EKS Data Interface

»The universal talent offering maximum flexibility.«

- Control of certain machine functions
- Storage of process parameters
- Traceability of events
- Storage of an expiry date on the Electronic-Key
- Different access rights for multiple processes

086809-15-07/19

EKS Data Interface

System overview

EKS devices with data interface are read/write systems permitting any desired use of the entire Electronic-Key memory. Device variants with the following data interfaces are available for system connection:

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

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 devices with PROFIBUS DP and PROFINET IO 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.

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.

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

To operate the EKS Electronic-Key adapter with USB interface on a 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.

Setup and system integration are 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.

1) Microsoft Windows® and ActiveX® are registered trademarks of Microsoft Corporation

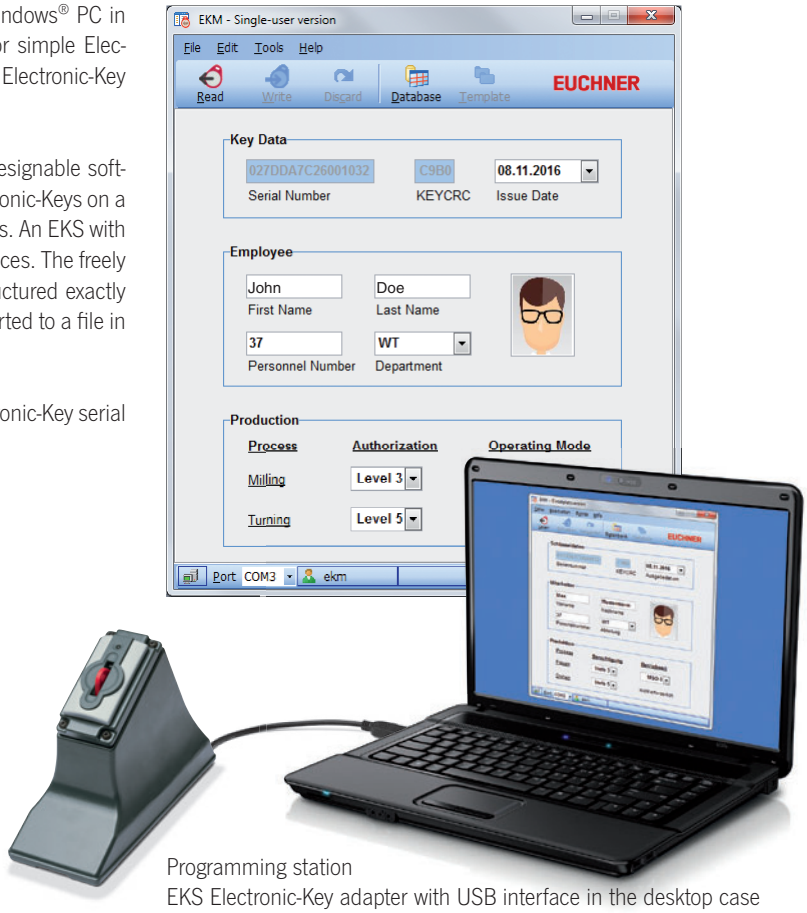
How are parameters assigned to Electronic-Keys?

In principle, the Electronic-Keys can be written and read by all devices with a data interface. This is always possible from the application.

An EKS with serial or USB interface can be used on a Windows® PC in combination with the Transponder Coding TC software for simple Electronic-Key reading and writing and for visual display of the Electronic-Key data during the setup phase as well, for example.

Furthermore, with the Electronic-Key-Manager a flexibly designable software is available for programming and managing the Electronic-Keys on a Windows® PC. It includes a database for the Electronic-Keys. An EKS with serial or USB interface must also be used on these workplaces. The freely programmable memory on the Electronic-Key can be structured exactly as required using EKM. The database content can be exported to a file in csv format for interaction with other software applications.

If a custom database is established using the unique Electronic-Key serial number, it is not imperative to write the Electronic-Key.



Programming station
EKS Electronic-Key adapter with USB interface in the desktop case on the PC

Electronic-Key adapter with serial interface

RS232 RS422 G01

- **Connection to PC**
- **Connection to control system or microprocessor**

Details

- Two-color status LED to indicate the operating state
- Serial interface RS232/RS422. Communication identical with EKS USB in G01 and G30 design.
- Connection to the user software via:
  - ActiveX® module under Windows®
  - Programming based on the 3964R protocol. Communication via the interface is disclosed in the manual.

Notice

- Suitable for setting up a programming station on a Windows® PC
- A commercially available screened connecting 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-pin) and on the PC/control system end typically a SUB-D socket (9-pin), with 1 to 1 connection of the contacts. Screws are required at both ends for strain relief. The maximum cable length is 5 m.

Further information

- For detailed information and downloads, enter the order number for the product in the search box at www.euchner.com.

