Electronic-Key-System
EKS

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EUCHNER safety switches monitor safety doors on machines and installations, help to minimize dangers and risks and thereby reliably protect people and processes. Today, our products range from electromechanical and electronic components to intelligent integrated safety solutions. Safety for people, machines and products is one of our dominant themes.

We define future safety technology with the highest quality standards and reliable technology. Extraordinary solutions ensure the great satisfaction of our customers. The product ranges are subdivided as follows:

- ▶ Transponder-coded Safety Switches (CES)
- ▶ Transponder-coded Safety Switches with guard locking (CET)
- ▶ Interlocking and guard locking systems (Multifunctional Gate Box MGB)
- ▶ Access management systems (Electronic-Key-System EKS)
- ▶ Electromechanical Safety Switches
- ▶ Magnetically coded Safety Switches (CMS)
- ▶ Enabling Switches
- ▶ Safety Relays
- ▶ Emergency Stop Devices
- ▶ Hand-Held Pendant Stations and Handwheels
- ▶ Safety Switches with AS-Interface
- ▶ Joystick Switches
- ▶ Position Switches

Contents

Electronic-Key-System (EKS)

Application

With the **Electronic-Key System (EKS)**, it does not matter if a password is forgotten. **EKS** is used for electronic access management on PCs and control systems.

Nowadays access rights are usually controlled by the issue of passwords. In practice, however, this often leads to unauthorized changes to systems.

This is where the **Electronic-Key System** can be put to optimal use: in comparison to the issue of a password, considerably more responsibility is assigned to the owner of an Electronic-Key.

The Electronic-Key provides **protection against unauthorized access** to operation and visualization systems. Often only specific people have permission to change the system parameters on critical systems. This is the ideal application for **EKS**.

In a typical application, the user has an **access right at a specific level** via the Electronic-Key.

An example:

▶ Level 1: Start and stop installation

▶ Level 2: Change process parameters

▶ Level 3: Manage Electronic-Keys

The Electronic-Keys are available in different colors with identical functionality. The colors can be used, for example, to indicate the different levels of access rights.
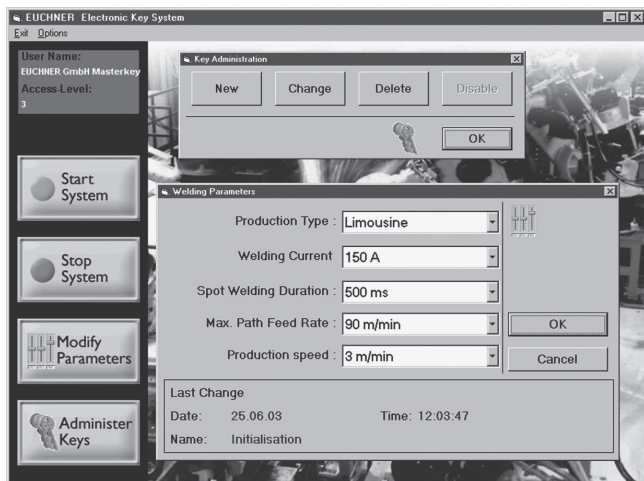
Key management using the Electronic-Key-Manager

The Electronic-Keys can also be managed on separate workstations using the **Electronic-Key-Manager (EKM)** software.

Along with access rights or personal data, it is also possible to save process-related information, e.g. recipes or parameters for the machine control system, on the Electronic-Key and in the database and retrieve the data in production.

System overview

In principle **EKS** comprises two components: an Electronic-Key and the matching Electronic-Key adapter.

Integrated into the Electronic-Key in the form of a robust tag are a memory chip and an antenna (transponder). This is in fact an **inductive identification system** with:

▶ Transponder **without battery**

In operation the Electronic-Key is inserted into the Electronic-Key adapter and is held in place by a spring clip. The power supply for the transponder and the data are transferred between the Electronic-Key adapter and the Electronic-Key **without using any contacts**.
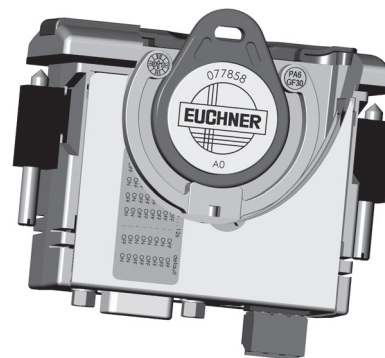
The data carrier in the Electronic-Key is equipped with a combined read/write and fixed-code memory:

▶ 116 bytes E²PROM (programmable) plus an additional 8 bytes ROM (serial number)

The Electronic-Key adapter is a **read/write system with integrated interface electronics**. Device variants with the following interfaces are available for system connection:

▶ Serial RS232/RS422, switchable
▶ USB
▶ Ethernet TCP/IP
▶ PROFIBUS DP
▶ PROFINET

The Electronic-Key adapters with serial interface and Ethernet TCP/IP interface can be connected to a PC or a control system. The advantage of Ethernet is that **EKS** can be **physically remote**. The Electronic-Key adapter with USB interface is particularly suitable for connecting to a PC. The major **advantage is that power is supplied via the USB connection**.

The Electronic-Key adapters with PROFIBUS and PROFINET interface are preferably used on control systems. Also in these variants, the **EKS** can be used remotely from the control system, e.g. at assembly workplaces.

All the advantages at a glance

With **EKS, very fast log-on** is possible without the use of a password even on systems without a keyboard. In addition, it is sensible to program the application to permit system access only as long as the Electronic-Key is positioned in the Electronic-Key adapter. Then when the Electronic-Key is removed, e. g. access to specific functions on the system is automatically inhibited.

A major advantage is the **flexibility of the system**:

▶ Easy assignment and alteration of the access rights level

▶ Access for lost Electronic-Keys can be disabled

▶ Fast assignment of additional Electronic-Keys

Along with the level for the access rights, e. g. the name of the user can be programmed into the Electronic-Key read/write in plain text.

For **quality assurance** in accordance with ISO 9000, it is possible to log accesses and changes when using **EKS**.

The **EKS** system also makes it possible, for example, to log product parameters and operator entries in accordance with FDA standard 21 CFR part 11. **EKS** can be used in this context as an **electronic signature** for personal confirmation of work steps.

