



## E-stop / mat-, edges-control relays

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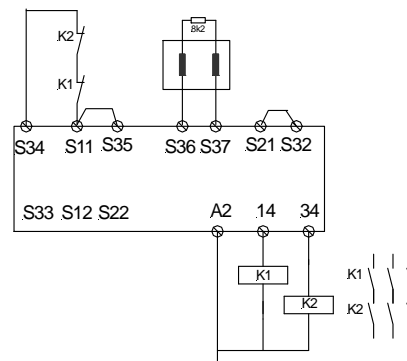
→ <b>DEVICE</b>	<b>SAFE CM</b>
→ APPLICATIONS	Safety controller for safety mats and safety bars with a or a finalizing resistor 8,2 kOhms
→ APPROVALS	CE, TÜV, UL, C-UL
→ CONTACTS	4 safety semiconductor outputs (OSSD)
→ SPECIAL CHARACTERISTICS	LED indicators for status and supply diagnostic wearless semiconductor outputs, "AND" function between several SAFE C possible, automatic start possible
→ LED	Power, channel 1 and channel 2
→ OPERATING VOLTAGE	24 V DC ( + 25 - 20 % ) Overvoltage protection
→ POWER CONSUMPTION	ca. 3 W
→ START UP DELAY / FALLBACK TIME	<30 ms / <140 ms (single channel <360 ms)
→ CONTACT CAPACITY max.	total current 1,8 A
→ CONTACT CAPACITY min. at 24 V DC (*)	infinite
→ SIMULTANEITY	not necessary
→ ENVIRONMENTAL TEMPERATURE	-25°C to + 55°C
→ SWITCHING CAPACITY	to 43 W
→ CONTACT SECURITY	short circuit proof

→ **OPERATING MODE**  
(\*) We offer all devices who have a CONTACT CAPACITY of min. 100 mA at 24 V DC with hard gold-plated contacts.  
In this way the CONTACT CAPACITY of min. 100 mA is only 4 mA.  
Please ask our sales team!

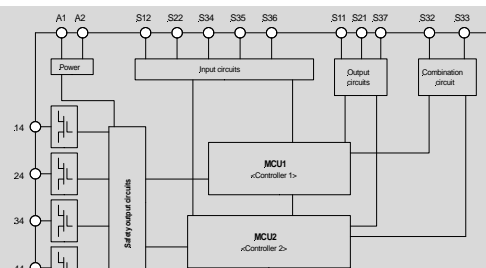
4 wire technology with wire break protection or 2 wire technology and terminating resistor with wire break protection are optional. Start monitoring and automatic start are optional. For monitoring of external relays to n.c. contacts are put in series of the start circuit "AND" function among several SAFE C is possible.

A1 + 24 V DC  
A2 0 V DC

→ **CONNECTION DIAGRAM**



→ **FUNCTION CIRCUIT DIAGRAM**



→ **Certifications according to Safety relevant substance data**  
Depending on wiring (only max. achievable values are given)

EN ISO 13849-1 / EN 61508: PL<sub>e</sub>, Cat. 4 / SIL3  
MTTFd: 163 years / high, DC: high, CCF: achieved,  
PFH:  $2,87 \cdot 10^{-9} / h$ , PFD:  $2,01 \cdot 10^{-6} / h$ , SFF: 0,9573