

EUCHNER

Operating Instructions

Non-Contact Safety Switch
CES-I-AS2A-C04 (Unicode/Multicode)

EN

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1. About this document





1.1. Scope

These operating instructions are valid for all CES-I-AS2A-C04. These operating instructions, the document *Safety information* and any enclosed data sheet form the complete user information for your device.

1.2. Target group




Design engineers and installation planners for safety devices on machines, as well as setup and servicing staff possessing special expertise in handling safety components.


1.3. Key to symbols

Symbol/depiction	Meaning
	Printed document
	Document is available for download at www.euchner.com
 DANGER WARNING CAUTION	Safety precautions Danger of death or severe injuries Warning about possible injuries Caution slight injuries possible
 NOTICE Important!	Notice about possible device damage Important information
Tip	Useful information

1.4. Supplementary documents

The overall documentation for this device consists of the following documents:

Document title (document number)	Contents	
Safety information (2525460)	Basic safety information	
Operating instructions (2120544)	(this document)	
Possibly enclosed data sheet	Item-specific information about deviations or additions	

	Important! Always read all documents to gain a complete overview of safe installation, setup and use of the device. The documents can be downloaded from www.euchner.com . For this purpose enter the doc. no. in the search box.
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2. Correct use

The series CES-IAS Coded Electronic Safety switches from EUCHNER are operated as slaves on the safety bus *AS-Interface Safety at Work* and function as interlocking devices without guard locking (type 4). The device meets the requirements according to EN IEC 60947-5-3. Devices with unicode evaluation possess a high coding level, devices with multicode evaluation possess a low coding level.

In combination with a movable guard and the machine control, this safety component prevents dangerous machine functions from occurring while the guard is open. A stop command is triggered if the guard is opened during the dangerous machine function.

This means:

- › Starting commands that cause a dangerous machine function must become active only when the guard is closed.
- › Opening the guard triggers a stop command.
- › Closing a guard must not cause automatic starting of a dangerous machine function. A separate start command must be issued. For exceptions, refer to EN ISO 12100 or relevant C-standards.

Before safety switches are used, a risk assessment must be performed on the machine, e.g., in accordance with:

- › EN ISO 13849-1
- › EN ISO 12100
- › IEC 62061

Correct use includes observing the relevant requirements for installation and operation, e.g.

- › EN ISO 13849-1
- › EN ISO 14119
- › EN 60204-1

The safety switch must be used only in conjunction with the designated CES actuators from EUCHNER. On the use of different actuators, EUCHNER provides no warranty for safe function.



Important!

- › The user is responsible for the proper integration of the device into a safe overall system. For this purpose, the overall system must be validated, e.g. in accordance with EN ISO 13849-2.
- › Correct use requires observing the permissible operating parameters (see technical data).
- › If a data sheet is included with the product, the information on the data sheet applies.
- › It is only allowed to use components that are permissible in accordance with the table below.

Table 1: Possible combinations for CES components

Safety switch	Actuator	
	CES-A-BBN-C04-115271	CES-A-BDN-06-104730
CES-I-AS2A-C04-... (Unicode/Multicode)	●	●
Key to symbols	●	Combination possible

3. Description of the safety function

Devices from this series feature the following safety functions:

Monitoring of the guard position (interlocking device according to EN ISO 14119)

- › Safety function:
When the guard is open, no valid code sequence is sent (see chapter 6.2. *Switching states on page 7*).
- › Safety characteristics: category, Performance Level, PFH_D (see chapter 11. *Technical data on page 14*).

4. Exclusion of liability and warranty

In case of failure to comply with the conditions for correct use stated above, or if the safety regulations are not followed, or if any servicing is not performed as required, liability will be excluded and the warranty void.

5. General safety precautions

Safety switches fulfill personnel protection functions. Incorrect installation or tampering can lead to fatal injuries to personnel.

Check the safe function of the safeguard particularly

- › after any setup work
- › after the replacement of a system component
- › after an extended period without use
- › after every fault

Independent of these checks, the safe function of the safeguard should be checked at suitable intervals as part of the maintenance schedule.



WARNING

Danger to life due to improper installation or due to bypassing (tampering). Safety components fulfill a personnel protection function.

- › Safety components must not be bypassed, turned away, removed or otherwise rendered ineffective. On this topic pay attention in particular to the measures for reducing the possibility of bypassing according to EN ISO 14119:2013, section 7.
- › The switching operation must be triggered only by actuators designated for this purpose.
- › Mounting, electrical connection and setup only by authorized personnel possessing the following knowledge:
 - specialist knowledge in handling safety components
 - knowledge about the applicable EMC regulations
 - knowledge about the applicable regulations on operational safety and accident prevention



Important!

Prior to use, read the operating instructions and keep these in a safe place. Ensure the operating instructions are always available during mounting, setup and servicing. For this reason you should archive a printed copy of the operating instructions. You can download the operating instructions from www.euchner.com.

6. Function

The safety switch monitors the position of movable guards. When the actuator is moved to/removed from the actuating range, a corresponding bit sequence is sent via the AS-Interface bus.

