Your Global Automation Partner
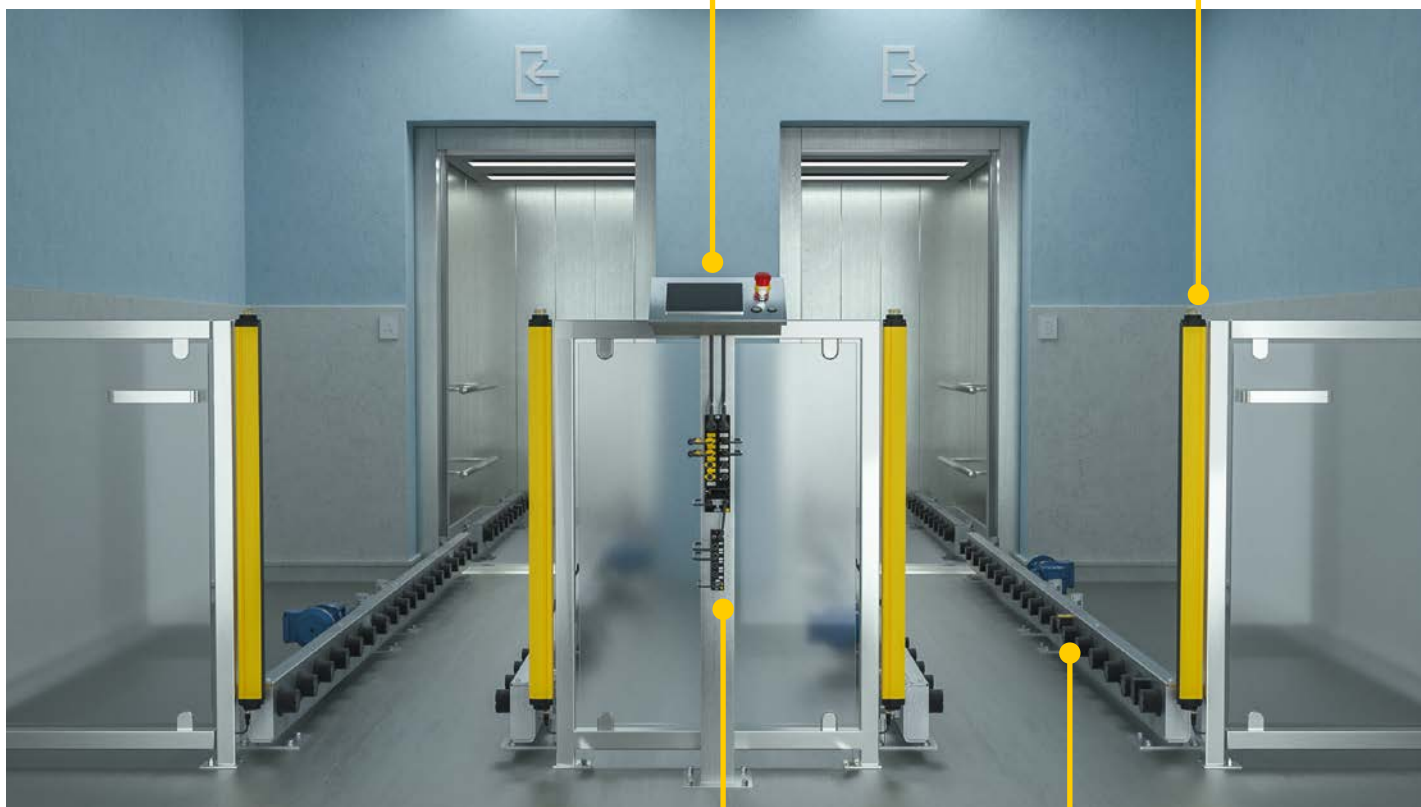
TURCK

Solutions for
Hospital Logistics

Solutions for Freight Elevators

The image below shows a transmitting-receiving station from Dürr for distributing roller containers to different floors. The buffer zones in front of the elevator mean that only a single person is required to carry out loading and unloading.

Light grids and laser scanners in different lengths and resolutions ensure the maximum level of personnel safety. The components can be integrated efficiently via Turck's TBPN safety hybrid module.

The robust operator panels from the HMI TX product series are used to control and visualize the application.

The radio technology used in the BL ident® RFID system increases system efficiency and reliably traces mobile containers. The system consists of read/write heads, RFID I/O modules, and tags that are optimized for the specific application and that can be mounted directly onto metal surfaces.

Inductive Factor 1 sensors with increased switching distances and no reduction factor reliably detect containers made of stainless steel or other metals.

Solutions for Conveyor Systems

The image below shows a conveyor system from Dürr for transporting roller containers.