Ordering table

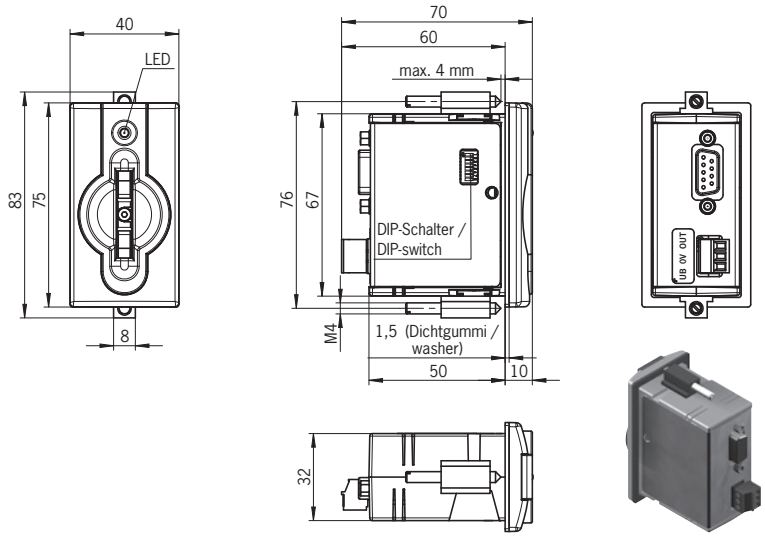
Electronic-Key adapter

Series	Design	Order no./item	
EKS-A-ISX... Serial interface	G01	**084750** EKS-A-ISX-G01-ST09/03	For detailed information, enter the order number for the product in the search box at www.euchner.com.

Accessories/software

Type	Version	
Electronic-Key read/write		Page 46
EKS ActiveX® module		Page 52
Transponder Coding TC		Page 50
Electronic-Key-Manager EKM		Page 51
Desktop case		Page 48

Dimension drawing



Technical data

General parameters	Value			Unit
	min.	typ.	max.	
Housing	Plastic (PA 6 GF30 gray)			
Degree of protection	IP65/IP67 in installed state			
Ambient temperature at U_B = DC 24 V	0		+ 55	°C
Mounting cut-out acc. to DIN IEC 61554	33 x 68			mm
Power supply connection	Plug-in connection terminal, 3-pin, with screw terminal			
Operating voltage U_B (regulated, residual ripple < 5%)	20	24	28	V DC
Current consumption I_B			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			
Serial interface connection	Socket Sub-D, 9-pin			
Cable length, RS232			5	m
Cable length, RS422			1,000	m
LED indicator	Green: ready (in operation) Yellow: Electronic-Key active [1)]			

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

Electronic-Key adapter with USB interface

- **Connection to PC**
- **Power supply via the USB interface**
- **Additional integration into the safety engineering (optional)**

Details

- Two-color status LED to indicate the operating state
- Virtual serial COM port. Communication identical with EKS serial and EKS USB in G30 design
- Connection to the user software via:
  - ActiveX® module under Windows®
  - Programming based on the 3964R protocol. Communication via the interface is disclosed in the manual

Notice

- Particularly suitable for setting up a programming station on a Windows® PC
- The version *FSA* (For Safety Applications) features a switching contact on a second channel. This permits the EKS *FSA* to be used in applications relevant for safety in combination with functionally safe evaluation. The function that can be evaluated in terms of safety engineering is the reliable detection that no Electronic-Key is placed.
- A commercially available, screened connecting cable in accordance with the 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 of type B and on the PC end typically a USB plug of type A. The maximum cable length is 3 m.

Further information

- For detailed information and downloads, enter the order number for the product in the search box at www.euchner.com.

Ordering table

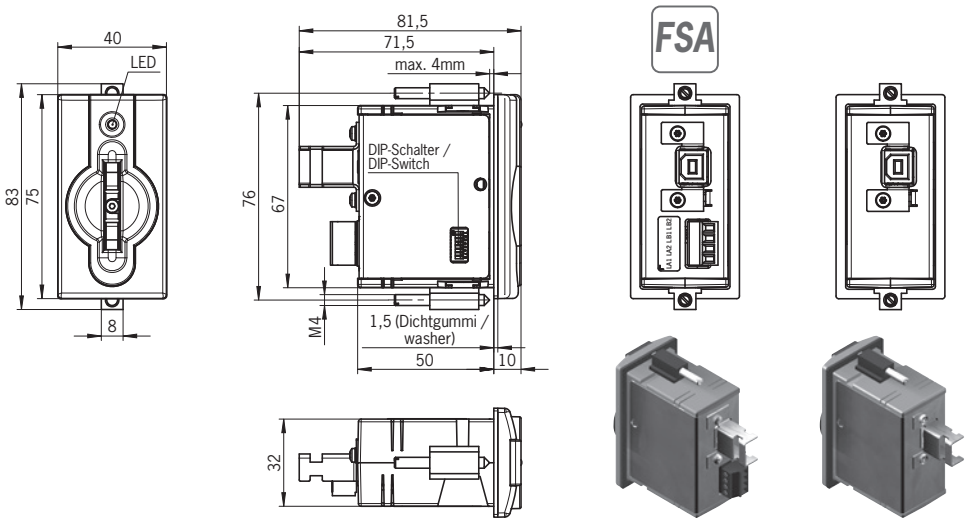
Electronic-Key adapter

Series	Design	Option	Order no./item	
EKS-A-IUX... USB interface	G01	–	**092750** EKS-A-IUX-G01-ST01	For detailed information, enter the order number for the product in the search box at www.euchner.com.
		FSA	**098513** EKS-A-IUXA-G01-ST01/04	