The system consists of the following components: coded actuator (transponder) and switch.

Whether the device learns the complete actuator code (unicode) or not (multicode) depends on the respective version.

Devices with unicode evaluation: The actuator must be assigned to the safety switch by a teach-in operation so that it is detected by the system. This unambiguous assignment ensures a particularly high level of protection against tampering. The system thus possesses a high coding level.

Devices with multicode evaluation: Unlike systems with unicode evaluation, on multicode devices a specific code is not requested but instead it is only checked whether the actuator is of a type that can be detected by the system (multicode detection). There is no exact comparison of the actuator code with the taught-in code in the safety switch (unicode evaluation). The system possesses a low coding level.

When the guard is closed, the actuator is moved towards the safety switch. When the operating distance is reached, power is supplied to the actuator by the switch and data are transferred.

When the guard is closed and the code is permissible, each CES-I-AS transmits a switch-specific, unique safety code sequence with 8 x 4 bits via the AS-Interface bus.

The zero sequence is transmitted via the AS-Interface bus when the guard is opened.

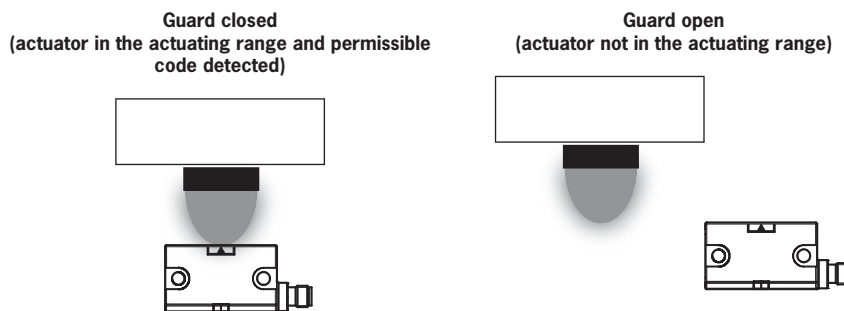
In the event of a fault in the safety switch, the zero sequence is sent and the DIA LED illuminates red. The occurrence of faults is detected at the latest on the next demand to close the safety outputs (e.g. on starting).

6.1. Limit-range monitoring

If the safety door with the actuator should settle over time, the actuator can drift out of the read head actuating range. The device recognizes this situation and indicates that the actuator is in the limit range by flashing the STATE LED. This allows the safety door to be readjusted in time. Also see chapter 10. System status table on page 13.

6.2. Switching states

The detailed switching states for your switch can be found in the system status table. All safety outputs, monitoring outputs and display LEDs are described there.



Programming	State	D0, D1	D2, D3	Monitor diagnostics
Dual-channel dependent Synchronization time ≥ 100 ms / Dual channel positively driven	Guard closed	Code sequence		Green If start-up test selected: yellow flashing on start-up
	Intermediate state during opening or closing of the guard. Switch S1 (internal) open	Half-sequence	00	On opening: yellow flashing On closing: red After expiration of the synchronization time: yellow flashing
	Intermediate state during opening or closing of the guard. Switch S2 (internal) open	00	Half-sequence	
	Guard open	00	00	Red
	Address 0 or communication disrupted	-		Gray

EN

7. Mounting



CAUTION

Safety switches must not be bypassed (bridging of contacts), turned away, removed or otherwise rendered ineffective.

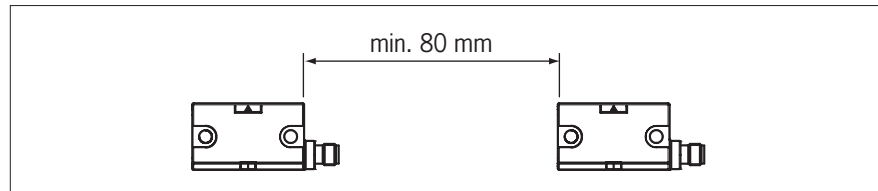
- › Observe EN ISO 14119:2013, section 7, for information about reducing the possibilities for bypassing an interlocking device.



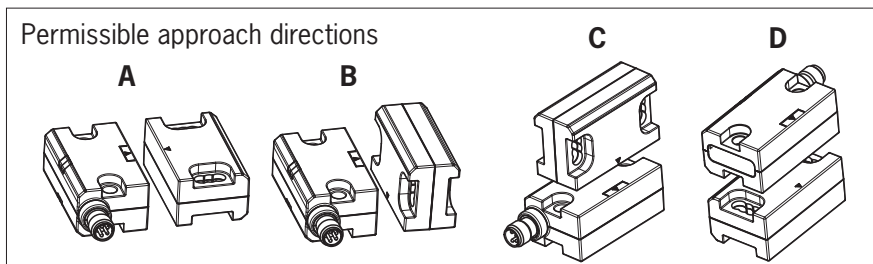
NOTICE

Risk of damage to equipment and malfunctions as a result of incorrect installation.

