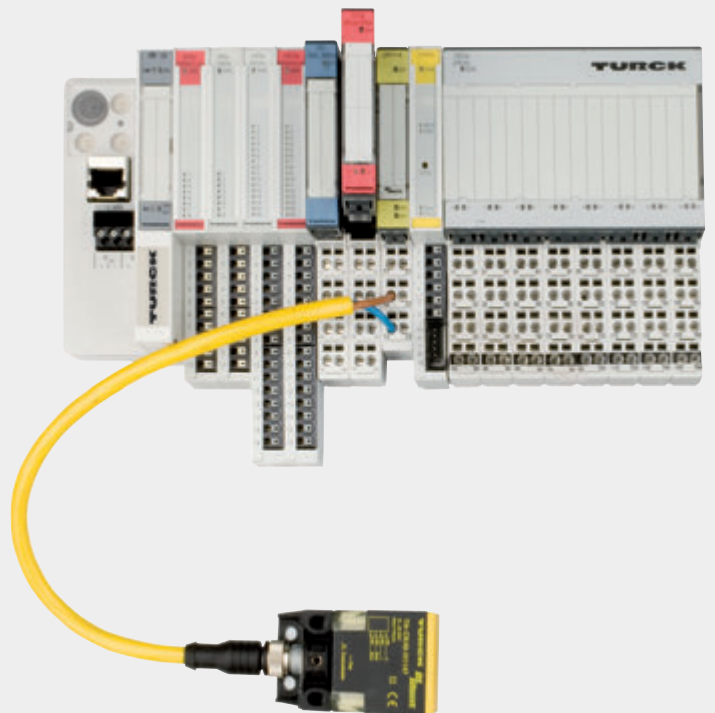


Your Global Automation Partner

TURCK

Solutions for the Pharmaceutical Industry



Solutions for the Pharmaceutical Industry

For over a decade, Turck has been your trusted partner for the pharmaceutical industry. Our customers around the globe benefit from industry-specific automation solutions in the areas of sensors, fieldbus, connection and I/O technology as well as RFID solutions – from pharmaceutical companies, architectural and engineering firms, and super skid suppliers, to system integrators and electrical contractors.

Whether it is new greenfield construction, expansions, or modernization of existing production facilities, the Turck pharmaceutical team will be happy to assist you with providing application specific solutions for your projects in many fields: fermenter control, mixing & batching, water and clean steam production and distribution, filtration, chromatology, the handling of solvents, etc.

Our support ranges from worldwide project management to application-specific, on-site advice. From planning to commissioning, we will guide you in all phases of the project.