Accessories/software

Type	Version	
Electronic-Key read/write		Page 46
USB driver **094376**	WWW	–
EKS ActiveX® module		Page 52
Transponder Coding TC		Page 50
Electronic-Key-Manager EKM		Page 51
PC mounting frame		Page 49
Desktop case		Page 48

Dimension drawing



Technical data

General parameters		Value			Unit
		min.	typ.	max.	
Housing		Plastic (PA 6 GF30 gray)			
Degree of protection		IP65/IP67 in installed state			
Ambient temperature		0		+ 55	°C
Mounting cut-out acc. to DIN IEC 61554		33 x 68			mm
Power supply		Via USB			
Current consumption I_B				100	mA
Interface, data transfer					
Interface to the PC		USB Full Speed (compatible with all USB versions)			
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 B socket			
Cable length				3	m
LED indicator		Green: ready (in operation) Yellow: Electronic-Key active [1]			
Parameters for floating semiconductor switching contacts LA and LB (version *FSA* only)					
Switching contact connection		Plug-in connection terminal, 4-pin, with screw terminal			
Power supply U for load (LA, LB)			24	30	V
Switching current per contact (with overload protection)		1	10	50	mA
Output voltage U_A (LA, LB) in switched state		U x 0.9		U	V
Resistance in switched state			35		ohms
Capacitive load				1	µF
Utilization category acc. to EN IEC 60947-5-2	AC-12 AC-15 DC-12 DC-13	50 mA / 24 V			
Reliability values according to EN ISO 13849-1 (version *FSA* only) [2]					
Category (with downstream safe evaluation)		3			
MTTFd	Evaluation of data channel and switching contact LA	416			years
	Evaluation of data channel and both switching contacts LA and LB	803			years
DC		92			%

1) The LED illuminates yellow if there is a functional Electronic-Key in the Electronic-Key adapter.
2) Values apply to switching contacts LA and LB when the Electronic-Key is removed. The two switching contacts must be monitored for simultaneity.

Electronic-Key adapter with USB interface FHC

- **Connection to PC**
- **Power supply via the USB interface**

Details

- Two-color status LED to indicate the operating state
- Virtual serial COM port. Communication identical with EKS serial and EKS USB in G01 design
- Connection to the user software via:
  - ActiveX® module under Windows®
  - Programming based on the 3964R protocol. Communication via the interface is disclosed in the manual

Notice

- A commercially available, screened connecting cable in accordance with the 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 of type Mini-B and on the PC end typically a USB plug of type A. The maximum cable length is 3 m.
- The use of connecting cables with straight or angled connector allows the cable to be routed away from the device in different directions. This results in a particularly small installation depth.

Further information

- For detailed information and downloads, enter the order number for the product in the search box at www.euchner.com.

Ordering table

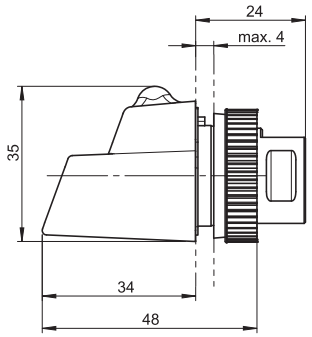
Electronic-Key adapter

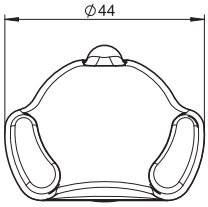
Series	Design	Option	Order no./item	
EKS-A-IUX... USB interface	G30	–	**157195** EKS-A-IUX-G30-STBM	For detailed information, enter the order number for the product in the search box at www.euchner.com.

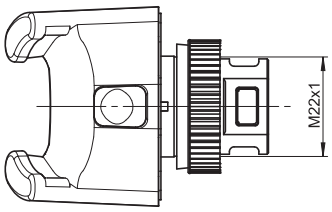
Accessories/software

Type	Version	
Electronic-Key read/write		Page 46
USB driver **094376**	WWW	–
EKS ActiveX® module		Page 52
Transponder Coding TC		Page 50
Electronic-Key-Manager EKM		Page 51

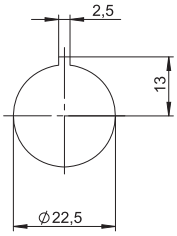
Dimension drawing







Schalttafelausschnitt /
Control panel cut-out



Technical data

General parameters	Value			Unit
	min.	typ.	max.	
Housing	Plastic (PVDF GF30, gray)			
Degree of protection	IP65/IP67/IP69K in installed state			
Ambient temperature	- 20		+ 70/+ 100 [1]	°C
Mounting bore	Ø 22.5			mm
Power supply	Via USB			
Current consumption I_B			100	mA
Interface, data transfer				
Interface to the PC	USB Full Speed (compatible with all USB versions)			
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 Mini-B socket			
Cable length			3	m
LED indicator	Green: ready (in operation) Yellow: Electronic-Key active [2]			

1) This is no ambient temperature for operation. It is valid for a time of no more than 3 minutes, e.g. for cleaning purposes.
2) The LED illuminates yellow if there is a functional Electronic-Key in the Electronic-Key adapter.

