


EUCHNER

Operating instructions

Non-Contact Safety System
CES-A-ABA-01/CES-A-ABA-01B (Unicode)

EN

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1. About this document

1.1. Scope

This document is valid for





- Non-Contact Safety System CES-A-ABA-01, evaluation unit for 1 read head (order no. 071850)
- Non-Contact Safety System CES-A-ABA-01B, evaluation unit for 1 read head (order no. 083513)

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	Signal word: DANGER WARNING CAUTION Consequence if not observed: Death or severe injuries Possibly death or severe injuries Possibly minor injuries
 NOTICE Important!	Signal word: NOTICE Important! Malfunction or device damage possible 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 (2071873)	(this document)	

	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

Evaluation units of the series CES-A are used to evaluate safety-related signals from EUCHNER read heads. The system forms an interlocking device. It meets the requirements according to EN IEC 60947-5-3.

The system consists of evaluation unit, read head and actuator. It forms an interlocking device with high coding level (type 4). In combination with a movable guard and the machine control, this system 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 12100 or relevant C-standards.

Before use, a risk assessment must be performed on the machine, e.g. according to the following standards:

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

Correct use includes observing the relevant requirements for installation and operation, e.g. according to the following standards:

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

The following components can be connected to the evaluation unit CES-A-ABA...:

- › CES read heads
- › CEM read heads
- › CET read heads







For further information, refer to the operating instructions of the corresponding component and to *Table 1: Possible combinations for CES components on page 6*.



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

Evaluation unit	Read head	Actuator									
		CES-A-BBA 071840	CES-A-BCA 098786	CES-A-BDA-20 0984720	CES-A-BMB 077791	CES-A-BQA 098108	CES-A-NBA-... All items	CES-A-BPA 098775	CEM-A-BE05 094805	CEM-A-BH10 095175	CET-A-BWK-50X 096327
CES-A-ABA-01 071850	CES-A-LNA... All items	●	●	●							
	CES-A-LNA-SC 077715	●	●	●							
	CES-A-LCA... All items	●	●	●							
	CES-A-LMN-SC 077790				●						
	CES-A-LQA-SC 095650	●	●			●					
CES-A-ABA-01B 083513	CES-A-LNA... All items	●	●	●							
	CES-A-LNA-SC 077715	●	●	●							
	CES-A-LCA... All items	●	●	●							
	CES-A-LMN-SC 077790				●						
	CES-A-LQA-SC 095650	●	●			●					
	CEM-A-LE05K-S2 094800										
	CEM-A-LE05R-S2 095792										
	CEM-A-LH10K-S3 095170 CEM-A-LH10R-S3 095793										
CET-AX											
Key to symbols	●	Combination possible									
		Combination possible, guard locking for process protection									
		Combination possible, guard locking for personnel protection									
		Combination not permissible									

3. Description of the safety function

Devices from this series feature the following safety functions:

The following applies in combination with read heads without guard locking (CES read heads) and read heads with guard locking for process protection (CEM/CET read heads):

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

- Safety function:
 - The safety contacts are switched off when the guard is open (see chapter 11. Technical data on page 18).
- Safety characteristics: category, Performance Level, PFH_D (see Technical data for CES-A-ABA-01B on page 19).

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



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.
- › The number of teach-in and switching operations is saved in the internal memory of the evaluation unit. If necessary, this memory can be read by the manufacturer.



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 system consists of three components:

- Coded actuator
- Read head
- Evaluation unit

1 read head can be connected to the evaluation unit.

The read heads and actuators are assigned to the device in a special teach-in operation.

Each delivered actuator possesses a unique electronic coding and so is a unique element in the system used. The code in an actuator cannot be reprogrammed.

The read head is fastened to the fixed part of the guard and is connected to the evaluation unit via a two-core shielded cable (terminals H11, H12 and SH1).

The actuator fastened to the movable part of the guard is moved towards the read head by closing the door. When the switch-on distance is reached, power is supplied to the actuator by the read head by induction and data can be transferred. The code read is compared with the taught-in code in the evaluation unit.

If the data match, the door monitoring output OUT (semiconductor output) is set to HIGH and the safety outputs (relay output) are enabled. The OUT LED illuminates.

Due to the combination of dynamic polling of the actuators and the redundant, diverse design of the safety electronics with redundantly controlled safety outputs, the evaluation unit will enter the safe state with every detectable fault.

When a guard is opened, the safety outputs switch off the safety circuit and the OUT LED goes out. The state of the safety outputs is monitored internally by positively driven NC contacts (relay output).

Independent of the switching state of the safety circuit, the position of the safety door can be polled via the output OUT.

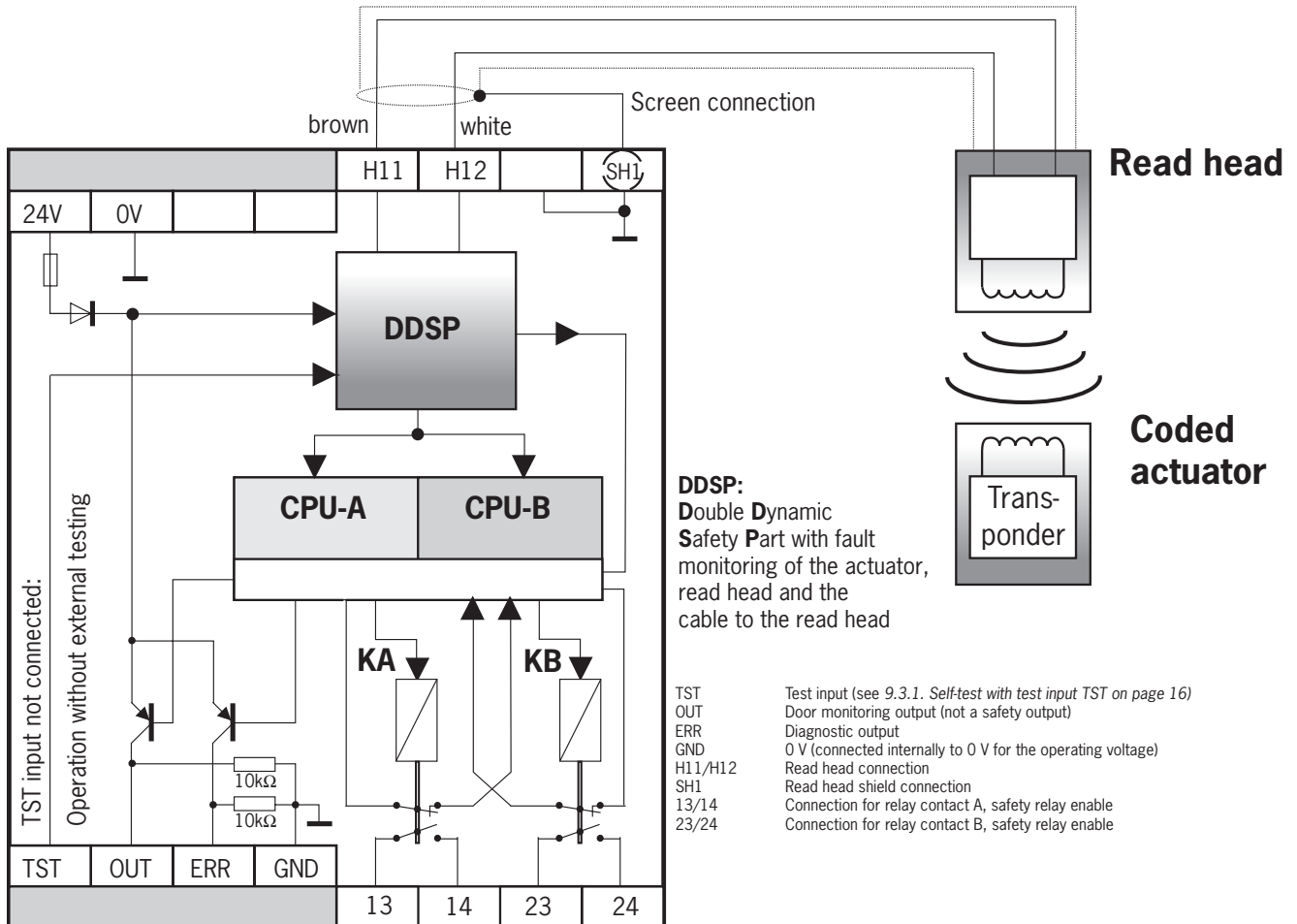
If an internal fault occurs in the evaluation unit, the safety circuit is switched off, the diagnostic output (ERR) is set HIGH and the ERROR LED illuminates red.

The safety contacts on the safety switch CES can also switch small currents. This allows the user to connect the device directly to a safe control system.

6.1. Block diagram CES-A-ABA-...

CES evaluation unit

Illustration: Actuator not in the operating distance



7. Mounting



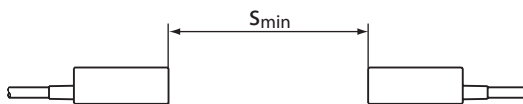
NOTICE

- Device damage due to improper installation or unsuitable ambient conditions.
- › Read heads and actuators must not be used as a mechanical end stop.
 - › Observe EN ISO 14119:2013, sections 5.2 and 5.3, for information about fastening the safety switch and the actuator.
 - › Observe EN ISO 14119:2013, section 7, for information about reducing the possibilities for bypassing an interlocking device.
 - › The evaluation unit must be mounted in a control cabinet with a minimum degree of protection of IP 54. A snap-in element on the rear of the device is used for fastening to a mounting rail.
 - › If several evaluation units are mounted side by side in a control cabinet without air circulation (e.g. fan), a minimum distance of 10 mm must be maintained between the evaluation units. This distance enables the heat from the evaluation unit to dissipate.

