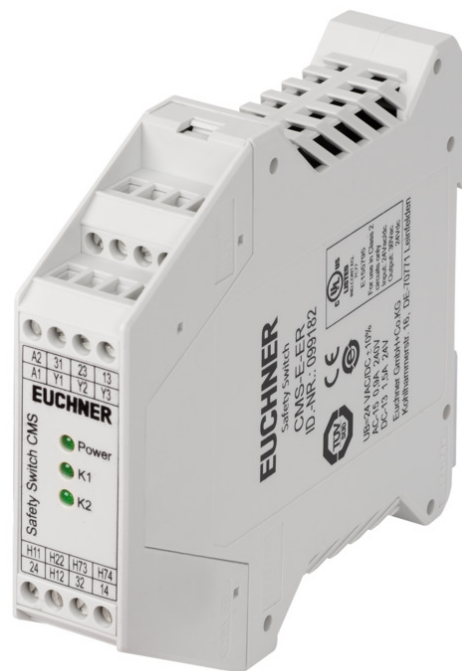


ITEM 099182 CMS-E-ER

Description	Technical data	Accessories	Downloads
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Features

- › Up to 30 read heads can be connected
- › 2 safety contacts
- › 1 auxiliary contact
- › 1 feedback loop can be connected
- › Start automatic/monitored/not monitored

Functional description

The evaluation unit CMS-E-ER is suitable for the direct connection of up to 30 read heads.

Category/PL according to EN ISO 13849-1

- › Category 3/PL d with more than one read head connected
- › Category 4/PL e with only one read head connected

Notice:

At low approach speeds in the z direction, the time offset when switching the reed contacts must not be more than 0.6 ms.

Approvals



Mechanical values and environment

Housing material	Polyamide PA6.6
Weight	
	Net 0,22 kg
Ambient temperature	0 ... 55 °C
Degree of protection	Terminals IP20 / housing IP40
Mechanical life	10 x 10 ⁶
Mounting method	Mounting rail 35mm according to DIN EN 60715 TH35
Connection	Connection terminals
	Safety contacts 13/14 and 23/24
Number of safety contacts	2
	Auxiliary contacts 31/32
Number of auxiliary contacts	1

Electrical connection ratings

Operating voltage		
	AC/DC	-10% ... 24 V +10% V ^[1]
Fusing		
Protection internal (operating voltage UB)		0,75 A Automatically resetting fuse PTC
Rated insulation voltage U _i		
	AC	250 V
Degree of contamination (external, according to EN 60947-1)		2
Connection cross-section		0,14 ... 2,5 mm ²
LED indicator		1 indicator LED Power (UB) and 2 status indicators for the read heads (K1/K2)
		Safety contacts 13/14 and 23/24
Type of output		Relay contacts, floating ^[2]
Current consumption		
	at DC 24V	10 ... 110 mA
Switching voltage		max.240 V
Switching current		
	at DC 24V	10 ... 3000 mA
Fusing		

External contact fuse (safety circuit) acc. to EN IEC 60269-1	4A gG
Utilization category according to EN 60947-4-1	AC-1 3A, 230V ; 3A, 24V [3]
Utilization category according to EN 60947-5-1	AC-15 0.9A , 240V and 0.9A , 24V [4] DC-13 1.5A , 24V [5]
Switching load According to UL class 2	Input: 24V AC/DC ; output: 30V AC, 24V DC
Breaking capacity (VA)	max.720 VA
Risk time according to EN 60947-5-3	20 ms
Auxiliary contacts 31/32	
Type of output	Relay contacts, floating [6]
Switching current at DC 24V	max.1500 mA

Miscellaneous

in compliance with	EN ISO 13849-1: 2015; EN ISO 13849-2:2012; EN 50178: 1997; EN 60204-1: 2006/A1: 2009; EN ISO 13850: 2015; EN 14119:2013; EN 6100-6-2: 2005; EN 6100-6-3: 2007/A1: 2011; EN 60947-5-3: 2013
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Reliability values acc. to EN ISO 13849-1

