



Small but highly beneficial

Transponder-coded safety switch
CTM with guard locking

EUCHNER

More than safety.

THE SAFETY SWITCH **CTM**

Smart, compact and safe – the CTM safety switch fits into any machine. The integrated transponder technology achieves the highest safety level, category 4/PL e (EN ISO 13849-1). Featuring a locking force of 1,000 N and an innovative ball actuator, it is ideally suited for small doors and flaps with pivoting radii from 150 mm. Two different versions for standard and hygienic applications cover a wide range of uses.

■ **Compact design**

The compact dimensions (120 mm x 36 mm x 25 mm) permit simple integration into any machine design.

Door pivoting radii as small as 150 mm are possible thanks to the innovative ball actuator. The integral adhesive force (25 / 50 N) effectively prevents doors from being opened when they are not locked.

■ **Maximum safety**

Transponder coding ensures maximum safety despite the small switch size. The requirements in all relevant standards can already be met with a single CTM. Irrespective of whether category 4/PL e according to EN ISO 13849-1 must be achieved or whether the requirements in EN ISO 14119 must be met – you're always on the safe side with the CTM.

■ **Simple series connection**

The CTM's communication capabilities future-proof it for Industry 4.0. The integrated interface also allows it to be connected to an EUCHNER IO-Link Gateway, which forwards the relevant process and diagnostic data via IO-Link to the higher-level control system. Data can also be exchanged via a series connection with additional EUCHNER devices.

■ **A variety of different versions**

EUCHNER can provide the right solution for every user because of the many different versions of the products that it offers. The CTM has everything you need, including protection of personnel and processes, different wiring options and the intelligent CTM-CBI version.

■ **Hygienic design**

The black-and-blue hygienic version consists exclusively of food-safe materials; all the plastics have been tested and approved for the relevant applications. With its smooth surfaces, rounded edges, and materials resistant to cleaning agents, this version is particularly suitable for use in the food and packaging industries.



CTM IN DETAIL

Industry 4.0 ready
with intelligent
communication

Easy installation

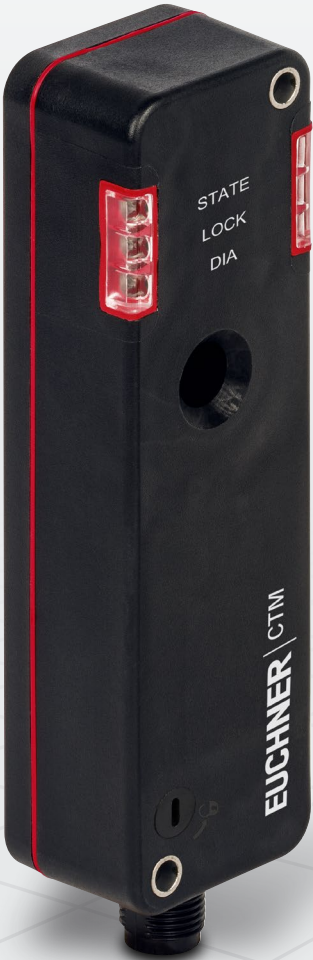
Auxiliary release
(optional)

