

the **sensor** people

# Magnetically Coded Sensors, Safety Switches, Safety Locking Devices and Safety Command Devices



Optimum **cost-effectiveness** to extreme **load capacity**. Switch to **Leuze electronic**.

### Profit from the diversity of our Safety Switches.

All Safety Switches, Safety Locking Devices and Safety Command Devices from Leuze electronic feature contact sets for integration in control circuits up to category 4 and Performance Level PL e in accordance with EN ISO 13849-1. The same applies for the MC3x Magnetically Coded Sensor in combination with the MSI-MC310 Safety Relay (evaluation unit).

Safety Switches and Magnetically Coded Safety Systems can be used to monitor moveable guards such as safety guards or flaps, for example in the food, pharmaceutical or timber industries. Opening the guards triggers an E-Stop command.

The complete portfolio ranges from hinge switches to position switches to locking devices, command devices and coded magnetic systems. All in all, it's a safe bet that you'll find the right solution for your application in our product range.

Cylindrical MC3x Sensor for guarding pad printing machines.



**Reliability** in all positions.

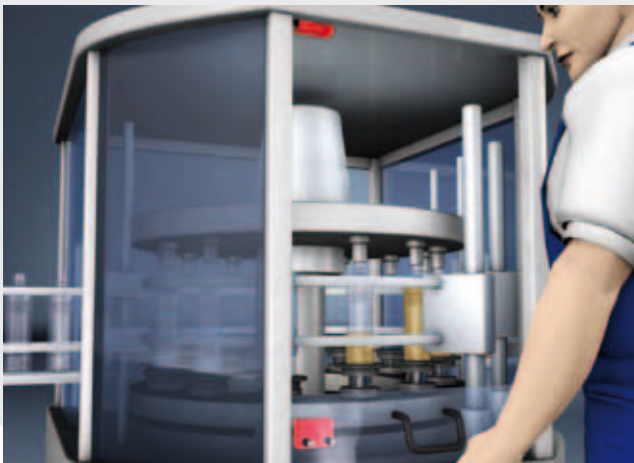


### **MC3x** Magnetically Coded Sensors

The MC3x Magnetically Coded Sensor contains specially combined reed contacts that are contactlessly activated by the coded magnetic field of the actuator.

- Monitoring of moving guards on machines with sufficiently short stopping times for demanding applications
- For dusty or humid environments
- High-strength plastic housing
- Highly tamperproof
- Designs for many different types of applications
- PVC or PUR cable, M8 plug

MC3x Magnetically Coded Sensors for guarding sliding gates in filling systems.



### **S20, S200** Safety Switches

These switches are predestined for guarding machines and systems in which process or production interruptions are possible or may be necessary.

- Fiberglass-reinforced plastic (S20) or metal (S200) housing – both with IP 67 protection rating
- Designed for normal duty (S20) and heavy duty applications (S200)
- Easy mounting with standard housing dimensions
- Universal use with 5 actuator approach directions
- Self-centering with funnel-shaped entry opening

S200 Safety Switch on the door of a plastic film wrapping station.



With or without hinge – **Leuze electronic** always has the **right** Safety Switch.

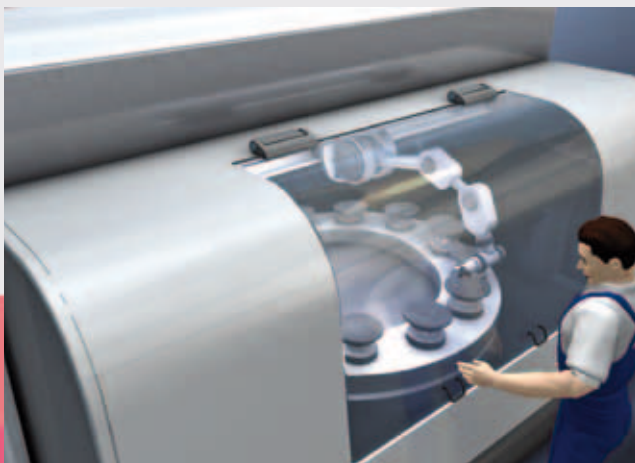


#### Safety Hinge Switch **S400**

The S400 series Safety Hinge Switches are used for position monitoring of rotatable hard guards (e.g. protective hoods). The S400 Safety Hinge Switches unite Safety Switch and door hinge functions in one component.

