

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.

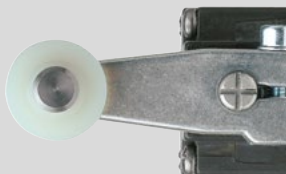
Our primary objective is 100% customer satisfaction without neglecting the well-being of our employees. The hallmarks of the EUCHNER philosophy are therefore quality, reliability and precision. Based on the long-standing experience of our staff, we always find the right solution for our customers' individual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

The medium-sized family-operated company based in Leinfelden, Germany, employs around 750 people around the world. In addition to the production locations in Unterböhringen and Shanghai/China, 18 subsidiaries and other sales partners in Germany and abroad work for our international success on the market.



**made
in
Germany**

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■ ManMachine

Joysticks, electronic handwheels, hand-held pendant stations,

Electronic-Key-System

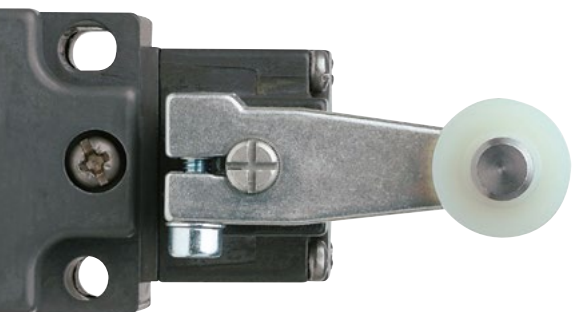
Joysticks, electronic handwheels, hand-held pendant stations

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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.



■ Detailed information in catalog: Main Catalogue ManMachine, Automation



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.

■ Detailed information in catalog: Main Catalogue ManMachine, Automation



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.

■ Detailed information in catalog: Main Catalogue ManMachine, Automation



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.

I Detailed information in catalog: Main Catalogue ManMachine, Automation

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.



I Detailed information in catalog: Main Catalogue ManMachine, Automation



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.

I Detailed information in catalog: Main Catalogue ManMachine, Automation

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.



■ Detailed information in catalog:
Safety Switches with Metal Housing



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.

■ Detailed information in catalog:
Safety Switches with Metal Housing





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.

I Detailed information in catalog: Safety Switches with Metal Housing



Safety hinges

Because of its small design, the safety hinge is particularly suitable for applications in which robustness is required in conjunction with small dimensions. It combines the function of a door hinge with that of a safety switch. The safety hinge can be mounted on standard aluminum profiles or directly on doors. The operating point can be adjusted over a large angular range.

I Detailed information in catalog: Safety Switches with Metal Housing

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.

I Detailed information in catalog: Safety Switches with Metal Housing



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.

■ Detailed information in catalog: Safety Switches with Plastic Housing



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.

■ Detailed information in catalog: Safety Switches with Plastic Housing



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.



I Detailed information in catalog: Safety Switches with Plastic Housing

Rope pull switches

EUCHNER rope pull switches are used as EMERGENCY STOP devices with detent according to the related standard wherever machines and systems cannot be protected with safety covers (for example on particularly long and extensive systems). The EMERGENCY STOP function is triggered by pulling a pre-tensioned rope system or if the rope is severed.

I Detailed information in catalog: Emergency Stop Device/Rope Pull Switches





■ 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.



■ Detailed information in catalog:
Transponder-coded safety systems



Key adapter CKS

The CKS is used as an electronic lockout mechanism and for safely entering installations. It is based on transponder technology and prevents the installation starting if the key is removed. The CKS key adapter is used in combination with a CES evaluation unit.



■ Detailed information in the catalog:
Transponder-coded safety systems

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.

■ Detailed information in catalog: Magnetically coded safety switches CMS



Safety system ESL

Multifunctional door handle, consisting of a handle module and an interlocking module with integrated transponder technology. It is used for protecting and monitoring safety guards. The compact and symmetrical design permits simple mounting on profile and allows use on doors hinged on the left and right. The metal housing is ideal for use in harsh conditions.



I Detailed information in catalog:
Safety system ESL



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.

I Detailed information in the catalog: Transponder-coded safety systems



Safety switches CTP

This switch combines the proven principle of operation of electromechanical safety switches with guard locking and guard lock monitoring with modern transponder coded safety engineering. Thanks to this technology, even a single CTP achieves category 4 / PL e according to EN ISO 13849-1 without additional fault exclusion and complies with all the requirements of EN ISO 14119.