Numerous versions
for protection of
personnel and processes

Compact housing

Hygienic version also
available

Version with integrated
AS-Interface



LEDs visible from
three sides

Innovative
guard locking principle



Flexible ball actuator for
very small door radii

Versatile integration into
the machine design



SMALL, COMPACT AND SAFE

A SOLUTION FOR EVERY REQUIREMENT

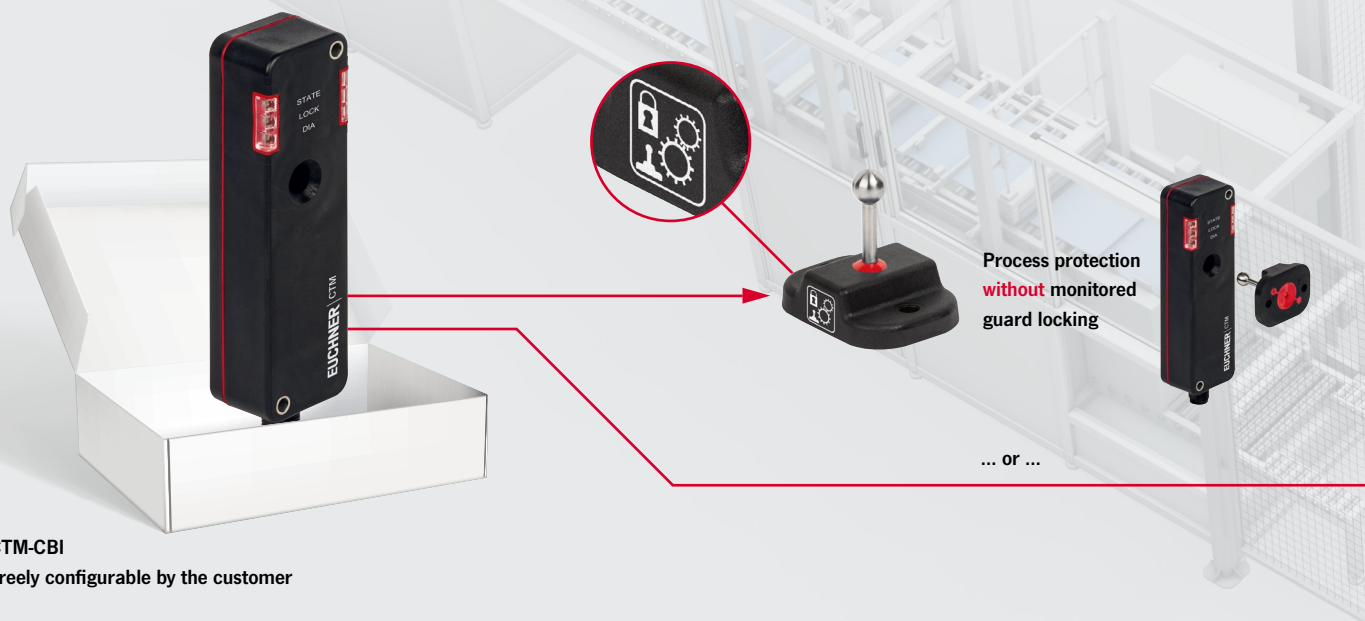
CTM-CBI – smart and unique

The unique CTM-CBI, which has been patented by EUCHNER, provides protection of personnel or processes, depending on the requirements. It can be configured with the help of the relevant actuator during the teach-in operation to function as a safety switch with or without guard lock monitoring.

If the installation is converted or the production process is redesigned, the switch can be returned at any time to the factory settings and reconfigured. This means that there are no limits to its applications and no time-consuming procurement and logistics processes are needed.

Benefits for you

- + Simple configuration
- + Standardized wiring throughout the installation
- + Considerable flexibility when converting machines
- + Bistable guard locking principle



CTM-CBI
Freely configurable by the customer

Bistable guard locking – no chance of getting locked in

The CTM versions with the bistable guard locking principle guarantee that guard locking remains in its current state if the power fails or the installation is switched off. In other words, a locked door will stay locked if it was locked before, or it can be opened and closed as needed if guard locking was not previously activated.

People can therefore no longer be locked in unintentionally if the machine is switched off or if the power should fail.