- › Safety switches and actuators must not be used as an end stop.
- › Observe EN ISO 14119:2013, sections 5.2 and 5.3, for information about mounting the safety switch and the actuator.
- › From the assured release distance S_{ar} , the safety outputs are safely shut down.
- › When mounting several safety switches, observe the stipulated minimum distance to avoid mutual interference.



- › If the actuator is installed flush, the operating distances change as a function of the installation depth and the guard material.
- › Observe direction of arrow on the device (see figure below).



Note the following points:

- › Actuator and safety switch must be easily accessible for inspection and replacement.
- › Actuator and safety switch must be fitted so that
 - the front faces are at the minimum operating distance $0.8 \times S_{a0}$ or closer when the guard is closed. To avoid entering the area of possible side lobes, a minimum distance is to be maintained in case of a side approach direction. See chapter 11. *Technical data*, section *Typical actuating range* for the related actuator.
 - when the guard is open up to the distance S_{ar} (assured release distance), a hazard is excluded.
 - the actuator is positively mounted on the guard, e.g. by using the safety screws included.
 - they cannot be removed or tampered with using simple means.
- › Pay attention to the maximum tightening torque for the read head or safety switch and actuator fastenings of 0.8 Nm.

8. Electrical connection

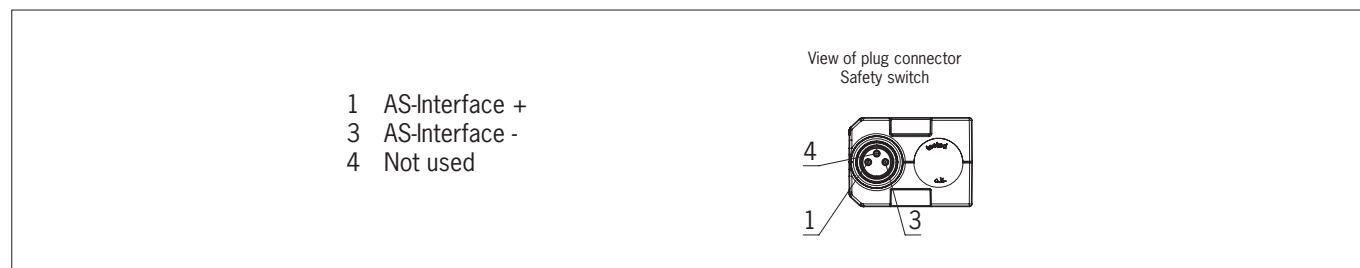


Figure 1: Terminal assignment, AS-Interface M8 plug connector



CAUTION

Risk of damage to equipment or malfunctions as a result of incorrect connection.

- Power devices which are a powerful source of interference must be installed in a separate location away from the input and output circuits for signal processing. The cable routing for safety circuits should be as far away as possible from the cables of the power circuits.
- To avoid EMC interference, the physical environmental and operating conditions at the installation site of the device must comply with the requirements according to the standard EN 60204-1:2006, section 4.4.2 (EMC).
- Pay attention to any interference fields from devices such as frequency converters or induction heating systems. Observe the EMC instructions in the manuals from the respective manufacturer.
- To ensure the degree of protection IP67 is achieved, the mating connector must be tightened with 0.3 Nm. This value must not be exceeded, however.





Important!

If the device does not appear to function when operating voltage is applied (e.g. green STATE LED does not flash), the safety switch must be returned unopened to the manufacturer.

8.1. Notes about



Important!

- This device is intended to be used with a *Class 2* power source in accordance with UL1310. As an alternative an LV/C (Limited Voltage/Current) power source with the following properties can be used:
 - This device shall be used with a suitable isolating source in conjunction with a fuse in accordance with UL248. The fuse shall be rated max. 3.3 A and be installed in the max. 30 V DC power supply to the device in order to limit the available current to comply with the  requirements. Please note possibly lower connection ratings for your device (refer to the technical data).
- For use and applications as per the requirements of  1), a connecting cable listed under the UL category code CYJV2 or CYJV must be used.

1) Notice on the scope of the UL approval: only for applications as per NFPA 79 (Industrial Machinery). The devices have been tested as per the requirements of UL508 and CSA/ C22.2 no. 14 (protection against electric shock and fire).

8.2. Setting the AS-Interface address

The address can be set prior to or after mounting.

The AS-Interface address of the safety switch is set using an AS-Interface programming device. Addresses 1 to 31 are valid. The unit is programmed by connecting the programming device to the M8 plug connector of the safety switch with a programming cable.

The AS-Interface address can also be set directly on the AS-Interface bus with a master.

Default setting on delivery is address 0 (the AS-Interface LED illuminates red).

8.3. Configuration in the AS-Interface safety monitor

(see operating instructions for the AS-Interface safety monitor)

8.3.1. Dual-channel dependent

**Cat.
4**

The safety switch is configured in the AS-Interface safety monitor with the AS-Interface address set as follows, for example:

- › Dual-channel dependent
- › With or without start-up test
- › Synchronization time ≥ 100 ms

8.3.2. Dual-channel positively driven

**Cat.
4**

The safety switch is configured in the AS-Interface safety monitor with the AS-Interface address set as follows, for example:

- › Dual-channel positively driven
- › With or without start-up test

8.4. AS-Interface status messages

A dual LED on the M8 plug connector (red/green) depicts the colors red and green. The following table provides assistance with troubleshooting.

