

EUCHNER

Operating Instructions

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1. About this document

1.1. Scope

These operating instructions are valid for AR evaluation unit CES-AR-AES-12. These operating instructions, the document "Safety information and maintenance" 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	Significance
	Printed document
	Document is available for download at www.euchner.de
	Document on CD
 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 and maintenance AR evaluation unit CES-AR-AES-12 (109633)	Basic information for safe setup and service	
Operating instructions (098221)	(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.de . For this purpose enter the doc. no. in the search box.	

2. Correct use

The AR evaluation unit is used for the central evaluation of safety-related signals in AR switch chains.

The following applies in combination with a CES switch:

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

This means:

- › Starting commands that cause a dangerous machine function must become active only when the safety guard is closed.
- › Opening the safety guard triggers a stop command.
- › Closing a safety 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.

The following applies in combination with a CET/CTP switch:

In combination with a movable safety guard and the machine control, this system prevents the safety guard from being opened while a dangerous machine function is being performed.

This means:

- › Starting commands that cause a dangerous machine function must become active only when the safety guard is closed and locked.
- › The guard locking device must not be unlocked until the dangerous machine function has ended.

Closing and locking a safety 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 the device is used, a risk assessment must be performed on the machine, e.g. in accordance with the following standards:

- › EN ISO 13849-1, Safety of machinery – Safety-related parts of control systems – Part 1: General principles for design
- › EN ISO 12100, Safety of machinery – Basic concepts – General principles for design – Risk assessment and risk reduction
- › IEC 62061, Safety of machinery – Functional safety of safety-related electrical, electronic and programmable electronic control systems

Correct use includes observing the relevant requirements for installation and operation, particularly based on the following standards:

- › EN ISO 13849-1, Safety of machinery – Safety-related parts of control systems – Part 1: General principles for design
- › EN ISO 14119 (supersedes EN 1088), Safety of machinery – Interlocking devices associated with guards – Principles for design and selection
- › EN 60204-1, Safety of machinery – Electrical equipment of machines.

Only safety switches that are suitable for operation in an AR switch chain can be evaluated. Check the operating instructions for the related safety switch. Combination with devices that are not suitable for use in an AR switch chain or with devices from other manufacturers is not permitted. A maximum of 12 safety switches in an AR switch chain can be connected to the AR evaluation unit CES-AR-AES-12.

Unicode and multicode version switches can be connected. Unicode and multicode versions can be combined in an AR switch chain.



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.
- › 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	Safety switch	Actuator												
		CES-A-BBA 071840	CES-A-BCA 088786	CES-A-BPA 098775	CES-A-BRN 100251	CES-A-BLN-R2-100776 100776	CES-A-BLN-L2-104510 104510	CES-A-BLN-U2-103450 103450	CES-A-BDN-06-104730 104730	CES-A-BBN-C04-115271 115271	CES-A-BDN-06-104730 104730	CET-A-BWK-50X 096327	A-C-H- ...	ESL-H-C30
AR evaluation unit CES-AR-AES-12 098225	CES-AR-C01... from V1.1.2 (see rating plate on the device)	●	●	●	●									
	CES-AR-CR2... from V1.1.2 (see rating plate on the device)					●		●	●					
	CES-AR-CL2... from V1.1.2 (see rating plate on the device)						●	●	●					
	CES-I-.-AR-C04 from V1.0.1 (see rating plate on the device)									●	●			
	CET1/2-AR... from V1.1.2 (see rating plate on the device)													
	CET3/4-AR... from V1.0.0 (see rating plate on the device)													
	CTP-AR													
	ESL-I-AR from V1.0.0													●
Key to symbols	● / ●	Combination possible / combination on request												
		Combination possible, guard locking for process protection												
		Combination possible, guard locking for personal protection / combination on request												
		Combination not permissible												

3. Exclusion of liability and warranty

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

4. General safety instructions

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

Check the safe function of the safety guard 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 safety guard 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 perform a personal 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.
- › 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 occupational 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. EUCHNER cannot provide any warranty in relation to the readability of the CD for the storage period required. For this reason you should archive a printed copy of the operating instructions. You can download the operating instructions from www.euchner.de.

5. Function

The AR evaluation unit is used to evaluate the individual safety switches in an AR switch chain and to reliably interrupt a safety circuit.

The unit has two inputs for the connection of an AR switch chain. The safety contacts are switched as a function of the input signals. Downstream parts of the safety circuit can be monitored using a feedback loop.

The switching states of the connected safety switches can be signaled by means of monitoring outputs.

If the actuator on one of the safety switches in the AR switch chain is moved out of the operating distance or if guard locking is deactivated, the AR evaluation unit opens its relay contacts and the corresponding monitoring output is switched off.

