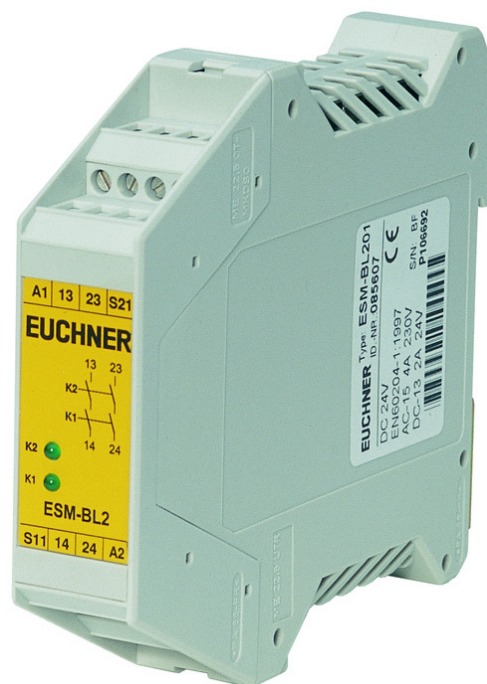


## ITEM 085608 ESM-BL202

Description	Technical data	Accessories	Downloads
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### Features

- › Usage up to category 3 according to EN ISO 13849-1
- › LED status indicators
- › 1-channel or 2-channel control
- › 2 redundant safety contacts

### Relay outputs

The outputs are electrically decoupled and of redundant design.

### Connection options

By using suitable wiring the following functions can be selected:

- › Relay start with automatic start or a start button
- › Monitoring of downstream relays or contactors

### Approvals



Functional  
Safety  
Type  
Approved  
www.tuv.com  
ID 0600000000



## Mechanical values and environment

Housing material	Polyamide PA6.6
Weight	
Net	0,23 kg
Ambient temperature	
At $U_B = 115/230V$ AC	-15 ... 40 °C
Degree of protection	IP20
Mechanical life	
operating cycles	$10 \times 10^6$
Contact material	AgNi-10
Mounting method	Mounting rail 35mm according to DIN EN 60715 TH35
Connection	Connection terminals
Length of control cable	
With conductor cross-section $0.75\text{mm}^2$	1000 m
	<b>Safety contacts 13/14, 23/24</b>
Number of safety contacts	2

## Electrical connection ratings

Operating voltage	
AC	115 V -10% ... +10%
Power consumption (apparent power)	
At 230 V AC	3,5 VA
Rated insulation voltage $U_i$	250 V
Rated impulse withstand voltage $U_{imp}$	
Leakage path/air gaps	4 kV
Overtoltage category according to IEC EN 60664-1	3
Rated supply frequency	50 ... 60 Hz
Degree of contamination (external, according to EN 60947-1)	2
Connection cross-section	0,14 ... 2,5 $\text{mm}^2$
Test voltage	
Control system/contacts	2,5 kV
Control voltage	
On S11	18,6 ... 24 V 26 V Start button
Control current	
S11...S14	40 mA
LED indicator	2 status displays (green) for relays K1 and K2
	<b>Safety contacts 13/14, 23/24</b>
Type of output	

	NO	Relay contacts, floating and positively driven (redundant) <b>[1]</b>
Switching voltage	AC	max.250 V
	DC	max.24 V
Switching current		at 24Vmin.20 mA
Fusing		
External contact fuses (safety circuit) according to IEC 60269-1		10A gG (T4A / F6A)
Utilization category according to EN 60947-5-1		
	AC-15	4A ,250V
	DC-13	2A, 24V
	AC-12	6A ohmic load, 250V
	DC-12	1.25A ohmic load, 24V
Breaking capacity according to UL		6A 250V AC / 2A 24V DC

