

## CKS2-K-BP-CC-FLX-F00-USI-168631 (Order no. 168631)

### Key adapter CKS2-K-BP with FlexFunction

- ▶ Key adapter with integrated evaluation electronics
- ▶ Suitable for separate operation (no series connection)
- ▶ 2 safety outputs (semiconductor outputs)
- ▶ Short circuit monitoring
- ▶ Category 4 / PL e according to EN ISO 13849-1
- ▶ LED indicator, multi-color RGB
- ▶ M12 plug connector, 5-pin, connecting cable, 15 cm
- ▶ Direct connection to IP67 field modules
- ▶ Pushbutton for teach-in operation
- ▶ Mechanical detent mechanism for inserted key



### Category according to EN 13849-1

Due to two redundantly designed semiconductor outputs (safety outputs) with internal monitoring suitable for:

- ▶ Category 4/PL e according to EN 13849-1

**Important:** To achieve the stated category according to EN ISO 13849-1, both safety outputs (FO1A and FO1B) must be evaluated.

### Key evaluation

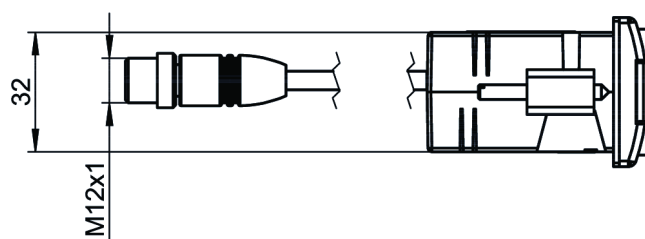
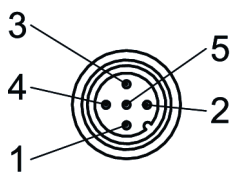
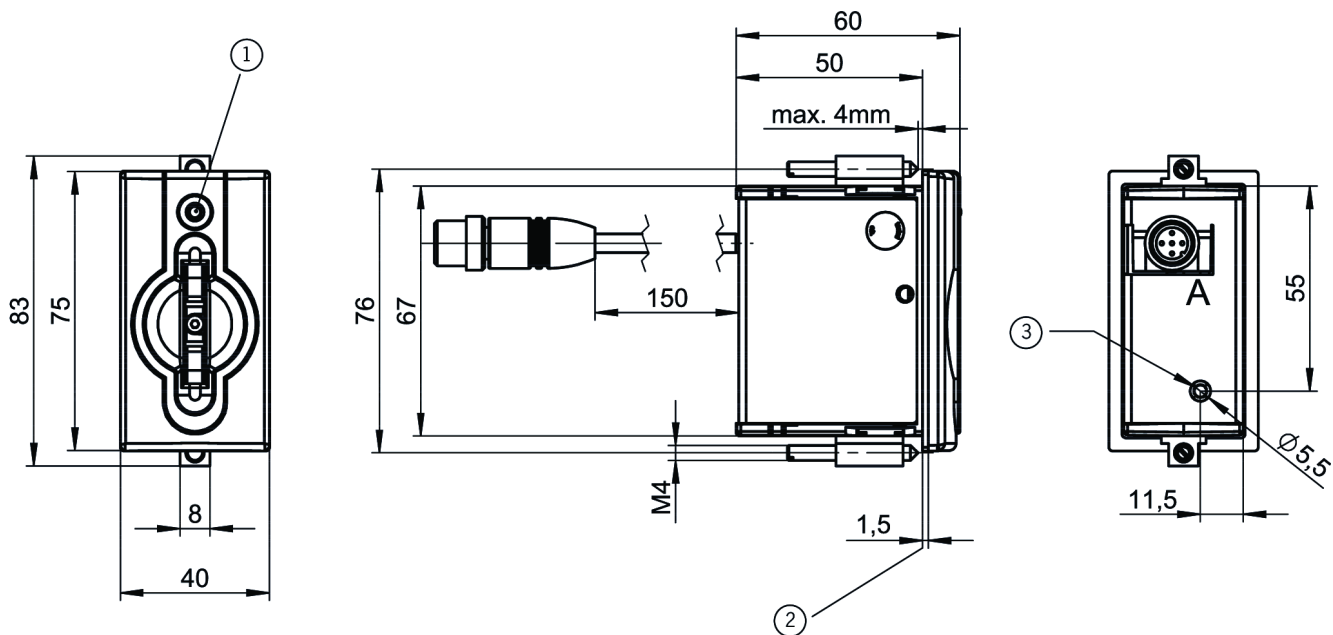
EUCHNER products with FlexFunction require a teach-in operation during setup to configure the device. The device's function depends on the taught-in key type.

