EN

Product Guide

EUCHNER

More than safety.

High spirits safeguard steady innovation

The EUCHNER success story starts in 1940 with the start-up of an engineering company by Emil Euchner. A milestone was set in 1952 with the development of the first “multiple limit switch” in the world. Highly sophisticated in technical terms, this position switch was developed in close co-operation with the machine tool industry. It is used for positioning and controlling machines and systems, and is still a symbol of the company’s innovative power today.

Safeguarding people, machines and processes is the main focus of EUCHNER's activities today. Wherever people and machine meet, our safety components help minimizing hazards and risks for workers.

Our primary objective is 100% customer satisfaction without neglecting the well-being of our employees. The hallmarks of the EUCHNER philosophy are therefore quality, reliability and precision. Based on the long-standing experience of our staff, we always find the right solution for our customers’ individual requirements.

The medium-sized family-operated company based in Leinfelden, Germany, employs around 900 people around the world. In addition to the production locations in Unterböhringen and Shanghai/China, 20 subsidiaries and other sales partners in Germany and abroad work for our international success on the market.

made in Germany

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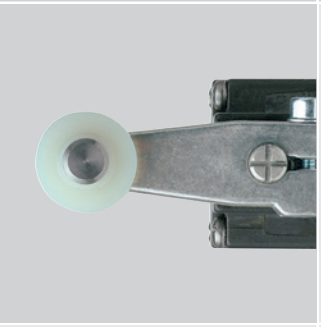
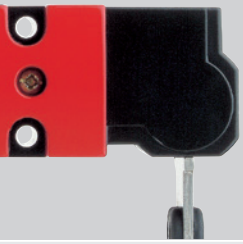
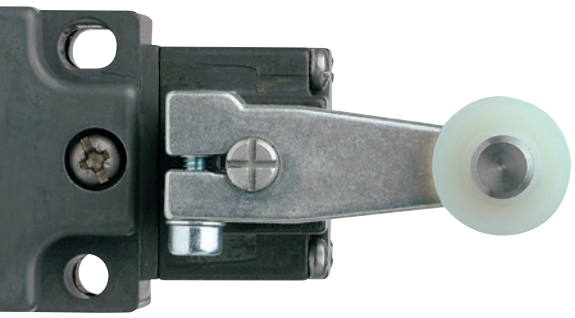






Automation

EUCHNER developed the first multiple limit switch in 1952. This switch, which has been continuously further developed, still forms a key element of the product range today alongside numerous other command switches. Selected, high quality materials, the tough surfaces as well as the proven EUCHNER characteristics of quality, reliability and precision makes these switches ideal for use in mechanical and systems engineering. The Automation product line also includes round plug connectors, trip dogs, trip rails and inductive ident systems.

Position switches

These mechanical command switches are designed according to the European standard EN 50041. The robust design, the utilization of corrosion-resistant materials, the precise production methods and the high degree of protection guarantee straightforward and reliable function in the toughest conditions.

Precision single limit switches

These limit switches were developed in close co-operation with machine tool manufacturers. The high quality materials, the combination of mature technology, high precision and practical design guarantee straightforward function in all industrial applications. Different designs cover a wide range of specific applications.

Precision multiple limit switches

Suitable for use in harsh production conditions, these high precision, reliable switches with their compact design are ideal for positioning and control applications in mechanical and systems engineering. A very wide range of applications is covered by the flexible configuration of these devices with non-contact and mechanical switches as well as other customer-specific features. Their high quality guarantees an exceptional mechanical life.

Inductive ident systems

Inductive ident systems are used for the non-contact identification of tools, workpiece carriers, pallets, containers and vehicles in the entire logistics sector. The read/write data carriers function completely wear-free and without batteries using inductive coupling.

Trip rails/trip dogs

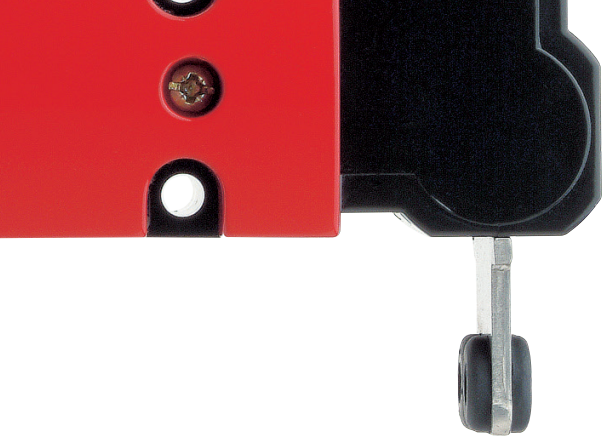
The combination of trip rails and trip dogs with all EUCHNER command switches safeguards the advantages of these highly precise positioning devices and ensures trouble-free operation.