	Monitoring of the safety guard position
Category	
With one read head	4 [7]
With more than one read head	3 [8]
Performance Level	
With one read head	PL e [9]
With more than one read head	PL d [10]
PFH _D	
With one read head	2.5×10^{-8} [11]
With more than one read head	1.0×10^{-7}

Number of switching cycles	
≤ 1A at 24V DC	70000 1/Jahr
≤ 0.1A at 24V DC	166000 1/Jahr
Mission time	20 y [12]

in combination with Read head CMS-R-AXH-03V, CMS-R-AXH-05V, CMS-R-AXH-SC, CMS-R-AXH-05P and Actuator CMS-M-AC

Operating distance

Center offset	
At s=3 mm read distance	2,5 mm [13]
Assured switch-off distance S_{ar}	max.31 mm [14]
Assured operating distance S_{a0}	
With center offset m=0	min.6 mm [15]

in combination with Read head CMS-R-BXI-03V, CMS-R-BXI-05V, CMS-R-BXI-SC, CMS-R-BXI-05P, CMS-R-BXI-07P and Actuator CMS-M-BD

Operating distance

Center offset	
At s=3 mm read distance	2,5 mm [16]
Assured switch-off distance S_{ar}	max.12 mm [17]
Assured operating distance S_{a0}	
With center offset m=0	min.3 mm [18]

in combination with Read head CMS-R-CXC-03V, CMS-R-CXC-05V, CMS-R-CXC-05P, CMS-R-CXC-SC and Actuator CMS-M-CA

Operating distance

Center offset	
At s=3 mm read distance	2,5 mm [19]
Assured switch-off distance S_{ar}	max.14 mm [20]
Assured operating distance S_{a0}	
With center offset m=0	min.6 mm [21]

in combination with Read head CMS-R-EXM-03V, CMS-R-EXM-05V, CMS-R-EXM-05P, CMS-R-EXM-SC and Actuator CMS-M-EF

Operating distance

Center offset	
At s=3 mm read distance	2,5 mm [22]
Assured switch-off distance S_{ar}	max.17 mm [23]
Assured operating distance S_{a0}	
With center offset m=0	min.6 mm [24]

in combination with Read head CMS-RH-AYA-03VL, CMS-RH-AYA-05VL and Actuator CMS-MH-AA

Operating distance

Center offset	
At s=3 mm read distance	2,5 mm [25]
Assured switch-off distance S_{ar}	max.20 mm [26]

Assured operating distance S_{a0} With center offset $m=0$	min.10 mm [27]
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in combination with Read head CMS-RH-BYB-03VL, CMS-RH-BYB-05VL and Actuator CMS-MH-BB

Operating distance

Center offset At $s=3$ mm read distance	2,5 mm [28]
Assured switch-off distance S_{ar}	max.13 mm [29]
Assured operating distance S_{a0} With center offset $m=0$	min.6 mm [30]

[1] All the electrical connections must either be isolated from the mains supply by a safety transformer according to EN 61558-2-6 with limited output voltage in the event of a fault, or by other equivalent isolation measures.