I Detailed information in catalog: Transponder-coded safety switch CTP with guard locking



EtherNet/IP
PROFINET

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.

I Detailed information in catalog: Multifunctional Gate Box MGB

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.

I Detailed information in catalog:
Transponder-coded safety systems

Transponder-coded safety switch CEM-C40

The safety switch CEM-C40 is the ideal solution for all customers who must achieve a high level of safety (category 4 / PL e) when securing a safety guard and also need guard locking to protect the process. It comprises a solenoid and integrated evaluation electronics. Opening is effectively prevented by the magnetic forces even in applications where significant forces are applied by the user.

I Detailed information in catalog:
Transponder-coded safety systems





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.



 Detailed information in catalog: Enabling Switches

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

I Detailed information in the accessory category of catalogs: Transponder-coded safety systems. Safety Switches with Metal Housing and Safety Switches with Plastic Housing.

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.

I Detailed information in catalog: Light grids and light curtains LCA





■ 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.



■ Detailed information in catalog: Safety Switches with AS-Interface





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.

■ Detailed information in catalog:
Safety Relays ESM



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 the base unit it is possible to realize applications with up to 8 inputs and 2 outputs. Depending on requirements, the MSC can be expanded with 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.

■ Detailed information in catalog:
Small safe control system MSC





■ 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.

■ Detailed information in catalog: Hand-Held Pendant Stations/Handwheels

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.



■ Detailed information in catalog: Joystick Switches



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.

■ Detailed information in catalog: Hand-Held Pendant Stations/Handwheels



Electronic-Key-System EKS

The EKS comprises an Electronic-Key and an Electronic-Key adapter - a read/write device with integrated evaluation electronics and interface. Various versions with different interfaces are available. All devices feature an extremely compact design for installation in a standard cut-out. Because of the non-contact transfer of data, the Electronic-Key adapter is suitable for harsh industrial use.

■ Detailed information in catalog: Electronic-Key-System EKS



Electronic-Key-Manager EKM

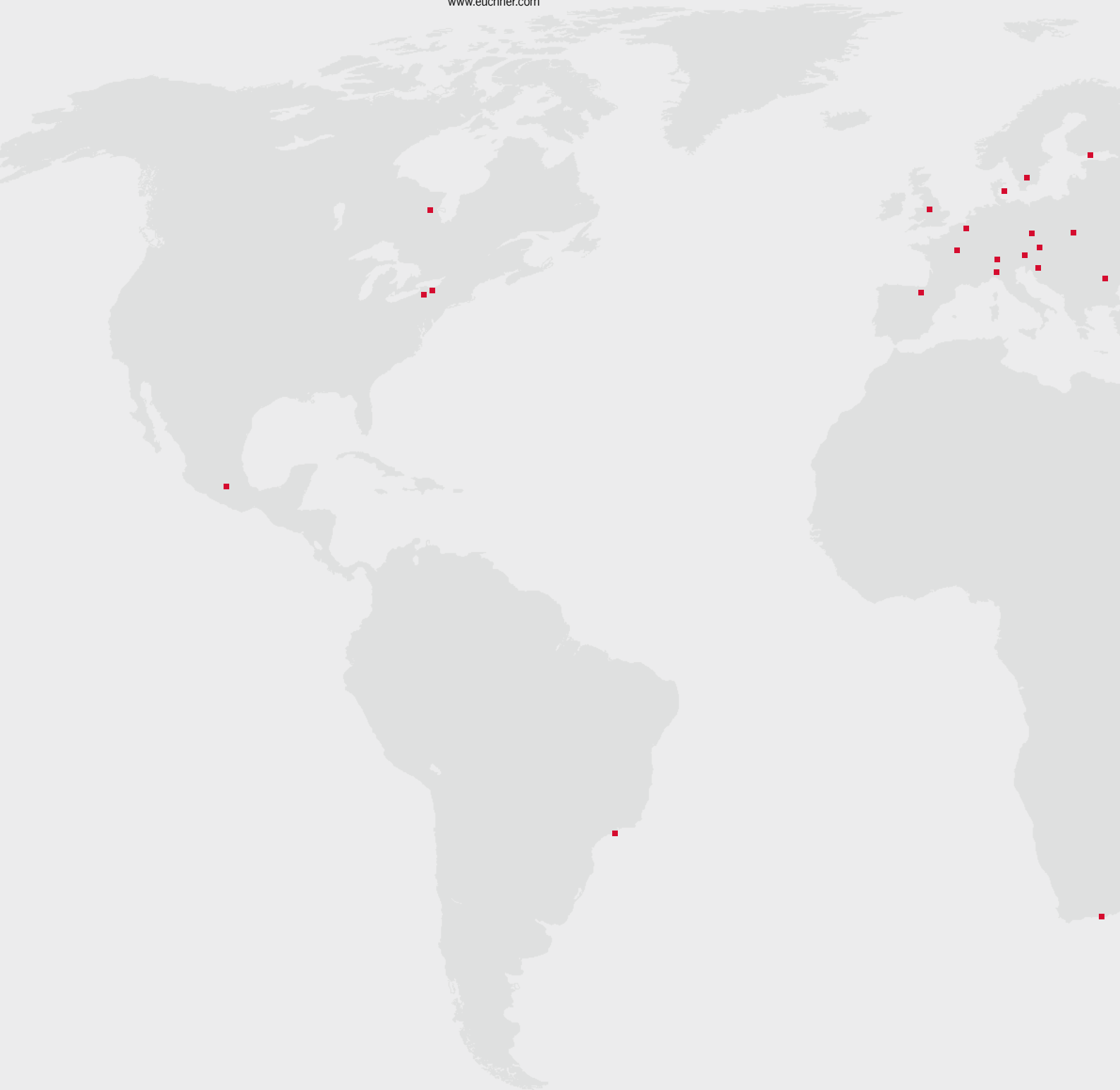
EKM is a software package for writing and managing the keys using a PC. All Electronic-Keys and their contents are saved in a central database. The freely programmable memory in the key can be allocated to database fields. The database fields and the user interfaces for entering the data can be configured as required. Read and write authorizations can be granted through user management. Product parameters and operator entries can be logged according to FDA-21 CFR part 11.