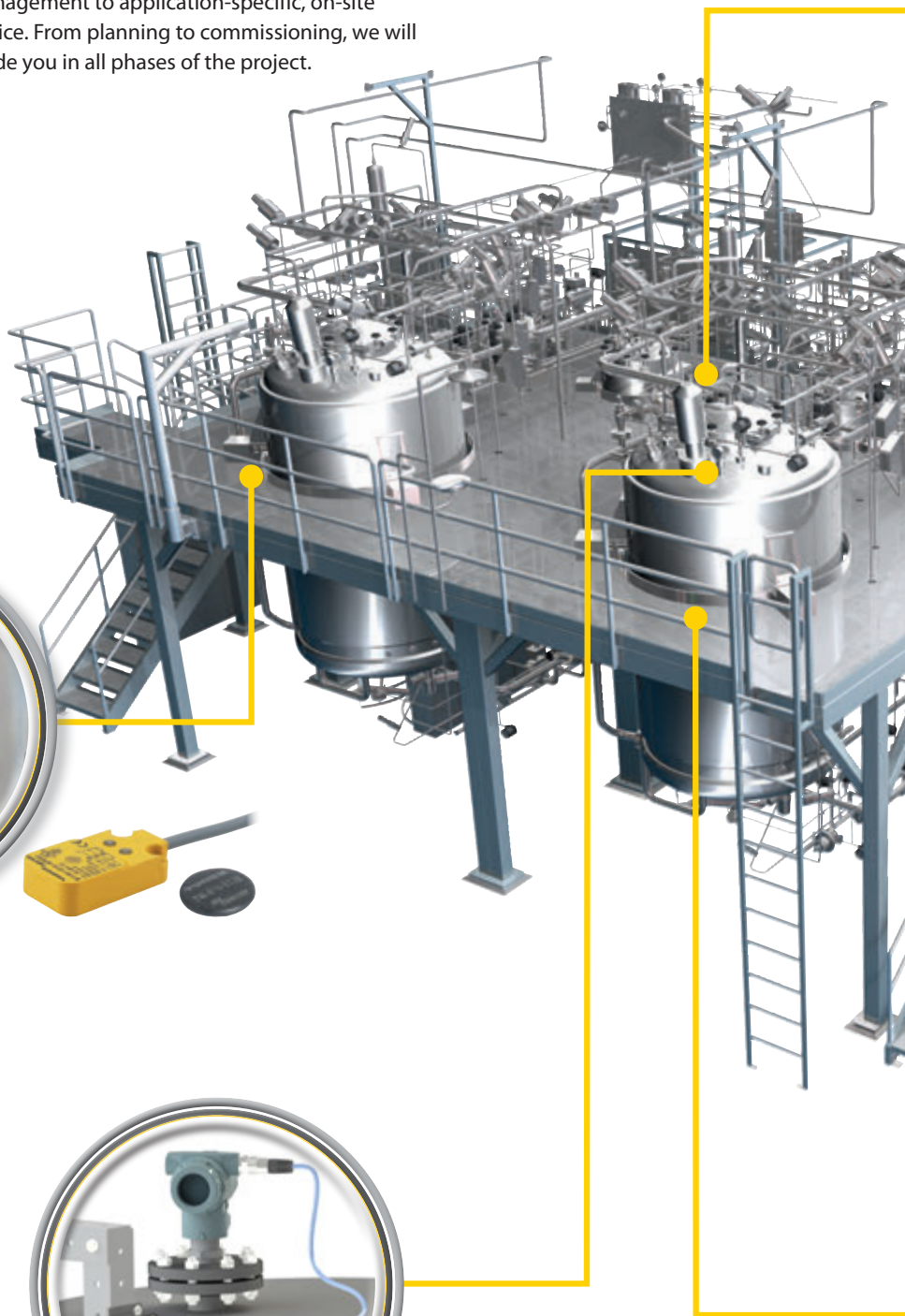
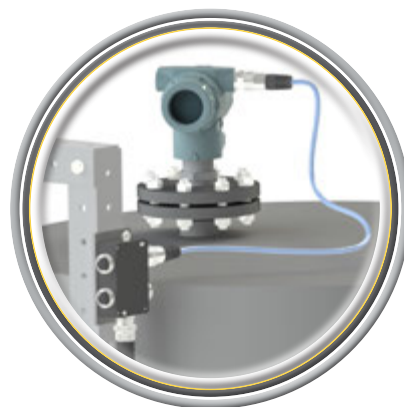


Identification of Portable Tanks

- The RFID system BL ident® ensures increased plant efficiency and traceability of the production processes through the reliable detection of mobile containers
- Application-optimized data carriers, for direct mounting on stainless steel and for use in pharmaceutical production

Easy Connection of Field Devices

- Efficient and fail-safe connection of field devices thanks to the process wiring connection technology realized with our quick disconnect connectors
- Comprehensive portfolio with connectors, cables and splitter boxes reduces cabling
- Flexible and highly chemical-resistant PVC cables
- Shielded twisted pair cables for analog and HART® signals
- Preinstalled connectors in process instrumentation allow for faster start up and commissioning