Due to the transfer of data without using any contacts, it was possible to design the Electronic-Key adapter with the high **degree of protection IP 67** from the access side, i.e. it is **suitable for industrial use**. The Electronic-Key adapter can be installed in accordance with DIN 43700 in any control panel with a standard cut-out of 33 mm x 68 mm. It is fastened by means of screw clamp elements from the rear side of the panel in order to prevent unauthorized tampering from the operator side.
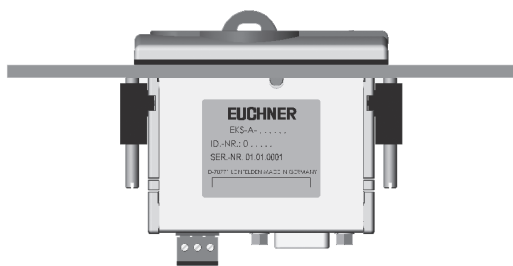
On Electronic-Key adapters that are used as pure read stations on the production line, **write protection can be enabled using a DIP switch** to further increase protection against tampering.

Approvals

The EKS Electronic-Key adapters are certified in accordance with cᴿᵁₗₛ (UL file number E240367).

Integration

The user is responsible for organizing the programming of the application, integration in an overall system and assignment and use of the freely programmable memory in the Electronic-Key.

Interfacing of the **EKS** Electronic-Key adapters with serial, USB or Ethernet TCP/IP interface to the user's PC application is supported by optionally available **ActiveX® modules** [1] (can be used if Microsoft Windows® [1] based user programs support ActiveX®) . **EKS** can thus be used, e. g., in conjunction with process visualization software. Data communication is in accordance with transfer protocol 3964R respectively TCP/IP. The **ActiveX® module** is used here as a protocol driver.

To operate the EKS Electronic-Key adapter with USB interface on the PC, USB driver software must be installed. The USB interface is designed as a virtual serial COM port. The communication over the interface is exactly the same as for the device with serial interface. Therefore devices with serial interface and USB interface are interchangeable with regard to software applications.

If a database is established to use the unique Electronic-Key serial number, it is not imperative to write to the Electronic-Key. As an option, the **Transponder Coding** software can be used for straightforwardly writing and reading the Electronic-Key on the PC. Furthermore, the **Electronic-Key-Manager**, a flexible software package, is available for **programming and managing the Electronic-Keys** on the PC including database for the Electronic-Keys. The freely programmable memory on the Electronic-Key can be structured exactly as required using **EKM**.

Commissioning and system integration is significantly simpler using the **EKS** with PROFIBUS and PROFINET interface. The address can be set using DIP switches. The **EKS** is integrated in the software using the GSD files and the data are available in the control system's input area immediately after configuration.

Version *FSA*

As an alternative, the Electronic-Key adapters with USB, Ethernet TCP/IP, PROFIBUS and PROFINET interface are available in the *FSA* **(For Safety Applications)** version. To solve the widespread problem of tampering with safety guards, **EKS** has been expanded for safety-related applications in conjunction with **operating mode selection**. In this case trained personnel are specifically authorized to perform critical setup and maintenance work in a special, hazardous operating mode.

This version has additional switched outputs that can be utilized to form a safe shut-down signal. In this case, a safe evaluation device must be connected downstream. This means that the **EKS FSA** can be used for **safety-relevant** applications. The machine is reset to a safe operating mode by removing the Electronic-Key.
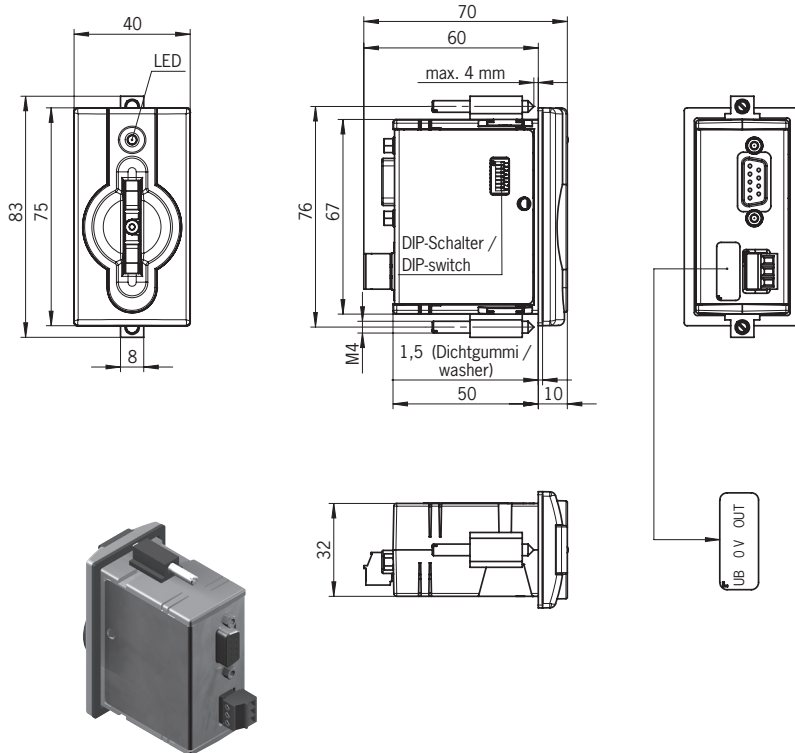
[1] Microsoft Windows® and ActiveX® are registered trademarks of Microsoft Corporation

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Electronic-Key adapter with serial Interface

RS232 serial
RS422

Dimension drawing
Dimensions in mm

LED

40

83
75

8

70
60

max. 4 mm

76
67

DIP-Schalter / DIP-switch

M4

1,5 (Dichtgummi / washer)
50
10

32

UB 0 V OUT

Typical applications

▶ Connection to PC. Interfacing via ActiveX® module in Windows®
▶ Connection to control system or microprocessor. Interfacing via programming based on the 3964R protocol

Technical data

General parameters	Value			Unit
	min.	typ.	max.	
Housing		plastic (PA 6 GF30 gray)		
Degree of protection according to EN 60529		IP 67 in mounted condition		
Ambient temperature at U_B = DC 24 V	0		+ 55	°C
Mounting cut-out according to DIN 43700		33 x 68		mm
Connection type for power supply		plug-in screw terminal, 3-pole		
Operating voltage U_B (regulated, residual ripple < 5%)	20	24	28	V DC
Current consumption			100	mA
Interface, data transfer				
Interface to the PC or to the control system		serial RS232 / RS422 (selectable via DIP switch)		
Transfer protocol		3964R		
Data transfer rate		9.6		kbaud
Data format		1 start bit, 8 data bits, 1 parity bit (even parity), 1 stop bit		
Connection type for serial interface		Sub-D socket 9-pole		
Cable length RS232			5	m
Cable length RS422			1000	m
LED indicator		green: "Ready" (in operation) yellow: "Electronic-Key active" *		

* The LED illuminates yellow if there is a functional Electronic-Key in the Electronic-Key adapter.