[2] 2 NO contact pairs

[3, 4, 5] Max. switching current per contact

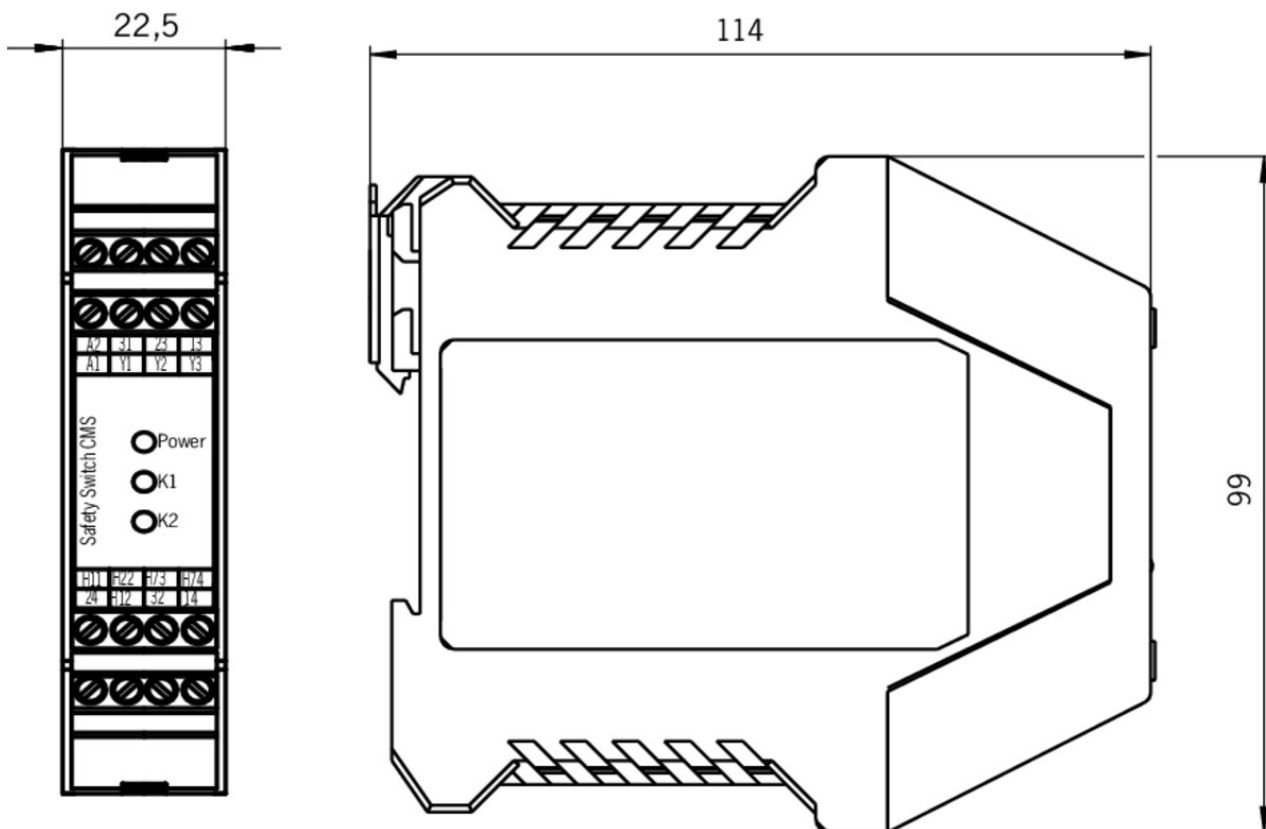
[6] 1 NC contact pair

[7, 8, 9, 10, 11, 12] This value is dependent on the number of switching cycles and the switching current.