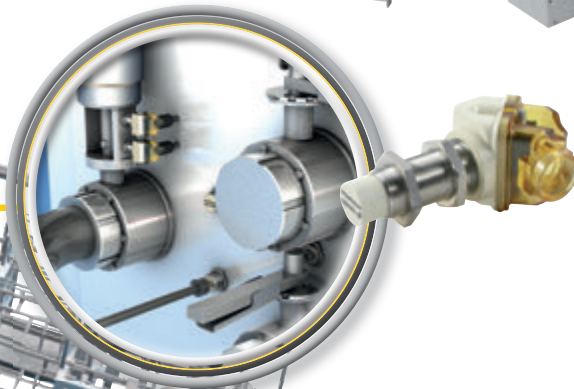


Planning and Construction of Super Skids

- Comprehensive know-how of fieldbus technology for pharmaceutical applications, with solutions for FOUNDATION Fieldbus, PROFIBUS, PROFIBUS-PA, Ethernet, DeviceNet™ and AS-i
- Comprehensive portfolio of fieldbus solutions for systems and control cabinets
- Application and customer-optimized device selection for super skid suppliers

Remote Signal I/O

- The modular I/O systems Excom® and BL20 support application-optimized signal processing
- Use in the non-Ex and Ex areas in zones 1 and 2, as well as 21 and 22
- High system availability through redundant communication and power supply
- Support of all standard fieldbus protocols

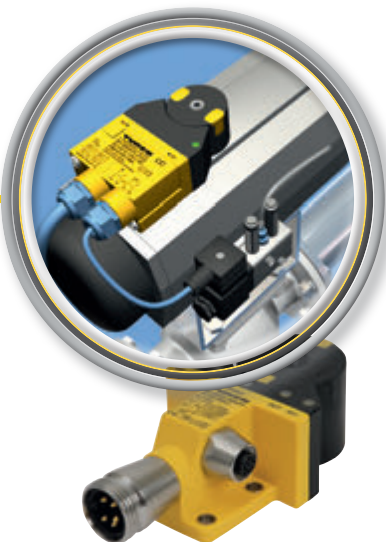


Transfer Panels/Hose Connections

- Besides RFID, Turck offers two major solutions for transfer panels and hose connections, with magnet as target and with metal target
- The magnet-inductive BIM M12 is a very robust solution
 - The magnet ensures a safe and error-free detection
 - ATEX approval for zones 1 G and D
- The inductive Uprox®+ WD sensors with terminal chamber are easily commissioned and maintained
 - Tightly sealed housings that are resistant to chemicals
 - Same increased switching distance on all metals
 - ATEX approval for zones 2 and 22

Monitoring of Quarter Turn Actuators

- The inductive DSU35 dual sensors capture the valve position of quarter turn actuators
- Easy assembly and adjustment
- Detergent-resistant plastic housing
- Analog output option
- Various electrical output signals: Intrinsically safe, AC/DC 2-wire, DC 3-wire, NAMUR, AS-i, DeviceNet™
- SIL 2



Collect Precisely

Encoders

- Extensive portfolio of standard devices
- Highest accuracy and interference immunity
- QR24 devices operate contactless and wear-free



Linear Position Sensors

- Contactless measuring system
- Range up to 200 mm
- ATEX approval for zones 1 and 21



Flow, Pressure, and Temperature Sensors

- Monitor and measure flow, pressure, and temperature rates of gases and liquids
- Different compact designs
- Many different process connections
- ATEX approval for zones 0 and 1



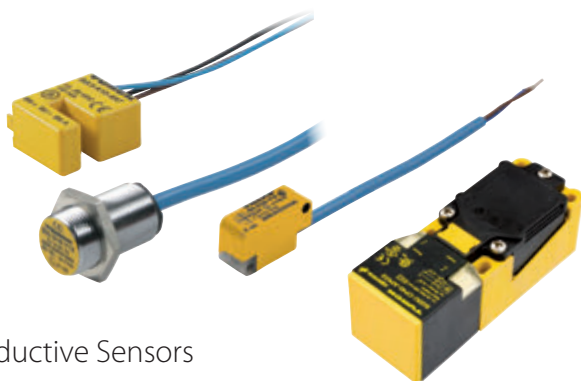
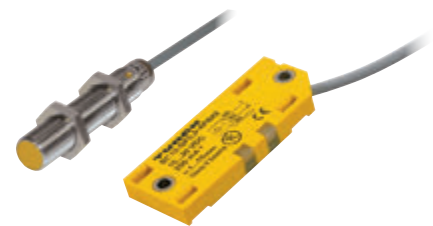
Dual Sensors

- Binary or analog position feedback of valves
- Easily mounted on all standard rotary actuators
- SIL certifications and approvals for ATEX, UL, CSA etc.