Ordering table

Designation	Item	Order No.
Electronic-Key adapter with serial Interface	EKS-A-ISX-G01-ST09/03	**084750**

Electronic-Key adapter with USB interface
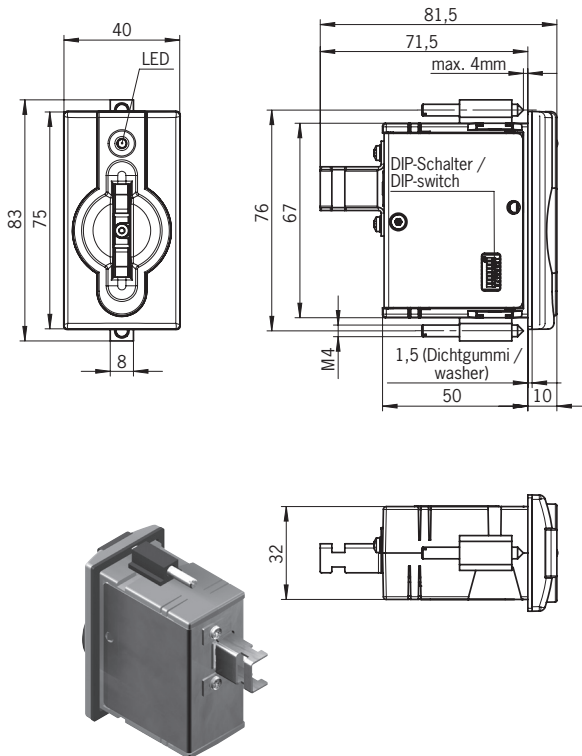
CERTIFIED **USB**™

Dimension drawing

Dimensions in mm

Typical applications

▶ Connection to PC. Interfacing via ActiveX® module in Windows®
▶ Virtual serial COM port. Communication identical to EKS serial

Technical data

General parameters	Value			Unit
	min.	typ.	max.	
Housing	plastic (PA 6 GF30 gray)			
Degree of protection according to EN 60529	IP 67 in mounted condition			
Ambient temperature	0		+ 55	°C
Mounting cut-out according to DIN 43700	33 x 68			mm
Power supply	via USB			
Current consumption			100	mA
Interface, data transfer				
Interface to the PC	USB full speed (USB 1.1 and USB 2.0 compatible)			
Transfer protocol	3964R			
Data transfer rate	9.6			kbaud
Data format	1 start bit, 8 data bits, 1 parity bit (even parity), 1 stop bit			
USB interface connection type	socket type B			
Cable length			3	m
LED indicator	green: "Ready" (in operation) yellow: "Electronic-Key active" *			

* The LED illuminates yellow if there is a functional Electronic-Key in the Electronic-Key adapter.
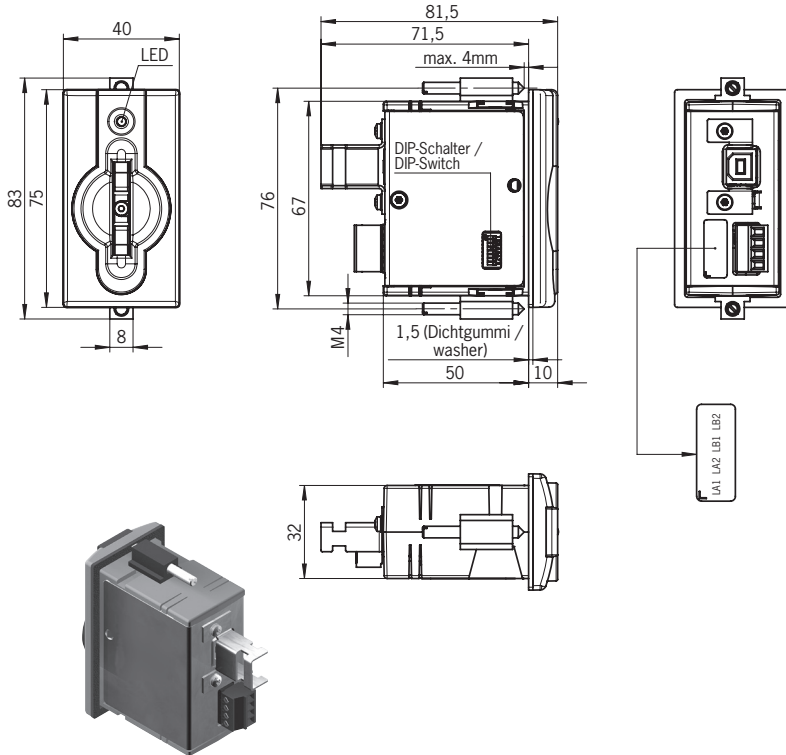
Ordering table

Designation	Item	Order No.
Electronic-Key adapter with USB interface	EKS-A-IUX-G01-ST01	**092750**

Electronic-Key adapter with USB interface version *FSA*

CERTIFIED **USB**™

Dimension drawing

Dimensions in mm

Typical applications

▶ Connection to PC. Interfacing via ActiveX® module in Windows®

▶ Virtual serial COM port. Communication identical to EKS serial

▶ Additional integration in the safety system

Technical data

General parameters		Value			Unit
		min.	typ.	max.	
See page 8, Electronic-Key adapter with USB interface (Order No. 092750)					
Parameters for the outputs LA and LB					
Power supply for load U (LA, LB)			24	30	V
Switching current per output		1	10	50	mA
Number of actuations of the overload protection			100		
Output voltage high for U (LA, LB)		U x 0.9		U	V
Resistance in switched-on state			35		Ohm
Capacitance per output				2	nF
Additional capacitive load per output				1	µF
Utilization category according to EN IEC 60947-5-2	AC-12 AC-15 DC-12 DC-13	50 mA / 24 V			
Difference time between the outputs* (LB first)			200		ms
Connection type switching contacts		plug-in screw terminal, 2 x 2-pole			

* If access on the USB interface takes place during the insertion or removal of the Electronic-Key, the difference time can be more than 200 ms.