**Important:** Keys must be ordered separately!

### Terminal assignment

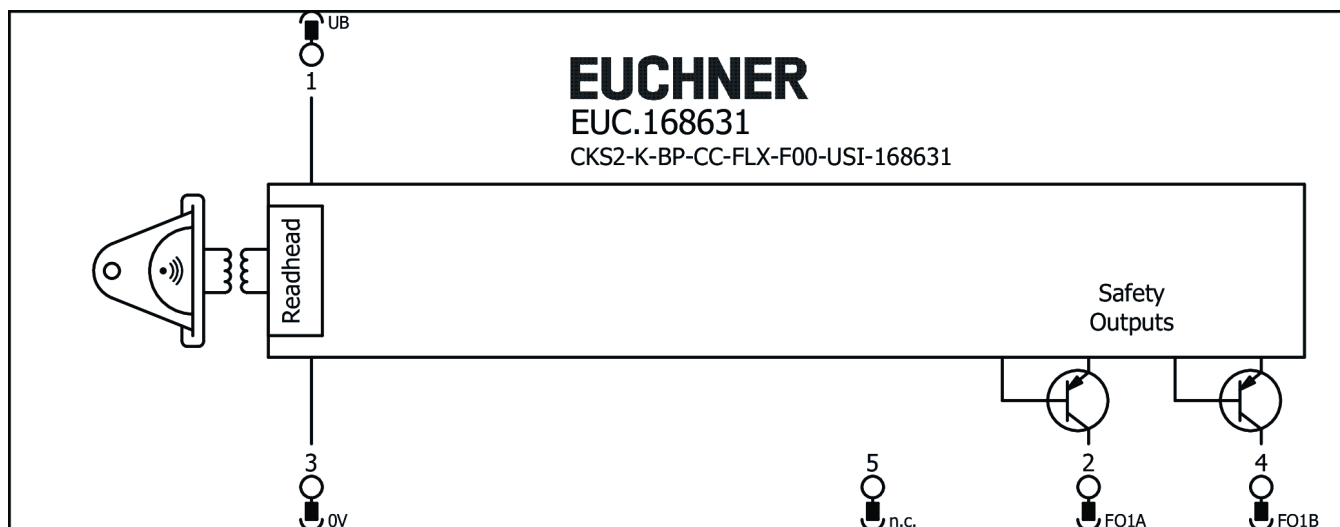
Pin	Designation	Function
1	UB	Power supply, DC 24 V
2	FO1A	Safety output, channel A
3	0 V	Ground, DC 0 V
4	FO1B	Safety output, channel B
5	-	n.c.

## Dimensional drawings



- 1 LED
- 2 Rubber seal
- 3 Pushbutton

## Connection examples



## Technical data

### Approvals



### Electrical connection values

Fuse	
external (operating voltage $U_B$ )	0.25 ... 8 A
rated conditional short-circuit current	100 A
Rated insulation voltage $U_i$	300 V
Rated impulse withstand voltage $U_{imp}$	1.5 kV
Operating voltage DC	
$U_B$	24 V DC -15% ... +20% reverse polarity protected, regulated, residual ripple < 5%, PELV
Turn-on time	
Safety outputs	max. 100 ms
EMC protection requirements	Acc. to EN IEC 60947-5-3
Utilization category	
DC-13	24 V 150 mA (Caution: outputs must be protected with a free-wheeling diode in case of inductive loads.)
Off-state current $I_r$	max. 0.25 mA
Risk time according to EN 60947-5-3	max. 125 ms
Safety class	III
Current consumption	40 mA
Degree of contamination (external, according to EN 60947-1)	2

### Safety outputs F01A/ F01B

Output type	Semiconductor outputs, p-switching, short circuit-proof
Output voltage	
HIGH $U(F01A) / U(F01B)$	$U_B - 4V \dots U_B V$ DC
LOW $U(F01A) / U(F01B)$	0 ... 1 V DC

Discrepancy time	max. 10 ms
Switching current	
per safety output	1 ... 150 mA
Test pulse duration	0.3 ms
Test pulse interval	97 ... 105 ms

## Mechanical values and environment

Ready delay	2 s
Installation orientation	on the front
Storage temperature	-30 ... +70 °C
Mounting cut-out according to DIN IEC 61554	33x68 mm
Shock and vibration resistance	Acc. to EN IEC 60947-5-3
Degree of protection	
in mounted condition (only access side)	IP65/IP67 (on installation in flat metal plate, thickness = 2 mm)
Ambient temperature	
for $U_B = 24$ V DC	-30 ... -55 °C

### Material

Connecting cable	PUR
Housing	Plastic PA6-GF30 black

### Connection X1

Connection type	Connecting cable with plug connector M12
Static bending radius	5x cable diameter
Cable outlet	straight
Cable length	0.15 m
Number of pins	5

