Simply safe.

Transponder-coded safety switch **CET**
with guard locking

EUCHNER
More than safety.

Safety switch CET

The CET combines a mechanical guard locking with an electronic coded actuator.

Versatile

The CET is used in securing safety doors of machines and installations for the protection of persons and processes. Thanks to the guard locking function with guard lock monitoring, the CET is also ideal in case of overtravelling machine movements. Its very robust metal housing allows the CET to be used in the harshest environmental conditions. It achieves a locking force of 6,500 N in the locked state, which is particularly advantageous for large and heavy doors. In the version with double insertion slide, the CET is perfect for use with swing doors and rotary tables.

Simple function

The CET is mounted on the fixed part of the safety guard, and the actuator with its spring-loaded plunger and transponder on the moving part. When the safety guard is closed, the plunger of the actuator is guided into a recess via the insertion slide of the CET. The recess also contains the read head. It detects the safety guard in closed position and in locked position. The internal evaluation electronics or an external evaluation unit releases the safety circuit when the safety guard is locked. A start button and a feedback loop can be optionally integrated.

Different coding levels

Unicode coding

Each CET actuator has a unique code and significantly surpasses the requirement in EN ISO 14119 for a type 4 switch with high coding level. The uniquely coded actuator is specifically assigned to the safety switch via a teach-in operation. As such bypassing the safety guard using another actuator of the same type is effectively prevented. In this way the requirement in the standard for effective protection against tampering is met. If a fault occurs, a new actuator can be taught-in at any time. On teaching-in the new actuator the previous actuator automatically ceases to be valid.

Multicode coding

For applications in which an actuator with a high coding level is not necessary, it is of course possible to use a multicode safety switch. The actuator is not specifically assigned to the safety switch here. It is only checked whether or not the actuator is a valid actuator.

Easy compliance with standards

Thanks to the combination of mechanical guard locking and transponder technology, the safety switch grants a maximum level of safety. Performance Level e (PL e) and Category 3 or 4 (depending on the installation position) according to EN ISO 13849 are achieved with **one CET**. The CET also obviously meets the requirement from EN 14119 for monitored guard locking.

Installation position	Achievable category and PL according to EN ISO 13849-1
Head upward 	3 / PL e

Installation position	Achievable category and PL according to EN ISO 13849-1
Head downward or horizontal 	4 / PL e

Types of guard locking

Two different types of guard locking are used with the CET.

- **Mechanical guard locking:** guard locking by spring force. Release by applying voltage to the guard locking solenoid (closed-circuit current principle).
- **Electrical guard locking:** guard locking by solenoid force. Activation of guard locking by applying voltage to the guard locking solenoid (open-circuit current principle).

Door monitoring output (available for variants with integrated evaluation electronics)

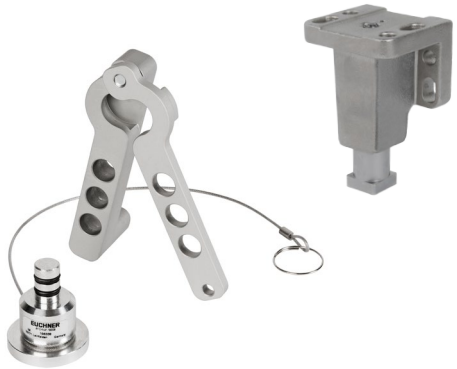
This allows the position of the safety door (open/closed) to be recognized.

Simple bus connection with AS-Interface

In the version CET-AS, the safety switch can be either directly connected in the control cabinet or operated on the AS-i bus via a coupling module. The wiring is thus no longer required. All information of the CET is provided to the control system via the AS-i bus.

Comprehensive, well-thought-out accessories

Whether it be mounting plates for simple attachment, various unlocking and release aids, assembled cabling or various bolt systems, the comprehensive range of accessories offers maximum flexibility for integration and assembly.



Lockout mechanism prevents activation of the guard locking. To do this, the lockout mechanism is attached to the CET actuator. In locking position, the lockout mechanism can be secured with up to three locks.

Emergency unlocking allows to unlock the CET manually.

Mechanical key release allows authorized personnel to operate the mechanical release in certain situations.

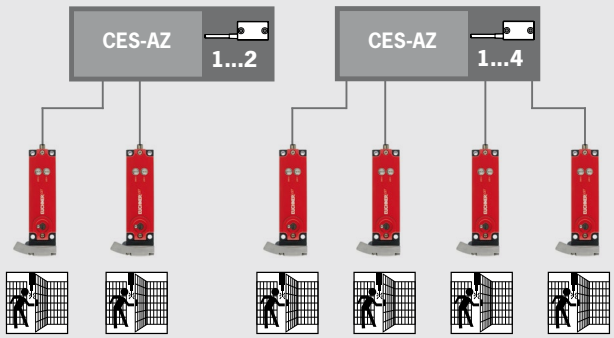
Mounting plates and bolt system for the simple mounting of the CET on profiles.