The system is designed so that failures will not result in the loss of the safety function. The occurrence of failures is detected by cyclic self-monitoring at the latest at the next demand to close the safety contacts.

The system can be started either manually using a start button or automatically.

5.1. Block diagram CES-AR-AES-12

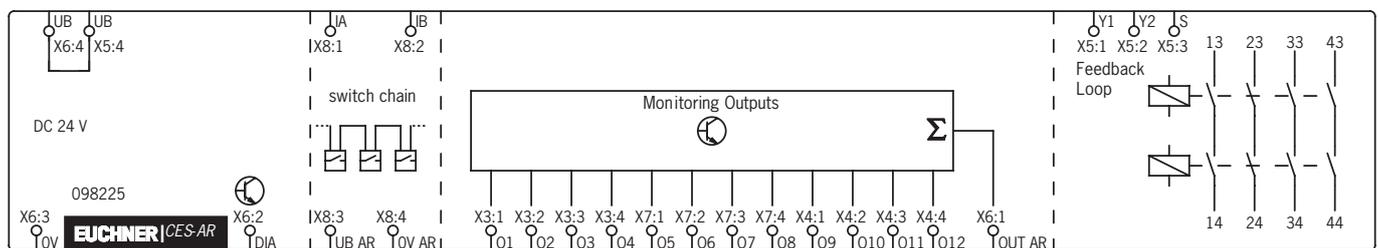


Figure 1: Block diagram AR evaluation unit

6. 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.
- The AR 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 standard rails.
- 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!

Follow the mounting instructions in the accompanying documents for the safety switches connected.

7. Electrical connection

	<p>WARNING</p> <p>In case of an error, loss of the safety function through incorrect connection.</p> <ul style="list-style-type: none"> › Monitoring outputs must not be used as safety outputs. › Lay the connection cables with protection to prevent the risk of short circuits.
	<p>CAUTION</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 (PELV). › 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 tightening torque for the screws on the connection terminals must be 0.6 ... 0.8 Nm. › 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). › Please pay attention to any interference fields in case of devices such as frequency converters or induction heating systems. Observe the EMC instructions in the manuals from the respective manufacturer.
	<p>Important!</p> <p>If the device does not appear to function when operating voltage is applied (e.g. green STATE LED does not flash), the device must be returned unopened to the manufacturer.</p>

7.1. Notes about

	<p>Important!</p> <ul style="list-style-type: none"> › For use and operation as per the  requirements¹⁾, 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> <ol style="list-style-type: none"> a) Electrically isolated power supply unit with a max. open-circuit voltage of 30 V/DC and a limited current of max. 8 A. b) 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. <ul style="list-style-type: none"> › Use cable material made of copper wire with a temperature resistance of at least 75 °C. <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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7.2. Safety in case of faults

- › The operating voltage U_B is reverse polarity protected.
- › The connections U_B AR and $0V$ AR for the AR devices are not short circuit-proof.
- › A short circuit between safety contacts can only be detected by external pulsing.
- › A short circuit in the cable can be excluded by laying the cable with protection.

7.3. Power supply

The power supply of 24 V DC is supplied to the AR evaluation unit. The AR switch chain must be supplied with DC 24 V DC by the AR evaluation unit.

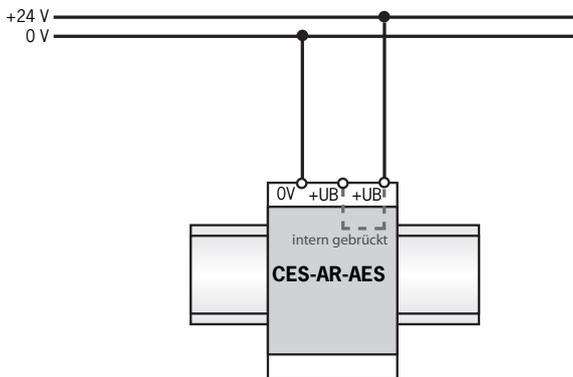


Figure 2: Power supply

7.4. Connecting AR switch chain

The AR evaluation unit has two safety inputs to which the AR switch chain is connected. Safety inputs IA and IB have short circuit and earth fault monitoring.

The AR switch chain must be supplied by the AR evaluation unit (terminals UBAR and OVAR). An additional power supply may be required for these safety switches (e.g. for guard locking), depending on which safety switches are used in the AR switch chain (see Figure 5). In case of switches with guard locking, the supply for the guard locking solenoid must be at the potential of the AR evaluation unit. Information on this is provided in the operating instructions of the respective safety switch.



Important!