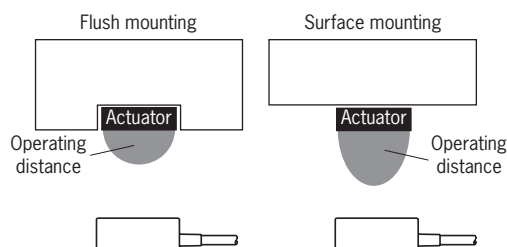


Important!

- › From the assured release distance S_{ar} , the safety outputs are safely shut down.
- › When mounting several read heads, observe the stipulated minimum distance to avoid mutual interference.
 - For CES-A-LNA/-LCA $S_{min} = 50$ mm
 - For CES-A-LMN $S_{min} = 20$ mm
 - For CES-A-LQA $S_{min} = 80$ mm





- › If the actuator is installed flush, the switching distance changes as a function of the installation depth and the guard material.





Note the following points:

- › Actuator and read head must be fitted so that
 - the front faces are at the minimum assured operating distance $0.8 \times S_{a0}$ or closer when the guard is closed (see section Actuating ranges). To avoid entering the area of possible side lobes, a minimum distance is to be maintained in case of a side approach direction. See section Typical actuating range for the related actuator.
 - a hazard is excluded until the assured release distance (S_{ar}) is reached when the guard is open.
 - 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 1 Nm. For read heads/actuators made of PE-HD, the maximum tightening torque is only 0.5 Nm.

8. Electrical connection

	<p>WARNING</p> <p>If there is a mistake, loss of the safety function due to incorrect connection.</p> <ul style="list-style-type: none"> › Monitoring outputs must not be used as safety outputs. › Lay the connecting cables with protection to prevent the risk of short circuits.
	<p>NOTICE</p> <p>Risk of damage to equipment or malfunctions as a result of incorrect connection.</p> <ul style="list-style-type: none"> › All the electrical connections must either be isolated from the mains supply by a safety transformer according to IEC 61558-2-6 with limited output voltage in the event of a fault, or by other equivalent isolation measures. › All electrical outputs must have an adequate protective circuit for inductive loads. The outputs must be protected with a free-wheeling diode for this purpose. The switch-on current may have to be limited for capacitive loads. › The tightening torque for the screws on the connection terminals must be 0.6 ... 0.8 Nm. › The connection cable for the read heads must only be extended using EUCHNER plug connectors, and adequate consideration must be given to EMC. Intermediate terminals must not be used. › The shield on the connection cable for the read head must be connected to the appropriate terminal SH on the evaluation unit. The portion of cable from which insulation is stripped should be kept as short as possible (max. 3 cm).

8.1. Notes about

	<p>Important!</p> <ul style="list-style-type: none"> › For use and operation as per the  requirements ¹⁾, a power supply with the feature “for use in Class 2 circuits” must be used. <p>Alternative solutions must comply with the following requirements:</p> <ul style="list-style-type: none"> - Electrically isolated power supply unit in combination with fuse as per UL248. This fuse should be designed for max. 3.3 A and should be integrated into the 30 V DC voltage section. <p><small>1) Note on the scope of the UL approval: The devices have been tested as per the requirements of UL508 and CSA/C22.2 no. 14 (protection against electric shock and fire).</small></p>
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8.2. Safety in case of faults

- › The operating voltage U_B is reverse polarity protected.
- › The connections for the read heads, ERR and OUT are not short circuit-proof.
- › A short circuit between 13/14 and 23/24 can be detected only by means of external pulsing.
- › A short circuit in the cable can be excluded by laying the cable with protection.

8.3. Fusing of the power supply and the safety contacts

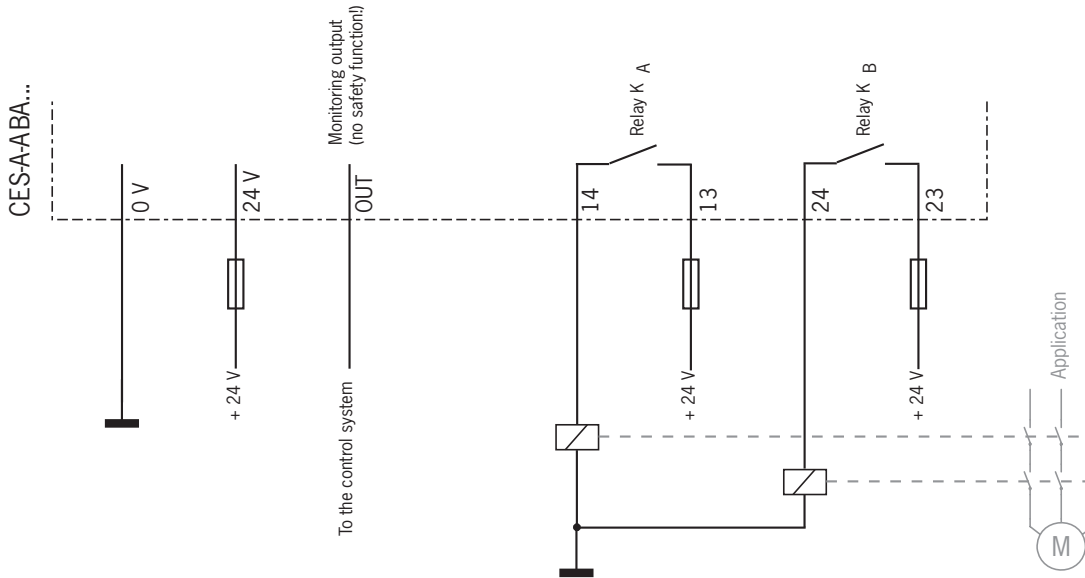
- › Provide external contact fuses (6 A gG fuse or 6 A circuit breaker, characteristic B or C) for relay outputs.
- › The power supply must be protected with a max. 8 A fuse ahead of terminal U_B .

8.4. Correct connection



Important!

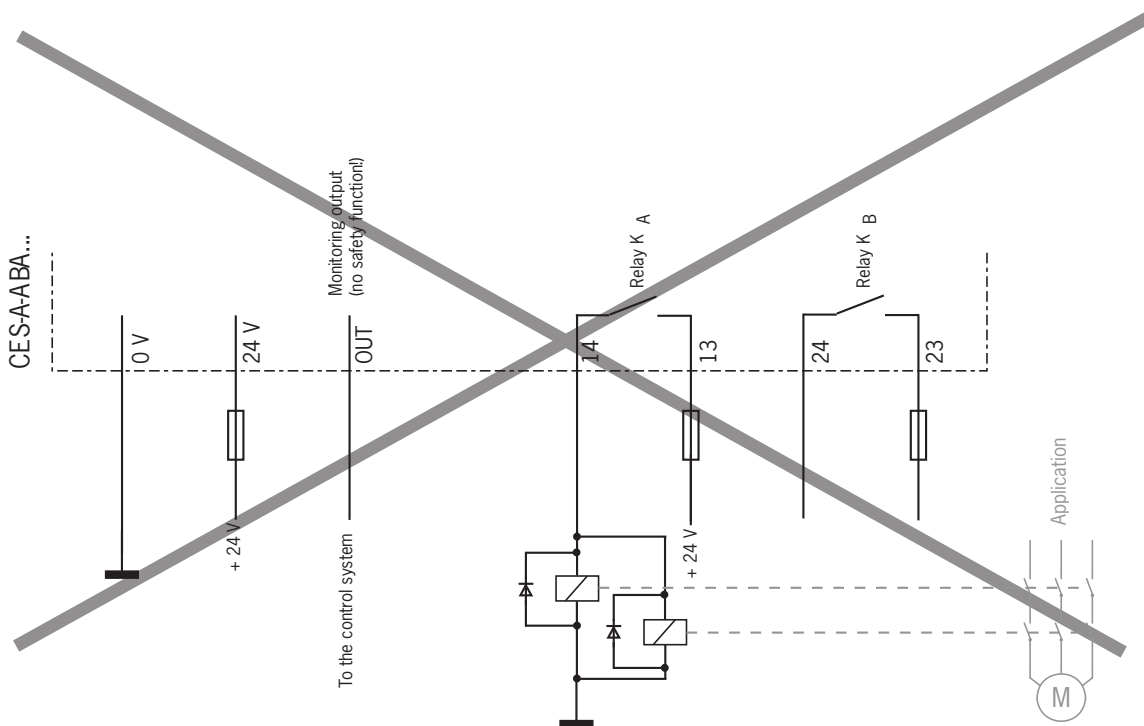
- ▶ To ensure safety, both safety outputs (13/14 and 23/24) must be evaluated.
- ▶ To achieve category 3 according to EN ISO 13849-1, it is necessary to monitor the downstream contactors.