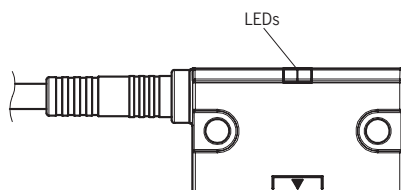
State ASI LED	Explanation
green	Normal operation
red	No data exchange between master and slave Cause: - Master in STOP mode - Slave not in LPS - Slave with wrong IO/D
red	No data exchange between master and slave Cause: slave address=0
red/green	Device fault in the slave. Contact the manufacturer.

9. Setup

9.1. LED displays

You will find a detailed description of the signal functions in chapter 10. *System status table on page 13.*

LED	Color
STATE	green
DIA	red



9.2. Teach-in function for actuator (only for unicode evaluation)

The actuator must be allocated to the safety switch using a teach-in function before the system forms a functional unit. During a teach-in operation, the bit sequence 0000 is transmitted, i.e. the system is in the safe state.



Important!

- › The teach-in operation may be performed only if the device functions flawlessly. The red DIA LED must not be illuminated.
- › The safety switch disables the code of the preceding device if teach-in is carried out for a new actuator. Teach-in is not possible again immediately for this device if a new teach-in operation is carried out. The disabled code is released again in the safety switch only after a third code has been taught-in.
- › The safety switch can be operated only with the last actuator taught-in.
- › If the switch detects the actuator that was most recently taught-in when in the teach-in standby state, this state is ended immediately and the switch changes to normal operation.
- › If the actuator to be taught-in is within the actuating range for less than 60 s, it will not be activated and the most recently taught-in actuator will remain saved.

9.2.1. Preparing device for the teach-in operation and teaching-in actuator

1. Connect AS-Interface bus to the safety switch.
 - ➔ A self-test is performed for approx. 0.5 s. After this, the LED flashes cyclically three times and signals that it is in standby state for teach-in. Standby state for teach-in remains active for approx. 3 minutes.
2. Move new actuator to the read head (observe distance $< S_{a0}$).
 - ➔ Teach-in operation starts, green LED flashes (approx. 1 Hz). During the teach-in operation, the safety switch checks whether the actuator is a disabled actuator. Provided this is not the case, the teach-in operation is completed after approx. 60 seconds, and the green LED goes out. The new code has now been stored, and the old code is disabled.
3. To activate the new actuator code from the teach-in operation in the safety switch, the safety switch must then be disconnected from the AS-Interface bus for min. 3 seconds.

9.3. Functional check



WARNING

Danger of fatal injury as a result of faults in installation and functional check.

- › Before carrying out the functional check, make sure that there are no persons in the danger zone.
- › Observe the valid accident prevention regulations.













9.3.1. Electrical function test

After installation and any fault, the safety function must be fully checked. Proceed as follows:

1. Switch on operating voltage.
 - ➔ The machine must not start automatically.
 - ➔ The safety switch carries out a self-test. The green STATE LED then flashes at regular intervals.
2. Close all guards.
 - ➔ The machine must not start automatically.
 - ➔ The green STATE LED illuminates continuously.
3. Enable operation in the control system.
4. Open the guard.
 - ➔ The machine must switch off and it must not be possible to start it as long as the guard is open.
 - ➔ The green STATE LED flashes at regular intervals.

Repeat steps 2 - 4 for each guard.

10. System status table

Operating mode	Actuator/door position	CES LED indicator Output		State
		STATE (green)	DIA (red)	
Normal operation	closed		○	Normal operation, door closed
	closed	 Flash burst inverse 5 x	○	Normal operation, door closed, actuator in the limit range → Re-adjust door
	open	 1 x	○	Normal operation, door open, no actuator taught
	open	 2 x	○	No actuator taught, teach-in operation not completed successfully
Teach-in operation (only unicode)	open	 3 x	○	- Door open, device is ready for teach-in for another actuator (only short time after power UP) - Switches that have not been taught-in remain in teach-in standby until the teach-in operation starts
	closed	 1 Hz	○	Teach-in operation
	X	○	○	Positive acknowledgment after completion of teach-in operation
Fault display	closed	 3 x		Defective actuator (e.g. fault in code or code not readable)
	X	○		Internal fault (e.g. component faulty, data error)
Key to symbols	○			LED not illuminated
				LED illuminated
	 10 Hz (8 s)			LED flashes for 8 seconds at 10 Hz
	 3 x			LED flashes three times, and this is then repeated
	X			Any state

After the cause has been remedied, faults can generally be reset by opening and closing the guard. If the fault is still displayed afterward, briefly interrupt the power supply. Contact the manufacturer if the fault could not be reset after restarting.



Important!

If you do not find the displayed device status in the system status table, this indicates an internal device fault. In this case, you should contact the manufacturer.