- ▶ A maximum of 12 safety switches can be connected.
- ▶ Only safety switches that are suitable for operation in an AR switch chain can be connected.
- ▶ Safety switches with a start input are not suitable for connection to an AR evaluation unit.
- ▶ In the case of unicode switches, the actuators must be taught in at the AR device. See the operating instructions for the related safety switch.
- ▶ For the AR system to function, a bridging plug must be connected to the first safety switch in the AR switch chain (or a jumper between IA, IB and UB_{AR}).
- ▶ Connections UBAR and OVAR must be used only for the power supply of the AR switch chain.

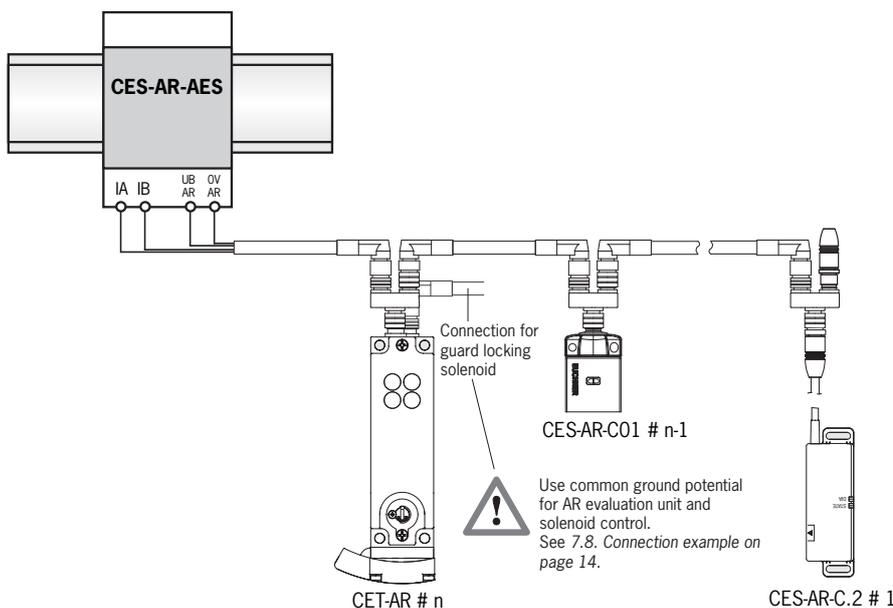


Figure 3: Schematic diagram showing connection of an AR switch chain

7.5. Starting behavior

The AR evaluation unit can be placed in operation either using the autostart mode or by starting it manually.



Important!

If the configuration for the starting behavior is changed during operation (e.g. jumper removed), this change will be detected by the unit. The AR evaluation unit assumes the fault state as soon as the next request to close the safety contacts is received (see section *Troubleshooting*).

7.5.1. Connection for monitored, manual start

For a monitored, manual start, a start button is connected to terminal S. The start button is supplied with a voltage of 24 V DC. The terminal +UB can be used for this purpose. A sticking start button, for example, will be detected by the monitoring function the next time the system is powered up.

The safety contacts close after max. 600 ms when the start button is pressed and then released again (falling edge) and if the actuators for all the safety switches connected are within the operating distance.

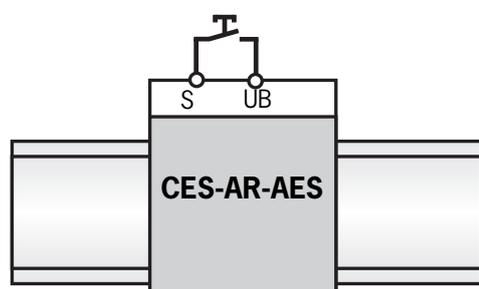


Figure 4: Monitored, manual start



Important!

The start button is only allowed to be pressed approx. 8 s after power on. If the start button is pressed earlier, the unit will switch to the fault state and the *DIA* LED illuminates. The *STATE* LED flashes (see section *Troubleshooting*).

7.5.2. Connection for automatic start



WARNING

The safety contacts close immediately if all safety switches signal a safe state and the feedback loop is closed.

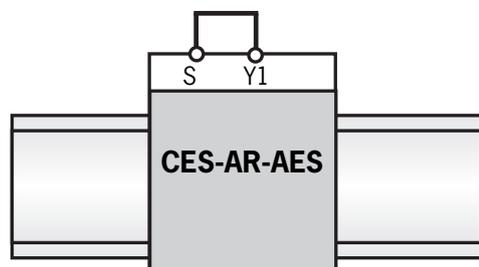


Figure 5: Automatic start

For the autostart mode, a jumper must be connected between the terminals S and Y1.

By pulsing the output signal on Y1 the device detects short circuits on starting (e.g. static DC 24 V on the input S).

7.6. Connecting safety contacts and feedback loop



Important!

If you do not connect the feedback loop, the downstream devices will not be monitored. This situation will affect the safety category of your system.