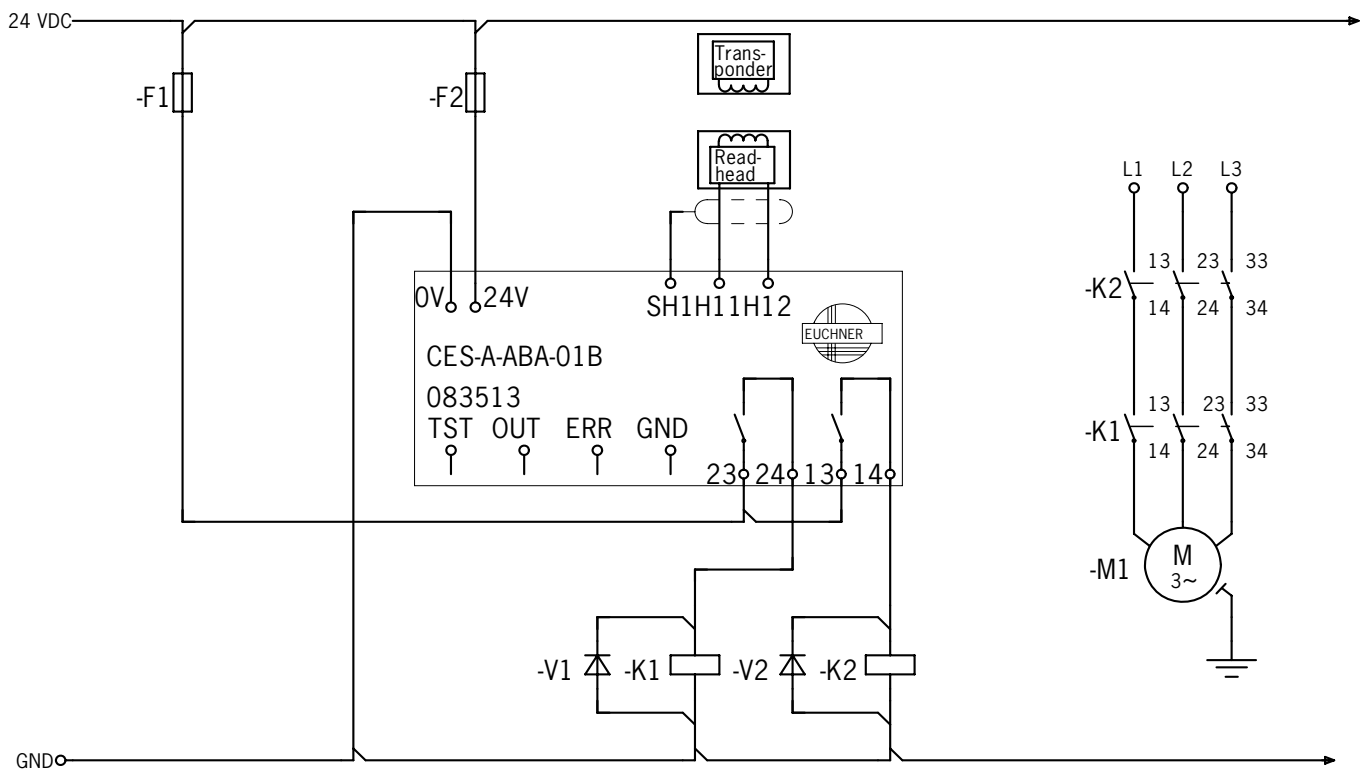
WARNING

If there is a mistake, loss of the safety function due to incorrect connection.

- ▶ To ensure safety, both safety outputs (13/14 and 23/24) must always be evaluated. Single-channel use of the safety outputs leads to a reduction of the category in accordance with EN ISO 13849-1.



8.5. Connection example CES-A-ABA-01B



Important!

To achieve category 4 according to EN ISO 13849-1, it is necessary to monitor the downstream contactors.

This example shows only an excerpt that is relevant for the connection of the CES system. The example illustrated here does not show complete system planning. The user is responsible for safe integration into the overall system.

9. Setup

9.1. LED indicators

Designation	Color	Meaning
STATE	green	Status indication (multifunction display using flashing modes)
OUT	yellow	Safety circuit closed
ERROR	red	<ul style="list-style-type: none"> ▸ Operating fault or ▸ External fault (fault in the feedback loop) or ▸ Teach-in operation not valid or ▸ Internal device fault or ▸ TST input activated (function test active)

9.2. Teach-in operation

The actuator must be assigned to the evaluation unit using a teach-in function before the system forms a functional unit.

During the teach-in operation the safety outputs are open and the door monitoring output is LOW. The system is in the safe state.



Important!

- The teach-in operation can differ for read heads that are not described in this document. Observe the information in the operating instructions for the read head used.
- During the teach-in operation the following conditions must be met:
 - A state change, e.g. due to opening or closing a safety door, must not occur.
 - The power supply must not be switched off.
- If these conditions are not met, the evaluation unit switches to the safe fault state (ERROR LED illuminates) and signals this operating fault with the STATE LED by 3 short flashes that are repeated every second. The teach-in operation must be repeated.
- Repeated teach-in of the same actuator on the same evaluation unit is not possible.
- The number of teach-in operations on one evaluation unit is limited to a maximum of 8.
- The evaluation unit can only be operated with the last actuator taught-in
- Actuators cannot be interchanged without a renewed teach-in operation.
- An actuator that has not been subjected to teach-in will not be detected by the related read head.
- Even if only one new actuator needs to be taught-in, a complete new teach-in operation must be carried out as described in the section *Setup*.
- When the evaluation unit is switched on (operating voltage is applied), the STATE LED signals the number of possible remaining teach-in operations (see System status table)
- After the eighth teach-in operation or if an "old" actuator is placed against the read head, the system automatically switches to the teach-in mode. In both cases, a teach-in operation with a duration of 60 seconds is started; however, the last actuator code remains active (see System Status Table) – a new code is not taught-in.

9.2.1. Carrying out teach-in for first actuator (default setting on delivery)

To trigger the first teach-in operation, the user must perform the following actions in the stipulated order:

1. Start teach-in operation
 - Switch on operating voltage (STATE LED flashes at approx. 4 Hz)
 - Close door to be monitored (the actuator must be in the actuating range of the read head)
 - Teach-in operation starts (STATE LED flashes at approx. 1 Hz)
 - Wait for acknowledgment of the teach-in operation (STATE LED goes out after approx. 60 seconds)
2. End teach-in operation
 - Interrupt operating voltage for at least 10 seconds (code for the actuator taught-in is activated)
3. Check guard for effectiveness

9.2.2. Carrying out teach-in for a new actuator

A maximum of 8 teach-in operations can be undertaken. The number of teach-in operations already undertaken is signaled after step 6 via the flashing sequence on the STATE LED (see 10. System status table on page 17, section State indication).

Faulty actuators can be replaced. Then a complete teach-in operation must be performed as per this section.

To trigger a further teach-in operation, the user must perform the following actions in the stipulated order:

1. Start teach-in operation
 - Switch on operating voltage
 - Close door to be monitored (the new actuator must be in the actuating range of the read head)
 - Teach-in operation starts (STATE LED flashes at approx. 1 Hz)
 - Wait for acknowledgment of the teach-in operation (STATE LED goes out after approx. 60 seconds)
2. End teach-in operation
 - Interrupt operating voltage for at least 10 seconds (code for the new actuator taught-in is activated)

The newly taught-in actuator is saved and the old actuator deactivated.

3. Check guard for effectiveness

9.3. Functional check

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



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.

1. Switch on operating voltage.
 - The safety switch carries out a self-test.
The green STATE LED flashes up to 3 times.
The STATE LED then illuminates continuously.
The OUT and ERROR LEDs do not light up.
2. Close all guards.
 - The machine must not start automatically.
 - The green STATE LED and the yellow OUT LED light up 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 illuminates continuously; the OUT and ERROR LEDs do not illuminate.

Repeat steps 2 ... 4 separately for each guard.

9.3.1. Self-test with test input TST

On electromechanical safety switches or magnetic switches, the function test can be performed by cyclically opening the guard.

From category 2 according to EN ISO 13849-1, EN 60204-1 : 1997 (section 9.4.2.4) requires a function test performed on the entire safety system on start-up or after defined intervals.

Testing of the internal function of the unit is not necessary because the device monitors itself in real time. Welding of an output contact (relay output) is detected by the device at the latest the next time the guard is opened. A short circuit in the output cable is not detected by the device.

In addition, the entire safety circuit can be tested without opening the guard. For this purpose, opening of the guard can be simulated by applying 24 V DC to the test input TST.

The safety outputs are switched off, enabling testing of the complete safety circuit. The diagnostic output ERR on the evaluation unit is also set HIGH as a monitoring function.

When test input TST is reset, the evaluation unit resets the diagnostic output ERR to LOW, the red LED switches off and normal operation is continued.



Important!

After the self-test, the test input TST must be connected to 0 V again or must be disconnected.