■ Detailed information in catalog:
Electronic-Key-System EKS

Head office

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



International Representatives

Austria

EUCHNER GmbH
Aumühlweg 17-19/Halle 1C
2544 Leobersdorf
Tel. +43 720 010 200
Fax +43 720 010 200-20
info@euchner.at

Benelux countries

EUCHNER (BENELUX) BV
Visschersbuurt 23
3356 AE Papendrecht
Tel. +31 78 615-4766
Fax +31 78 615-4311
info@euchner.nl

Brazil

EUCHNER Com. Comp. Eletronicos Ltda.
Av. Prof. Luiz Ignácio Anhaia Mello,
no. 4387
Vila Graciosa
São Paulo - SP
CEP 03295-000
Tel. +55 11 29182200
Fax +55 11 23010613
euchner@euchner.com.br

Canada

EUCHNER Canada Inc.
2105 Fasan Drive
Oldcastle, ON NOR 1L0
Tel. +1 519 800-8397
Fax +1 519 737-0314
sales@euchner.ca

China

EUCHNER (Shanghai)
Trading Co., Ltd.
No. 15 building,
No. 68 Zhongchuan Road,
Songjiang
Shanghai, 201613, P.R.C
Tel. +86 21 5774-7090
Fax +86 21 5774-7599
info@euchner.com.cn

Czech Republic

EUCHNER electric s.r.o.
Trnkova 3069/117h
62800 Brno
Tel. +420 533 443-150
Fax +420 533 443-153
info@euchner.cz

Denmark

Duelco A/S
Systemvej 8-10
9200 Aalborg SV
Tel. +45 7010 1007
Fax +45 7010 1008
info@duelco.dk

Finland

Sähkölehto Oy
Holkkitie 14
00880 Helsinki
Tel. +358 9 7746420
office@sahkolehto.fi

France

EUCHNER France S.A.R.L.
Parc d'Affaires des Bellevues
Allée Rosa Luxembourg
Bâtiment le Colorado
95610 ERAGNY sur OISE
Tel. +33 1 3909-9090
Fax +33 1 3909-9099
info@euchner.fr

Hungary

EUCHNER Magyarországi Kft.
FSD Park 2.
2045 Törökbálint
Tel. +36 1919 0855
Fax +36 1919 0857
info@euchner.hu

India

EUCHNER (India) Pvt. Ltd.
401, Bremen Business Center,
City Survey No. 2562, University Road,
Aundh, Pune - 411007
Tel. +91 20 64016384
Fax +91 20 25885148
Mobil +91 8600121112
info@euchner.in

Israel

Ilan & Gavish Automation Service Ltd.
26 Shenkar St. Qiryat Arie 49513
P.O. Box 10118
Petach Tikva 49001
Tel. +972 3 9221824
Fax +972 3 9240761
mail@ilan-gavish.com