The unit has four redundant, positively driven safety contacts that switch off immediately if the actuator is removed at one of the connected safety switches or if a fault occurs. To check the switching state of a connected load, the monitoring contacts on a contactor or relay can be connected to terminals Y1 and Y2 to form a feedback loop (see *Figure 6*).

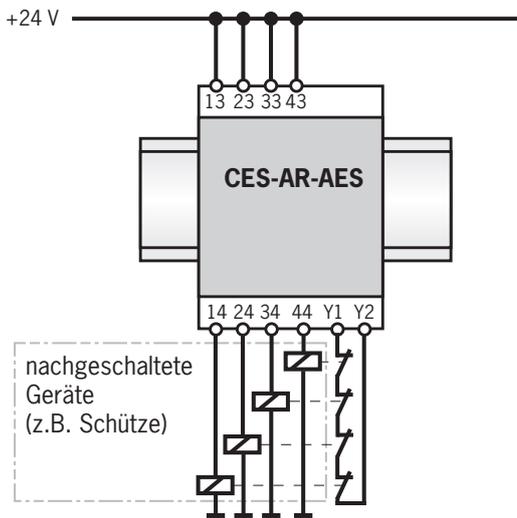


Figure 6: Safety contacts and feedback loop connected

The unit detects external short circuits on the feedback loop at the start by pulsing the output signal on Y1 (e.g. static DC 24 V on the feedback loop).

If a feedback loop is not to be connected, a jumper must be fitted to the terminals Y1 and Y2 (see *Figure 7*).

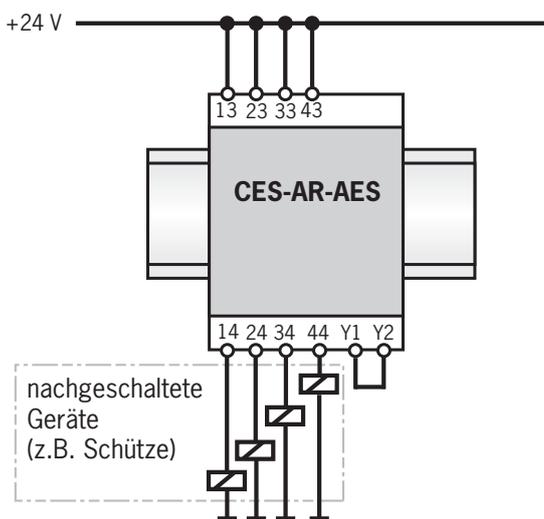


Figure 7: Safety contacts connected and jumper on the feedback loop

The following conditions must be met for the safety contacts to be closed:

For manual start

- › The feedback loop is closed
- › The start button has been pressed and released (switches on falling edge)
- › All safety doors closed

For automatic start

- › The feedback loop is closed
- › All safety doors closed

If the feedback loop is open, the *DIA* LED flashes and the *STATE* LED is lit (see section *Troubleshooting*). The monitoring output *DIA* is set.

The safety contacts remain open if the feedback loop is open at the start. The unit switches to fault state, the *DIA* LED illuminates, and the *STATE* LED flashes (see section *Troubleshooting*).

7.7. Connecting monitoring outputs on the AR evaluation unit

The AR evaluation unit has 14 short circuit-proof semiconductor outputs that can be used to signal different operating states, e.g. to a PLC. If the monitoring output is active, a voltage of max. 24 V DC is present at the related terminal (referred to the potential at terminal 0 V).

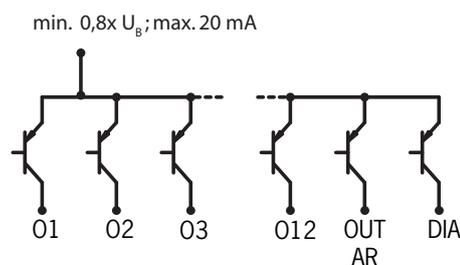


Figure 8: Monitoring outputs CES-AR-AES

Significance of the signals with monitoring output active:

- › *O1 ... O12*: Status of safety switches 1 ... 12 (actuator at operating distance or guard locking status)
- › *OUT AR*: All connected safety switches in state *Enable*. (All actuators in operating distance and all guard locking devices active)
- › *DIA*: Fault on the AR evaluation unit or on a safety switch in the AR switch chain, or feedback loop was open during start (see section *Troubleshooting*)

7.7.1. Assignment of safety switches to monitoring outputs

At least one monitoring output is assigned to each safety switch in the AR switch chain. The safety switch with bridging plug has the monitoring output *O1*. From here, the output assignments are incremented up to the last switch in the chain.

Several monitoring outputs are occupied depending on the switch type, e.g. one monitoring output for the door position and one for the guard locking status.