10. System status table

Operating mode	Actuator/door position	Safety outputs A and B	PLC			LED indicator Output			State
			In-put	Output		STATE (green)	OUT (yellow)	ERROR (red)	
			TST	OUT (status signal)	ERR				
Normal operation	closed	on	N	1	0			○	Normal operation, door closed
	open	off	N	0	0		○	○	Normal operation, door open
Setup	open	off	N	0	0		○	○	Initial setup after delivery, ready for first teach-in operation
	closed	off	N	0	0		○	○	Teach-in operation
	closed	off	N	0	0	○	○	○	Positive acknowledgment of completion of teach-in operation. To activate the actuator code from the teach-in operation in the evaluation unit, the operating voltage must then be switched off at the evaluation unit for min. 3 seconds.
State indication	X	off	X	0	0		○	○	Indication after 1st to 5th Teach-in operation
	X	off	X	0	0		○	○	Indication of the remaining teach-in operations after the 6th Teach-in operation
	X	off	X	0	0		○	○	Indication of the remaining teach-in operations after the 7th Teach-in operation
	X	off	X	0	0		○	○	Device cannot perform any further teach-in operation
Fault display	X	off	N	0	1	○	○		Device-internal component failure or excessively high external interference (EMC)
Operating fault	closed	off	N	0	1		○		Incorrect 9th teach-in operation
	closed	off	N	0	1		○		Incorrect teach-in operation for an old actuator
	closed	off	N	0	1		○		Negative acknowledgment for teach-in operation. Actuator was held in front of the read head for less than 60 s
Function test	X	off	1	0	1		○		Function test active (TST input = 24 V)

Key to symbols	N	0 Volt or not connected
	1	24 Volt
	0	0 Volt
	○	LED not illuminated
		LED illuminated
		LED flashes for 60 seconds at 1 Hz
		LED flashes three times and then illuminates continuously
		LED flashes three times, and this is then repeated
X	Any state	



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

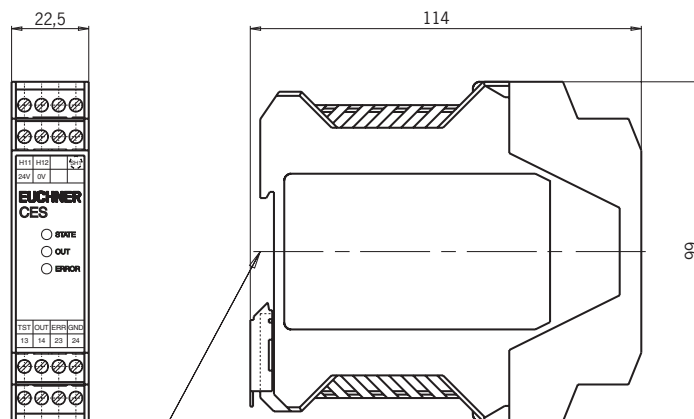
11.1. Evaluation unit CES-A-ABA-...

- › Housing for rail mounting, IP20
- › Relay output
- › 1 read head can be connected

Approvals



Dimension drawing



↳ Suitable for standard 35 mm mounting rail

Switching characteristics

- › 2 safety outputs with one NO contact each (relay outputs)
- › 1 door monitoring output (semiconductor output, not a safety output)

		Guard	
		closed (actuator detected)	open (actuator not in the actuating range)
Read head	Actuator	Read head	
13	14	13	14
23	24	23	24
24 V	OUT	24 V	OUT

Technical data for CES-A-ABA-01B

Parameter	Value			Unit
	min.	typ.	max.	
Housing material	PA6.6 plastic			
Dimensions	114 x 99 x 22.5			mm
Weight	0.2			kg
Ambient temperature at $U_B = DC 24 V$	-20	-	+55	°C
Atmospheric humidity, not condensing	-	-	80	%
Degree of protection	IP20			
Degree of contamination	2			
Mounting	Mounting rail 35 mm according to EN 60715 TH35			
Number of read heads	1 read head per evaluation unit			
Connection (plug-in screw terminals/coded)	0.25	-	2.5	mm ²
Operating voltage U_B (regulated, residual ripple < 5%)	21	24	27	V DC
For the approval according to UL the following applies	Operation only with UL class 2 power supply or equivalent measures			
Current consumption I_B (with relay energized) ¹⁾	-	150	-	mA
External fuse (operating voltage U_B)	0.25	-	8	A
Safety contacts	2 (relays with internally monitored contacts)			
Switching current (relay outputs)				
- at switching voltage AC/DC 21 ... 60 V	1	-	300	mA
- at switching voltage AC/DC 10 ... 30 V	10	-	6000	
Switching load according to UL	Class 2 max. 30 V AC/Class 2 max. 60 V DC 120 V AC 3 A / 240 V AC 1.5 A			
External fuse (safety circuit) according to EN 60269-1	6 AgG or 6 A circuit breaker (characteristic B or C)			
Utilization category according to EN 60947-5-1	AC-12 60 V 0.3 A / DC-12 60 V 0.3 A AC-12 30 V 6 A / DC-12 30 V 6 A AC-14 30 V 2 A / DC-13 24 V 3 A			
Rated insulation voltage U_i	63			V
Rated impulse withstand voltage U_{imp}	1.5			kV
Rated conditional short-circuit current	100			A
Resilience to vibration	Acc. to EN 60947-5-2			
Mechanical operating cycles (relays)	10×10^6			
Switching delay from state change ²⁾	-	-	180	ms
Discrepancy time (of the switching points of both relays)	-	-	120	ms
Ready delay ³⁾	-	-	3	s
Dwell time ⁴⁾	0.5	-	-	s
Switching frequency max. ⁵⁾	-	-	1	Hz
Repeat accuracy R acc. to EN IEC 60947-5-3	≤ 10			%
Monitoring outputs (diagnostics ERR, door monitoring output OUT, semiconductor output, p-switching) ⁶⁾				
- Output voltage	$0.8 \times U_B$	-	U_B	V DC
- Max. load	-	-	20	mA
Test input TST				
- Input voltage LOW	0	-	2	V DC
- Input voltage HIGH	15	-	U_B	
- Input current HIGH	5	8	10	mA
EMC protection requirements	Acc. to EN 60947-5-3			
Reliability values acc. to EN ISO 13849-1 as a function of the switching current at 24 V DC	$\leq 0.1 A$	$\leq 1 A$	$\leq 3 A$	
Category	3			
Performance Level (PL)	e			
PFH _D	4.3×10^{-8}			
Mission time	20			years
Number of switching cycles/year	760 000	153 000	34 600	
Diagnostic coverage DC	90			%
MTTF _D	100			years

1) Without taking into account the load currents on the monitoring outputs.

2) Corresponds to the risk time according to EN 60947-5-3. This is the maximum OFF time for the safety outputs following removal of the actuator.

3) After the operating voltage is switched on, the relay outputs are switched off and the door monitoring output is set to LOW potential during the ready delay.

4) The dwell time of an actuator inside and outside the actuating range must be at least 0.5 s to ensure reliable detection of internal faults in the evaluation unit (self-monitoring).

5) If the current load is > 100 mA, a switching frequency of 0.1 Hz should not be exceeded as this will affect the mechanical life of the relay contacts.

6) Not short circuit-proof.

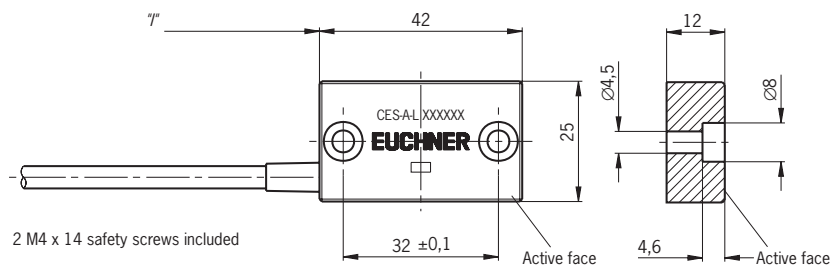
11.2. Read head CES-A-LNA-...

- Cube-shaped design 42 x 25 mm
- Hard-wired cable

Approvals

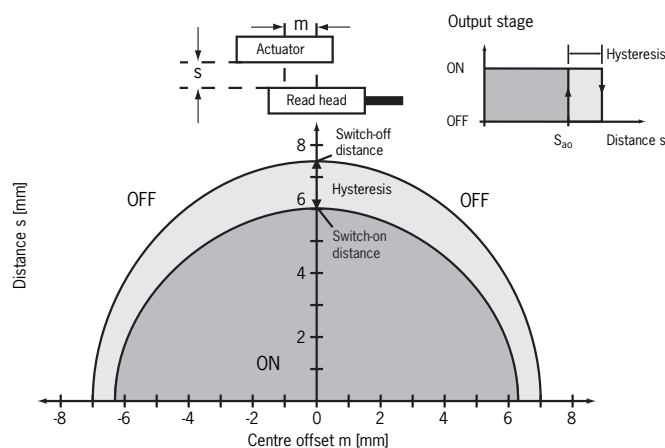


Dimension drawing

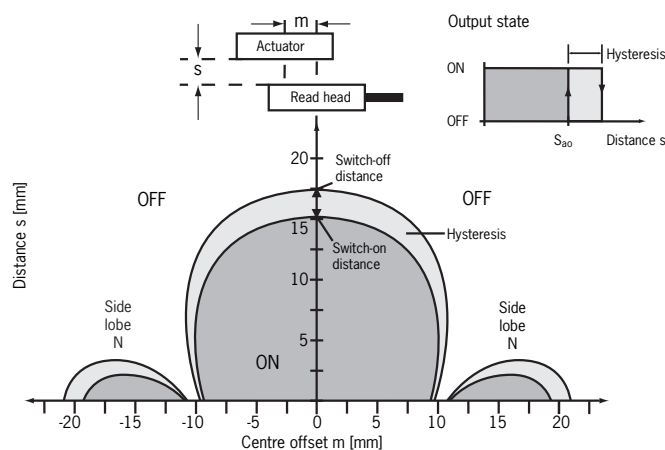


Typical actuating range

With evaluation unit CES-A-ABA-01 and actuator CES-A-BBA



With evaluation unit CES-A-ABA-01B and actuator CES-A-BBA

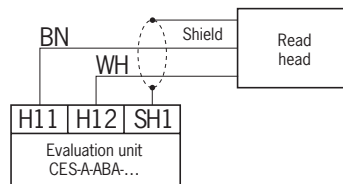


NOTICE

For a side approach direction for the actuator and read head, a minimum distance of $s = 3$ mm must be maintained so that the actuating range of the side lobes is not entered.