Electronic-Key adapter with Ethernet TCP/IP interface

- **Connection to PC**
- **Connection to control systems for special applications**
- **Remote mounting; cable length up to 100 m**
- **Additional integration into the safety engineering (optional)**

Details

- Three-color status LED to indicate the operating state
- Connection to the user software via:
  - ActiveX® module under Windows®
  - Programming based on the TCP/IP protocol. Communication via the interface is disclosed in the manual.

Notice

- The device offers various options for address assignment via:
  - DHCP
  - Web browser
  - DIP switch
- The version *FSA* (For Safety Applications) features a switching contact on a second channel. This permits the EKS *FSA* to be used in applications relevant for safety in combination with functionally safe evaluation. The function that can be evaluated in terms of safety engineering is the reliable detection that no Electronic-Key is placed.
- A commercially available, screened twisted-pair 100BaseTX connecting 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.

Further information

- For detailed information and downloads, enter the order number for the product in the search box at www.euchner.com.

Ordering table

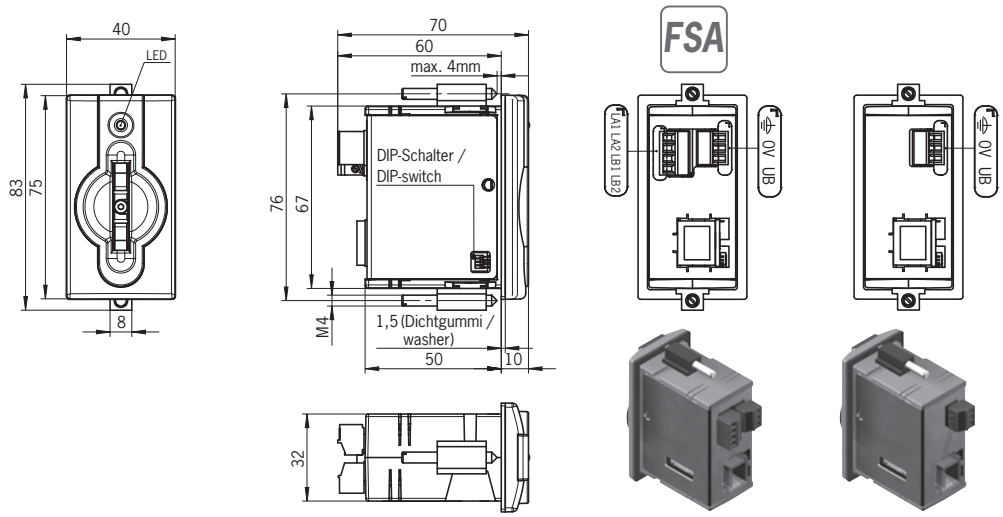
Electronic-Key adapter

Series	Design	Option	Order no./item	
EKS-A-IEX... Ethernet TCP/IP interface	G01	–	**100401** EKS-A-IEX-G01-ST02/03	For detailed information, enter the order number for the product in the search box at www.euchner.com.
		FSA	**099265** EKS-A-IEXA-G01-ST02/03/04	

Accessories/software

Type	Version	
Electronic-Key read/write		Page 46
EKS ActiveX® module		Page 52
Desktop case		Page 48

Dimension drawing



Technical data

General parameters		Value			Unit
		min.	typ.	max.	
Housing			Plastic (PA 6 GF30 gray)		
Degree of protection			IP65/IP67 in installed state		
Ambient temperature at U_B = DC 24 V		0		+ 55	°C
Mounting cut-out acc. to DIN IEC 61554			33 x 68		mm
Power supply connection			Plug-in connection terminal, 3-pin, with screw terminal		
Operating voltage U_B (regulated, residual ripple < 5%)		20	24	28	V DC
Current consumption I_B				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
Ethernet interface connection			1 x RJ45 socket		
Data line			2 x 2 twisted-pair copper wire, screened; min. category 5		
Cable length				100	m
LED indicator			Green: ready (in operation) Yellow: Electronic-Key active [1] Red: fault		
Parameters for floating semiconductor switching contacts LA and LB (version *FSA* only)					
Switching contact connection			Plug-in connection terminal, 4-pin, with screw terminal		
Power supply U for load (LA, LB)			24	30	V
Switching current per contact (with overload protection)		1	10	50	mA
Output voltage U_A (LA, LB) in switched state		U x 0.9		U	V
Resistance in switched state			35		ohms
Capacitive load				1	µF
Utilization category acc. to EN IEC 60947-5-2	AC-12, AC-15 DC-12, DC-13		50 mA / 24 V		
Reliability values according to EN ISO 13849-1 (version *FSA* only) [2]					
Category (with downstream safe evaluation)			3		
MTTFd	Evaluation of data channel and switching contact LA		416		years
	Evaluation of data channel and both switching contacts LA and LB		803		years
DC			92		%

1) The LED illuminates yellow if there is a functional Electronic-Key in the Electronic-Key adapter.
2) Values apply to switching contacts LA and LB when the Electronic-Key is removed. The two switching contacts must be monitored for simultaneity.