Benefits for you

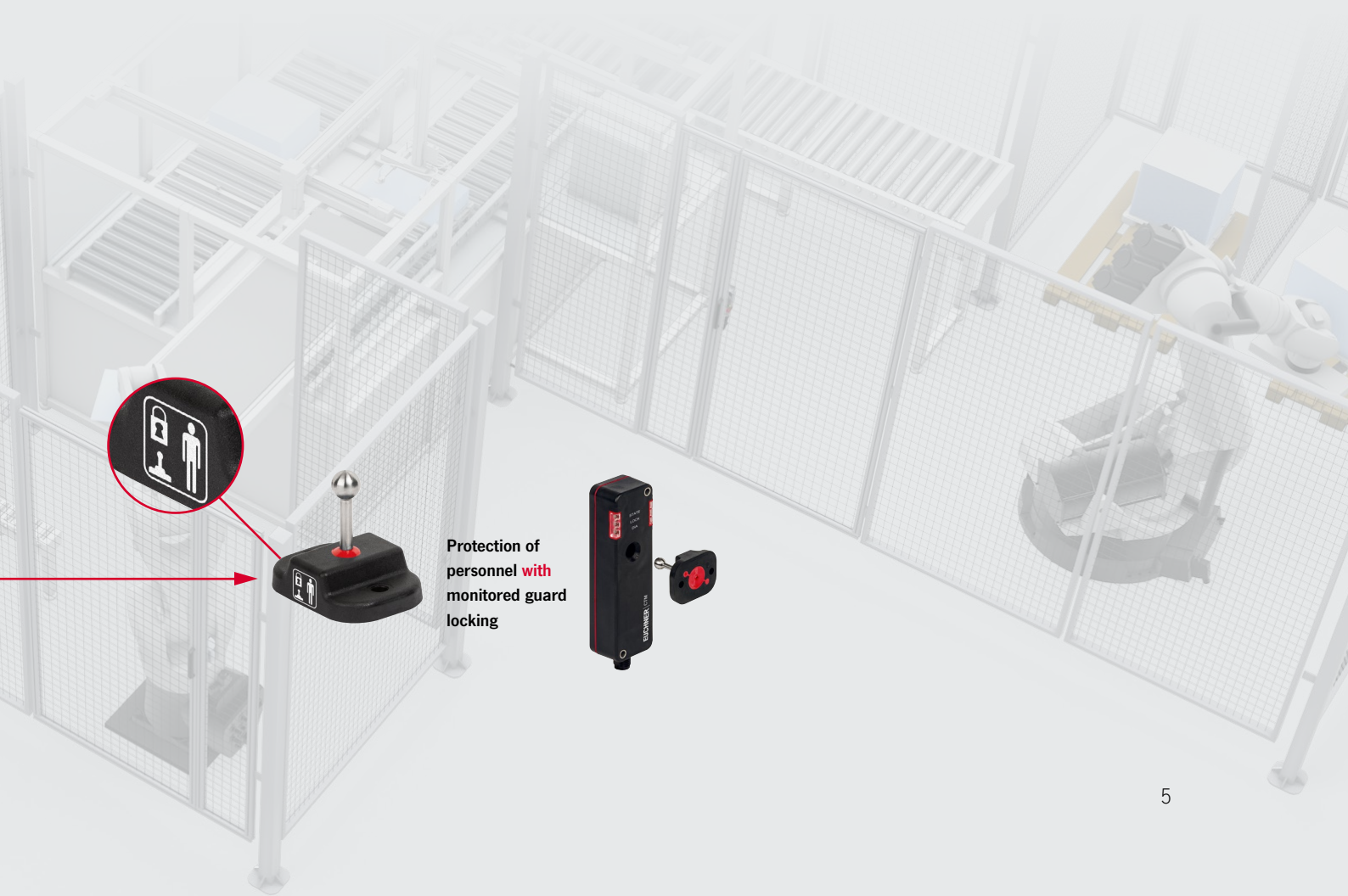
- + No additional escape release required
- + Available in different versions with or without guard lock monitoring

Open-circuit current principle as an alternative

In the open-circuit current principle, guard locking is activated by the voltage at the solenoid and deactivated by spring force. The new open-circuit current versions of the CTM are suitable for series connection and for use with AS-Interface.

Benefits for you

- + Simple release by switching off the machine
- + Access possible at any time even if the power fails



EASY TO INTEGRATE

INTO APPLICATIONS AND SYSTEMS

From separate operation and series connection to a connection to the higher-level control system via various communication standards – anything is possible thanks to the wide range of CTM versions available.

■ System families **BP** and **BR**



Devices in the BP and BR system families combined with an EUCHNER IO-Link Gateway can communicate and send process and device data in real time to an IO-Link master. Comprehensive diagnostic messages enable rapid and targeted troubleshooting.

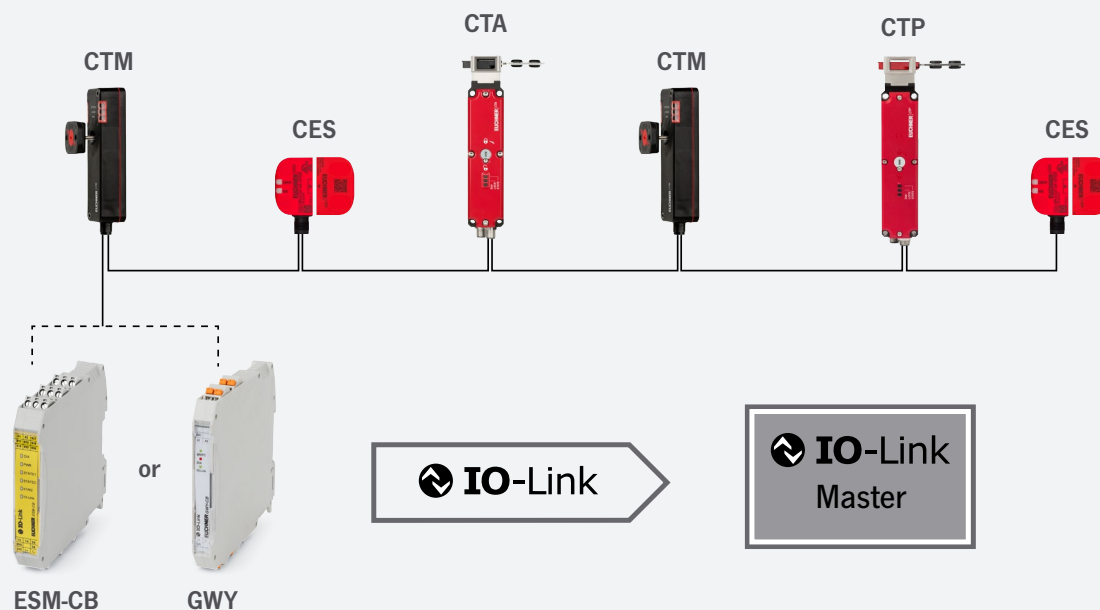
BP devices are suitable for separate operation. In the BR version, up to 20 devices belonging to the BR system family can be connected in series. Devices with communication capability are identified by the INDUSTRY 4.0 READY logo.