Terminal assignment

Read head with connection cable



Technical data

Parameter	Value			Unit
	min.	typ.	max.	
Housing material	Fortron, reinforced thermoplastic, fully encapsulated			
Dimensions	42 x 25 x 12			mm
Weight (incl. 10 m cable)	0.3			kg
Ambient temperature	-25	-	+70	°C
Degree of protection	IP67/IP69K			
Installation orientation	Any			
Method of operation	Inductive			
Power supply	Via evaluation unit			
In combination with actuator CES-A-BBA on evaluation unit CES-A-ABA-01				
Assured release distance S_{ar}	-	-	23	mm
Actuating range for center offset $m = 0$ ¹⁾	-	6	-	
- Switch-on distance	-	-	-	
- Assured operating distance S_{ao}	5	-	-	
- Switching hysteresis	0.5	1.5	-	
In combination with actuator CES-A-BBA on evaluation unit CES-A-ABA-01B				
Assured release distance S_{ar}	-	-	32	mm
Actuating range for center offset $m = 0$ ²⁾	-	15	-	
- Switch-on distance	-	-	-	
- Assured operating distance S_{ao}	10	-	-	
- Switching hysteresis	0.5	2	-	
Minimum distance s for side approach direction	-	3	-	
In combination with actuator CES-A-BDA-20 on evaluation unit CES-A-ABA-01				
Assured release distance S_{ar}	-	-	24	mm
Actuating range for center offset $m = 0$ ³⁾	-	7	-	
- Switch-on distance	-	-	-	
- Assured operating distance S_{ao}	6	-	-	
- Switching hysteresis	0.5	1.5	-	
Minimum distance s for side approach direction	-	1	-	
Installation in steel, surface/flush				
Assured release distance S_{ar}	-	-	24	mm
Actuating range for center offset $m = 0$	-	4.4/3.6	-	
- Switch-on distance	-	-	-	
- Assured operating distance S_{ao}	3.6/3	-	-	
- Switching hysteresis	0.4/0.3	1.2/1.0	-	
Minimum distance s for side approach direction	-	1	-	
Installation in stainless steel, surface/flush				
Assured release distance S_{ar}	-	-	24	mm
Actuating range for center offset $m = 0$	-	4/3.3	-	
- Switch-on distance	-	-	-	
- Assured operating distance S_{ao}	3.3/2.7	-	-	
- Switching hysteresis	0.4/0.3	1.1/0.9	-	
Minimum distance s for side approach direction	-	1	-	
In combination with actuator CES-A-BDA-20 on evaluation unit CES-A-ABA-01B				
Assured release distance S_{ar}	-	-	33	mm
Actuating range for center offset $m = 0$ ³⁾	-	16	-	
- Switch-on distance	-	-	-	
- Assured operating distance S_{ao}	11	-	-	
- Switching hysteresis	0.5	2	-	
Minimum distance s for side approach direction	-	4	-	
Connecting cable	Hard-wired encapsulated connection cable, with crimped ferrules PVC, \varnothing 4.6 mm PUR, \varnothing 4.8 mm, suitable for drag chain			
Cable length	-	-	25	m

1) These values apply to flush installation of the read head and the actuator in aluminum.

2) These values apply to surface installation of the read head and the actuator.

3) These values apply to non-metallic surrounding material. Other materials on request.

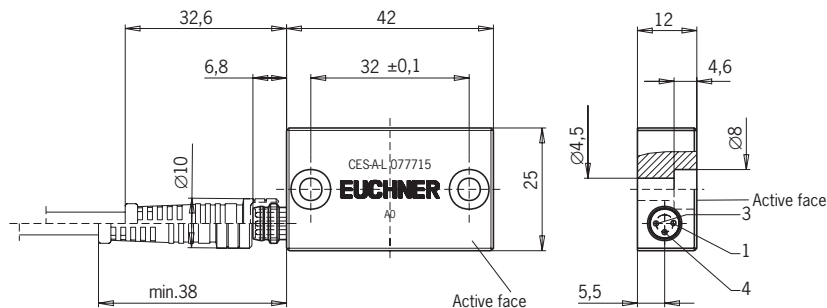
11.3. Read head CES-A-LNA-SC

- Cube-shaped design 42 x 25 mm
- M8 plug connector

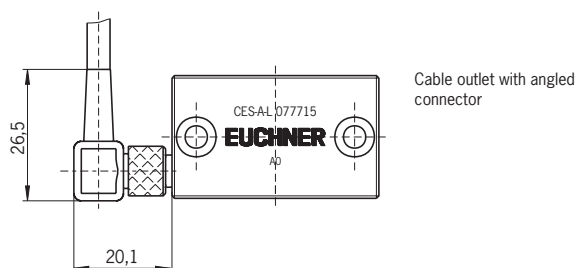
Approvals



Dimension drawing

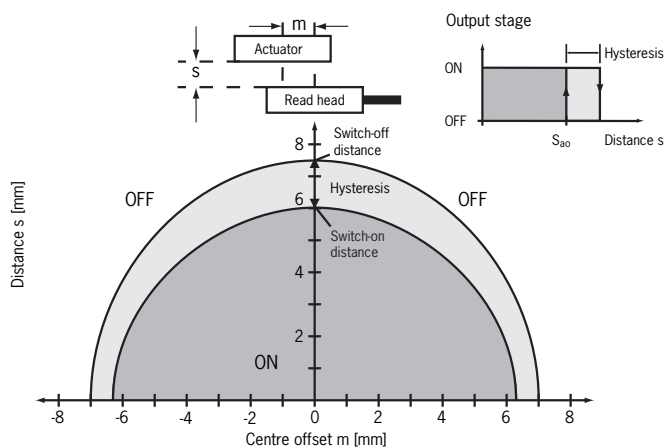


2 M4 x 14 safety screws included

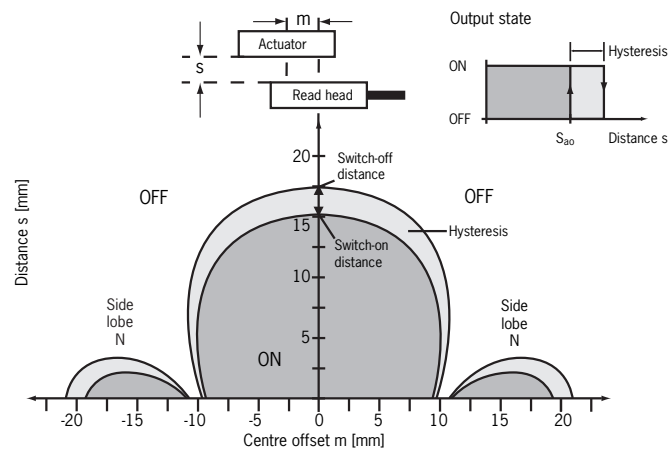


Typical actuating range

With evaluation unit CES-A-ABA-... and actuator CES-A-BBA



With evaluation unit CES-A-ABA-01B and actuator CES-A-BBA

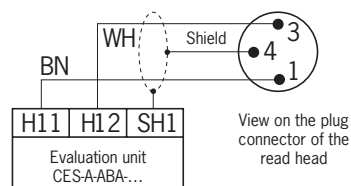


NOTICE

For a side approach direction for the actuator and read head, a minimum distance of $s = 3$ mm must be maintained so that the actuating range of the side lobes is not entered.

Terminal assignment

Read head with plug connector



Technical data

Parameter	Value			Unit
	min.	typ.	max.	
Housing material	Fortron, reinforced thermoplastic, fully encapsulated			
Dimensions	42 x 25 x 12			mm
Weight (incl. 10 m cable)	0.3			kg
Ambient temperature	-25	-	+70	°C
Degree of protection	IP67/IP69K			
Installation orientation	Any			
Method of operation	Inductive			
Power supply	Via evaluation unit			
In combination with actuator CES-A-BBA on evaluation unit CES-A-ABA-01				
Assured release distance S_{ar}	-	-	23	mm
Actuating range for center offset $m = 0$ ¹⁾				
- Switch-on distance	-	6	-	
- Assured operating distance S_{ao}	5	-	-	
- Switching hysteresis	0.5	1.5	-	
In combination with actuator CES-A-BBA on evaluation unit CES-A-ABA-01B				
Assured release distance S_{ar}	-	-	32	mm
Actuating range for center offset $m = 0$ ²⁾				
- Switch-on distance	-	15	-	
- Assured operating distance S_{ao}	10	-	-	
- Switching hysteresis	0.5	2	-	
Minimum distance s for side approach direction	-	3	-	
In combination with actuator CES-A-BDA-20 on evaluation unit CES-A-ABA-01				
Assured release distance S_{ar}	-	-	24	mm
Actuating range for center offset $m = 0$ ³⁾				
- Switch-on distance	-	7	-	
- Assured operating distance S_{ao}	6	-	-	
- Switching hysteresis	0.5	1.5	-	
Minimum distance s for side approach direction	-	1	-	
Installation in steel, surface/flush				
Assured release distance S_{ar}	-	-	24	mm
Actuating range for center offset $m = 0$				
- Switch-on distance	-	4.4/3.6	-	
- Assured operating distance S_{ao}	3.6/3	-	-	
- Switching hysteresis	0.4/0.3	1.2/1.0	-	
Minimum distance s for side approach direction	-	1	-	
Installation in stainless steel, surface/flush				
Assured release distance S_{ar}	-	-	24	mm
Actuating range for center offset $m = 0$				
- Switch-on distance	-	4/3.3	-	
- Assured operating distance S_{ao}	3.3/2.7	-	-	
- Switching hysteresis	0.4/0.3	1.1/0.9	-	
Minimum distance s for side approach direction	-	1	-	
In combination with actuator CES-A-BDA-20 on evaluation unit CES-A-ABA-01B				
Assured release distance S_{ar}	-	-	33	mm
Actuating range for center offset $m = 0$ ³⁾				
- Switch-on distance	-	16	-	
- Assured operating distance S_{ao}	11	-	-	
- Switching hysteresis	0.5	2	-	
Minimum distance s for side approach direction	-	4	-	
Connection	M8 plug connector, 3-pin			
Connecting cable	-	-	25	m

- 1) These values apply to flush installation of the read head and the actuator in aluminum.
 2) These values apply to surface installation of the read head and the actuator.
 3) These values apply to non-metallic surrounding material. Other materials on request.