Electronic-Key adapter with PROFIBUS DP interface

- **Connection to control system**
- **Remote mounting; cable length up to 1,200 m**
- **Additional integration into the safety engineering (optional)**

Details

- Three-color status LED to indicate the operating state
- Connection to the control system's bus master via:
  - GSD file

  and
  - Cyclical data transfer corresponding to the parametrization in the control software.

Notice

- Address assignment is performed via DIP switches
- The version *FSA* (For Safety Applications) features a switching contact on a second channel. This permits the EKS *FSA* to be used in applications relevant for safety in combination with functionally safe evaluation. The function that can be evaluated in terms of safety engineering is the reliable detection that no Electronic-Key is placed.
- A commercially available screened connecting cable is used to connect the EKS Electronic-Key adapter via the PROFIBUS interface. The cable requires a sub-D connector (9-pin) on the EKS end and typically on the control system end. Screws are required at both ends for strain relief. The maximum cable length is 1,200 m.

Further information

- For detailed information and downloads, enter the order number for the product in the search box at www.euchner.com.

Ordering table

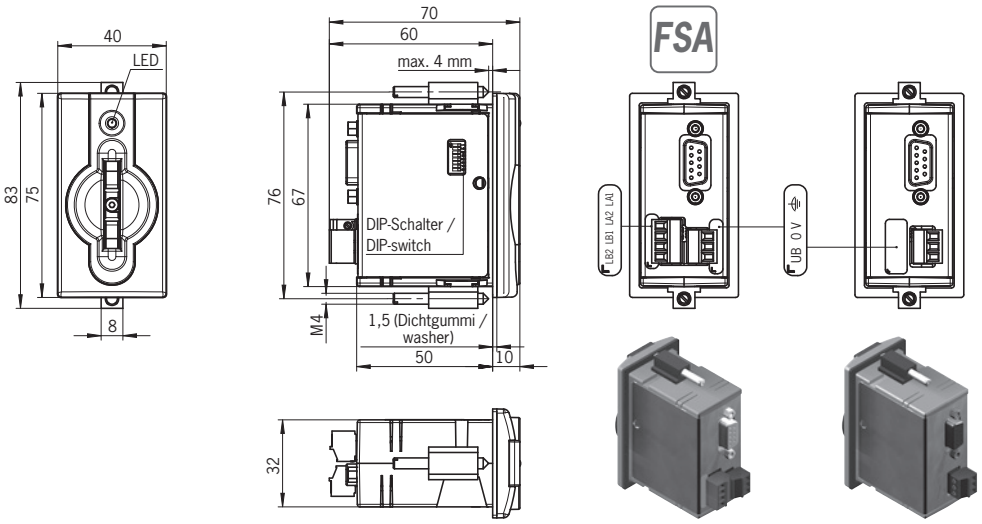
Electronic-Key adapter

Series	Design	Option	Order no./item	
EKS-A-IDX... PROFIBUS DP interface	G01	–	**084800** EKS-A-IDX-G01-ST09/03	For detailed information, enter the order number for the product in the search box at www.euchner.com.
		FSA	**100378** EKS-A-IDXA-G01-ST09/03/04	

Accessories/software

Type	Version	
Electronic-Key read/write		Page 46
GSD file **092054**	WWW	–
Desktop case		Page 48

Dimension drawing



Technical data

General parameters		Value			Unit
		min.	typ.	max.	
Housing			Plastic (PA 6 GF30 gray)		
Degree of protection			IP65/IP67 in installed state		
Ambient temperature at U_B = DC 24 V		0		+ 55	°C
Mounting cut-out acc. to DIN IEC 61554			33 x 68		mm
Power supply connection			Plug-in connection terminal, 3-pin, with screw terminal		
Operating voltage U_B (regulated, residual ripple < 5%)		20	24	28	V DC
Current consumption I_B				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		kbit/s
PROFIBUS DP connection			1.5/3/6/12		Mbit/s
Data line			Socket Sub-D, 9-pin		
Cable length max.			100 … 1,200 according to PROFIBUS DP, depending on data transfer		m
LED indicator			Green: ready (in operation) Yellow: Electronic-Key active [1] Red: fault		
Parameters for floating semiconductor switching contacts LA and LB (version *FSA* only)					
Switching contact connection			Plug-in connection terminal, 4-pin, with screw terminal		
Power supply U for load (LA, LB)			24	30	V
Switching current per contact (with overload protection)		1	10	50	mA
Output voltage U_A (LA, LB) in switched state		U x 0.9		U	V
Resistance in switched state			35		ohms
Capacitive load				1	µF
Utilization category acc. to EN IEC 60947-5-2	AC-12, AC-15 DC-12, DC-13		50 mA / 24 V		
Reliability values according to EN ISO 13849-1 (version *FSA* only) [2]					
Category (with downstream safe evaluation)			3		
MTTFd	Evaluation of data channel and switching contact LA		416		years
	Evaluation of data channel and both switching contacts LA and LB		803		years
DC			92		%

1) The LED illuminates yellow if there is a functional Electronic-Key in the Electronic-Key adapter.
2) Values apply to switching contacts LA and LB when the Electronic-Key is removed. The two switching contacts must be monitored for simultaneity.