Capacitive Sensors

- Compact designs
- Interference-free operation
- Mechanically and chemically robust
- ATEX approval



Inductive Sensors

- Available in many different designs, sizes and housing materials
- Inductive and magnetic field sensors
- SIL Certifications and ATEX approvals

Ultrasonic Sensors

- Large measuring ranges
- Rugged mechanics and front-flush diaphragm
- User-friendly thanks to Easy Teach



Connect Reliably

Cables and Connectors

- Many different types and designs
- Ready-made or field-wireable
- Different cable qualities for all types of applications



FOUNDATION™ fieldbus/PROFIBUS-PA

- Multibarriers, junction boxes in IP67 and IP20, ready-made cables, and much more
- Rugged and space-saving designs for harsh environments
- Suitable for FISCO applications



Interface Devices

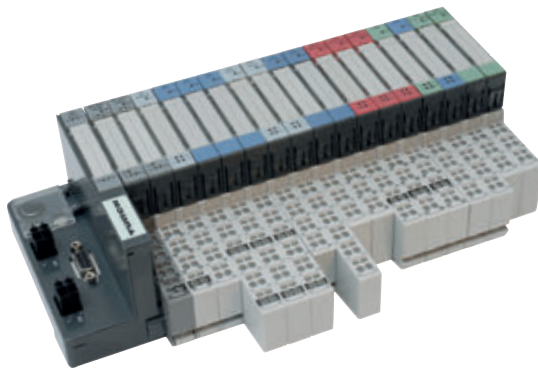
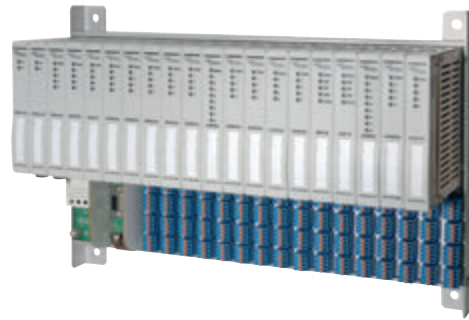
- For separation, supply, conversion and protection tasks
- In modular housing for DIN rail, as backplane solution, or as cartridge in IP67 housing
- Many different input and output signals
- ATEX approval for zone 2



Communicate Effectively

Remote I/O System Excom for Zones 1, 2 and Non-Ex Area

- HART and NAMUR signals
- High system availability through redundant communication and power supply
- Connection to various control systems
- FDT technology for easy operation

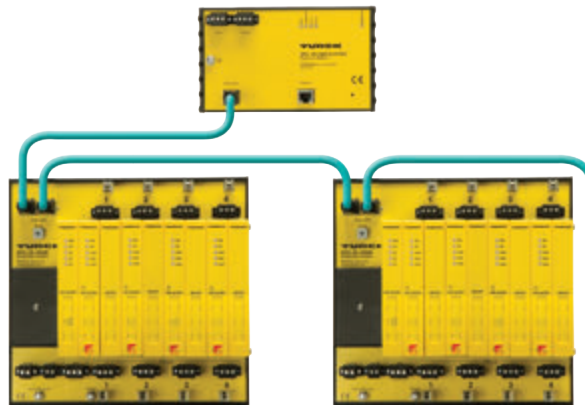


BL20 I/O System

- HART and NAMUR signals
- Connection to various control systems
- ATEX approval for zone 2
- Redundant power supply (optional)