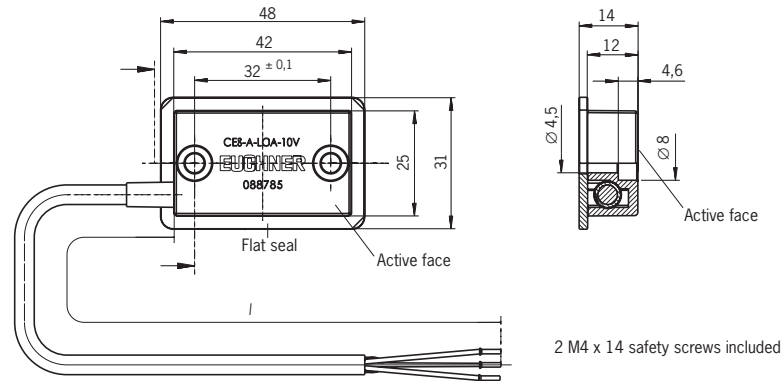
11.4. Read head CES-A-LCA-...

- ▶ Cube-shaped design 42 x 25 mm
- ▶ PE-HD plastic housing material, suitable for use in aggressive media (e.g. acids, alkalis)

Approvals



Dimension drawing

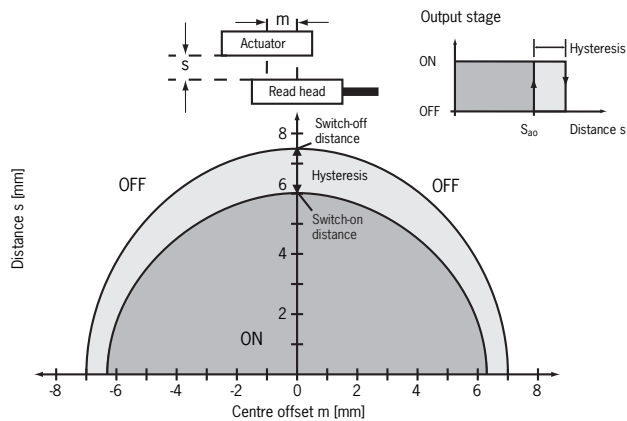


NOTICE

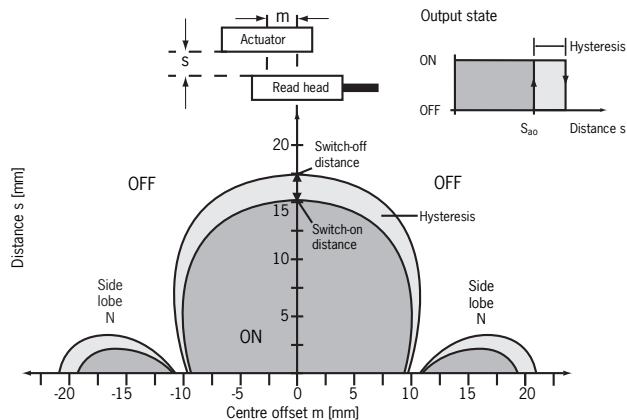
The flat seal provided must be used during assembly.

Typical actuating range

With evaluation unit CES-A-ABA-01 and actuator CES-A-BCA



With evaluation unit CES-A-ABA-01B and actuator CES-A-BCA

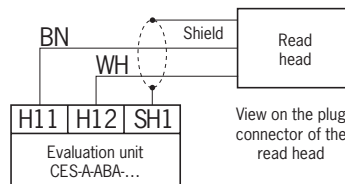


NOTICE

For a side approach direction for the actuator and read head, a minimum distance of $s = 3$ mm must be maintained so that the actuating range of the side lobes is not entered.

Terminal assignment

Read head with connection cable



Technical data

Parameter	Value			Unit
	min.	typ.	max.	
Housing material	PE-HD plastic without reinforcement, fully encapsulated			
Flat seal material	Fluororubber 75 FPM 4100			
Dimensions	42 x 25 x 12			mm
Weight (incl. 10 m cable)	0.3			kg
Ambient temperature	-25	-	+50	°C
Degree of protection	IP67/IP69K			
Installation orientation	Any			
Method of operation	Inductive			
Power supply	Via evaluation unit			
In combination with actuator CES-A-BBA on evaluation unit CES-A-ABA-01				
Assured release distance S_{ar}	-	-	23	mm
Actuating range for center offset $m = 0$ ¹⁾	-	6	-	
- Switch-on distance	-	-	-	
- Assured operating distance S_{ao}	5	-	-	
- Switching hysteresis	0.5	1.5	-	
In combination with actuator CES-A-BBA on evaluation unit CES-A-ABA-01B				
Assured release distance S_{ar}	-	-	32	mm
Actuating range for center offset $m = 0$ ²⁾	-	15	-	
- Switch-on distance	-	-	-	
- Assured operating distance S_{ao}	10	-	-	
- Switching hysteresis	0.5	2	-	
Minimum distance s for side approach direction	-	3	-	
In combination with actuator CES-A-BDA-20 on evaluation unit CES-A-ABA-01				
Assured release distance S_{ar}	-	-	24	mm
Actuating range for center offset $m = 0$ ³⁾	-	7	-	
- Switch-on distance	-	-	-	
- Assured operating distance S_{ao}	6	-	-	
- Switching hysteresis	0.5	1.5	-	
Minimum distance s for side approach direction	-	1	-	
Installation in steel, surface/flush				
Assured release distance S_{ar}	-	-	24	mm
Actuating range for center offset $m = 0$	-	4.4/3.6	-	
- Switch-on distance	-	-	-	
- Assured operating distance S_{ao}	3.6/3	-	-	
- Switching hysteresis	0.4/0.3	1.2/1.0	-	
Minimum distance s for side approach direction	-	1	-	
Installation in stainless steel, surface/flush				
Assured release distance S_{ar}	-	-	24	mm
Actuating range for center offset $m = 0$	-	4/3.3	-	
- Switch-on distance	-	-	-	
- Assured operating distance S_{ao}	3.3/2.7	-	-	
- Switching hysteresis	0.4/0.3	1.1/0.9	-	
Minimum distance s for side approach direction	-	1	-	
In combination with actuator CES-A-BDA-20 on evaluation unit CES-A-ABA-01B				
Assured release distance S_{ar}	-	-	33	mm
Actuating range for center offset $m = 0$ ³⁾	-	16	-	
- Switch-on distance	-	-	-	
- Assured operating distance S_{ao}	11	-	-	
- Switching hysteresis	0.5	2	-	
Minimum distance s for side approach direction	-	4	-	
Connecting cable	Hard-wired encapsulated connection cable, with crimped ferrules PVC, \varnothing 4.6 mm			
Cable length	-	-	25	m

- 1) These values apply to flush installation of the read head and the actuator in aluminum
- 2) These values apply to surface installation of the read head and the actuator.
- 3) These values apply to non-metallic surrounding material. Other materials on request.

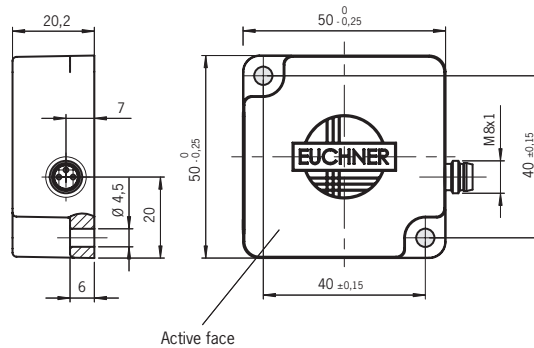
Read head CES-A-LQA-SC

- Cube-shaped design 50 x 50 mm
- M8 plug connector)

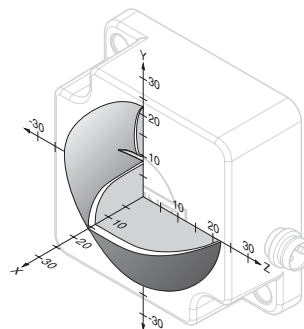
Approval



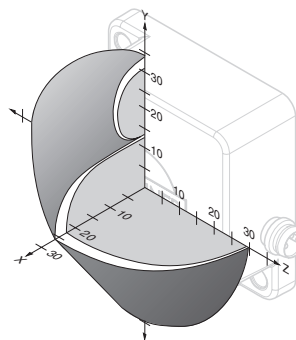
Dimension drawing



Typical actuating range



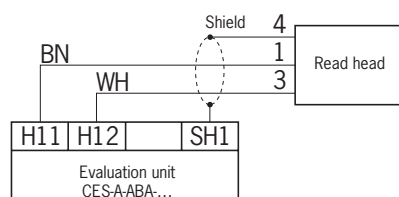
With actuator CES-ABBA or CES-BCA



With actuator CES-ABQA on evaluation unit CES-A-ABA-01B

Terminal assignment

Read head with connection cable



EN

Technical data

Parameter	Value			Unit
	min.	typ.	max.	
Housing material	Fortron, reinforced thermoplastic, fully encapsulated			
Dimensions	50 x 50 x 20.2			mm
Weight	0.08			kg
Ambient temperature	-25	-	+70	°C
Degree of protection	IP67			
Installation orientation	Any			
Method of operation	Inductive			
Power supply	Via evaluation unit			
In combination with actuator CES-A-BBA or CES-A-BCA				
Assured release distance S_{ar}	-	-	47	mm
Actuating range for center offset $m = 0$ ¹⁾				
- Switch-on distance	-	15	-	
- Assured operating distance S_{ao}	10	-	-	
- Switching hysteresis	2	3	-	
In combination with actuator CES-A-BQA on evaluation unit CES-A-ABA-01B				
Assured release distance S_{ar}	-	-	60	mm
Actuating range with vertical approach direction Center offset $m = 0$ ¹⁾				
- Switch-on distance	-	23	-	
- Assured operating distance S_{ao}	16	-	-	
- Switching hysteresis	2	3	-	
Actuating range with side approach direction Distance in x direction = 10 mm				
- Switch-on distance	-	28	-	
- Assured operating distance S_{ao}	24	-	-	
- Switching hysteresis	1	1.3	-	
Connecting cable	-	-	25	

1) These values apply to surface installation of the read head and the actuator.