Ordering table

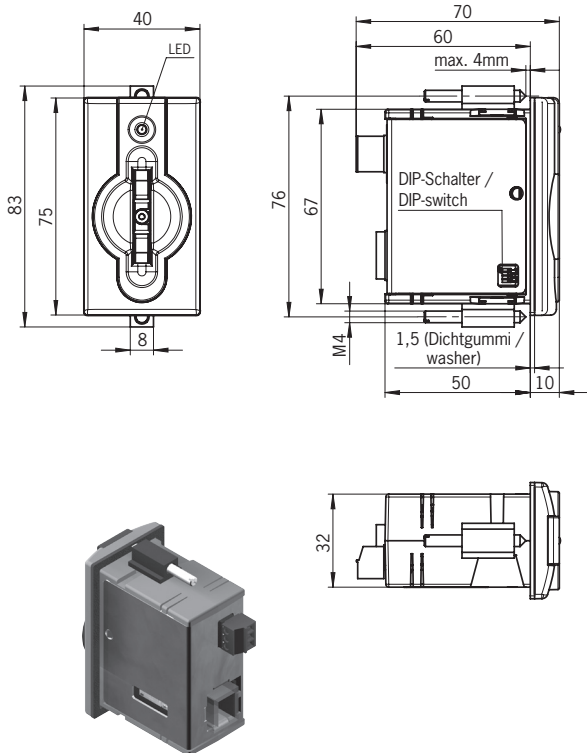| Designation	Item	Order No.
Electronic-Key adapter with USB interface version *FSA*	EKS-A-IUXA-G01-ST01/04	**098513**

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Electronic-Key adapter with Ethernet TCP/IP interface

ETHERNET

Dimension drawing

Dimensions in mm

Typical applications

▶ Connection to PC. Interfacing via ActiveX® module in Windows®
▶ Remote installation
▶ Connection to control systems for special applications

Technical data

General parameters	Value			Unit
	min.	typ.	max.	
Housing	plastic (PA 6 GF30 gray)			
Degree of protection according to EN 60529	IP 67 in mounted condition			
Ambient temperature at U_B = DC 24 V	0		+ 55	°C
Mounting cut-out according to DIN 43700	33 x 68			mm
Connection type for power supply	plug-in screw terminal 3-pole			
Operating voltage U_B (regulated, residual ripple < 5%)	20	24	28	V DC
Current consumption			150	mA
Interface, data transfer				
Interface to the PC or to the control system	Industrial Ethernet (IEEE 802.3)			
Transfer protocol	TCP/IP			
Data transfer rate (full duplex)	10/100			Mbit/s
Connection type Ethernet interface	1 x RJ45 socket			
Data cable	2 x 2 twisted pair copper cable, screened; min. Cat. 5			
Cable length			100	m
LED indicator	green: "Ready" (in operation) yellow: "Electronic-Key active" * red: "Error"			

* The LED illuminates yellow if there is a functional Electronic-Key in the Electronic-Key adapter.

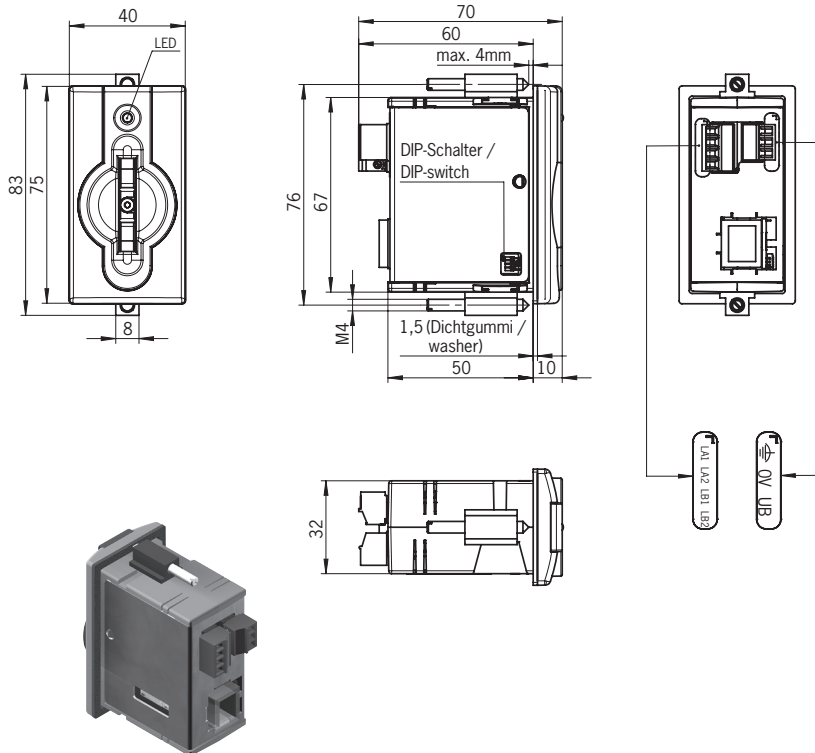## Ordering table

Designation	Item	Order No.
Electronic-Key adapter with Ethernet TCP/IP interface	EKS-A-IEX-G01-ST02/03	**100401**

Electronic-Key adapter with Ethernet TCP/IP interface version *FSA*

ETHERNET

Dimension drawing

Dimensions in mm

Typical applications

▶ Connection to PC. Interfacing via ActiveX® module in Windows®
▶ Remote installation
▶ Connection to control systems for special applications
▶ Additional integration in the safety system

Technical data

General parameters		Value			Unit
		min.	typ.	max.	
See page 10, Electronic-Key adapter with Ethernet TCP/IP interface (Order No. 100401)					
Parameters for the outputs LA and LB					
Power supply for load U (LA, LB)			24	30	V
Switching current per output		1	10	50	mA
Number of actuations of the overload protection			100		
Output voltage high for U (LA, LB)		U x 0.9		U	V
Resistance in switched-on state			35		Ohm
Capacitance per output				2	nF
Additional capacitive load per output				1	µF
Utilization category according to EN IEC 60947-5-2	AC-12 AC-15 DC-12 DC-13	50 mA / 24 V			
Difference time between the outputs* (LB first)			200		ms
Connection type switching contacts		plug-in screw terminal, 2 x 2-pole			

* If access on the Ethernet interface takes place during the insertion or removal of the Electronic-Key, the difference time can be more than 200 ms.