## Miscellaneous

in compliance with	EN 60439-1: 1999 + A1: 2004; EN 60947-1: 2007; EN 60947-5-1: 2004; EN 60947-7-1: 2002; EN 61000-6-2: 2005; EN 61000-6-3: 2007; EN ISO 13849-1: 2015; EN 62061: 2005 + AC: 2010 + A1: 2013 + A2: 2015; EN 60204-1: 2007
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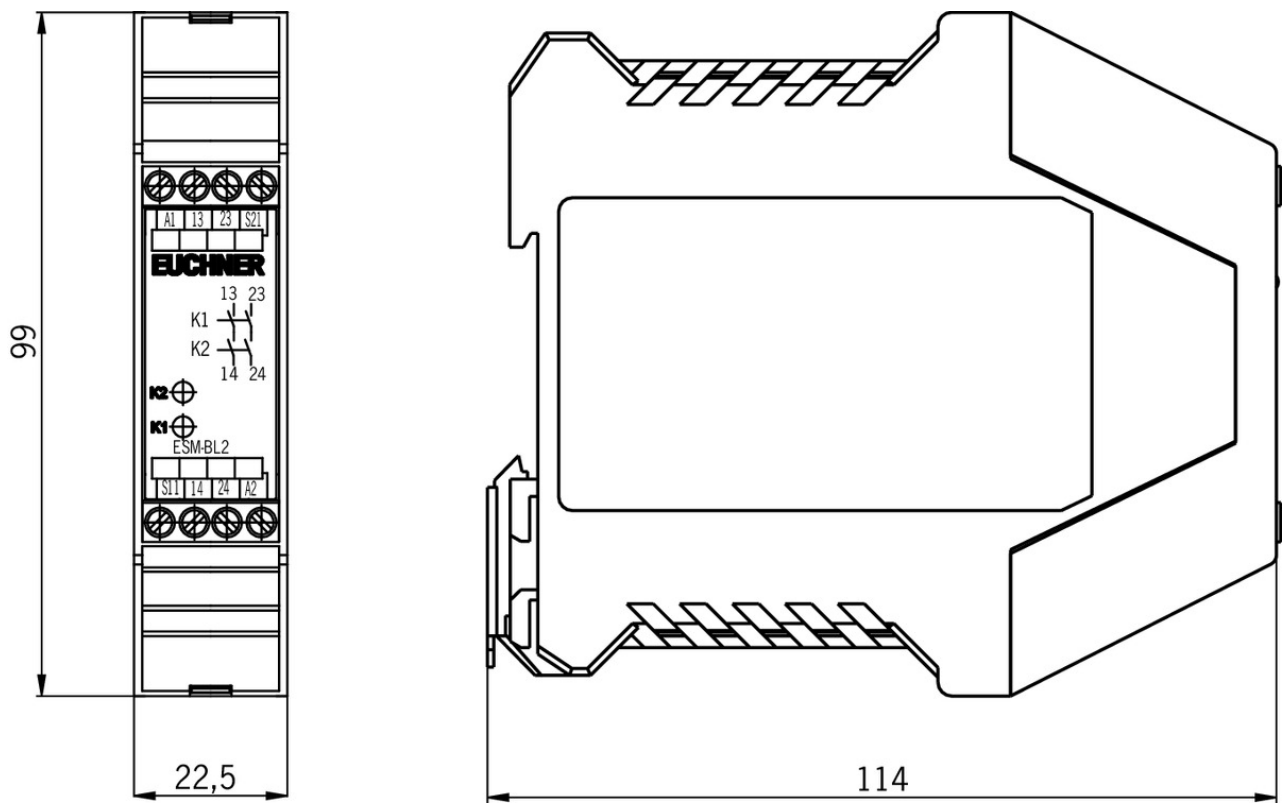
## Reliability values acc. to EN ISO 13849-1

Performance Level	PL d <b>[2]</b>
Category	3 <b>[3]</b>
PFH <sub>D</sub>	$1.03 \times 10^{-7}$ <b>[4]</b>
Number of switching cycles	
≤ 0.1 A at 24 V DC	max.400000 1/Jahr
≤ 1 A at 24 V DC	max.73000 1/Jahr
≤ 2 A at 24 V DC	max.17000 1/Jahr
Mission time	20 y <b>[5]</b>