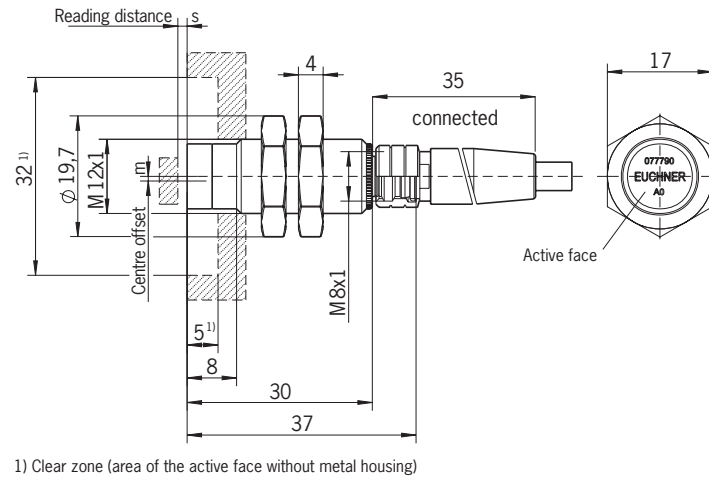
11.5. Read head CES-A-LMN-SC

- › Cylindrical design M12
- › M8 plug connector

Approvals



Dimension drawing

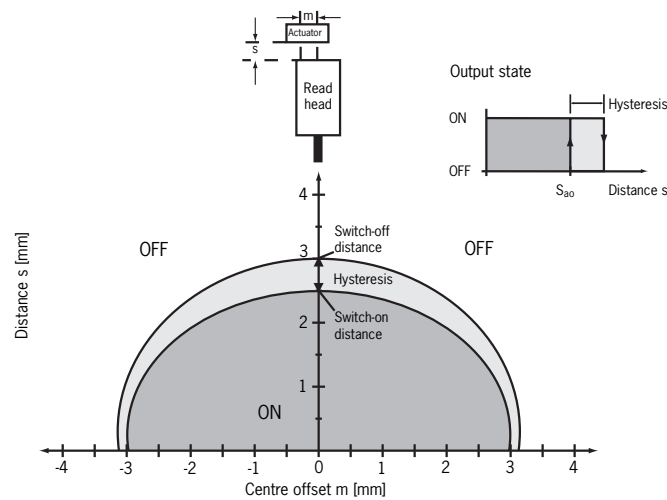


NOTICE

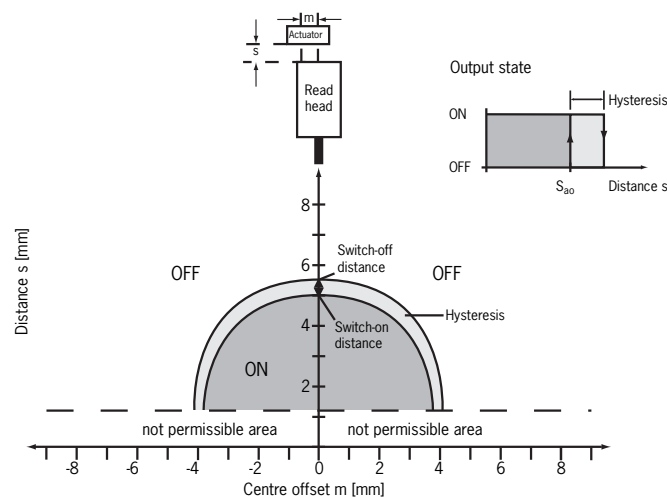
The read head is allowed to be installed as a maximum up to the clear zone (area of the active face without metal housing).

Typical actuating range

With evaluation unit CES-A-ABA-01 and actuator CES-A-BMB



With evaluation unit CES-A-ABA-01B and actuator CES-A-BMB

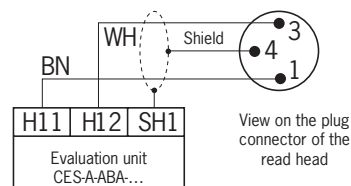


NOTICE

A minimum distance of $s = 1.2 \text{ mm}$ must be maintained.

Terminal assignment

Read head with plug connector



Technical data

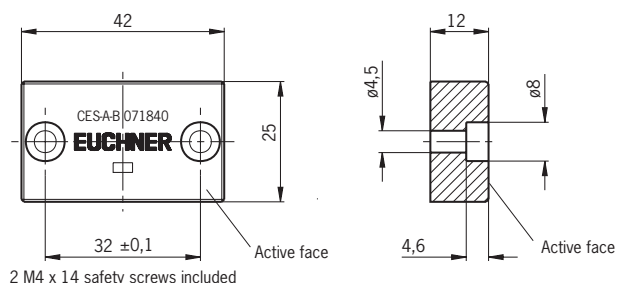
Parameter	Value			Unit
	min.	typ.	max.	
Housing material	Nickel-plated CuZn housing sleeve Plastic PBT GF20 cap			
Dimensions	M12 x 1, length 38			mm
Weight (incl. 10 m cable)	0.2			kg
Ambient temperature	-25	-	+85	°C
Ambient pressure (only of active face in installed condition)	-	-	10	bar
Degree of protection	IP67/IP69/IP69K			
Installation orientation	Any			
Method of operation	Inductive			
Power supply	Via evaluation unit			
In combination with actuator CES-A-BMB on evaluation unit CES-A-ABA-01				
Assured release distance S_{ar}	-	-	8.5	mm
Actuating range for center offset $m = 0$ ¹⁾		2.5		
- Switch-on distance	-			
- Assured operating distance S_{a0}	1.6	-	-	
- Switching hysteresis	0.2	0.3	-	
In combination with actuator CES-A-BMB on evaluation unit CES-A-ABA-01B				
Assured release distance S_{ar}	-	-	10	mm
Actuating range for center offset $m = 0$ ¹⁾				
- Assured release distance S_{ar}	-	-	10	
- Switch-on distance	-	5	-	
- Assured operating distance S_{a0}	3.5	-	-	
- Switching hysteresis	0.1	0.3	-	
Connection	M8 plug connector, 3-pin			
Connecting cable	-	-	15	m

1) These values apply to surface installation of the read head in steel.

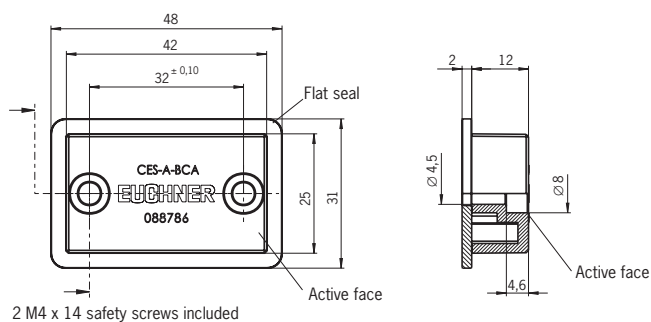
11.6. Actuator CES-A-BBA/CES-A-BCA

- › Cube-shaped design 42 x 25 mm
- › CES-A-BCA suitable for use in aggressive media (e.g. acids, alkalis)
- › In combination with read head CES-A-LNA.../CES-A-LCA...

Dimension drawing for CES-A-BBA



Dimension drawing for CES-A-BCA



NOTICE

CES-A-BCA: The flat seal provided must be used during assembly.

