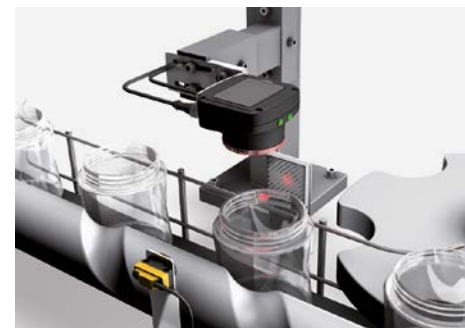# Food and Beverage Solutions

Identification of chocolate moulds

- The **RFID system BL ident®** reliably detects each and every chocolate mold and thus improves the efficiency of systems and quality of products
- Application-optimized data carriers and read/write heads for food and beverage applications

Efficient hazard zone guarding

- Machine safety through hybrid module with integrated safety logic
- Scalable safety levels up to SIL3, PLe
- Simple integration in high protection class through field-wirable cables

Detecting pipe elbows

- The **inductive uprox®+ WD sensors** reliably detect pipe elbows at pipe manifolds and thus ensure high system availability
- Secure functioning thanks to extra-large switching distance for all metals, even with worn seals
- High tightness and resistance to chemicals

Container check

- The **vision sensor iVu** checks plastic and glass containers before they are filled and thus avoids rejects
- Easy teaching of the sensor without PC
- Removable display

Level monitoring of ground coffee

- The **capacitive sensor QF5,5** reliably detects the level of ground coffee inside the container
- Easy integration into the machine design due to especially flat sensor form

Reliable operation of machines

- Packaging machines are operated reliably thanks to the extremely rugged connection technology of the **block I/O fieldbus station TBEN**
- For many standard fieldbuses
- Multiple Ethernet protocols with the same module without replacement thanks to multiprotocol technology
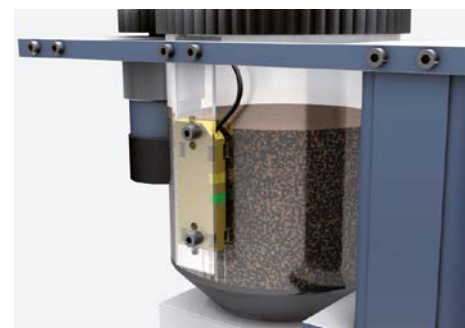- Cost-efficient due to cabinetless installation, withstands even aggressive cleaning processes

Speed monitoring of conveyor belts

- The **contactless inductive encoder QR24** reliably detects the speed of a conveyor system for potatoes
- Fully encapsulated, resists therefore aggressive chemicals and high pressures during the cleaning process.
- Thanks to the contactless inductive principle insensitive to vibration of the motor axis

Detects can feeding gaps

- The inductive sensor **Q130WD** monitors the gapless-feeding of food cans on the conveyor line and thus prevents production errors
- uprox®-1 technology enables large detection range and reliable detection of tinplate and aluminium cans
- Maximum mounting freedom in lateral guide rails
- Suitable for high-pressure cleaning thanks to protection class IP68/IP69K

Identification of meat hooks

- The **RFID system BL ident®** reliably identifies meat hooks for efficient control and easy traceability of production processes.
- Flush mountable data carriers for unslotted hooks
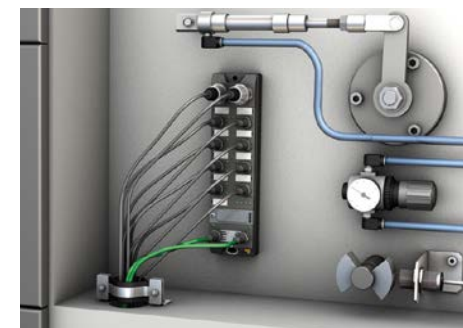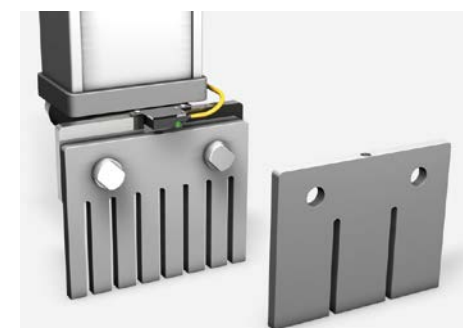- Read/write head Q42 in IP69K detects hooks in harsh production environments

Dough thickness control in rolling machines

- The **inductive linear position sensor LI** continuously checks the dough thickness to ensure consistent quality
- Contactless operating principle, therefore permanently high protection class and accuracy
- Absolutely wear-free

Monitoring changeover processes

- The **RFID system BL ident®** reliably identifies machine parts during changeover processes and thus reduces machine downtimes
- Application-optimized compact read/write heads
- Rugged miniature data carriers in a stainless steel housing, easily installed in machine parts

Over 30 subsidiaries and
60 representatives worldwide!