Ordering table

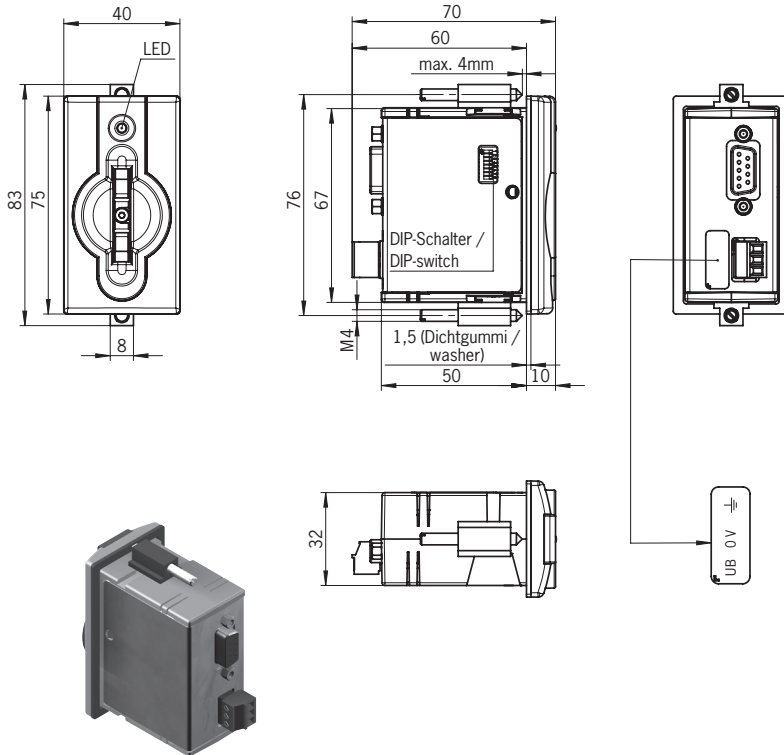| Designation	Item	Order No.
Electronic-Key adapter with Ethernet TCP/IP interface version *FSA*	EKS-A-IEXA-G01-ST02/03/04	**099265**

Subject to technical modifications; no responsibility is accepted for the accuracy of this information.

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Electronic-Key adapter with PROFIBUS DP interface

Dimension drawing

Dimensions in mm

Typical applications

▶ Connection to bus master of a control system. Interfacing via GSD file
▶ Remote installation

Technical data

General parameters	Value			Unit
	min.	typ.	max.	
Housing	plastic (PA 6 GF30 gray)			
Degree of protection according to EN 60529	IP 67 in mounted condition			
Ambient temperature at U_B = DC 24 V	0		+ 55	°C
Mounting cut-out according to DIN 43700	33 x 68			mm
Connection type for power supply	plug-in screw terminal 3-pole			
Operating voltage U_B (regulated, residual ripple < 5%)	20	24	28	V DC
Current consumption			150	mA
Interface, data transfer				
Interface to the PC or to the control system	RS485			
Address range	0 ... 126 (address selectable via DIP switch)			
Transfer protocol	PROFIBUS according to IEC 61158/IEC 61784-1			
Data transfer rate	9.6/19.2/45.45/93.75/187.5/500			kbps
	1.5/3/6/12			Mbps
Connection type for PROFIBUS DP	Sub-D socket (9-pole)			
Cable length max.	100 ... 1200 according to PROFIBUS DP, depending on data transfer			m
LED indicator	green: "Ready" (in operation) yellow: "Electronic-Key active" * red: "Error"			

* The LED illuminates yellow if there is a functional Electronic-Key in the Electronic-Key adapter.

Ordering table
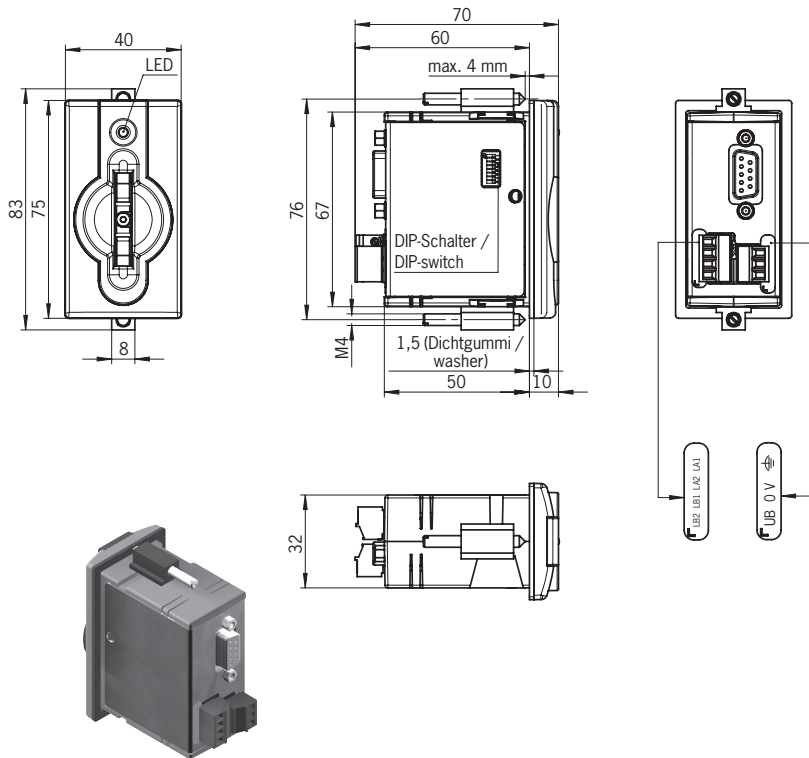
Designation	Item	Order No.
Electronic-Key adapter with PROFIBUS DP interface	EKS-A-IDX-G01-ST09/03	**084800**

Subject to technical modifications; no responsibility is accepted for the accuracy of this information.

Electronic-Key adapter with PROFIBUS DP interface version *FSA*

Dimension drawing

Dimensions in mm

Typical applications

▶ Connection to bus master of a control system. Interfacing via GSD file
▶ Remote installation
▶ Additional integration in the safety system

Technical data

General parameters		Value		Unit
	min.	typ.	max.	
See page 12, Electronic-Key adapter with PROFIBUS DP interface (Order No. 084800)				
Parameters for the outputs LA and LB				
Power supply for load U (LA, LB)		24	30	V
Switching current per output	1	10	50	mA
Number of actuations of the overload protection		100		
Output voltage high for U (LA, LB)	U x 0.9		U	V
Resistance in switched-on state		35		Ohm
Capacitance per output			2	nF
Additional capacitive load per output			1	µF
Utilization category according to EN IEC 60947-5-2 AC-12 AC-15 DC-12 DC-13		50 mA / 24 V		
Difference time between the outputs* (LB first)		200		ms
Connection type switching contacts		plug-in screw terminal, 2 x 2-pole		

* If access on the PROFIBUS DP interface takes place during the insertion or removal of the Electronic-Key, the difference time can be more than 200 ms.