Diagnostic Power Conditioner System DPC

- FOUNDATION™ fieldbus power supply for simple and redundant applications
- Excellent efficiency and high output power (28 V at 800 mA)
- Commissioning support and long-term diagnostics via FF-HSE, DTM and web interface



DeviceNet™



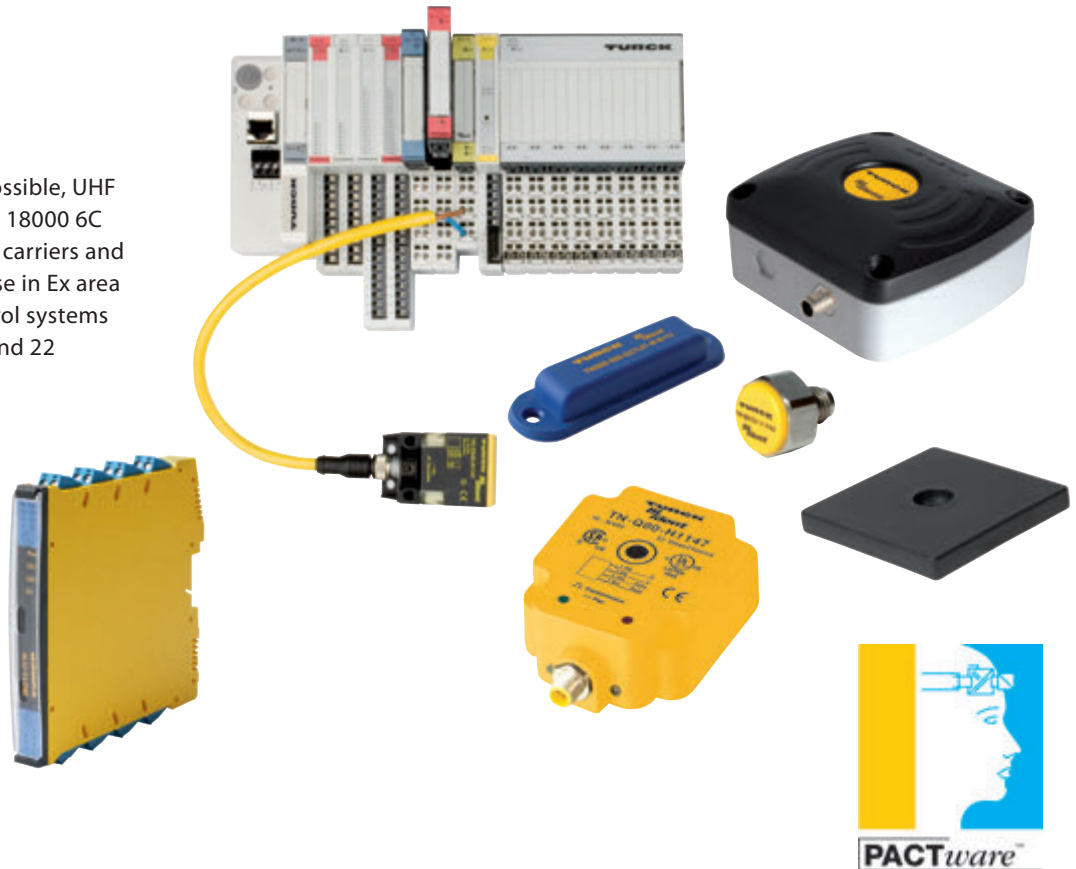
Fieldbus
Foundation



Automate Efficiently

RFID System BL ident

- Compact IP67 solution for different fieldbus types
- HF/UHF mixed operation possible, UHF read/write heads acc. to ISO 18000 6C
- Application-optimized data carriers and read/write heads, also for use in Ex area
- Connection to various control systems
- ATEX approval for zones 2 and 22



Customer-Specific System Solutions

- Planning, manufacturing, testing and commissioning of customized system solutions - from products, production and programming of cabinets up to commissioning

TURCK



28 subsidiaries and over
60 representations worldwide!

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