Turck's TBIL I/O hub transmits 16 incoming or outgoing digital signals to the controller via IO-Link, meaning that signals can be consolidated cost-effectively.
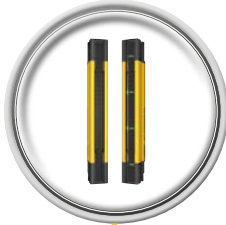
The illuminated E-stop buttons with twist release can also be easily integrated in Turck's TBPN safety hybrid module. Each button is illuminated when triggered, meaning that it can be instantly identified.

Turck's TBPN safety hybrid module combines four intrinsically safe inputs with four non-intrinsically safe inputs for PROFINET and PROFIsafe. Two safe outputs can also switch off dangerous motions on site.The rugged IP67 I/O module is ideal for safety applications on elevators, conveyor systems or lifting equipment – either for use with safety PLCs or when retrofitted as a stand-alone solution.
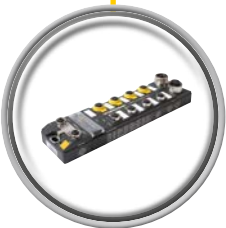
Muting Solutions for ESPE

The muting function of electro-sensitive protective equipment (ESPE) works using a decentralized safety module, which in conjunction with a non-intrinsically safe PLC can safely bypass (mute) the ESPE, thus ensuring a continuous material flow. The function can be triggered by either the switching signals from two adjacent digital sensors or the switching signal from one digital sensor together with the tag presence signal from an RFID read/write head.

ESPE: If people enter the danger zone, they will be detected by the light barriers and the system will stop.

Due to its special design, the RFID read/write head TNLR-Q80L400 reliably identifies roller containers of various sizes. In addition, its tag present signal can also be used as a trigger signal for muting.

The signals from the inductive sensors or the RFID system enable the safety module to bypass the ESPE, ensuring a continuous material flow. Thanks to the Safety-Configurator software, this can be done easily and safely directly in the module.

Two inductive Factor 1 sensors with increased switching distances switch sequentially and are able to identify every incoming container. The decentralized safety module can also use the signals from these sensors to mute the ESPE.
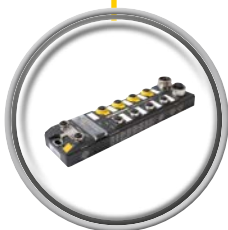
Solutions for Cleaning Systems

The image below shows a semi-automatic dishwashing organizing system from HOBART, with lowered supply at the flight-type dishwasher, cutlery lifting magnet, automatic tray indexing and a multi-chamber container wash system.

The protective cover of the E-stop buttons have IP69K protection rating and meet FDA standards. The buttons themselves are illuminated, meaning they can be immediately recognized even in large plants.

Light grids and laser scanners in different lengths and resolutions protect personnel to the greatest possible extent.

The TBPN safety hybrid module offers two safe inputs, two safe, configurable inputs/outputs, four digital inputs or outputs that can be safely switched off and two IO-Link ports, one of which can be safely switched off in the module. A safe PLC is therefore not required.

Turck's BL ident® RFID system reliably identifies all containers and guarantees important regular cleaning in accordance with applicable regulations. The specially designed tags for direct mounting onto metal surfaces ensure that each container is reliably detected.

Your Automation Partner for Hospital Logistics

Benefits of automated transport systems

As specialists in sensor, fieldbus, connection and interface technology, as well as HMI (human machine interfaces) and RFID (radio frequency identification), Turck offers efficient solutions for manufacturing, process and logistics automation. Hospital logistics is another field in which you can benefit from Turck's experience with automated transport systems, with advantages including:

- End-to-end monitoring and history of goods in automated transportation processes
- Checking and verifying that transport times for containers are being adhered to
- Reducing the time spent searching for an actuated E-stop button
- Restarting the system faster after an emergency stop
- Low cabling requirements reduces the fire load
- Safety applications are easy to retrofit
- RFID can be easily retrofitted to existing systems

Modular BL ident® all-in-one RFID system

The BL ident® RFID system increases system efficiency and ensures mobile containers can be traced.

It provides a reliable solution for the following applications:

- Identifying mobile containers for the purpose of tracking and locating
- Checking that specified cleaning intervals are complied with; e.g. for containers
- Automatically allocating containers to the correct destination in hospitals

Reliable safety technology that provides added value

Turck safety components provide an increased level of personnel safety up to PLe or SIL3

They provide a reliable solution for the following applications:

- Transmitter and receiver stations on elevators
- Hoists and lifting equipment
- Handover of goods from AGV systems to materials handling technology
- Washing and cleaning systems
- Conveyor systems
- Safety features when used with RFID (muting)

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