11. Technical data



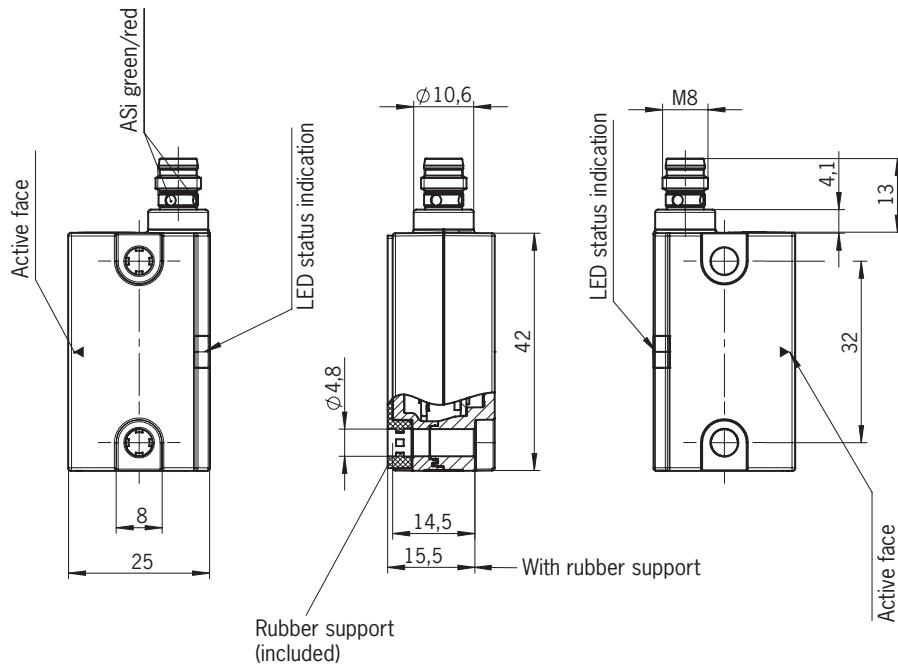
NOTICE

If a data sheet is included with the product, the information on the data sheet applies.

11.1. Technical data for safety switch CES-I-AS2A-C04

Parameter	Value			Unit
	min.	typ.	max.	
Housing material		PBT plastic		
Rubber-support material		NBR 80 ±5 Shore		
Fixing screw tightening torque	-	-	0.8	Nm
Dimensions		42 x 25 x 18		mm
Weight (without connection cable)		0.04		kg
Ambient temperature at $U_B = DC 30 V$	-25	-	+65	°C
Storage temperature	-25	-	+70	
Degree of protection		IP67		
Safety class		III		
Degree of contamination		3		
Installation orientation		Any		
Mounting method		Non-flush		
Connection		M8 plug connector, 3-pin Tightening torque for mating connector max. 0.3 Nm		
For the approval acc. to UL the following applies		Operation with UL-class 2 power supply only		
Rated insulation voltage U_i	-	-	300	V
Rated impulse withstand voltage U_{imp}	-	-	1.5	kV
Resilience to vibration		Acc. to EN IEC 60947-5-2		
Switching frequency	-	-	1	Hz
Ready delay	-	0.5	-	s
Risk time	-	-	260	ms
Turn-on time			300	ms
AS-Interface data		EA code: 0	ID code: B	
AS-i operating voltage	19	-	31.6	DC V
Total current consumption	-	-	50	mA
Valid AS-Interface addresses		1 - 31		
AS-Interface inputs		Acc. to AS-Interface Safety at Work		
Door monitoring contact		D0 - D3		
Reliability values acc. to EN ISO 13849-1				
Category		4		
Performance Level		PL e		
PFH_D		$4.5 \times 10^{-9} / h$		
Mission time		20		years

11.1.1. Dimension drawing of safety switch CES-I-AS2A-C04



11.2. Typical system times

Refer to the technical data for the exact values.

Ready delay: After switch-on, the device carries out a self-test. The system is ready for operation only after this time.

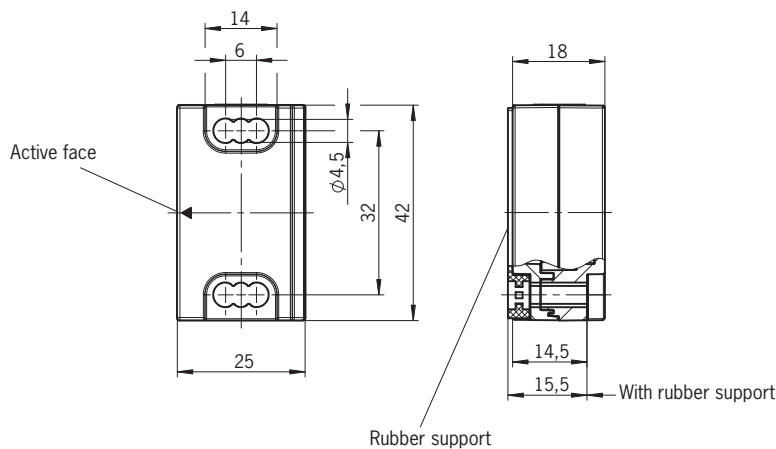
Turn-on time: The max. reaction time t_{on} is the time from the moment when the actuator is in the actuating range to the moment when the code sequence is sent.