## Characteristic values according to EN ISO 13849-1 and EN IEC 62061

	PL	Maximum SIL	PFH <sub>D</sub>	Category	Mission time
Safe key detection	PL e	3	$4.11 \times 10^{-9}$	4	20 y

## Downloads

All documentation for this material can be found on our website:

<https://www.euchner.de/en-us/a/168631/?#downloads-tab>

**Ordering data**

Ordernumber	168631
Item designation	CKS2-K-BP-CC-FLX-F00-USI-168631
Gross weight	0,19kg
Customs tariff number	85389099990

## Accessories

### Actuator

#### Key A-FLX-K-0A FlexFunction, 1 key per packaging unit



**168921**  
A-FLX-K-0A-RD-168921

- ▶ Transponder coding
- ▶ High coding level according to EN 14119
- ▶ Key type 0A: 1 key per packaging unit
- ▶ Key color red



**171455**  
A-FLX-K-0A-BK-171455

- ▶ Transponder coding
- ▶ High coding level according to EN 14119
- ▶ Key type 0A: 1 key per packaging unit
- ▶ Key color black



**171456**  
A-FLX-K-0A-BU-171456

- ▶ Transponder coding
- ▶ High coding level according to EN 14119
- ▶ Key type 0A: 1 key per packaging unit
- ▶ Key color blue



**171458**  
A-FLX-K-0A-YE-171458

- ▶ Transponder coding
- ▶ High coding level according to EN 14119
- ▶ Key type 0A: 1 key per packaging unit
- ▶ Key color yellow

#### Key A-FLX-K-0B FlexFunction, 2 keys per packaging unit



**168962**  
A-FLX-K-0B-RD-V02-168962

- ▶ Transponder coding
- ▶ High coding level according to EN 14119
- ▶ Key type 0B: 2 keys per packaging unit
- ▶ Key color red

#### Key A-FLX-K-0B FlexFunction, 3 keys per packaging unit



**168963**  
A-FLX-K-0B-RD-V03-168963

- ▶ Transponder coding
- ▶ High coding level according to EN 14119
- ▶ Key type 0B: 3 keys per packaging unit
- ▶ Key color red

### Connection accessories

#### Connecting cable with 2 plug connectors M12, 5-pin, 0.22 m, AIDA standard



**163573**  
C-M12F05-05X034PU0,22-M12M05-163573

- ▶ M12 female plug to M12 plug connector, 5-pin
- ▶ Straight female plug and plug connector
- ▶ Connecting cable according to AIDA standard
- ▶ PUR cable, sheath color yellow
- ▶ Cable length 0.22 m

#### Connecting cable with 2 plug connectors M12, 5-pin, 1.5 m, AIDA standard



**159363**  
C-M12F05-05X034PU01,5-M12M05-159363

- ▶ M12 female plug to M12 plug connector, 5-pin
- ▶ Straight female plug and plug connector
- ▶ Connecting cable according to AIDA standard
- ▶ PUR cable, sheath color yellow
- ▶ Cable length 1.5 m

## Connecting cable with 2 plug connectors M12, 5-pin, 10 m



**100181**

C-M12F05-05X034PV10,0-M12M05-100181

- ▶ M12 female plug to M12 plug connector, 5-pin
- ▶ Straight female plug and plug connector
- ▶ PVC cable
- ▶ Cable length 10 m



**119947**

C-M12F05-05X034PU10,0-M12M05-119947

- ▶ M12 female plug to M12 plug connector, 5-pin
- ▶ Straight female plug and plug connector
- ▶ PUR cable
- ▶ Cable length 10 m

## Connecting cable with 2 plug connectors M12, 5-pin, 10 m, AIDA standard



**159920**

C-M12F05-05X034PU10,0-M12M05-159920

- ▶ M12 female plug to M12 plug connector, 5-pin
- ▶ Straight female plug and plug connector
- ▶ Connecting cable according to AIDA standard
- ▶ PUR cable, sheath color yellow
- ▶ Cable length 10 m

## Connecting cable with 2 plug connectors M12, 5-pin, 15 m, AIDA standard



**159921**

C-M12F05-05X034PU15,0-M12M05-159921

- ▶ M12 female plug to M12 plug connector, 5-pin
- ▶ Straight female plug and plug connector
- ▶ Connecting cable according to AIDA standard
- ▶ PUR cable, sheath color yellow
- ▶ Cable length 15 m

## Connecting cable with 2 plug connectors M12, 5-pin, 1 m, AIDA standard



**159362**

C-M12F05-05X034PU01,0-M12M05-159362

- ▶ M12 female plug to M12 plug connector, 5-pin
- ▶ Straight female plug and plug connector
- ▶ Connecting cable according to AIDA standard
- ▶ PUR cable, sheath color yellow
- ▶ Cable length 1 m