Single hole fixing limit switches

The alternative to inductive proximity switches are mechanically actuated limit switches. These switches are completely maintenance-free and are also used in the most extreme conditions. Their small size makes it possible to install them directly at the monitoring point.

Round plug connectors

Round plug connectors have a very robust, matt chromium-plated brass housing. When assembled correctly in relation to EMC, they provide optimal protection against electromagnetic interference. The connector system can also be used for very low currents and voltages because of the integration of gold-plated contacts.



Safety

Safety switches with metal housing

The function of safety switches is to monitor the position of a safety guard and, if the safety guard is opened, to trigger a signal that safely interrupts the supply of power to the hazardous parts of the system. Switches are available with a large number of options, for example with guard locking, emergency release and escape release as well as accessories.

Safety switches without guard locking

Safety switches with a separate actuator permit operation of a system only if the safety guard is in the closed position and the actuator is inserted in the switch. A range of mounting fixtures makes these devices ideally suited to situations requiring high flexibility and robust design.

Safety switches with guard locking

In addition to the same function as the safety switches with a separate actuator, these switches also have guard locking. Safety guards can then not be opened when locked.

Safety switches with guard locking and guard lock monitoring

These safety switches have an interlocking solenoid with additional guard lock monitoring. As a result the position of the guard and the solenoid can be monitored safely. The guard locking prevents the unintentional opening of a safety guard. These switches are suitable for the protection of people as well as for the protection of the process.

Position switches and limit switches with safety function

These position switches are used to limit the final position and to safely shut down drives in systems and machinery. The built-in safety switching elements ensure safe interruption of the circuit. Like all EUCHNER safety switches, contact elements are available in a large number of versions and provide the necessary flexibility for all applications.

Safety

Safety switches with plastic housing

The safety switches with plastic housing are also ideally suited to use in all applications. Both small and large guards can be protected depending on the version and requirement. Switches with and without guard locking are also available in plastic housing.

Position switches with safety function

These switches are used for monitoring the position of safety guards and moving machine components. They are available with different actuating heads. Every user can thus employ the most suitable actuating element for his/her application. The versions with hinged actuator require little space for mounting and can be fitted such that they are secure against tampering.

Safety switches without guard locking

These safety switches with a separate actuator are suitable for safety guards that must be closed to provide the necessary safety. The different versions of the switches provide solutions for all applications.

Safety switches with guard locking and guard lock monitoring

The plastic safety switches also ensure that safety guards remain in the closed position until a dangerous movement has come to a standstill. Opening of the safety guards during a process is also prevented. With a choice of actuating heads made of plastic or metal, you will find the right combination for every application. The advantages of metal and plastic switches can therefore be optimally combined.

Emergency stop devices

Emergency stop devices serve to prevent impending hazards to persons or damage to machines or to minimize existing hazards. These devices are always identified by a red pushbutton on a yellow background, and they are designed to be triggered by a single action of a person. In addition to built-in devices of various sizes, EUCHNER also offers emergency stop devices in separate housings.

Rope pull switches

Rope pull switches are used as emergency stop devices with detent mechanism according to the related standard wherever machines and systems cannot be protected with safety covers. They are therefore perfectly suited to safeguarding particularly long and expansive installations. The emergency stop system is triggered when a pre-tensioned rope system is pulled or if the rope breaks. In addition to rope pull switches in plastic housings, the product range includes rope pull switches in metal housings.

Safety

Non-contact safety switches

EUCHNER supplies non-contact safety switches with two different principles of operation. Systems with transponder technology and systems with magnetically coded reed switches. Especially the transponder-based safety systems feature a very large read distance and center offset, a uniform operating distance as well as protection against tampering. Furthermore, with their small design, no service requirements and their resistance to vibration, they offer advantages in many applications.

Non-contact safety systems CES with transponder coding

The coded electronic safety systems CES are modern interlocking devices of type 4 for the protection of people, machines and processes. They are based on non-contact transponder technology and consist of a coded actuator, a read head and evaluation electronics. In some systems, the read head and evaluation electronics form a self-contained unit. A unit of this kind is referred to as a safety switch. All safety functions are combined in a single component here (internal evaluation). With external evaluation, the actuator is read via a separate read head connected to an evaluation unit in the control cabinet.