Italy

TRITECNICA SpA
Viale Lazio 26
20135 Milano
Tel. +39 02 541941
Fax +39 02 55010474
info@tritecnica.it

Japan

EUCHNER Co., Ltd.
1662-3 Komakiharashinden,
Komaki-shi, Aichi-ken
485-0012, Japan
Tel. +81 568 42 0157
Fax +81 568 42 0159
info@euchner.jp

Korea

EUCHNER Korea Co., Ltd.
115 Gasan Digital 2-Ro
(Gasan-dong, Daeryung
Technotown 3rd Rm 810)
153- 803 Kumchon-Gu, Seoul
Tel. +82 2 2107-3500
Fax +82 2 2107-3999
info@euchner.co.kr

Mexico

EUCHNER México S de RL de CV
Conjunto Industrial PK Co.
Carretera Estatal 431 km. 1+300
Ejido El Colorado, El Marqués
76246 Querétaro, México
Tel. +52 442 402 1485
Fax +52 442 402 1486
info@euchner.mx

Poland

EUCHNER Sp. z o.o.
Krasieńskiego 29
40-019 Katowice
Tel. +48 32 252 20 09
Fax +48 32 252 20 13
info@euchner.pl

Portugal

PAM Servicos Tecnicos
Industriais Lda.
Rua de Timor - Pavilhao 2A
Zona Industrial da Abelheira
4785-123 TROFA
Tel. +351 252 418431
Fax +351 252 494739
pam@mail.telepac.pt

Republic of South Africa

RUBICON ELECTRICAL DISTRIBUTORS
4 Reith Street, Sidwell
6061 Port Elizabeth
Tel. +27 41 451-4359
Fax +27 41 451-1296
sales@rubiconelectrical.com

Romania

First Electric SRL
Str. Ritmului Nr. 1 Bis
Ap. 2, Sector 2
021675 Bucuresti
Tel. +40 21 2526218
Fax +40 21 3113193
office@firstelectric.ro

Singapore

Sentronics Automation & Marketing Pte Ltd.
Blk 3, Ang Mo Kio Industrial Park 2A
#05-06
Singapore 568050
Tel. +65 6744 8018
Fax +65 6744 1929
info@sentronics-asia.com

Slovakia

EUCHNER electric s.r.o.
Trnkova 3069/117h
62800 Brno
Tel. +420 533 443-150
Fax +420 533 443-153
info@euchner.cz

Slovenia

SMM proizvodni sistemi, d.o.o.
Jaskova 18
2000 Maribor
Tel. +386 2 4502326
Fax +386 2 4625160
franc.kit@smm.si

Spain

EUCHNER, S.L.
Gurutzegi 12 - Local 1
Poligono Belartza
20018 San Sebastian
Tel. +34 943 316-760
Fax +34 943 316-405
info@euchner.es

Sweden

Censit AB
Box 331
33123 Värnamo
Tel. +46 370 691010
Fax +46 370 18888
info@censit.se

Switzerland

EUCHNER AG
Falknisstrasse 9a
7320 Sargans
Tel. +41 81 720-4590
Fax +41 81 720-4599
info@euchner.ch

Taiwan

Daybreak Int'l (Taiwan) Corp.
3F, No. 124, Chung-Cheng Road
Shihlin 11145, Taipei
Tel. +886 2 8866-1234
Fax +886 2 8866-1239
day111@ms23.hinet.net

Turkey

EUCHNER Endüstriyel Emniyet Teknolojileri
Ltd. Şti.
Hattat Bahattin Sok.
Ceylan Apt. No. 13/A
Göztepe Mah.
34730 Kadıköy /İstanbul
Tel. +90 216 359-5656
Fax +90 216 359-5660
info@euchner.com.tr

United Kingdom

EUCHNER (UK) Ltd.
Unit 2 Petre Drive
Sheffield
South Yorkshire
S4 7PZ
Tel. +44 114 2560123
Fax +44 114 2425333
sales@euchner.co.uk

USA

EUCHNER USA Inc.
6723 Lyons Street
East Syracuse, NY 13057
Tel. +1 315 701-0315
Fax +1 315 701-0319
info@euchner-usa.com

EUCHNER USA Inc.
Detroit Office
130 Hampton Circle
Rochester Hills, MI 48307
Tel. +1 248 537-1092
Fax +1 248 537-1095
info@euchner-usa.com

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

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