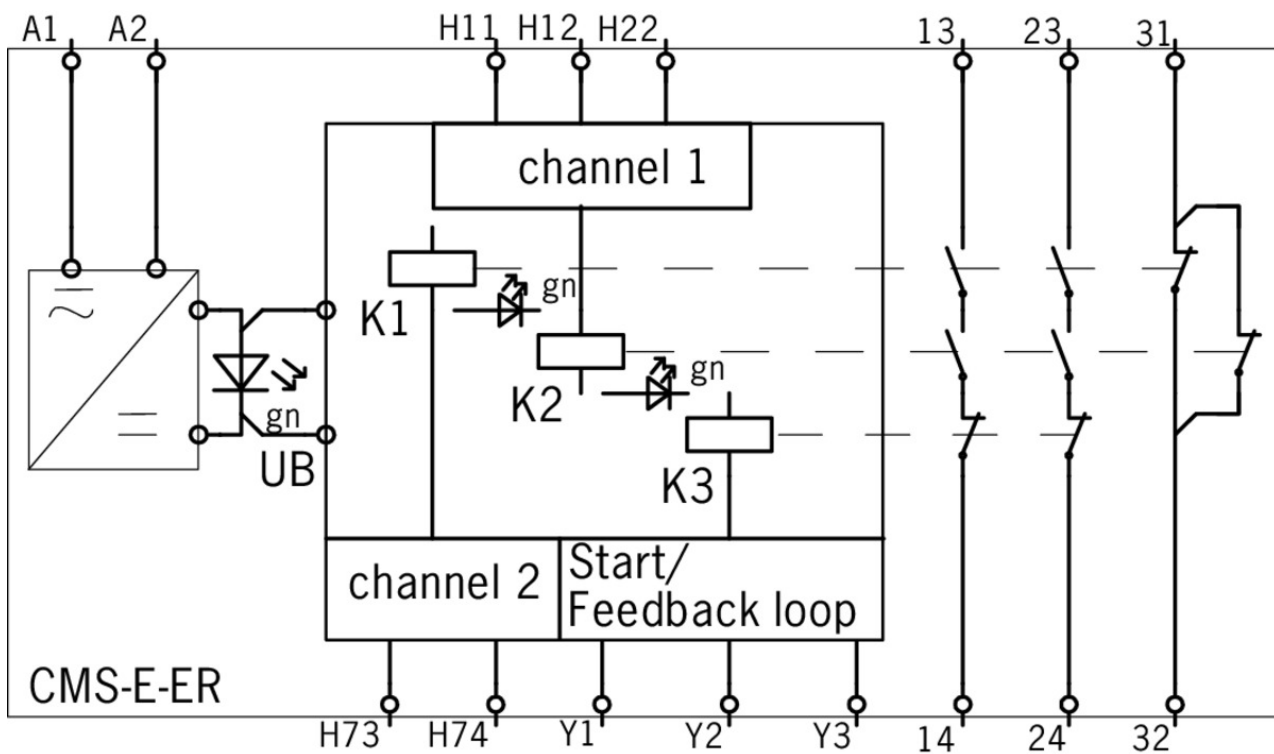
[13, 15, 16, 18, 19, 21, 22, 24, 25, 27, 28, 30] Figure only applies if there is no ferromagnetic material in the vicinity of the read head and the actuator.

[14, 17, 20, 23, 26, 29] The assured switch-off distance s_{ar} corresponds to the reset distance.

Dimension drawing



Block diagram



Additional system components

- Read heads CMS design A - with NC/NO contacts, PVC



084587 CMS-R-AXH-03V

✓ Features

- › In combination with evaluation units CMS-E-BR/CMS-E-ER/CMS-E-FR
 - › Cube-shaped version 88 x 25 mm
 - › Connection cable
 - › Cable type: PVC
-



085736 CMS-R-AXH-05V

✓ Features

- › In combination with evaluation units CMS-E-BR/CMS-E-ER/CMS-E-FR
 - › Cube-shaped version 88 x 25 mm
 - › Connection cable
 - › Cable type: PVC
-

✓ Read heads CMS design A - with NC/NO contacts, M8



100745 CMS-R-AXH-SC

✓ Features

- › In combination with evaluation units CMS-E-BR/CMS-E-ER/CMS-E-FR
 - › Cube-shaped version 88 x 25 mm
 - › Plug connector M8
-

✓ Read heads CMS design B - with NC/NO contacts, PVC



085530 CMS-R-BXI-03V

✓ Features

- › In combination with evaluation units CMS-E-BR/CMS-E-ER/CMS-E-FR
 - › Cube-shaped version 36 x 26 mm
 - › Connection cable
 - › Cable type: PVC
-



085737 CMS-R-BXI-05V

✓ Features

- › In combination with evaluation units CMS-E-BR/CMS-E-ER/CMS-E-FR
 - › Cube-shaped version 36 x 26 mm
 - › Connection cable
 - › Cable type: PVC
-