Ordering table

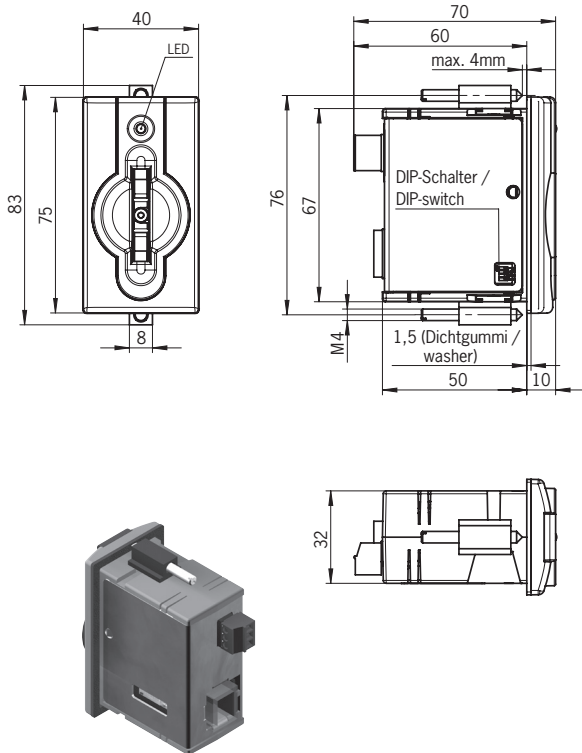| Designation	Item	Order No.
Electronic-Key adapter with PROFIBUS DP interface version *FSA*	EKS-A-IDXA-G01-ST09/03/04	**100378**

Subject to technical modifications; no responsibility is accepted for the accuracy of this information.

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Electronic-Key adapter with PROFINET interface

Dimension drawing

Dimensions in mm

Typical applications

▶ Connection to control system. Interfacing via GSDML file
▶ Remote installation

Technical data

General parameters	Value			Unit
	min.	typ.	max.	
Housing	plastic (PA 6 GF30 gray)			
Degree of protection according to EN 60529	IP 67 in mounted condition			
Ambient temperature at U_B = DC 24 V	0		+ 55	°C
Mounting cut-out according to DIN 43700	33 x 68			mm
Connection type for power supply	plug-in screw terminal 3-pole			
Operating voltage U_B (regulated, residual ripple < 5%)	20	24	28	V DC
Current consumption			150	mA
Interface, data transfer				
Interface to the PC or to the control system	Industrial Ethernet (IEEE 802.3)			
Address range	1 ... 255 (if DCP name is set using DIP switch)			
Transfer protocol	PROFINET according to IEC 61158 / IEC 61784-1 and -2			
Data transfer rate (full duplex)	10/100			Mbit/s
Connection type Ethernet interface	1 x RJ45 socket			
Data cable	2 x 2 twisted pair copper cable, screened; min. Cat. 5			
Cable length			100	m
LED indicator	green: "Ready" (in operation) yellow: "Electronic-Key active" * red: "Error"			

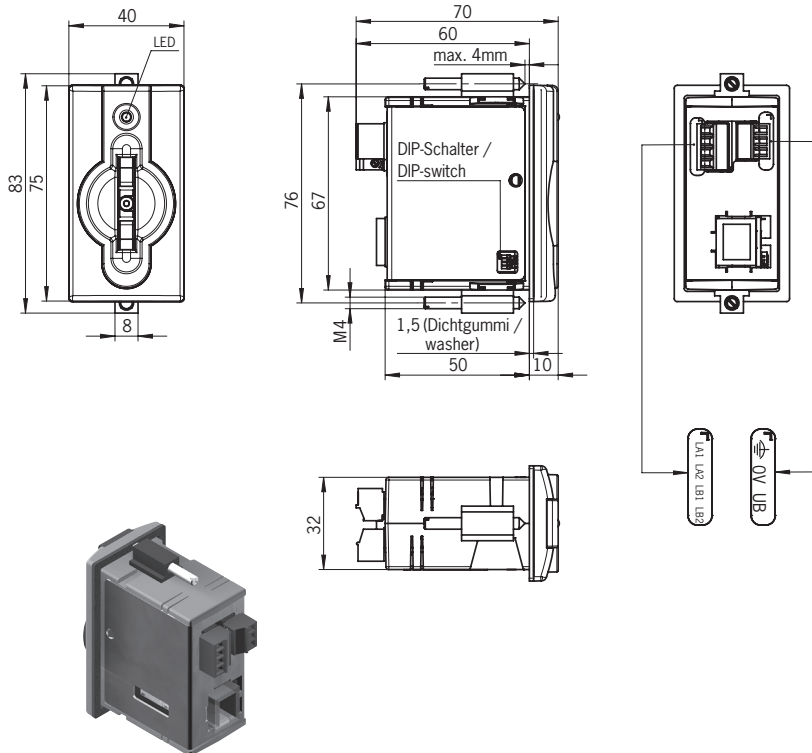* The LED illuminates yellow if there is a functional Electronic-Key in the Electronic-Key adapter.

Ordering table

Designation	Item	Order No.
Electronic-Key adapter with PROFINET interface	EKS-A-IIX-G01-ST02/03	**106305**

Electronic-Key adapter with PROFINET interface version *FSA*

Dimension drawing

Dimensions in mm

Typical applications

► Connection to control system. Interfacing via GSDML file
► Remote installation
► Additional integration in the safety system

Technical data

General parameters		Value			Unit
		min.	typ.	max.	
See page 14, Electronic-Key adapter with PROFINET interface (Order No. 106305)					
Parameters for the outputs LA and LB					
Power supply for load U (LA, LB)			24	30	V
Switching current per output		1	10	50	mA
Number of actuations of the overload protection			100		
Output voltage high for U (LA, LB)		U x 0.9		U	V
Resistance in switched-on state			35		Ohm
Capacitance per output				2	nF
Additional capacitive load per output				1	µF
Utilization category according to EN IEC 60947-5-2	AC-12 AC-15 DC-12 DC-13	50 mA / 24 V			
Difference time between the outputs* (LB first)			200		ms
Connection type switching contacts		plug-in screw terminal, 2 x 2-pole			

* If access on the PROFINET interface takes place during the insertion or removal of the Electronic-Key, the difference time can be more than 200 ms.