The table below shows how many monitoring outputs the individual safety switches occupy.

Series	Number (type) of monitoring outputs
CES-AR ESL-AR	1 (door position or diagnostics)
CET1/2-AR	1 (status of guard locking)
CET3/4-AR CTP-AR	2 (first monitoring output: door position, second monitoring output: status of guard locking)

8. Setup



WARNING

- › Pay attention to the notes on setup and on the teach-in process in the operating instructions for the safety switch used.
- › Observe correct connection on devices with teach-in input.

Proceed as follows:

1. Ensure nobody can be placed in danger during setup.
 2. Prior to setup, check whether all connections are correct (jumpers connected, external circuit correct) and the AR switch chain is fitted with a bridging plug.
 3. Close all safety guards and make sure that the feedback loop on the evaluation unit is closed.
 4. Switch on the power supply.
 - ➔ The switches in the chain are initialized during starting. Unicode switches that have not yet learned an actuator on starting learn it automatically. This process can take up to one minute.
 5. Subsequently press the RST button on the AR evaluation unit for approx. 3 s to restart the device.
 - ➔ If the AR evaluation unit is set up for automatic start, the *STATE* LED flashes and signals that the self-test is being performed. After the self-test, the *OUT* and *STATE* LEDs are continuously lit.
- or
- ➔ If you start the evaluation unit manually, the *STATE* LED flashes and signals that the self-test is being carried out. After the self-test, the *STATE* LED illuminates continuously. The *OUT* LED flashes, since no start command has been issued yet.
6. Press the start button (only necessary for manual start).
 7. Check the correct function of the safety circuits connected. In case of problems, see section *Troubleshooting*.



Important!

Use the status table in the section *Troubleshooting* to check the overall function. In addition, the status LEDs on the respective safety switches provide information about the status of the respective switch.

9. Status LEDs, control elements and terminal assignment

The AR evaluation unit has status LEDs for the most important operating states. The significance of the individual LED states is explained in the system status table in the section *Troubleshooting*.

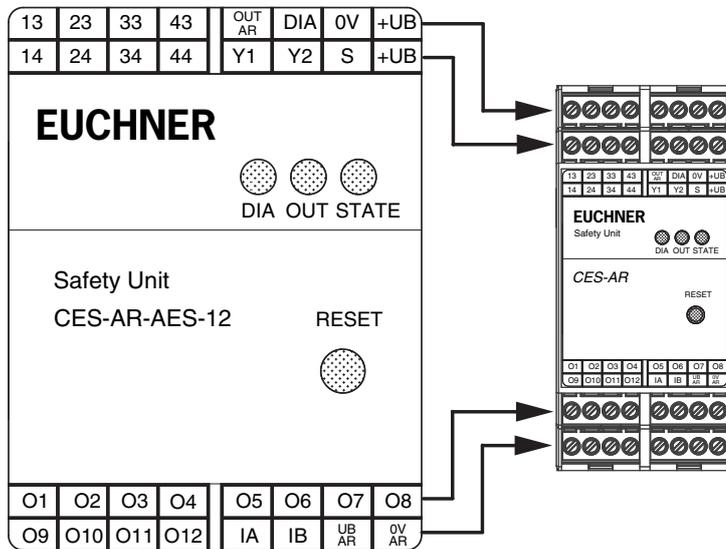


Figure 10: Terminal assignment, LEDs and reset button

9.1. LED indicators

LED	Color	Significance
STATE	green	Device status
OUT	yellow	Switch chain status
DIA	red	Fault display

9.2. Reset button

With the reset button pressed, the power supply for the AR evaluation unit and as a result for the entire AR switch chain is interrupted. After it is released, the AR evaluation unit and the switches connected restart with a self-test.

10. System status table

Operating mode	Actuator/door position	Safety outputs OA and OB	Indicator LEDs			Monitoring outputs		State
			DIA (red)	OUT (yel-low)	STATE (green)	OUT AR	DIA	
Self-test	X	off	○	○	☀ 15 Hz (10 s)	off	off	Self-test after power up
Normal operation	open	off	○	○	☀	off	off	Normal operation, at least one door open
	closed	on	○	☀	☀	on	off	Normal operation, all doors closed
	closed	off	○	☀ 3 Hz	☀	on	off	Normal operation, all doors closed, start button not pressed or fault in the feedback loop
	closed	off	☀ 4 x	○	☀	on	on	Normal operation, all doors closed, feedback loop was open during attempt to start
	X	X	☀	X	☀ 7 x	off	on	Faulty data transmission for status signals (safety circuit not affected)
Fault display	X	off	☀	○	☀ 1 x	off	on	Fault in the AR switch chain (e.g. fault on starting the switch chain or more than 12 devices connected)
	X	off	☀	○	☀ 2 x	off	on	Fault on the safety outputs or on the start button (e.g. start configuration changed in operation, no/erroneous signals from the switch chain, broken cable on one of the channels I _A or I _B , or short circuit/ground fault on one of the channels I _A or I _B)
	X	off	☀	○	☀ 4 x	off	on	Fault on the safety relay, re-start device. If fault is still indicated, contact manufacturer.
	X	off	☀	○	☀ 5 x	off	on	Internal component fault, re-start device. If fault is still indicated, contact manufacturer.
	X	off	☀	○	☀ 6 x	off	on	- Fault in feedback loop, e.g. - feedback loop not connected on power up - missing jumper between Y1/Y2 or - Fault in the start button, e.g. - on autostart: jumper between S/U _B instead of S/Y1 - Start button stuck
	X	off	☀	○	○	off	on	Start failed three times, contact manufacturer