Risk time according to EN 60947-5-3: If an actuator moves outside the actuating range, the zero sequence is sent via the AS-Interface bus.

11.3. Technical data for actuator CES-A-BBN-C04

Parameter	Value			Unit
	min.	typ.	max.	
Housing material	PBT plastic			
Rubber-support material	NBR 80 ±5 Shore			
Dimensions	42 x 25 x 18			mm
Weight	0.03			kg
Ambient temperature	- 40	-	+ 65	°C
Degree of protection	IP67/IP69K			
Installation orientation	Active face opposite read head			
Power supply	Inductive via read head			

11.3.1. Dimension drawing

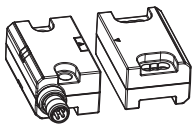
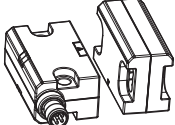


NOTICE

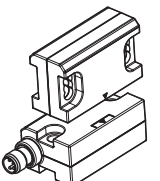
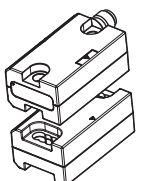
- ▶ 2 safety screws M4x20 included.
- ▶ Rubber support included.

11.3.2. Operating distances

Actuating range for center offset $m = 0$

Approach direction		Parameter	Value			Unit
A	B		min.	typ.	max.	
		Operating distance	-	15	-	mm
		Assured operating distance s_{ao} ¹⁾	10	-	-	
		Switching hysteresis ¹⁾	1	2	-	
		Assured release distance s_{ar} - in x/z direction - in y direction	- -	- -	40 60	

1) On approach in z direction

Approach direction		Parameter	Value			Unit
C	D		min.	typ.	max.	
		Operating distance	-	11	-	mm
		Assured operating distance s_{ao} ¹⁾	6	-	-	
		Switching hysteresis ¹⁾	1	2	-	
		Assured release distance s_{ar} - in x/z direction - in y direction	- -	- -	40 60	

1) On approach in x direction.

11.3.3. Typical actuating range in approach direction A

(only in combination with actuator CES-A-BBN-C04)

