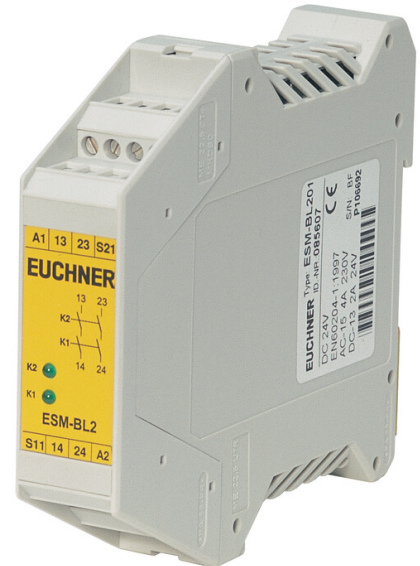


## ESM-BL201 (ORDER NO. 085607)

Basic device ESM-BL., 2 safety contacts, cat. 3

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



### Description

#### Relay outputs

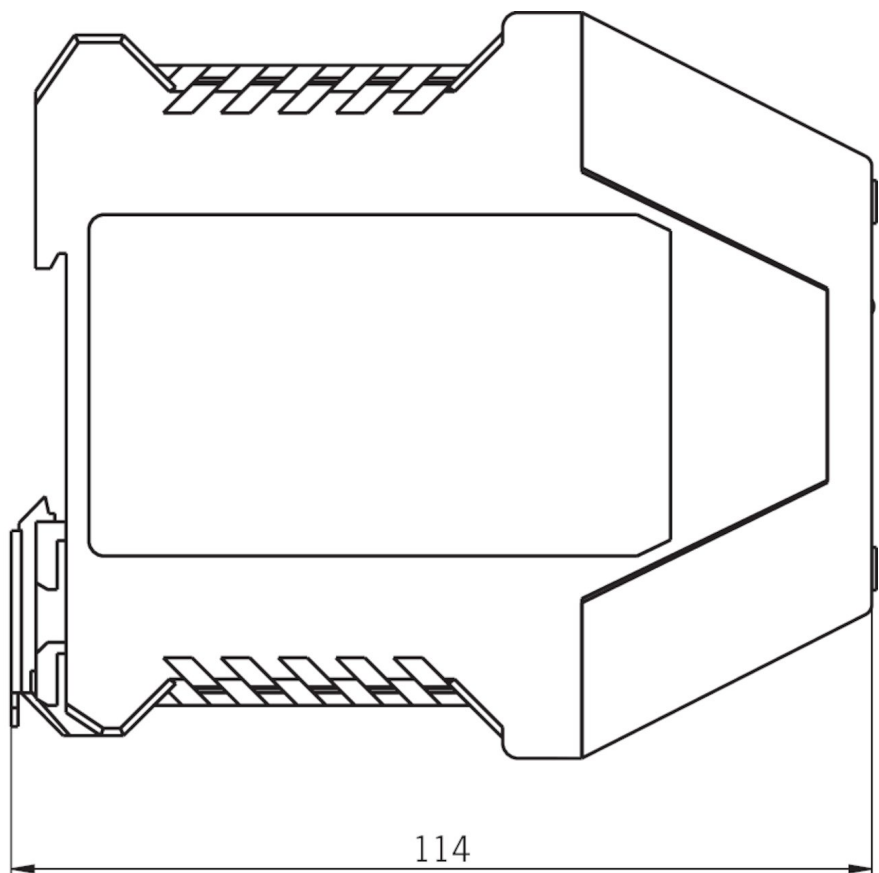
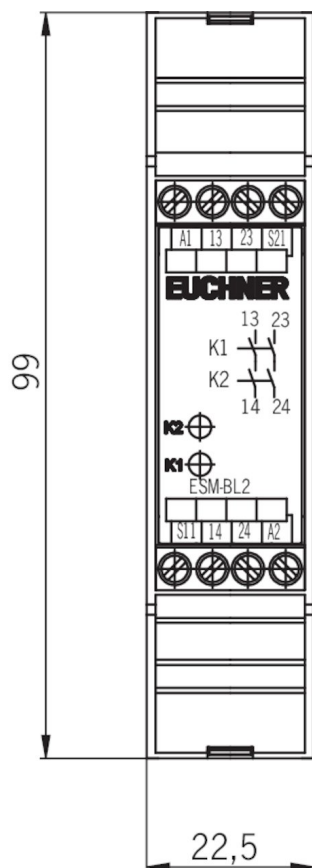
The outputs are electrically decoupled and of redundant design.