Safe electronic key system CKS2

The key system CKS2 consists of a key adapter and highly coded keys with transponder technology. The device safely detects whether a specific key is inserted. The system can be configured with the aid of different keys. When the device is used as a lockout system, the installation cannot be started unintentionally when the key is removed. When it is used as an authorization system, operators can safely select a specific operating mode. The key used to operate the installation can be optionally read using the EUCHNER BR/IO-Link Gateway.

Key adapter CKS

The CKS is used as an electronic lockout bar and for safely entering installations. It is based on transponder technology and prevents the installation from starting when the key is removed. CKS key adapters are used in combination with CES evaluation units.

Non-contact safety systems CMS – magnetic coding

These magnetic switches are characterized by their high degree of protection and compact design. A major advantage of safety switches CMS is that the actuator and read head can be fitted behind stainless steel.

Safety switch CEM-C40

The CEM-C40 is the ideal solution for customers who must achieve a high level of safety when securing a guard and also need guard locking for process protection. It comprises a mounting magnet and integrated evaluation electronics.

Field evaluation unit CES-FD

The CES-FD evaluation unit is suitable for the connection of CES / CKS read heads. The transponder signals are evaluated directly in the field. The safe semiconductor outputs can be connected directly to the control system.

Compact transponder-coded door locking mechanism 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.

Transponder-coded safety guard locking with guard lock monitoring

With the CET the advantages of non-contact transponder technology have been combined with mechanical guard locking. Features such as unique coding and a particularly large offset are integrated into a switch with extremely high locking forces. The highest safety category is achieved even with the use of a single switch.

Safety switch CTS with Flex-Function

The safety switch CTS expands the EUCHNER product range between the CTP all-round talent and the CTM specialist, combining the best of both worlds while offering maximum flexibility. The CTS is ideal for applications requiring a high locking force in a confined space.

Transponder-coded safety switches CTP and CTA

The safety switch CTP/CTA combines the proven principle of operation of electromechanical safety switches with guard locking and modern transponder-coded safety engineering. Thanks to the transponder technology, even a single CTP/CTA achieves category 4 / PL e according to EN ISO 13849-1, without additional fault exclusion, and meets all the requirements of EN ISO 14119. It is ideally suited to applications in which a high Performance Level and a high locking force are required.

Safety System MGB – Multifunctional Gate Box

The safety system MGB (Multifunctional Gate Box) combines a safety switch, bolt and door locking mechanism in one system. The modular design is flexible for upgrades and can be individually adapted to suit the diverse safety requirements of every customer. It is ideal for protecting safety doors. In addition to the standard version the MGB is also available in the versions PROFINET and EtherNet/IP.

EtherNet/IP PROFINET

PROFINET EtherCAT P

Space-saving safety door system MGBS

This is the ideal solution wherever a slimline switch housing is advantageous, such as on safety fence corner posts. The system is optionally available with an emergency stop device and with controls and indicators. The resulting MGBS is a slimline safety door protection device with the properties of an MGB.

Safety door system MGB2 *Classic* and *Modular*

Users can customize how guards are safeguarded using the latest generation of the intelligent safety door system MGB. The MGB2 Modular and the MGB2 Classic offer more variants, additional functions, different networking options and intelligent communication features for Industry 4.0 applications.

Safety

Enabling switches

The large range of enabling switches from EUCHNER provides the user with suitable solutions for every application. Along with standard devices, built-in versions and kits are available.

Bolts for safety guards

Bolts are used in conjunction with safety switches. The safety switches are protected against damage and installation is simplified.

Light grids and light curtains LCA

When combined with the proven guard locking devices and interlocking devices, non-contact safety guards such as light grids and light curtains form a complete solution to secure machines.

Enabling switches

Enabling switches are manually operated control devices. These switches are used wherever personnel must work directly in the danger area on machines and systems. Because of their robust and ergonomic design, these switches are the right choice for numerous applications, for example during setup operation.

Authorized personnel can enter hazardous areas with the enabling switches. Enabling switches are available as built-in and hand-held versions, with two or three-stage switching elements and in various housings.