Ordering table

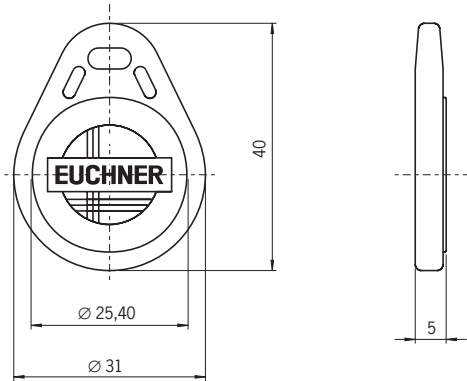| Designation	Item	Order No.
Electronic-Key adapter with PROFINET interface version *FSA*	EKS-A-IIXA-G01-ST02/03/04	**106306**

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Electronic-Key read/write

▶ **Memory 116 bytes E²PROM (programmable) plus 8 bytes ROM (serial number)**

Dimension drawing

Dimensions in mm

Special features

▶ The Electronic-Key contains a unique 8-byte serial number. This number is written by laser during the Electronic-Key production process and is stored absolutely indestructibly. The serial number is used for secure distinction of every single Electronic-Key.

Electronic-Key memory structure

	E²PROM (programmable)					ROM (serial number)		
Byte no. [dec]	0	1	...	114	115	116	...	123
Byte no. [hex]	00	01	...	72	73	74	...	7B
	Quantity: 116 bytes					**Quantity: 8 bytes**		

Technical data

General parameters	Value			Unit
	min.	typ.	max.	
Memory capacity (read/write)		116		bytes
Serial number (read only)		8		bytes
Power supply	inductive via Electronic-Key adapter			
Housing	plastic PC, ABS			
Degree of protection according to EN 60529	IP 67			
Ambient temperature	- 20		+ 60	°C
Number of read cycles	not limited			
Number of write cycles	100,000			cycles
Data retention time (at T = + 55°C)	10			years
Memory organization				
Write	only possible in 4-byte blocks			
Read	possible byte by byte			

Ordering table

Designation	Color	Item	Order No.
	red	EKS-A-K1RDWT32-EU	**077859**
	black	EKS-A-K1BKWT32-EU	**084735**
Electronic-Key read/write with 116 bytes read/write memory	blue	EKS-A-K1BUWT32-EU	**091045**
	green	EKS-A-K1GNWT32-EU	**094839**
	yellow	EKS-A-K1YEWT32-EU	**094840**

Subject to technical modifications; no responsibility is accepted for the accuracy of this information.

Transponder Coding (TC)

▶ **Software for writing to the Electronic-Keys**
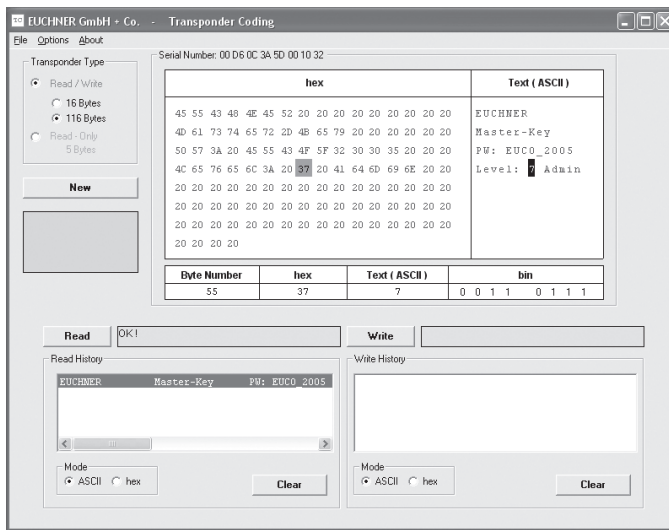
Product description

The Transponder Coding (TC) software is an ASCII/hex editor that can be used to read and write the Electronic-Key data on the PC.

Overview

▶ Display of the programmed Electronic-Key data in ASCII and hex view as well as the serial number in hex view
▶ Byte-wise editing of the Electronic-Key data
▶ Storage of the Electronic-Key data as ASCII or hex file

System requirements

▶ Operating system: Microsoft Windows® 98/ME/NT/2000/XP/Vista/7
▶ Processor: from Pentium 2
▶ Available memory: min. 64 MB
▶ Hard disk space for the installation: approx. 20 MB
▶ Interfaces: serial or USB (depending on model of the Electronic-Key adapter)

Ordering table

Designation		Order No.
Transponder Coding software	on CD	**067190**

Electronic-Key-Manager (EKM)

▶ **Database for Electronic-Key management**
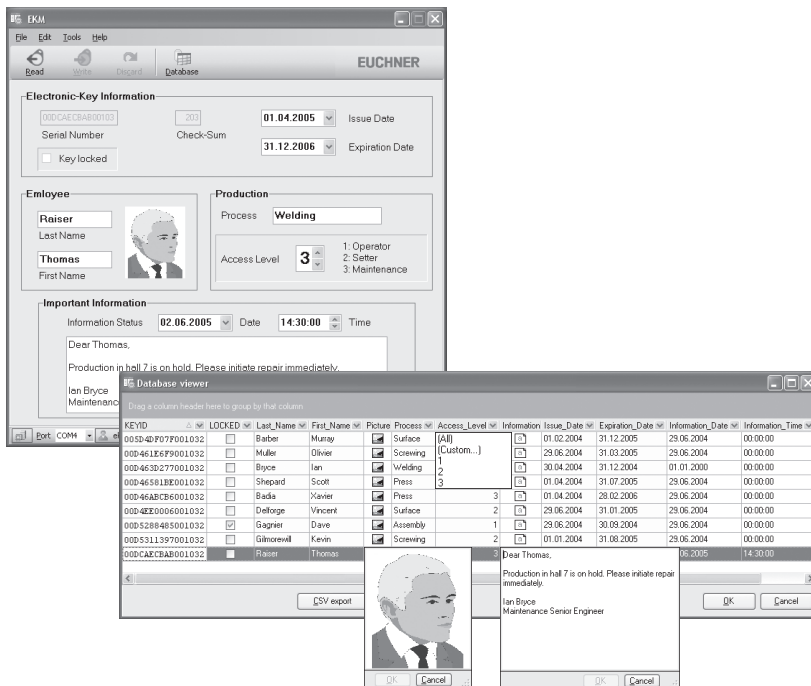
Product description

The Electronic-Key-Manager (EKM) is a software package for writing and managing the Electronic-Keys on the PC. All Electronic-Keys and their contents are managed 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 screen interface for entering the data can be configured as required. Write and read rights can be granted through user management. EKM can also be integrated into an existing EKS environment. All versions include:
▶ Database import/export function in csv format
▶ Example databases that can be edited
▶ Software and documentation in German and English

Overview of demo version
▶ Only local EKM client, no network support
▶ Runtime limitation
▶ Databases and forms prepared using the demo version can continue to be used with the full version