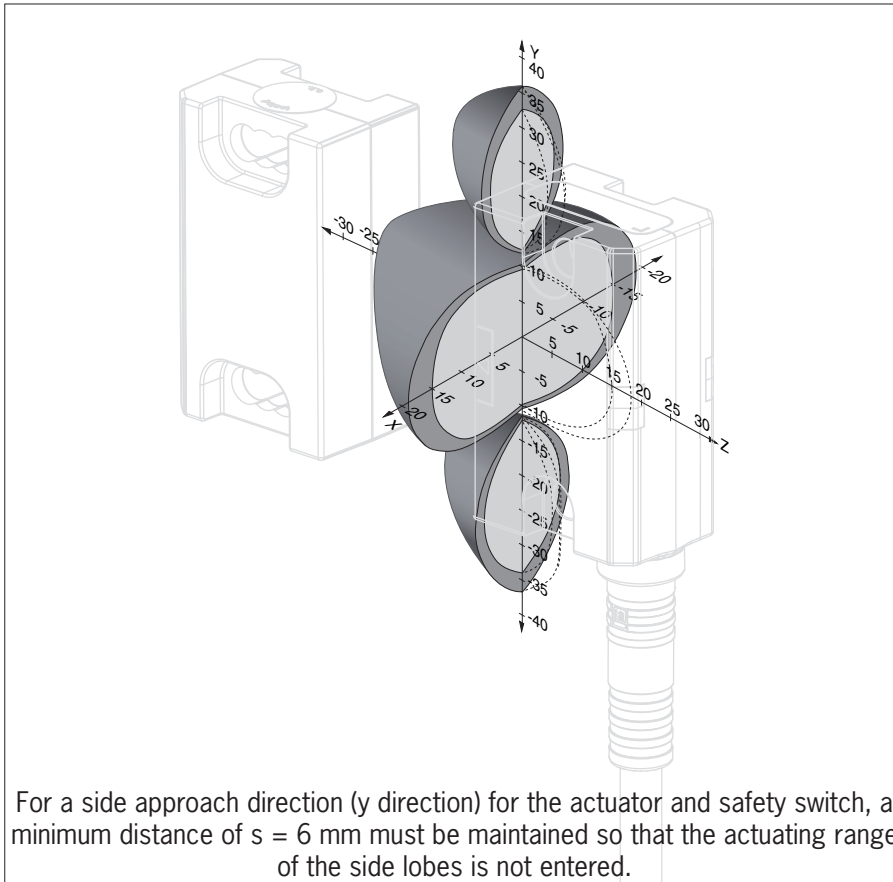


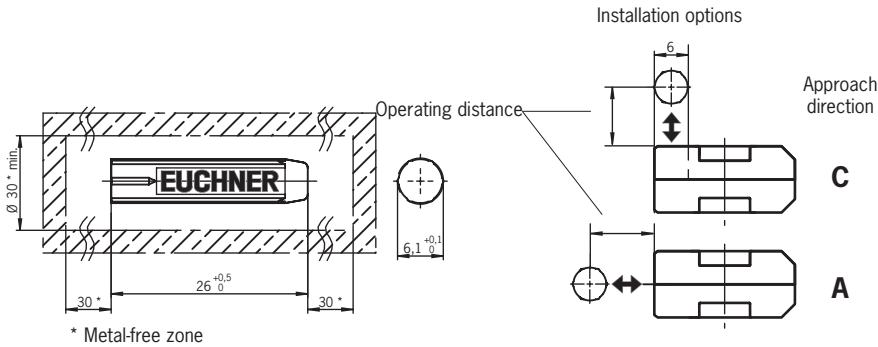
Figure 2: Typical actuating range

11.4. Technical data for actuator CES-A-BDN-06

Parameter	Value			Unit
	min.	typ.	max.	
Housing material	Macromelt PA-based plastic			
Dimensions	26 x Ø 6			mm
Weight	0.005			kg
Ambient temperature	- 40	-	+ 70	°C
Degree of protection	IP67 / IP69K 1)			
Installation orientation	Active face opposite read head			
Power supply	Inductive via read head			

1) With flush installation.

11.4.1. Dimension drawing



CAUTION

- Do not mount at temperatures below 0 °C.
- The actuator can be damaged during mounting.

11.4.2. Operating distances

Actuating range for center offset m = 0

Approach direction	Parameter	Value			Unit
		min.	typ.	max.	
<p>A</p>	Operating distance	-	19	-	mm
	Assured operating distance s_{ao} 1)	14	-	-	
	Switching hysteresis 1)	-	2	-	
	Assured release distance s_{ar} - in x/z direction - in y direction	- -	- -	40 60	

1) The values apply to surface mounting of the actuator.

Approach direction	Parameter	Value			Unit
		min.	typ.	max.	
<p>C</p>	Operating distance	-	15	-	mm
	Assured operating distance s_{ao} 1)	10	-	-	
	Switching hysteresis 1)	-	2	-	
	Assured release distance s_{ar} - in x/z direction - in y direction	- -	- -	40 60	

1) The values apply to surface mounting of the actuator.

12. Ordering information and accessories



Tip!

Suitable accessories, e.g. cables or assembly material, can be found at www.euchner.com. To order, enter the order number of your item in the search box and open the item view. Accessories that can be combined with the item are listed in *Accessories*.

13. Inspection and service



WARNING

Loss of the safety function because of damage to the device.

- › In case of damage, the entire device must be replaced.
- › Only accessories or spare parts that can be ordered from EUCHNER may be replaced.

Regular inspection of the following is necessary to ensure trouble-free long-term operation:

- › Check the switching function (see chapter 9.3. *Functional check on page 12*)
- › Check the secure mounting of the devices and the connections
- › Check for soiling

No servicing is required. Repairs to the device are only allowed to be made by the manufacturer.



NOTICE

The year of manufacture can be seen in the lower right corner of the rating plate. The current version number in the format (VX.X.X) can also be found on the device.

14. Service

If servicing is required, please contact:

EUCHNER GmbH + Co. KG
Kohlhammerstraße 16
70771 Leinfelden-Echterdingen
Germany

Service telephone:

+49 711 7597-500

E-mail:

support@euchner.de

Internet:

www.euchner.com

15. Declaration of conformity



EUCHNER

More than safety.

EU-Konformitätserklärung
EU declaration of conformity
Déclaration UE de conformité
Dichiarazione di conformità UE
Declaración UE de conformidad

Original DE
Translation EN
Traduction FR
Traduzione IT
Traducción ES

2138020-05-06/20

Die nachfolgend aufgeführten Produkte sind konform mit den Anforderungen der folgenden Richtlinien (falls zutreffend):
The beneath listed products are in conformity with the requirements of the following directives (if applicable):
Les produits mentionnés ci-dessous sont conformes aux exigences imposées par les directives suivantes (si valable)
I prodotti sotto elencati sono conformi alle direttive sotto riportate (dove applicabili):
Los productos listados a continuación son conforme a los requisitos de las siguientes directivas (si fueran aplicables):

I:	Maschinenrichtlinie	2006/42/EG
	<i>Machinery directive</i>	<i>2006/42/EC</i>
	<i>Directive Machines</i>	<i>2006/42/CE</i>
	<i>Direttiva Macchine</i>	<i>2006/42/CE</i>
	<i>Directiva de máquinas</i>	<i>2006/42/CE</i>
II:	Funkanlagen-Richtlinie (RED)	2014/53/EU
	<i>Radio equipment directive</i>	<i>2014/53/EU</i>
	<i>Directive équipement radioélectrique</i>	<i>2014/53/UE</i>
	<i>Direttiva apparecchiatura radio</i>	<i>2014/53/UE</i>
	<i>Directiva equipo radioeléctrico</i>	<i>2014/53/UE</i>
III:	RoHS Richtlinie	2011/65/EU
	<i>RoHS directive</i>	<i>2011/65/UE</i>
	<i>Directive de RoHS</i>	<i>2011/65/UE</i>
	<i>Direttiva RoHS</i>	<i>2011/65/UE</i>
	<i>Directiva RoHS</i>	<i>2011/65/UE</i>
IV:	Explosionsschutzrichtlinie (ATEX)	2014/34/EU
	<i>Explosion proof directive (ATEX)</i>	<i>2014/34/EU</i>
	<i>Directive de protection contre des explosions (ATEX)</i>	<i>2014/34/UE</i>
	<i>Direttiva ATEX per apparecchi antideflagranti</i>	<i>2014/34/UE</i>
	<i>Directiva para atmósferas explosivas (ATEX)</i>	<i>2014/34/UE</i>