Bolts for safety guards

The use of bolts will ensure that the actuator is properly inserted in the safety switch when the safety guard is closed. Forces, as occur for instance on slamming a guard shut, are applied to the mechanically very robust bolt and not the safety switch. In accessible hazardous areas, bolts with escape release enable the safety guard to be opened from inside the danger area. By fitting padlocks to the bolt tongue, operators can effectively prevent locking inside. An additional door handle is no longer required if an EUCHNER bolt is used.

The bolt is designed to provide mechanical protection of the switch when the safety guard is closed. The assembly holes provided permit easy and fast installation of the bolts to the safety guards. Mounting is particularly straightforward on standard aluminum profiles. Bolts can be combined with both electromechanical and non-contact safety switches.

Light grids and light curtains LCA

Light grids and light curtains are non-contact safety guards (electro-sensitive protective equipment) for securing danger areas on machines and installations. They use several light beams to form an invisible safety light curtain in front of the danger area. When a machine operator interrupts one of these light beams, it will cause the safety outputs to switch off.

Safety

Safety Switches with AS-Interface

A connection to the AS-Interface Safety at Work is available for almost all EUCHNER safety switches. As a result the switches can be integrated into the bus very easily.

Safety relays

EUCHNER supplies a wide range of evaluation units for monitoring safety components.

Small safe control system

Freely programmable, modular safety system for the protection of machines and installations.

Safety Switches with AS-Interface

These safety products are based on the proven standard AS-Interface bus technology. The wiring effort has been reduced to a minimum. Because of the simple structure it is not necessary to set parameters. The safety-related signals for AS-Interface Safety at Work are evaluated using a safety monitor. This monitor is a safety PLC that can be programmed, as required, very straightforwardly using clearly understandable software.

The wiring of the overall system always corresponds to the highest safety category. The status signals from all safety-related components connected can be evaluated directly in the control system. Additions can be realized as required with very little effort and very easily.

Safety relays ESM

All modules in this series are built into a housing that is only 22.5 mm wide. Various safety relays are available to which expansion modules can be added on the output side. The advantage of the ESM modular principle is that different safety evaluations can be realized with only a few module variants.

Small safe control system MSC

The small safe control system MSC is a universal, freely programmable, modular safety system for the protection of machines and installations. Even with only one base unit it is possible to implement applications with up to 8 inputs and 4 safety outputs. Depending on requirements, the base unit can be expanded with various input, output or fieldbus modules. Programming is undertaken easily and intuitively using the software EUCHNER Safety Designer. The MSC offers various options for diagnostics to obtain a quick overview of the status of the device.

ManMachine

Joysticks, electronic handwheels, hand-held pendant stations

Joysticks are integrated into control panels and portable control equipment. Electronic handwheels are particularly useful in any situation where manual axis positioning is required. The hand-held pendant stations facilitate work in danger areas on machinery and systems.

Electronic-Key-System

The EKS provides electronic access management on PCs and control systems, and protects against unauthorized operation.

Electronic handwheels

EUCHNER electronic handwheels are universal pulse generators for manual axis positioning. They are mainly used for positioning NC-controlled axes. Different pulse rates and output stages make the handwheels suitable for the most control systems. By using wear-free magnetic detent mechanisms, absolutely no servicing is required.

Joysticks

These devices are always used if movements are to be controlled as a function of the manual actuation direction. Joysticks are used in areas of the steel and construction industry, in transport and conveyor systems, in systems engineering and mechanical engineering, as well as in warehousing, medicine and studios. The devices are also approved for maritime use because of their certification by Germanischer Lloyd.

Hand-held pendant stations

Machine functions can be monitored and controlled decentrally using hand-held pendant stations. In addition to the control function, hand-held pendant stations can also have a safety function. For this purpose the hand-held pendant stations are equipped with emergency stop buttons and enabling switches.

Electronic-Key-System EKS

The Electronic-Key-System EKS is a transponder-based read/write system for industrial use. It is used primarily for electronic access control and access management as an alternative to the usual, password-based systems. As an open, freely configurable system with various data interfaces, EKS is of very universal application. Thanks to the non-contact transfer of data, the devices are suitable for harsh industrial use.

Electronic-Key-Manager EKM

EKM is a software package for writing and managing the Electronic-Keys using a PC. All Electronic-Keys and their contents are saved in a central database. The freely programmable memory on the Electronic-Key can be allocated to the specific database fields. The database fields and the user interface for entering the data can be configured as required. Editing permissions within EKM can be assigned using the EKM user manager. Various EKM versions are available.

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