CET system families

Matched to specific customer requirements, EUCHNER offers four connection and wiring concepts:

CET-AX

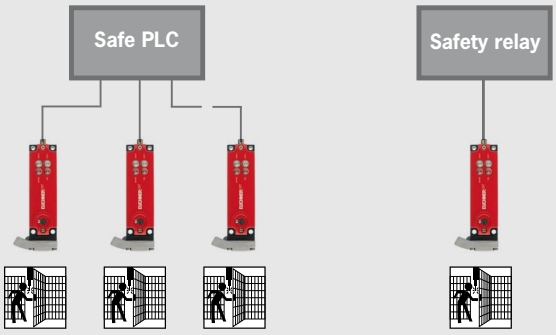
Consists of a read head and an actuator. Evaluation takes place via separate CES-AZ evaluation units.



- Type of evaluation:
  - Evaluation unit CES-AZ
- Maximum number of read heads

CET-AP

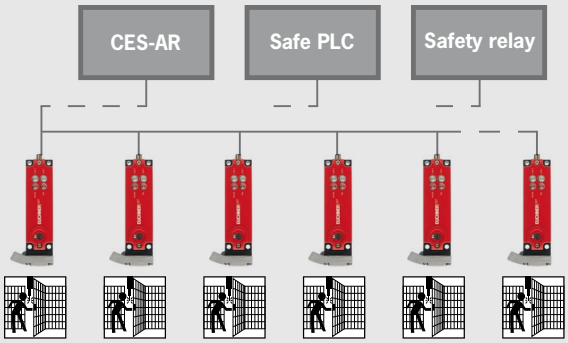
Consisting of a safety switch with internal evaluation electronics and an actuator. The CET-AP is suitable only for separate operation.



- Type of evaluation:
  - Safe control system
  - Safety relay
- Maximum number of switches

CET-AR

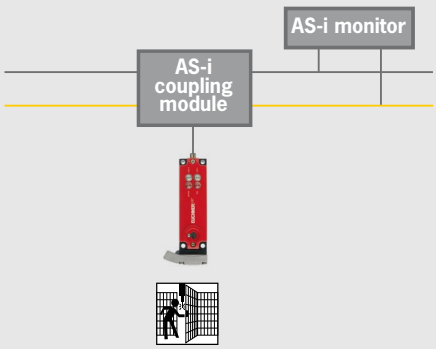
Consisting of a safety switch with internal evaluation electronics and an actuator. The CET-AR can be connected in series (up to 20 units).



- Type of evaluation:
  - Evaluation unit CES-AR
  - Safe control system
  - Safety relay
- Maximum number of switches

CET-AS

Consisting of a safety switch with internal evaluation electronics and an actuator. The CET-AS is suitable for direct connection to the AS-i bus.



- Type of evaluation
  - AS-i Safety at work
- Maximum number of switches

CET
in detail

Actuator made of rustproof steel with integrated transponder

Plunger for releasing the guard locking

Mechanical guard locking with 6,500 N

Recess with integrated read head

Sturdy insertion slide of rustproof steel permits use on large and heavy doors

Actuating head adjustable in four directions for use on doors hinged on the right or left

Escape release (optional) for releasing the guard locking from within the danger area without tools

Mechanical release for releasing the guard locking with the aid of a tool

Slim design, ideal for space-saving installation

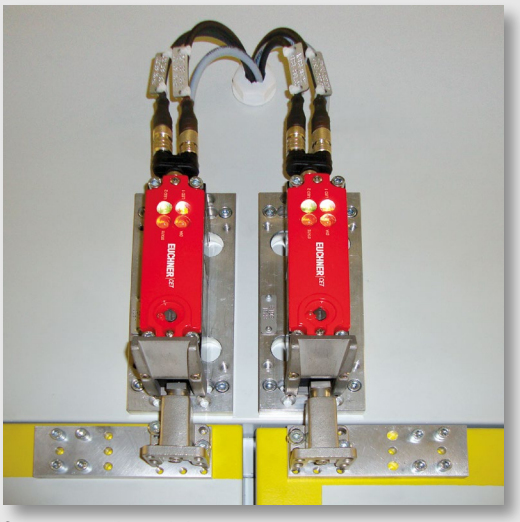
Front wire release (Bowden) (optional) permits remote release of the guard locking via a pull rope

Detailed diagnostic function via LEDs

Different connection options (M12, M23, AS-i) simplify wiring work

Robust die-cast metal housing, ideally suited for harsh environments

Sturdy double insertion (optional) slide made of rustproof steel for use on swing doors or rotary tables



Securing two hinged doors

Securing a sliding door

The advantages of CET at a glance

- Combination of mechanical guard locking and transponder technology
- Guard locking with guard lock monitoring
- Suitable for process protection and the protection of personnel, even in case of overtravelling machine movements
- Uniquely coded actuator
- Effective protection against tampering
- Category 4 / PL e with one switch
- Plug connectors mean little wiring effort
- High locking force up to 6,500 N
- Robust metal housing for harsh environment
- Also suitable for heavy doors
- High degree of protection IP67
- Actuator with large freedom of movement
- No precise door adjustment necessary

Securing a hinged door

EUCHNER GmbH + Co. KG
Kohlhammerstraße 16
70771 Leinfelden-Echterdingen
Germany

Tel. +49 711 7597-0
Fax +49 711 753316
info@euchner.de
www.euchner.com

EUCHNER
More than safety.

114133-09-02/19 Subject to technical modifications; no responsibility is accepted for the accuracy of this information. © EUCHNER GmbH + Co. KG - TA