Electronic-Key adapter with PROFINET IO interface

- **Connection to control system**
- **Remote mounting; cable length up to 100 m**
- **Additional integration into the safety engineering (optional)**

Details

- Three-color status LED to indicate the operating state
- Connection to the control system's bus master via:
  - GSDML file

  and
  - Cyclical data transfer corresponding to the parametrization in the control software.

Notice

- The device offers various options for address assignment via:
  - DCP naming by PLC
  - Web browser
  - DIP switch
- The version *FSA* (For Safety Applications) features a switching contact on a second channel. This permits the EKS *FSA* to be used in applications relevant for safety in combination with functionally safe evaluation. The function that can be evaluated in terms of safety engineering is the reliable detection that no Electronic-Key is placed.
- A commercially available, screened twisted-pair 100BaseTX connecting 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.

Further information

- For detailed information and downloads, enter the order number for the product in the search box at www.euchner.com.

Ordering table

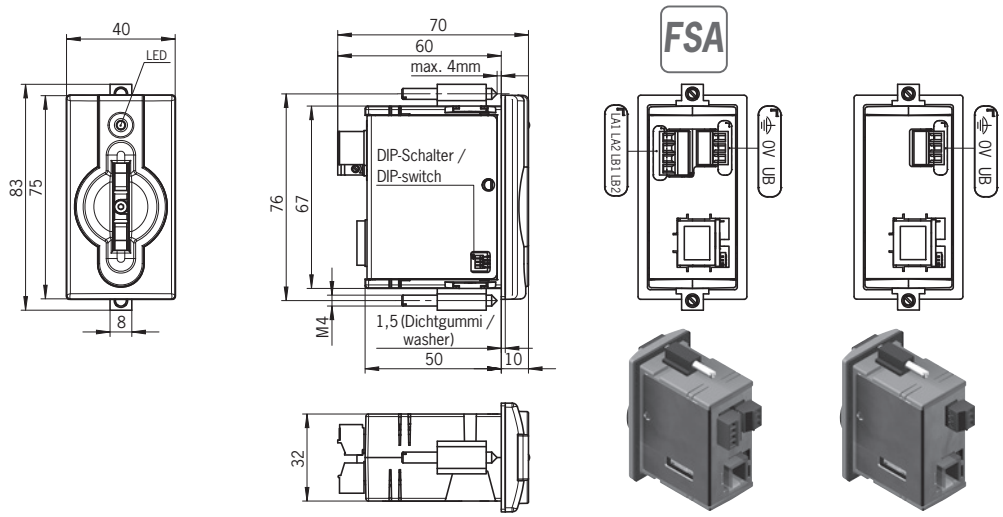
Electronic-Key adapter

Series	Design	Option	Order no./item	
EKS-A-IIX... PROFINET IO interface	G01	–	**106305** EKS-A-IIX-G01-ST02/03	For detailed information, enter the order number for the product in the search box at www.euchner.com.
		FSA	**106306** EKS-A-IIXA-G01-ST02/03/04	

Accessories/software

Type	Version	
Electronic-Key read/write		Page 46
GSDML file **2524496**	WWW	–
Desktop case		Page 48

Dimension drawing



Technical data

General parameters		Value			Unit
		min.	typ.	max.	
Housing			Plastic (PA 6 GF30 gray)		
Degree of protection			IP65/IP67 in installed state		
Ambient temperature at U_B = DC 24 V		0		+ 55	°C
Mounting cut-out acc. to DIN IEC 61554			33 x 68		mm
Power supply connection			Plug-in connection terminal, 3-pin, with screw terminal		
Operating voltage U_B (regulated, residual ripple < 5%)		20	24	28	V DC
Current consumption I_B				150	mA
Interface, data transfer					
Interface to the PC or to the control system			Industrial Ethernet (IEEE 802.3)		
Transfer protocol			PROFINET acc. to IEC 61158 / IEC 61784-1 and -2		
Data transfer rate (full duplex)			10/100		Mbit/s
Ethernet interface connection			1 x RJ45 socket		
Data line			2 x 2 twisted-pair copper wire, screened; min. category 5		
Cable length				100	m
LED indicator			Green: ready (in operation) Yellow: Electronic-Key active [1] Red: fault		
Parameters for floating semiconductor switching contacts LA and LB (version *FSA* only)					
Switching contact connection			Plug-in connection terminal, 4-pin, with screw terminal		
Power supply U for load (LA, LB)			24	30	V
Switching current per contact (with overload protection)		1	10	50	mA
Output voltage U_A (LA, LB) in switched state		U x 0.9		U	V
Resistance in switched state			35		ohms
Capacitive load				1	µF
Utilization category acc. to EN IEC 60947-5-2	AC-12, AC-15 DC-12, DC-13		50 mA / 24 V		
Reliability values according to EN ISO 13849-1 (version *FSA* only) [2]					
Category (with downstream safe evaluation)			3		
MTTFd	Evaluation of data channel and switching contact LA		416		years
	Evaluation of data channel and both switching contacts LA and LB		803		years
DC			92		%

1) The LED illuminates yellow if there is a functional Electronic-Key in the Electronic-Key adapter.
2) Values apply to switching contacts LA and LB when the Electronic-Key is removed. The two switching contacts must be monitored for simultaneity.

