF (840…960 MHz, ISO 18000-6C/EPCglobal Class 1 Gen 2) are available in one identification solution. HF and UHF read/write heads can be connected and operated at the same interface.



Future-proof investment

BL ident® can be adapted flexibly to new system demands. Additionally required read/write units are simply added through connection of further RFID modules to the existing interface. Changing the fieldbus is no problem either.



High availability

The rugged and modular *BL ident*® concept extends the service intervals and increases the availability of your system. If you wish to extend your system, you can plug or remove the electronic modules and the read/write heads in ongoing operation.

BL ident® applications

Integrative identification of all components in car assembly processes

Owing to TURCK's RFID expertise end-to-end identification in automotive production is now possible. Not only the transport systems can be equipped with RFID data carriers but also every car body and single component. The automotive industry thus profits from seamless identification and quality assurance. Through the entire production process, including also the paint-spray lines, in which the data carriers are exposed to temperatures of around +200 °C, the data carrier stays firm on the body. The long range *BL ident*® UHF technology enables the transfer of product data over several meters, between data carrier and read/write head, fast and reliable.

Long-range UHF technology in logistics

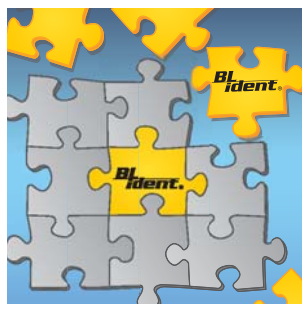
Thanks to the long-range UHF technology, RFID systems can now be applied in many more production environments and creates additional cost saving potential. The UHF data carriers are not only applied in industrial core processes such as production lines, but also in upstream and downstream processes such as the in intralogistics. A well-known North European supermarket chain has equipped its logistics center entirely with the TURCK UHF technology. As many as 300 RIFD read stations identify pallet types and goods. The TURCK solution convinced with its high-speed reading rates, fast bulk reading of several data carriers as well as flexible data connectivity and programmability of the handhelds.

Secure identification of tumbler screens in the dust Ex-zone 22

The chemical group WACKER produces among other products dispersible polymer powders in different granulation for different designated purposes. To ensure correct sieving, the mesh width of the tumbler screens should be monitored by an RFID system. The choice felt on *BL ident*® because it is not only approved for dust Ex-zone 22 but also the right solution for this task. As many as four tumbler screens are equipped with TNLR-Q80 read/write heads for the Ex-zones 2 and 22 an all screens with TW-R50-Ex data carriers. In addition, TURCK has also customized the accompanying function block to the existing Siemens PLC PCS7.

Maximum flexibility

As a *BL ident*® user you profit from an extensive portfolio of flexibly combinable components: We offer data carriers in many different designs as well as industry-standard read/write heads, interfaces, connection and fieldbus technology for connection to the available fieldbus.



Fast implementation of project

BL ident® supports you in fast project implementation. You can simulate the air-interface parameters of different system constellations. This reduces the effort and expenses for planning considerably and enables you to implement your RFID project much faster.