Die Schutzziele der Niederspannungsrichtlinie 2014/35/EU und EMV Richtlinie 2014/30/EU werden gemäß Artikel 3.1 der Funkanlagen-Richtlinie eingehalten.

The safety objectives of the Low-voltage directive 2014/35/EU and EMC Directive 2014/30/EU comply with article 3.1 of the Radio equipment directive.

Les objectifs de sécurité de la Directive basse tension 2014/35/UE et Directive de CEM 2014/30/UE sont conformes à l'article 3.1 de la Directive équipement radioélectrique.

Gli obiettivi di sicurezza della Direttiva bassa tensione 2014/35/UE e Direttiva EMV 2014/30/UE sono conformi a quanto riportato nell'articolo 3.1 della Direttiva apparecchiatura radio.

Los objetivos de seguridad de la Directiva de bajo voltaje 2014/35/UE y Directiva CEM 2014/30/UE cumplen con el artículo 3.1 de la Directiva equipo radioeléctrico.

Folgende Normen sind angewandt:

Following standards are used:

Les normes suivantes sont appliquées:

Vengono applicate le seguenti norme:

Se utilizan los siguientes estándares:

- a: EN 62026-2:2013 (ASi)
- b: EN 60947-5-3:2013
- c: EN ISO 14119:2013
- d: EN ISO 13849-1:2015
- e: EN IEC 63000:2018 (RoHS)
- f: EN 50364:2018
- g: EN 300 330 V2.1.1
- h: EN 1127-1:2019 (ATEX)
- i: EN IEC 60079-0:2018 (ATEX)
- j: EN 60079-11:2012 (ATEX)
- k: EN 60079-7:2015 (ATEX)
- l: EN 60079-31:2014 (ATEX)



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Bezeichnung der Bauteile <i>Description of components</i> <i>Description des composants</i> <i>Descrizione dei componenti</i> <i>Descripción de componentes</i>	Type <i>Type</i> <i>Tipo</i> <i>Tipo</i>	Richtlinie <i>Directives</i> <i>Directive</i> <i>Direttiva</i> <i>Directivas</i>	Normen <i>Standards</i> <i>Normes</i> <i>Norme</i> <i>Estándares</i>	Zertifikats-Nr. <i>No. of certificate</i> <i>Numero del certificat</i> <i>Numero del certificado</i>
Sicherheitsschalter <i>Safety Switches</i> <i>Interrupteurs de sécurité</i> <i>Finecorsa di sicurezza</i> <i>Interruptores de seguridad</i>	CES-I-AS2A...C04... CES-I-AP...C04... CES-I-AP...C14... CES-I-AR...C04... CES-I-AR...C14... CES-I-AP...C04... + AM-C-C04-EX CES-I-AR...C04... + AM-C-C04-EX	I, II, III I, II, III I, II, III I, II, III I, II, III, IV	a, b, c, d, e, f, g b, c, d, e, f, g b, c, d, e, f, g b, c, d, e, f, g b, c, d, e, f, g, h, i, k, l	UQS 120552 UQS 116783 UQS 119733 UQS 116783 UQS 119733
Betätiger <i>Actuator</i> <i>Actionneur</i> <i>Azionatore</i> <i>Actuador</i>	CES-A-BBN-.... CES-A-BDN-06 CES-A-BBN-C04-EX	I, II, III I, II, III, IV	b, c, d, e, f, g, b, c, d, e, f, g, h, i, j	UQS 116783 UQS 116783

Die alleinige Verantwortung für die Ausstellung dieser Konformitätserklärung trägt der Hersteller:

This declaration of conformity is issued under the sole responsibility of the manufacturer:

La présente déclaration de conformité est établie sous la seule responsabilité du fabricant:

La presente dichiarazione di conformità è rilasciata sotto la responsabilità esclusiva del fabbricante:

La presente declaración de conformidad se expide bajo la exclusiva responsabilidad del fabricante:

EUCHNER GmbH + Co. KG

Kohlhammerstraße 16

70771 Leinfelden-Echterdingen

Germany

Leinfelden, Juni 2020

EUCHNER GmbH + Co. KG

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Edition:
2120544-07-07/20
Title:
Operating Instructions Non-Contact Safety Switch
CES-IAS2A-C04
(Translation of the original operating instructions)
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