Modular interface adapter with PROFINET IO interface

- **Use in conjunction with Electronic-Key adapter FHM**
- **Connection to control system**
- **Remote mounting; cable length up to 100 m**
- **Additional integration into the safety engineering (optional)**

Details

- Three-color status LED to indicate the operating state
- Connection to the control system's bus master via:
  - GSDML file

  and
  - Cyclical data transfer corresponding to the parametrization in the control software.

Notice

- The device offers various options for address assignment via:
  - DCP naming by PLC
  - Web browser
  - DIP switch
- The plug-in connection terminals are not included with the interface adapter and must be ordered separately.
- A complete read/write station comprises an Electronic-Key adapter FHM and a modular interface adapter.
- The version *FSA* (For Safety Applications) features a switching contact on a second channel. This permits the EKS *FSA* to be used in applications relevant for safety in combination with functionally safe evaluation. The function that can be evaluated in terms of safety engineering is the reliable detection that no Electronic-Key is placed.
- A commercially available, screened twisted-pair 100BaseTX connecting cable in accordance with Cat5 or better is used to connect the EKS interface adapter via the Ethernet interface. On the EKS end the cable must have an RJ-45 plug. The maximum cable length is 100 m.

Further information

- For detailed information and downloads, enter the order number for the product in the search box at www.euchner.com.

Ordering table

Interface adapter

Series	Version: Design	Version: Option	Order no./item	
EKS-A-AIX... PROFINET IO interface		–	**122352** EKS-A-AIX-G18	For detailed information, enter the order number for the product in the search box at www.euchner.com.
		FSA	**122353** EKS-A-AIXA-G18	
Connection kits for interface adapter **122352**	Two plug-in connection terminals with screw terminal 4-pin and 5-pin		**125543** AC-SC-04/05-V2	
	Two plug-in connection terminals with spring terminal 4-pin and 5-pin		**125548** AC-CC-04/05-V2	
Connection kits for interface adapter **122353**	Three plug-in connection terminals with screw terminal 4-pin and 5-pin		**125528** AC-SC-04/05-V3	
	Three plug-in connection terminals with spring terminal 4-pin and 5-pin		**125529** AC-CC-04/05-V3	

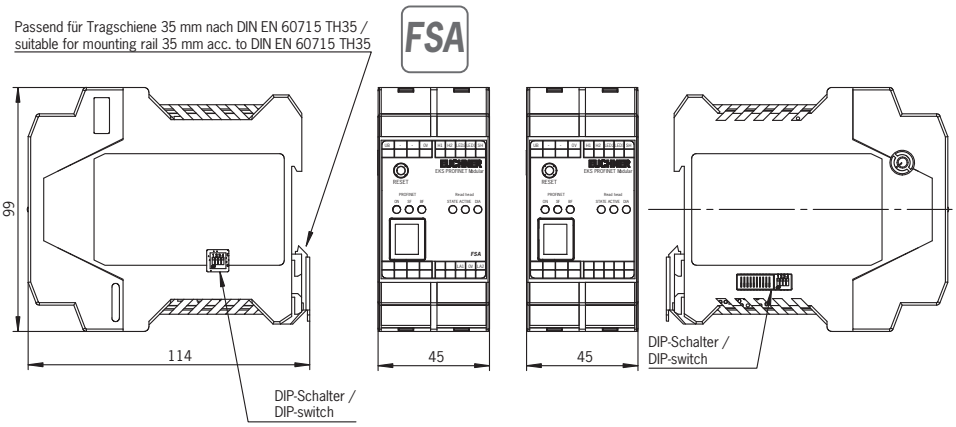
Electronic-Key adapter

Type	Version	
Electronic-Key adapter FHM	G30	Page 42

Accessories/software

Type	Version	
Electronic-Key read/write		Page 46
GSDML file **2524496**	WWW	–

Dimension drawing



Technical data

General parameters		Value			Unit
		min.	typ.	max.	
Housing			Plastic (PA 6.6, gray)		
Ambient temperature at U_B = DC 24 V		0		+ 55	°C
Mounting			Mounting rail 35 mm according to DIN EN 60715 TH35		
Electronic-Key adapter connection			1 Electronic-Key adapter with max. 15 m connecting cable		
Connection for power supply and Electronic-Key adapter			Plug-in connection terminal, 4-pin and 5-pin, with screw or spring terminal		
Operating voltage U_B (regulated, residual ripple < 5%)		20	24	28	V DC
Current consumption I_B				150	mA
Interface, data transfer					
Interface to the PC or to the control system			Industrial Ethernet (IEEE 802.3)		
Transfer protocol			PROFINET acc. to IEC 61158 / IEC 61784-1 and -2		
Data transfer rate (full duplex)			10/100		Mbit/s
Ethernet interface connection			1 x RJ45 socket		
Data line			2 x 2 twisted-pair copper wire, screened; min. category 5		
Cable length				100	m
LED indicator			Green: ready (in operation) Yellow: Electronic-Key active [1] Red: fault		
Parameters for floating semiconductor switching contact LA (version *FSA* only)					
Switching contact connection			Plug-in connection terminal, 5-pin, with screw or spring terminal		
Power supply U for load (LA)			24	30	V
Switching current (with overload protection)		1	10	50	mA
Output voltage U_A (LA) in switched state		U x 0.9		U	V
Resistance in switched state			35		ohms
Capacitive load				1	µF
Utilization category acc. to EN IEC 60947-5-2	AC-12 AC-15 DC-12 DC-13	50 mA / 24 V			
Reliability values according to EN ISO 13849-1 (version *FSA* only [2])					
Category (with downstream safe evaluation)			3		
MTTFd	Evaluation of data channel and switching contact LA		416		years
DC			92		%

1) The LED illuminates yellow if there is a functional Electronic-Key in the Electronic-Key adapter.
2) The values apply to switching contact LA when the Electronic-Key is removed and only to one channel.