Key to symbols	○	LED not illuminated
	☀	LED illuminated
	☀ 15 Hz (10 s)	LED flashes for 10 seconds at 15 Hz
	☀ 3 x	LED flashes three times
	X	Any state



Important!

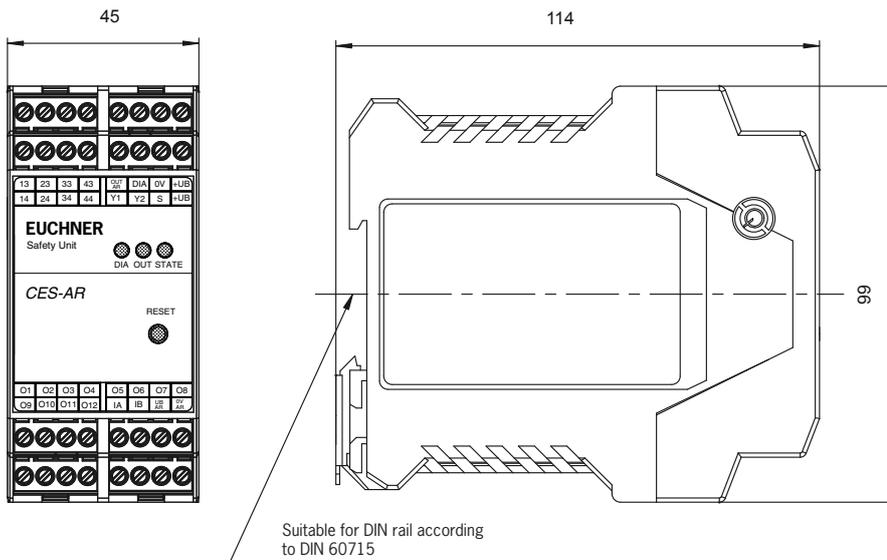
If you do not find the displayed device status in the system status table, this indicates an internal device fault. In this case, you should contact the manufacturer.

11. Technical data

Parameter	Value			Unit
	min.	typ.	max.	
Housing material	PA6.6 plastic			
Dimensions	114 x 99 x 45			mm
Weight	0.25			kg
Ambient temperature at $U_B = DC 24 V$	-20	-	+55	°C
Atmospheric humidity, not condensing	-	-	80	%
Degree of protection acc. to EN 60529	IP 20			
Degree of contamination	2			
Mounting	DIN rail 35 mm according to EN 60715			
Connection (plug-in screw terminals/coded)	0.14	-	2.5	mm ²
Operating voltage U_B (regulated, residual ripple < 5%)	24 ± 10%			V DC
Current consumption I_B (with relay energized) ¹⁾	-	1.2 ¹⁾	-	A
External fuse (operating voltage U_B)	-	2.5	8	A gG
Safety contacts	4 (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 5 ... 30 V	10	-	6,000	
- at switching voltage AC 5 ... 230 V	10	-	5,000	
External fuse (safety circuit) according to EN 60269-1	6 A gG or 6 A circuit breaker (characteristic B or C)			
Utilization category according to EN 60947-5-1	AC-12 60V 0.3A / DC-12 60V 0.3A AC-12 30V 6A/DC-12 30V 6A AC-15 230V 5A/DC-13 24V 5A			
Rated insulation voltage U_i	250			V
Rated impulse withstand voltage U_{imp}	4			kV
Resilience to vibration	In acc. with EN 60947-5-2			
Mechanical operating cycles (relays)	10 x 10 ⁶			
Current via feedback loop Y1/Y2	5	8	10	mA
Permissible resistance via feedback loop	-	-	600	Ω
Monitoring outputs (O1 ... O12, DIA and OUT AR, semiconductor outputs, p-switching, short circuit-proof)				
- Output voltage	0.8 x U_B	-	U_B	V DC
- Max. load	-	-	20	mA
- Switching frequency	-	1	-	Hz
Start button S inputs				
- Input voltage LOW	0	-	2	V DC
HIGH	15	-	U_B	
- Input current HIGH	5	8	10	
Safety inputs IA, IB	2 (for AR switch chain)			
- Input current	-	10	-	mA
Number of connectible safety switches	Max. 12			
EMC protection requirements	In acc. with EN 60947-5-3			
Reliability values according to EN ISO 13849-1 as a function of the switching current at 24 V DC				
	≤ 0.1 A	≤ 1 A	≤ 3 A	
Category	4			
Performance Level (PL)	e			
PFH _d	1.5 x 10 ⁻⁸			
Mission time	20			years
Number of switching cycles/year	720,000	540,000	107,000	