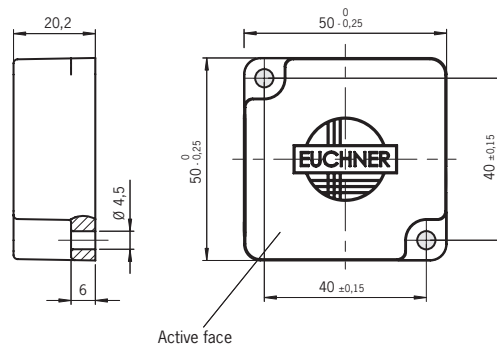
Technical data

Parameter	Value			Unit
	min.	typ.	max.	
Housing material	Fortron, reinforced thermoplastic, fully encapsulated			
- CES-A-BBA	PE-HD plastic without reinforcement, fully encapsulated			
- CES-A-BCA	Fluororubber 75 FPM 4100			
Flat seal material (CES-A-BCA only)				
Dimensions	42 x 25 x 12			mm
Weight	0.02			kg
Ambient temperature				
- CES-A-BBA	-25	-	+70	°C
- CES-A-BCA	-25	-	+50	
Degree of protection	IP67/IP69K			
Installation orientation	Active face opposite read head			
Power supply	Inductive via read head			

11.7. Actuator CES-A-BQA

› Cube-shaped design 50 x 50 mm

Dimension drawing for CES-A-BQA



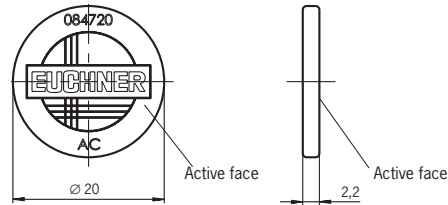
Technical data

Parameter	Value			Unit
	min.	typ.	max.	
Housing material	Fortron, reinforced thermoplastic, fully encapsulated			
Dimensions	50 x 50 x 20.2			mm
Weight	0.07			kg
Ambient temperature	-25	-	+70	°C
Degree of protection	IP67			
Installation orientation	Active face opposite read head			
Power supply	Inductive via read head			

11.8. Actuator CES-A-BDA-20

- › Round design \varnothing 20 mm
- › In combination with read head CES-A-LNA.../CES-A-LCA...

Dimension drawing



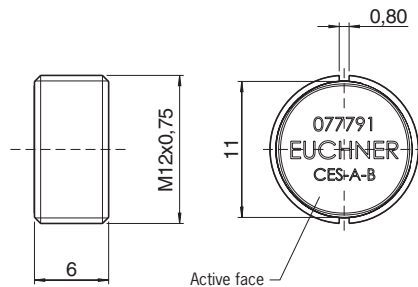
Technical data

Parameter	Value			Unit
	min.	typ.	max.	
Housing material	PC plastic			
Dimensions	\varnothing 20 x 2.2			mm
Weight	0.0008			kg
Ambient temperature	-25	-	+70	°C
Degree of protection	IP67			
Installation orientation	Active face opposite read head			
Power supply	Inductive via read head			

11.9. Actuator CES-A-BMB

- Cylindrical design M12 x 75
- In combination with read head CES-A-LMN-SC
 (actuating range on request for read head CES-A-LNA.../LCA...)

Dimension drawing



NOTICE

- The actuator can be screwed into the M12 x 0.75 thread provided with the aid of an insertion tool (order no. 037 662).
- Flush installation of the actuator in steel is permissible.

Technical data

Parameter	Value			Unit
	min.	typ.	max.	
Housing material	Stainless steel			
Dimensions	M12 x 0.75, depth 6			mm
Weight	0.002			kg
Ambient temperature	-25	-	+85	°C
Degree of protection	IP67/IP69/IP69K			
Installation orientation	Active face opposite read head			
Power supply	Inductive via read head			

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 related safety component must be replaced. The replacement of individual parts in a safety component is not permitted.

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 16*)
- › Check the secure mounting of the devices and the connections
- › Check for soiling
- › Check for sealing of the plug connector on the safety switch
- › Check for loose cable connections on the plug connector
- › Check the release distance

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.

14. Service

If servicing is required, please contact:

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

Service telephone:

+49 711 7597-500

E-mail:

support@euchner.de

Internet:

www.euchner.com

15. Declaration of conformity



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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

2077154-35-12/18

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>
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>
III:	RoHS Richtlinie	2011/65/EU
	<i>RoHS directive</i>	<i>2011/65/EU</i>
	<i>Directive de RoHS</i>	<i>2011/65/UE</i>
	<i>Direttiva RoHS</i>	<i>2011/65/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 CEM 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 60947-5-3:2013
b:	EN ISO 14119:2013
c:	EN 62026-2:2013 (ASi)
d:	EN ISO 13849-1:2015
e:	EN ISO 13849-2:2012
f:	EN 60947-5-2:2007/A1:2012
i:	EN 50581:2012 (RoHS)
j:	EN 50364:2010
k:	EN 300 330 V2.1.1



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Bezeichnung der Bauteile Description of components Description des composants Descrizione dei componenti Descripción de componentes	Type Type Type Tipo Tipo	Richtlinie Directives Directive Direttiva Directivas	Normen Standards Normes Norme Estándares	Zertifikats-Nr. No. of certificate Número du certificat Numero del certificato Número del certificado						
Auswertegerät Safety Unit Analyseur Centralina Unidad de evaluación	CES-A-ABA-01 CES-A-UBA-01 CES-A-ABA-01B CES-A-UBA-01B	I, II, III	a, b, d, e, i, j, k	ET 15038						
	CES-A-AEA-02B CES-A-AEA-04B CES-A-UEA-02B CES-A-UEA-04B				I, II, III	a, b, d, e, i, j, k	ET 15050			
	CES-AZ-ABS-01B CES-AZ-UBS-01B							I, II, III	a, b, d, e, i, j, k	ET 15038
	CES-AZ-AES-01B CES-AZ-AES-02B CES-AZ-AES-04B CES-AZ-UES-01B CES-AZ-UES-02B CES-AZ-UES-04B									
	Lesekopf Read head Tête de lecture Testina di lettura Cabeza lectora	CES-A-LMN-SC CES-A-LNA-SC CES-A-LNA-xxx CES-A-LCA-xxx CES-A-LQA-SC CES-A-LNN-SC CES-A-LNN-V-...	I, II, III	a, b, d, e, i, j, k				ET 15038		
		ET 15050								
		ET 15042								
		CES-A-LSP-SB CES-A-LSP-...			I, II, III	a, b, d, e, i, j, k	ET 15042			
		CEM-A-LE05K-S2 CEM-A-LE05R-S2 CEM-A-LH10K-S3 CEM-A-LH10R-S3 CEM-A-LE05K-S1-10V CEM-A-LH10K-S2-10V						I, II, III	a, b, d, e, i, j, k	ET 15038
		ET 15050								
	ET 15042									
	CET-A-XL-...	I, II, III	a, b, d, e, i, j, k	ET 13050						
Betätiger Actuator Actionneur Azionatore Actuador	CES-A-BBA-... CES-A-BCA-... CES-A-BDA-... CES-A-BMB-... CES-A-BQA-...				I, II, III	a, b, d, e, i, j, k	ET 15038			
	ET 15050									
ET 15042										
CES-A-BSP-... CES-A-BBN-...	I, II, III	a, b, d, e, i, j, k	ET 15042							
CEM-A-BE05 CEM-A-BH10				I, II, III	a, b, d, e, i, j, k	ET 15038				
ET 15050										
ET 15042										
CET-A-BW-...	I, II, III	a, b, d, e, i, j, k	ET 13050							

Benannte Stelle
Notified Body
Organisme notifié
Sede indicata
Entidad citada

0340
DGUV Test Prüf- und Zertifizierungsstelle Fachausschuss Elektrotechnik
Gustav-Heinemann-Ufer 130
50968 Köln - Germany



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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>Type</i> <i>Tipo</i> <i>Typo</i>	Richtlinie <i>Directives</i> <i>Directive</i> <i>Direttiva</i> <i>Directivas</i>	Normen <i>Standards</i> <i>Normes</i> <i>Norma</i> <i>Estándares</i>	Zertifikats-Nr. <i>No. of certificate</i> <i>Numéro du certificat</i> <i>Numero del certificato</i> <i>Número del certificado</i>
Auswertegerät <i>Safety Unit</i> <i>Analyseur</i> <i>Centralina</i> <i>Unidad de evaluación</i>	CES-AZ-ALS... CES-A-F1B-01B-AS1 CES-A-V1B-01B-AS1 CEM-A-ME05K-S1 CEM-A-LE05H-S2 CEM-A-LE05K-S2-P CET1-AX-L... CET2-AX-L...	I, II, III I, II, III I, II, III I, II, III I, II, III I, II, III	a, b, d, e, i, j, k a, b, c, d, e, i, j, k a, b, d, e, i, j, k a, b, d, e, i, j, k a, b, d, e, i, j, k	UQS 115948 Euchner QS PB 62/2005 Euchner QS PB 22/2005 Euchner QS PB 132/2010 Euchner QS PB 019/2018 Euchner QS PB 17/2008 Euchner QS PB 23/2008 Euchner QS PB 116/2009 Euchner QS PB 115/2009
Lesekopf <i>Read head</i> <i>Tête de lecture</i> <i>Testina di lettura</i> <i>Cabeza lectora</i>	CES-A-LFP...	I, II, III	a, b, d, e, i, j, k	Euchner QS PB 110/2010
Betätiger <i>Actuator</i> <i>Actionneur</i> <i>Azionatore</i> <i>Actuador</i>	CES-A-BFP...	I, II, III	a, b, d, e, i, j, k	Euchner QS PB 110/2010
Zubehör <i>Accessory</i> <i>Accessoire</i> <i>Accessorio</i> <i>Accesorio</i>	PM-SCL-096945	III	f, i	Euchner QS PB 14 /2006

Genehmigung der umfassenden Qualitätssicherung (UQS) durch die benannte Stelle
Approval of the full quality assurance system by the notified body
Approbation du système d'assurance qualité complet par l'organisme notifié
Approvazione del sistema di garanzia di qualità totale da parte dell'organismo notificato
Aprobación del sistema de aseguramiento de calidad total por parte del organismo notificado

0035
TÜV Rheinland
Industrie Service GmbH
Alboinstr. 56 - 12103 Berlin
Germany

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, Dezember 2018
EUCHNER GmbH + Co. KG
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