Electronic-Key adapter FHM modular

- **Use in conjunction with modular interface adapter**

Details

- The Electronic-Key adapter FHM is available with:
  - Cable length 2 m and flying lead

  or
  - Cable length 0.13 m with M8 male plug. This version can be combined with cables measuring 2, 5, 10 and 15 m in length. The cable has an M8 female plug on one end and a flying lead on the other end.

Notice

- Use in conjunction with modular interface adapter.

Further information

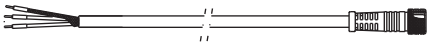
- For detailed information and downloads, enter the order number for the product in the search box at www.euchner.com.

Ordering table

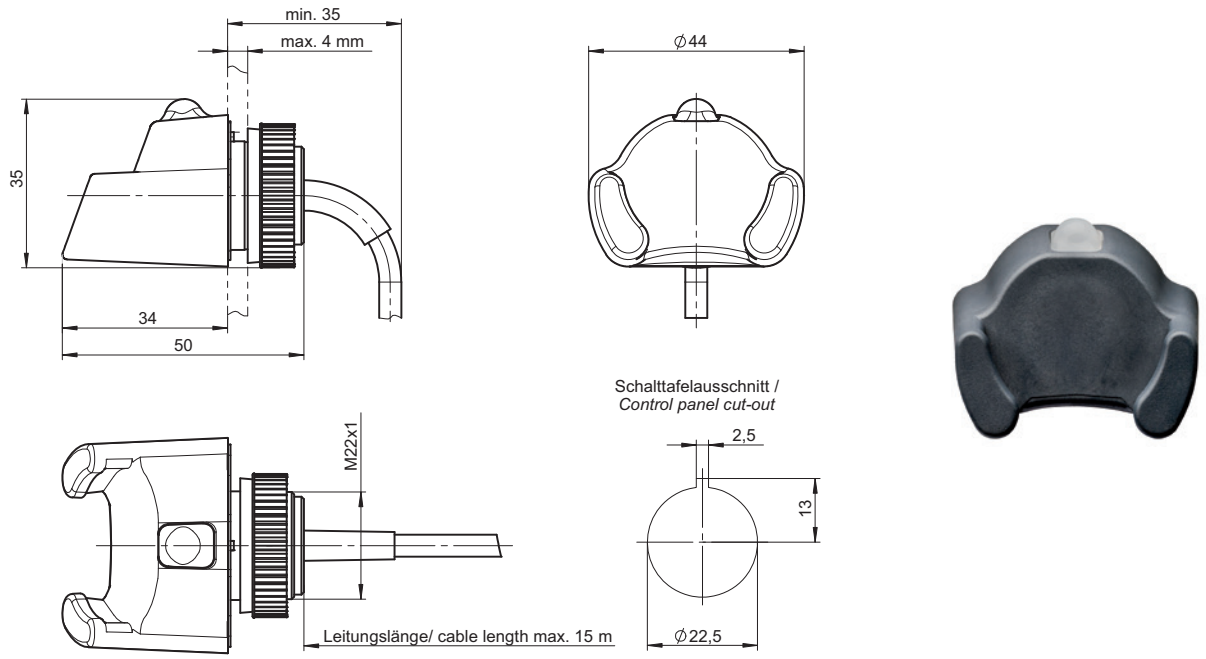
Electronic-Key adapter

Series	Design	Version	Order no./item	
EKS-A-SFH-G30-... Electronic-Key adapter FHM	G30	2m	**106585** EKS-A-SFH-G30-2000	For detailed information, enter the order number for the product in the search box at www.euchner.com.
		3m	**158353** EKS-A-SFH-G30-3000	
		M8 0,13m	**116118** EKS-A-SFH-G30-ST150	

Accessories/software

Type	Version	
Electronic-Key read/write		Page 46
Connection material	Connecting cable with plug connector  M8 4 pin	Page 53

Dimension drawing



Technical data

General parameters	Value			Unit
	min.	typ.	max.	
Housing	Plastic (PVDF GF30, gray)			
Degree of protection	IP65/IP67/IP69K in installed state			
Ambient temperature	- 20		+ 70 / + 100 [1)]	°C
Mounting bore	Ø 22.5			mm
Connection	Connecting cable 2 m with flying lead or connecting cable 0.13 m with plug connector M8, 4-pin			
Connecting cable length	2, 5, 10, 15			m
Connecting cable cross-section	4 x 0.25 screened			mm^2
Connecting cable outer sheath	PVC			

1) This is no ambient temperature for operation. It is valid for a time of no more than 3 minutes, e.g. for cleaning purposes.
The LED signaling is described with the interface adapter.