Solutions for the Food and Beverage Industry

Collect Precisely

Inductive uprox®+ and wash-down sensors

- Largest switching distances and factor 1 for all metals
- Extended temperature range, protection class IP68/69K
- Resistant against wet temperature shock tests (ice water – boiling water)
- Food-safe chemically resistant materials, Ecolab certified versions

Linear position and angle sensors

- Available in different sizes, max. 7,500 mm
- Analog level control with hygiene-compliant stainless steel floats
- Resistant to wet temperature shocks (ice water –boiling water)
- Magnet-free resonator principle for interference-free detection of signals; works contactless, wear-free and permanently water-tight

Capacitive sensors

- Highly chemical-resistant housings and tank inserts
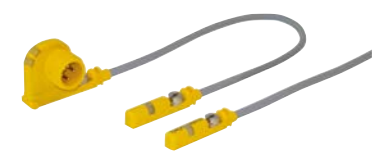- Food-safe materials
- Teachable

Vision sensors iVu

- Compact image processing solution for inspection tasks and code reading
- Integrated or external display
- Taught and operated without PC

Magnetic field sensors

- Detect the piston position on pneumatic cylinders reliably

Ultrasonic sensors

- V4A metal-encased sensors for extremely harsh application conditions
- Protection class IP69K
- Compact sensors with teach function

Photoelectric sensors

- Improved tightness and resistance to chemicals
- Ecolab certified
- Detect filling levels with glass tip
- Safety light screens

Pressure, temperature, flow sensors

- Different designs, measuring principles, and process connections
- Easy handling and mounting
- Highest accuracy and safety

Connect Reliably

Cable and connectors

- Very tight and resistant to chemicals
- Food-safe materials
- Ecolab certified versions
- Resistant to wet temperature shocks (ice water –boiling water)

Passive junctions and T-pieces

- Signal transmission and voltage distribution
- Different designs and wirings
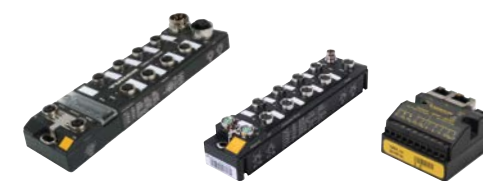
Interface and power supply modules

- Modules to isolate, convert, process and condition analog or digital signals for example temperature and rotation speed
- Different standard designs and widths
- Innovative accessories: Power supply modules, removable terminals, programming adapters
- Cabinet Guard IM12-CCM – perfect Protection of IP20 installation

Communicate Effectively

Compact I/O modules in IP67, IP69K and IP20

- Multiprotocol technology for PROFINET, EtherNet/IP™ and Modbus TCP
- Stainless steel flanges, for use in wet areas
- Fully potted (IP67, IP69K), vibration and shock tested
- Various designs with 4 to 16 I/O channels, Analog I/Os, temperature, RS232/RS485 and RFID interfaces
- Hybrid module for safety and standard I/Os
- Decentralized, pre-processing, fast logic thanks to Field Logic Controller (FLC) programmable with ARGEE

Modular I/O system BL20

- Gateways for many different fieldbuses and Ethernet, can also be programmed with CODESYS V3
- Multiprotocol technology for PROFINET, EtherNet/IP™ and Modbus TCP
- I/O modules available as: digital, analog, temperature, counter, RS232/485/422, PWM, SSI, RFID
- Economy gateways and I/O modules

Modular I/O system BL67

- Gateways for many different fieldbuses and Ethernet, can also be programmed with CODESYS V3
- Multiprotocol technology for PROFINET, EtherNet/IP™ and Modbus TCP
- I/O modules available as: digital, analog, temperature, counter RS232/485/422, SSI, CANopen, RFID, valve manifolds and IO-Link master
- Connectivity: M8, M12, M23 and 7/8"

DX wireless system

- Flexible network modules for radio transmission of sensor signals
- Point-to-point connection, star topology, Multi-Hop Repeater Network
- Configuration software

Automate Efficiently

Machine safety

- Protection of hazardous areas up to SIL3, Performance Level e
- Due to safe decentralized logic in the module, highly efficient safety technology even without safety bus protocol
- Hybrid I/O module Combinatorics of 8 safe I/Os and up to 36 standard I/Os thanks to IO-Link Master on board

HMI panel

- Programming of control and visualization functions with CODESYS 3
- HMIs with and without integrated PLC
- Flexible use as PROFINET, EtherNet/IP and Modbus TCP/RTU Master
- Brilliant TFT displays with screen diagonals from 4" to 15"

Decentralized control

- Fully-fledged control in IP67 with master or slave function, multiprotocol and multiple interfaces, edge gateway function
- CoDeSys V3 programmable gateways for I/O systems BL67 and BL20
- Modularly expandable with all available BL I/O modules
- Can also be used as fieldbus or Ethernet slave
- Highest flexibility due to a wide range of variants in the Ethernet communication

Pick-to-Light system

- Optical user guidance for manual assembly and commissioning processes
- Contactless pick-up alert
- Easily integrated in existing systems via the modular BL20 and BL67 I/O systems

Turck cloud solutions

- Functions such as monitoring, alarm, reports, trends and location information already integrated
- Simple and fast integration, also in existing architectures
- Secure hosting of the data in different variants such as private or public
- Increase of machine availability and added value through digitization

IO-Link

- Fieldbus-neutral communication standard for sensors and actuators
- Simple device configuration via control system or FDT/DTM
- IO-Link sensors, masters and IO-hub

Wash-down work lights

- Very high luminous intensity
- Absolutely water tight thanks to protection class IP68/69K
- Withstands aggressive cleaning processes in the food industry

Compact tower lights

- Easily mounted and aligned (e.g. M12 connector)
- Versions with and without acoustic alarm (adjustable, max. 95 dB)
- Green, yellow, red, blue or white LEDs
- Excellent luminosity, good visible even at greater distances

RFID system BL ident®

- Flexibly integrated in systems, thanks to the modular concept of the I/O systems BL67, BL20
- Many application possibilities thanks to mixed HF and UHF operation
- Data carriers and read/write heads in IP69K, made of food-safe materials