1) Taking into account the load currents at the monitoring outputs (20 mA each)

11.1. Dimension drawing



11.2. System times for the AR system

11.2.1. Typical system times

Ready delay: After switching on, the unit carries out a self-test for 10 s. The system is ready for operation only after this time.

Risk time according to EN 60947-5-3: If an actuator leaves the operating distance, the safety contacts on the AR evaluation unit are opened at the latest after 520 ms.

Difference time: The safety contacts on the AR evaluation unit switch with a slight time offset. They have the same signal state at the latest after a difference time of 10 ms.



Important!

The system times shown are maximum values for a circuit arrangement with 12 safety switches connected in an AR switch chain. Shorter times can also be achieved in circuits with fewer switches.

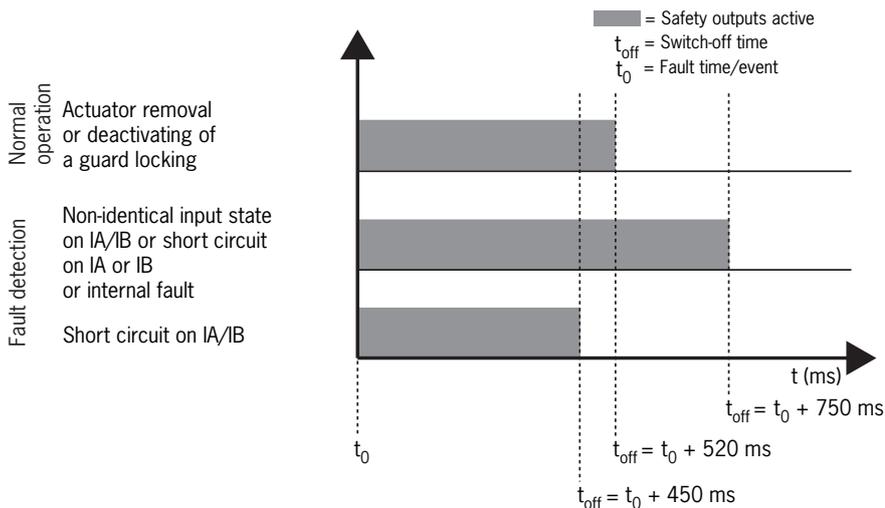


Figure 11: System times for AR evaluation unit on an AR switch chain with 12 safety switches

12. Ordering information and accessories



Tip!

Suitable accessories, e.g. cables or assembly material, can be found at www.euchner.de. 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 under "Accessories".

13. Inspection and service



WARNING

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

- › 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
- › Check the secure fastening of the devices and the connections
- › Check for soiling (e.g. the ventilation slots on the housing)

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 service support is required, please contact:

EUCHNER GmbH + Co. KG

Kohlhammerstraße 16

D-70771 Leinfelden-Echterdingen

Service telephone:

+49 711 7597-500

E-mail:

support@euchner.de

Internet:

www.euchner.de

15. Declaration of conformity

More than safety.



EUCHNER

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

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

109923-10 -10/15

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 Machinery directive Directive Machines Direttiva Machine Directiva de máquinas	2006/42/EG 2006/42/EC 2006/42/CE 2006/42/CE 2006/42/CE	
II:	EMV Richtlinie EMC Directive Directive de CEM Direttiva EMV Directiva CEM	2004/108/EG bis 2016-04-19 2004/108/EC till 2016-04-19 2004/108/CE 2004/108/CE 2004/108/CE	2014/30/EU ab 2016-04-20 2014/30/EU from 2016-04-20 2014/30/UE 2014/30/UE 2014/30/UE

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 60947-5-3:1999+A1:2005
b: EN ISO 14119:2013
c: EN ISO 13849-1:2008
d: EN ISO 13849-2:2012
e: EN 62026-2:2013 (ASI)