■ System family **AS**



Version with integrated AS-Interface. The safety switch is connected directly to the ribbon cable via an AS-i coupling module. The wiring work is therefore reduced to a minimum, as all information on the safety switch is made available to the control system via AS-Interface.

Examples of series connection in the field



INDUSTRY 4.0 BIDIRECTIONAL GUARD LOCKING VIA IO-LINK

The connection to the IO-Link communication can do more than simply reading process and device data for diagnostics. It can also be used for control purposes.

IO-Link

The CTM with control of guard locking via IO-Link communication is intended specifically for this application. No separate wiring is needed for the control of guard locking, because the existing communication connection is used.

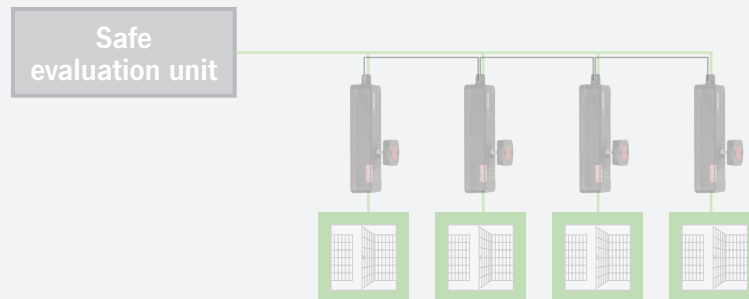
This variant is designed for process protection and functions only in combination with an EUCHNER IO-Link Gateway.

Benefits for you

- + Individual control of a switch within a switch chain
- + Longer switch chains as a result of lower voltage drop when switching
- + Simple wiring

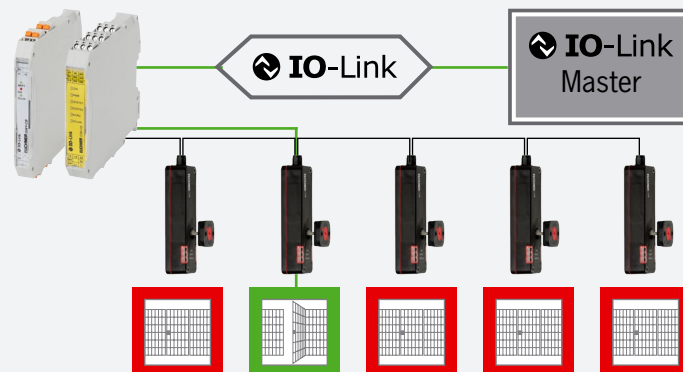
Connection to safe PLCs or safety relays

Control of guard locking via the control input



Connection to an IO-Link Gateway

Control of guard locking via IO-Link communication



OUR PRODUCTS FOR YOUR SAFETY

RELIABLE DOOR DETECTION

Transponder-coded safety switches without guard locking:
CES-C04 // CES-C07

Magnetically coded safety switches without guard locking:
CMS

Electromechanical safety switches without guard locking:
NM // NP // GP // NZ

SAFE GUARD LOCKING

Transponder-coded safety switches with guard locking:
CTM // CTP // CTA // CET

Electromechanical safety switches with guard locking:
STM // TP // STP // STA

Safety switches with integrated mounting magnet:
CEM-C40 // CEM-C60

DOOR LOCKING SYSTEMS

MGB // MGB2 *Modular* // MGBS

ACCESS CONTROL SYSTEMS

EKS // EKS *Light* // EKS *Modular* // CKS

OPERATING DEVICES

ZSM // ZSB // HBA // HBM

LIGHT GRIDS/LIGHT CURTAINS

LCA

EMERGENCY STOP DEVICES

ES // RPS

SAFETY CONTROL / SAFETY RELAY / IO-LINK GATEWAYS

MSC // ESM // GWY

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