✓ Read heads CMS design B - with NC/NO contacts, PUR



115117 CMS-R-BXI-07P

✓ Features

- › In combination with evaluation units CMS-E-BR/CMS-E-ER/CMS-E-FR
 - › Cube-shaped version 36 x 26 mm
 - › Connection cable
 - › Cable type: PUR
-

✓ Read heads CMS design E - with NC/NO contacts, M8

103969 CMS-R-EXM-SC

✓ Features



- › In combination with evaluation units CMS-E-BR/CMS-E-ER/CMS-E-FR
 - › Cylindrical version M30
 - › Plug connector M8
-

▼ Read heads CMS design E - with NC/NO contacts, PVC



085743 CMS-R-EXM-05V

▼ Features

- › In combination with evaluation units CMS-E-BR/CMS-E-ER/CMS-E-FR
 - › Cylindrical version M30
 - › Connection cable
 - › Cable type: PVC
-



085634 CMS-R-EXM-03V

▼ Features

- › In combination with evaluation units CMS-E-BR/CMS-E-ER/CMS-E-FR
 - › Cylindrical version M30
 - › Connection cable
 - › Cable type: PVC
-

▼ Read heads CMS design C - with NC/NO contacts, M8



103967 CMS-R-CXC-SC

▼ Features

- › In combination with evaluation units CMS-E-BR/CMS-E-ER/CMS-E-FR
 - › Cylindrical version M25
 - › Plug connector M8
-

▼ Read heads CMS design C - with NC/NO contacts, PVC



085741 CMS-R-CXC-05V

▼ Features

- › In combination with evaluation units CMS-E-BR/CMS-E-ER/CMS-E-FR
 - › Cylindrical version M25
 - › Connection cable
 - › Cable type: PVC
-



084575 CMS-R-CXC-03V

▼ Features

- › In combination with evaluation units CMS-E-BR/CMS-E-ER/CMS-E-FR
 - › Cylindrical version M25
 - › Connection cable
 - › Cable type: PVC
-

▼ Read heads CMS design B - with NC/NO contacts, M8



100696 CMS-R-BXI-SC

▼ Features

- › In combination with evaluation units CMS-E-BR/CMS-E-ER/CMS-E-FR
- › Cube-shaped version 36 x 26 mm
- › Plug connector M8

✓ Read heads CMS design C - with NC/NO contacts, PUR



103872 CMS-R-CXC-05P

✓ Features

- › In combination with evaluation units CMS-E-BR/CMS-E-ER/CMS-E-FR
- › Cylindrical version M25
- › Connection cable
- › Cable type: PUR

Instructions

✓ Betriebsanleitung Auswertegerät CMS-E-ER

	Doc. no.	Version	Language	Download
Betriebsanleitung Auswertegerät CMS-E-ER Operating Instructions Evaluation Unit CMS-E-ER Manual de instrucciones Unidad de evaluación CMS-E-ER Mode d'emploi Analyseur CMS-E-ER	2102344	10-06/18	 	1.1 MB

✓ Sicherheitsinformation CMS-E-.R

	Doc. no.	Version	Language	Download
Sicherheitsinformation CMS-E-.R Safety Information CMS-E-.R Información de seguridad CMS-E-.R Information de sécurité CMS-E-.R	137276	01-09/16	 	0.4 MB

Catalogs

✓ Magnetisch codierte Sicherheitsschalter CMS
Magnetically Coded Safety Switches CMS

	Doc. no.	Version	Language	Download
Magnetisch codierte Sicherheitsschalter CMS	086823	09-02/18		2.3 MB
Système de sécurité sans contact CMS	090606	09-02/18		2.3 MB
Magnetically Coded Safety Switches CMS	086824	09-02/18		2.3 MB

Declaration of conformity

✓ EU-Konformitätserklärung

	Doc. no.	Version	Language	Download
EU-Konformitätserklärung Declaración UE de conformidad Déclaration UE de conformité Dichiarazione di conformità EU declaration of conformity	2112987	07-05/17	 	0.3 MB

CAD data

CAD data for this item on TraceParts