- Maximum protective device opening angle – 180°
- Repeatable setting (switching angle alignment) with moved or misaligned doors
- Compact, precisely rounded robust metal version construction – IP 67
- Encapsulated, internal actuator guarantees proper functioning – difficult conditions included
- Extremely manipulation-safe with hidden connections
- Cable or M12 connection

S400 Safety Hinge Switch on a semi-automatic test system with protective hood.



#### Safety Position Switch **S300**

The S300 Safety Position Switch's design also allows it to be mounted as an alternative to Hinge Switches, for example on flaps – always requiring appropriate actuation tappets or notches that can actuate the switch when friction closed.

- Metal housing for "heavy duty" applications
- Switching direction selectable
- Universal use with up to 5 actuator approach directions
- Stable lever fixing in 10° increment
- Variants with tappet and spool actuator; extremely long-life and robust

Safety Position Switch on a machine with pivot bearing flap as protective device.





## Leuze electronic Safety Command Devices – **always at hand.**



### E-STOP Rope Switch **ERS200**

The ERS200 E-STOP Rope Switch is a Safety Command Device in accordance with EN 60947-5-5, and the first choice for use with expansive points of operation. The E-STOP function may not be used here as a substitute for protective devices or other safety functions. Rope pull guarantees easy reaching and activation all along the point of operation.

- Pulling the rope or rope fracture safely stops the machine
- Clicks in on both sides with friction-locking contacts
- Easy alignment with switching point indicator
- Easy integration with 3 cable approach directions
- Compact metal housing – IP 67
- Reset button with status display
- Temperature compensation with greater rope lengths

ERS200 E-STOP Rope Switch as a Safety Command Device on machines and systems with expansive points of operation, e.g. with filter presses.



## Proven personnel and machine protection – **mature and reliable.**

### Safety Interlocking Devices for universal use.

Safety Interlocking Devices keep protective doors locked and consequently prevent inadmissible personnel access until the secured machine no longer poses a danger. The access to the danger zone is only released by an electric signal when either the dangerous movement has stopped (personnel protection) or an uninterrupted work process has finished (machine protection).

All Leuze electronic safety locking devices are configured with their robust design for use in tough industrial applications and prove their value under the most demanding operational conditions.

- Universal use with 5 actuator approach directions
- Self-centering with funnel-shaped entry opening
- Compact, robust

Cost-effective solution: L10 on store area door without control signal for interlocking (manual locking and unlocking).



## Typical features – from standard to heavy duty.



### Safety Interlocking Devices **L10, L100**

- L10 Safety Interlocking Device as a particularly cost-effective interlocking solution for rarely used maintenance doors and applications without electric control signal
- Hardly any cabling effort with manual locking and unlocking (L10)
- 6 different heavy duty actuators for the most diverse installation conditions
- Standard design L100 Safety Interlocking Device in variants with electro-magnetic or spring force locking and auxiliary unlocking function
- Settable switching current reduction (L100)

Reliable access guarding on solid protective doors with the L100.



### Safety Interlocking Device **L200**

- Heavy duty access guarding on big machinery and systems in tough environments
- Emergency unlock function (ergonomically optimized panic button) for manually opening guards in emergencies
- Suitable for extreme mechanical loads
- Auxiliary unlocking (with spring-force locking)
- LED status displays

Heavy duty Safety Interlocking Device L200 for guarding the door of a plastic film wrapping station.



## **Optoelectronic Sensors**

Cubic Series  
Cylindrical Sensors, Mini Sensors, Fibre Optic Amplifiers  
Measuring Sensors  
Special Sensors  
Light Curtains  
Forked Sensors  
Double Sheet Monitoring, Splice Detection  
Inductive Switches  
Accessories

## **Identification Systems**

### **Data Transmission Systems**

### **Distance Measurement**

Barcode Readers  
RF-IDent-System  
Modular Interfacing Units  
Industrial Image Processing Systems  
Optical Data Transmission Systems  
Optical Distance Measurement/Positioning  
Mobile Code Readers

## **Safety Sensors**

### **Safety Systems**

### **Safety Services**

Safety Laser Scanners  
Safety Light Curtains  
Transceiver and Multiple Light Beam Safety Devices  
Single Light Beam Safety Devices  
AS-i-Safety Product Range  
Safety Sensor Technology for PROFIBUS DP  
Safety Switches, Safety Locking Devices, Safety Command Devices  
Safety Relays  
Sensor Accessories and Signal Devices  
Safety Engineering Software  
Machine Safety Services

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