#### Connection options

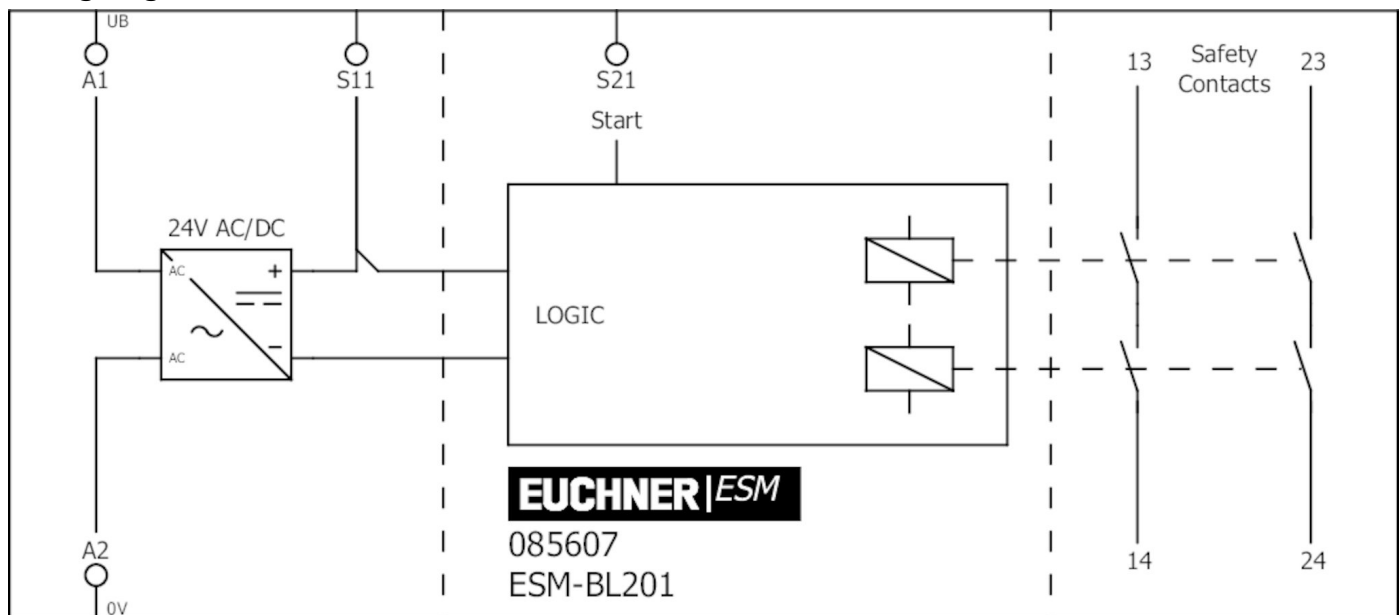
By using suitable wiring the following functions can be selected:

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

#### Dimension drawing



Wiring diagram



## Technical data

### Approvals



### Mechanical values and environment

Housing material		
	Housing	Polyamide PA6.6
Weight		
	Net	0,23 kg
Ambient temperature		
	At $U_B = 24V$ DC	-15 ... 60 °C
	At $U_B = 24V$ 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/DC	24 V -10% ... +10% (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.)
Rated insulation voltage $U_i$		250 V
Rated impulse withstand voltage $U_{imp}$		
	Leakage path/air gaps	4 kV
Overvoltage category according to IEC EN 60664-1		3
Reverse polarity protection		
	On version $U_B = 24V$ DC	
Rated supply frequency		50 ... 60 Hz
Connection rating		
	at 24V DC	1,2 W
Degree of contamination (external, according to EN 60947-1)		2
Connection cross-section		0,14 ... 2,5 mm <sup>2</sup> (Connection terminal (size))
Test voltage		
	Control system/contacts	2,5 kV
Control voltage		
	On S11	24 V 18,6 ... 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) (Positively driven relay according to EN 50205)
Switching voltage		
	AC	max.250 V
	DC	max.24 V
Switching current		min.20 mA at 24V
Fusing		
	External contact fuses (safety circuit) according to IEC 60269-1	10A gG
Utilization category acc. 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


## Other


In compliance with	EN ISO 13849-1: 2015; EN 62061: 2005 + AC: 2010 + A1: 2013 + A2: 2015; EN 50581: 2012 (RoHS)
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Reliability values according to EN ISO 13849-1


Performance Level	PL d (This value is dependent on the number of switching cycles and the switching current.)
Category	3 (This value is dependent on the number of switching cycles and the switching current.)
PFH <sub>D</sub>	$1.03 \times 10^{-7}$ (This value is dependent on the number of switching cycles and the switching current.)
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 (This value is dependent on the number of switching cycles and the switching current.)

## Contacts

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