## Connecting cable with 2 plug connectors M12, 5-pin, 20 m



**100182**

C-M12F05-05X034PV20,0-M12M05-100182

- ▶ M12 female plug to M12 plug connector, 5-pin
- ▶ Straight female plug and plug connector
- ▶ PVC cable
- ▶ Cable length 20 m



**119971**

C-M12F05-05X034PU20,0-M12M05-119971

- ▶ M12 female plug to M12 plug connector, 5-pin
- ▶ Straight female plug and plug connector
- ▶ PUR cable
- ▶ Cable length 20 m

## Connecting cable with 2 plug connectors M12, 5-pin, 3 m, AIDA standard



**159364**

C-M12F05-05X034PU03,0-M12M05-159364

- ▶ M12 female plug to M12 plug connector, 5-pin
- ▶ Straight female plug and plug connector
- ▶ Connecting cable according to AIDA standard
- ▶ PUR cable, sheath color yellow
- ▶ Cable length 3 m



## Connecting cable with 2 plug connectors M12, 5-pin, 5 m



**100180**

C-M12F05-05X034PV05,0-M12M05-100180

- ▶ M12 female plug to M12 plug connector, 5-pin
- ▶ Straight female plug and plug connector
- ▶ PVC cable
- ▶ Cable length 5 m



**119932**

C-M12F05-05X034PU05,0-M12M05-119932

- ▶ M12 female plug to M12 plug connector, 5-pin
- ▶ Straight female plug and plug connector
- ▶ PUR cable
- ▶ Cable length 5 m

## Connecting cable with 2 plug connectors M12, 5-pin, 5 m, AIDA standard



**159365**

C-M12F05-05X034PU05,0-M12M05-159365

- ▶ M12 female plug to M12 plug connector, 5-pin
- ▶ Straight female plug and plug connector
- ▶ Connecting cable according to AIDA standard
- ▶ PUR cable, sheath color yellow
- ▶ Cable length 5 m

## Connecting cable with 2 plug connectors M12, 5-pin, 8 m, AIDA standard



**159919**

C-M12F05-05X034PU08,0-M12M05-159919

- ▶ M12 female plug to M12 plug connector, 5-pin
- ▶ Straight female plug and plug connector
- ▶ Connecting cable according to AIDA standard
- ▶ PUR cable, sheath color yellow
- ▶ Cable length 8 m

## Connecting cable with straight plug connector M12, 5-pin, 10 m



**100184**

C-M12F05-05X034PV10,0-MA-100184

- ▶ M12 female plug, 5-pin
- ▶ Straight plug connector
- ▶ PVC cable
- ▶ Cable length 10 m
- ▶ With flying lead



**113640**

C-M12F05-05X034PU10,0-MA-113640

- ▶ M12 female plug, 5-pin
- ▶ Straight plug connector
- ▶ PUR cable
- ▶ Cable length 10 m
- ▶ With flying lead

## Connecting cable with straight plug connector M12, 5-pin, 20 m



**100185**

C-M12F05-05X034PV20,0-MA-100185

- ▶ M12 female plug, 5-pin
- ▶ Straight plug connector
- ▶ PVC cable
- ▶ Cable length 20 m
- ▶ With flying lead



**113682**

C-M12F05-05X034PU20,0-MA-113682

- ▶ M12 female plug, 5-pin
- ▶ Straight plug connector
- ▶ PUR cable
- ▶ Cable length 20 m
- ▶ With flying lead

## Connecting cable with straight plug connector M12, 5-pin, 30 m



**122784**

C-M12F05-05X034PU30,0-MA-122784

- ▶ M12 female plug, 5-pin
- ▶ Straight plug connector
- ▶ PUR cable
- ▶ Cable length 30 m
- ▶ With flying lead

## Connecting cable with straight plug connector M12, 5-pin, 5 m



**100183**

C-M12F05-05X034PV05,0-MA-100183

- ▶ M12 female plug, 5-pin
- ▶ Straight plug connector
- ▶ PVC cable
- ▶ Cable length 5 m
- ▶ With flying lead



**113620**

C-M12F05-05X034PU05,0-MA-113620

- ▶ M12 female plug, 5-pin
- ▶ Straight plug connector
- ▶ PUR cable
- ▶ Cable length 5 m
- ▶ With flying lead

## miscellaneous accessories

### Color cover set for CKS key adapter (black, blue, yellow)



**165413**

AY-SET-CVR-165413

- ▶ Color covers for CKS key adapter
- ▶ Packaging unit with black, blue and yellow covers
- ▶ Color covers can be replaced on the CKS on location