Overview of single-user version
▶ Only local EKM client, no network support
▶ Databases and forms prepared using the single-user version can continue to be used with the full version

Overview of full version
▶ Client/server architecture, full network support
▶ Includes EKM ActiveX® module for interfacing the EKM database to any user program with ActiveX® support (e. g. for process visualization)

System requirements
▶ Operating system: Windows® XP/Server 2003/Server 2008 (32- and 64-bit)/Windows® 7 (32- and 64-bit)/Server 2008 R2
▶ Processor: from Pentium 2
▶ Available memory: min. 64 MB
▶ Network: network card and TCP/IP protocol installed
▶ Hard disk space for the installation: approx. 20 MB
▶ Interfaces: serial or USB (depending on model of the Electronic-Key adapter)
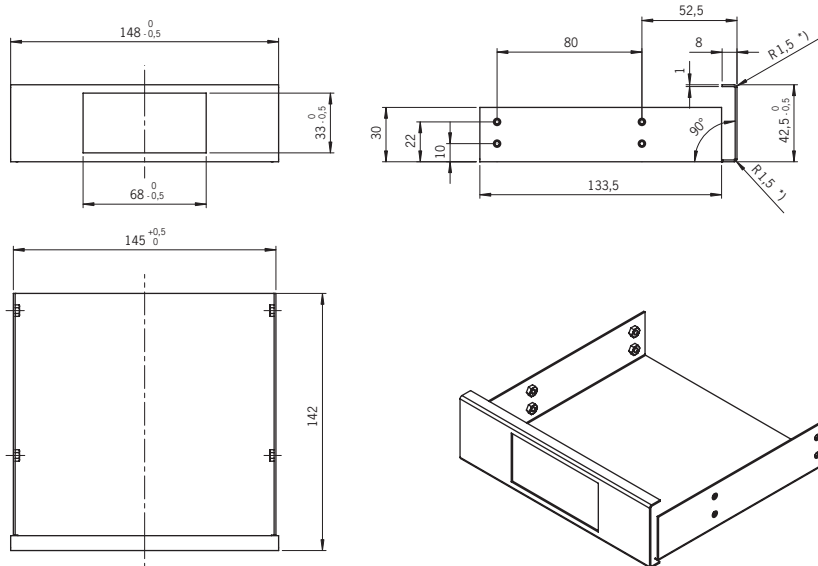
Ordering table

Designation		Order No.
Electronic-Key-Manager software, demo version	on CD	**093320**
Electronic-Key-Manager software, single-user version	on CD	**098578**
Electronic-Key-Manager software, full version	on CD	**093322**

Subject to technical modifications; no responsibility is accepted for the accuracy of this information.

Accessories

▶ **PC mounting frame for 5.25" drive bay**

Dimension drawing

Dimensions in mm

Product description

For installing the EKS Electronic-Key adapter in a PC.

▶ Dimensions: 148 mm x 42.5 mm x 142 mm (suitable for 5.25" drive bay)
▶ Housing: sheet steel 1 mm in accordance with EN 10111
▶ Surface: front signal black matt RAL 9004
▶ Incl. 4 fastening screws

As an option a connection cable is available for the connection from the USB Electronic-Key adapter to the internal USB connection on the motherboard.

Ordering table

Designation	Order No.
PC mounting 5.25" for EKS Electronic-Key adapter	**093615**
Internal USB connection cable	**095633**

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Software and user manuals

▶ **Electronic-Key adapter with serial Interface**

Ordering table

Designation		Order No.
Electronic-Key adapter manual	pdf file as download	**088796**
ActiveX® module manual	pdf file as download	**098655**
Software, ActiveX® module for Windows®	on CD	**098708**
Electronic-Key-Manager software, demo version	on CD	**093320**
Electronic-Key-Manager software, single-user version	on CD	**098578**
Electronic-Key-Manager software, full version	on CD	**093322**
Transponder Coding software	on CD	**067190**

Note on the connection cable
A commercially available screened connection cable is used to connect the **EKS** Electronic-Key adapter via the serial interface. On the **EKS** end the cable must have a SUB-D plug (9-pole) and on the PC/control system end a SUB-D socket (9-pole), with 1 to 1 connection of the contacts. Screws are required at both ends for strain relief. The maximum cable length is 5 m.

▶ **Electronic-Key adapter with USB interface**

Ordering table

Designation		Order No.
Electronic-Key adapter manual	pdf file as download	**094485**
ActiveX® module manual	pdf file as download	**098655**
Software, ActiveX® module for Windows®	on CD	**098708**
Software, USB driver	as download	**094376**
Electronic-Key-Manager software, demo version	on CD	**093320**
Electronic-Key-Manager software, single-user version	on CD	**098578**
Electronic-Key-Manager software, full version	on CD	**093322**
Transponder Coding software	on CD	**067190**

Note on the connection cable
A commercially available, screened connection cable in accordance with USB 1.1 or USB 2.0 standard is used to connect the **EKS** Electronic-Key adapter via the USB interface. On the **EKS** end the cable must have a USB plug type B and on the PC end typically a USB plug type A. The maximum cable length is 3 m.

▶ **Electronic-Key adapter with Ethernet TCP/IP interface**

Ordering table

Designation		Order No.
Electronic-Key adapter manual	pdf file as download	**100420**
ActiveX® module manual	pdf file as download	**102030**
Software Ethernet ActiveX® module for Windows®	on CD	**100665**

Note on the connection cable
A commercially available, screened twisted pair 100BaseTX connection cable in accordance with Cat5 or better is used to connect the **EKS** Electronic-Key adapter via the Ethernet interface. On the **EKS** end the cable must have an RJ-45 plug. The maximum cable length is 100 m.

▶ **Electronic-Key adapter with PROFIBUS DP interface**

Ordering table

Designation		Order No.
Electronic-Key adapter manual	pdf file as download	**092009**
GSD file	as download	**092054**

▶ **Electronic-Key adapter with PROFINET interface**

Ordering table

Designation		Order No.
Electronic-Key adapter manual	pdf file as download	**109283**
GSDML file	as download	**109539**

Note on the connection cable
A commercially available, screened twisted pair 100BaseTX connection cable in accordance with Cat5 or better is used to connect the **EKS** Electronic-Key Adapter via the Ethernet interface. On the **EKS** end the cable must have an RJ-45 plug. The maximum cable length is 100 m.

Downloads available at *www.euchner.de* in the *Download* area.

Subject to technical modifications; no responsibility is accepted for the accuracy of this information.

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