S

Bezeichnung der Sicherheitsbauteile Description of safety components Description des composants sécurité Descrizione dei componenti di sicurezza Descripción de componentes de seguridad	Type Type Type 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
Sicherheitsschalter Safety Switches Interrupteurs de sécurité Finecorsa di sicurezza Interruptores de seguridad	CES-AP-CL2-AH-SF CES-AP-CR2-AH-SF CES-AP-CL2-CH-SF CES-AP-CR2-CH-SF CES-AP-CL2-AH-SB CES-AP-CR2-AH-SB CES-AP-CL2-CH-SB CES-AP-CR2-CH-SB CES-AP-CL2-AH-Lxx CES-AP-CR2-AH-Lxx CES-AP-CL2-CH-Lxx CES-AP-CR2-CH-Lxx	I, II	a, b, c, d	ET 12056
	CES-AP-C01-CH-SA	I, II	a, b, c, d	ET 12084
	CES-AR-C01-AH-SA CES-AR-C01-CH-SA CES-AR-C01-EH-SA	I, II	a, b, c, d	ET 12084
	CES-AR-CL2-AH-SA CES-AR-CR2-AH-SA CES-AR-CL2-CH-SA CES-AR-CR2-CH-SA CES-AR-CL2-AH-SG CES-AR-CR2-AH-SG CES-AR-CL2-CH-SG CES-AR-CR2-CH-SG CES-AR-CL2-AH-Lxx CES-AR-CR2-AH-Lxx CES-AR-CL2-CH-Lxx CES-AR-CR2-CH-Lxx	I, II	a, b, c, d	ET 12066

More than safety.



EUCHNER

Bezeichnung der Sicherheitsbauteile <i>Description of safety components</i> <i>Description des composants sécurité</i> <i>Descrizione dei componenti di sicurezza</i> <i>Descripción de componentes de seguridad</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>Norme</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>
Betätiger <i>Actuator</i> <i>Actionneur</i> <i>Azionatore</i> <i>Actuador</i>	CES-A-BLN-L2 CES-A-BLN-R2 CES-A-BLN-U2 CES-A-BDN-06	I, II	a, b, c, d	ET 12056 ET 12066
	CES-A-BBA CES-A-BCA CES-A-BPA CES-A-BDA-20 CES-A-BRB CES-A-BRN			

Benannte Stelle <i>Notified Body</i> <i>Organisme notifié</i> <i>Sede indicata</i> <i>Entidad citada</i>	NB 0340 DGUV Test Prüf- und Zertifizierungsstelle Fachausschuss Elektrotechnik Gustav-Heinemann-Ufer 130 50968 Köln Germany
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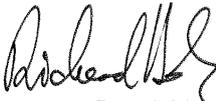
Bezeichnung der Sicherheitsbauteile <i>Description of safety components</i> <i>Description des composants sécurité</i> <i>Descrizione dei componenti di sicurezza</i> <i>Descripción de componentes de seguridad</i>	Type <i>Type</i> <i>Type</i> <i>Tipo</i> <i>Typo</i>	Richtlinie <i>Directives</i> <i>Directive</i> <i>Direttiva</i> <i>Directivas</i>	Normen <i>Standards</i> <i>Normes</i> <i>Norma</i> <i>Estándares</i>	Prüfbericht <i>Test report</i> <i>Rapport du test</i> <i>Rapporto di prova</i> <i>Informe de prueba</i>			
Sicherheitsschalter <i>Safety Switches</i>	CES-AH-C.3... CES-AP-C.1...	I, II I, II	a, b, c, d a, b, c, d	Euchner QS PB 21/2010 Euchner QS PB 76/2010			
Interrupteurs de sécurité <i>Fincorsa di sicurezza</i> <i>Interruptores de seguridad</i>	CES-I-AP...C04... CES-I-AR...C04... CES-I-AS2A...C04...	I, II I, II I, II	a, b, c, d a, b, c, d a, b, c, d, e	UQS 116783 (*) UQS 119733 (*) UQS 120552 (*)			
Auswertegerät <i>Safety Unit</i> <i>Analyseur</i> <i>Centralina</i> <i>Unidad de evaluación</i>	CES-AR-AES-12 CES-FD-AP...				I, II I, II	a, b, c, d a, b, c, d	Euchner QS PB 53/2007 UQS 116784 (*)
Betätiger <i>Actuator</i> <i>Actionneur</i> <i>Azionatore</i> <i>Actuador</i>	CES-A-BBN-C04... CES-A-BMB CKS-A-BK1-RD				I, II	a, b, c, d	UQS 116783 (*) UQS 116784 (*) UQS 116784 (*)
Lesekopf <i>Read head</i> <i>Tête de lecture</i> <i>Testina di lettura</i> <i>Cabeza lectora</i>	CES-A-LMN-SC... CKS-A-L1B-SC...	I, II	a, b, c, d	UQS 116784 (*)			

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

Leinfelden, Oktober 2015

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