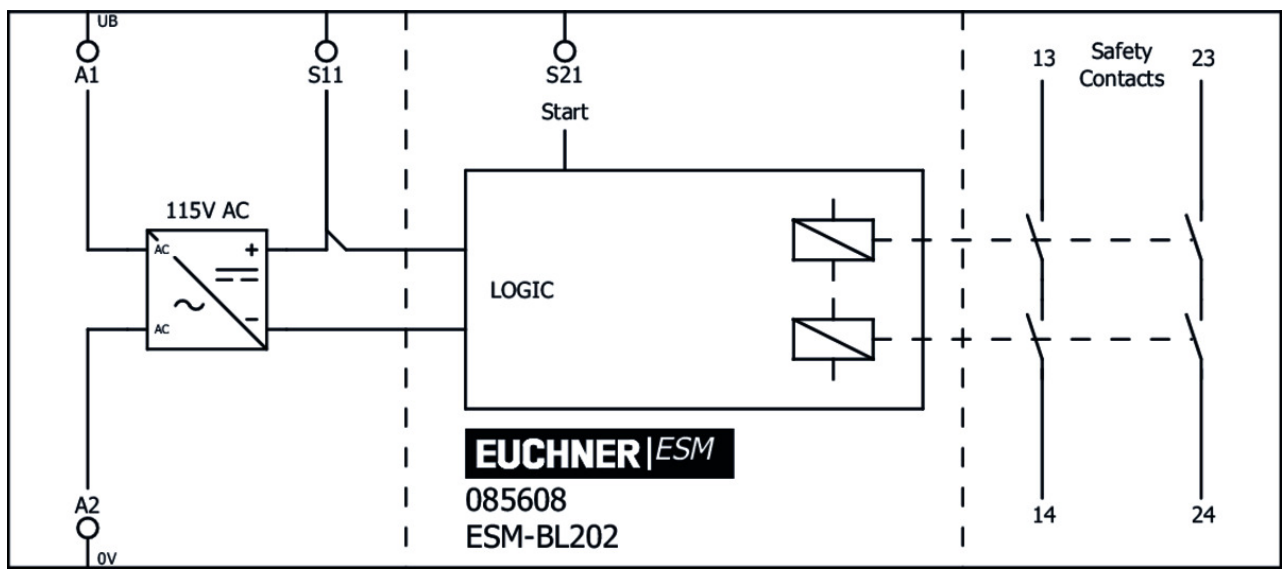
**[1]** Positively driven relay according to EN 50205

**[2, 3, 4, 5]** This value is dependent on the number of switching cycles and the switching current.

### Dimension drawing



### Block diagram











### Instructions

✓ Basisgerät Baureihe ESM-BL2..

	Doc. no.	Version	Language	Download
Basisgerät Baureihe ESM-BL2..	090070	07-03/15		1.0 MB
Emergency Stop Safety Relay ESM-BL2..	090070	07-03/15		0.6 MB






## Catalogs

### ▼ Sicherheitsrelais ESM Safety Relays ESM Relais de sécurité ESM 安全继电器 ESM

	Doc. no.	Version	Language	Download
Sicherheitsrelais ESM	110650	05-02/13		 6.7 MB
Relais de sécurité ESM	110652	05-02/13		 6.8 MB
Safety Relays ESM	110651	05-02/13		 6.7 MB
安全继电器 ESM	155884	05-02/13		 4.6 MB

## Declaration of conformity

### ▼ EU-Konformitätserklärung

	Doc. no.	Version	Language	Download
EU-Konformitätserklärung	2090791	15-04/17		 0.3 MB
Declaración UE de conformidad				
Déclaration UE de conformité				
Dichiarazione di conformità				
EU declaration of conformity			