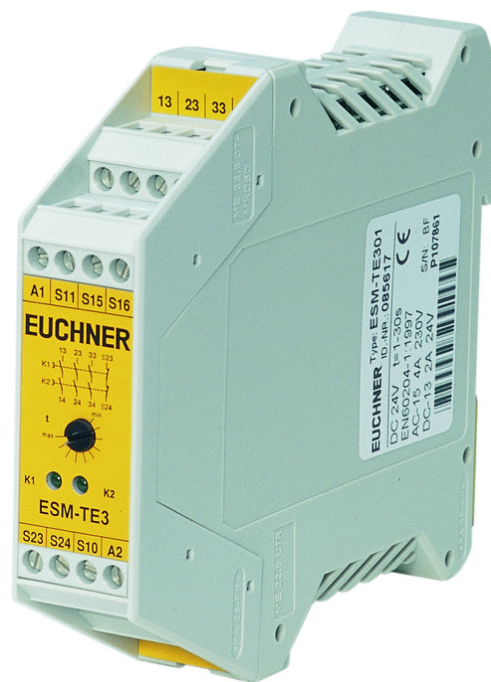


ITEM 085617 ESM-TE301

Description	Technical data	Accessories	Downloads
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Features

- › Usage up to category 3 according to EN ISO 13849-1
- › LED status indicators
- › Control using safety relays
- › 3 redundant time-delayed safety contacts
- › Delay time-range 1 s - 30 s
- › 1 auxiliary contact
- › Earth fault/ground fault monitoring can be selected

Relay outputs

The outputs are electrically decoupled and of redundant design.

Connection

By using suitable wiring the following function can be selected:

- › Earth fault/ground fault monitoring to detect short circuits between the connection cables and earth or ground and to shut down the outputs or prevent relay starting if necessary.

Time-delayed shutdown

The release time for the time-delay contacts can be set as required using a potentiometer on the safety relay.

Approvals



Mechanical values and environment

Housing material	Polyamide PA6.6
Weight	
Net	0,23 kg
Ambient temperature	
At $U_B = 24V$ AC	-15 ... 40 °C
At $U_B = 24V$ DC	-15 ... 60 °C
Degree of protection	IP20
Mechanical life	
operating cycles	10×10^6
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 0.75mm^2	1000 m
	Safety contacts 17/18, 27/28, 37/38
Number of safety contacts	3
	Auxiliary contacts S25/S26
Number of auxiliary contacts	1

Electrical connection ratings

Operating voltage	
AC/DC	24 V -10% ... +10% [1]
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
Reverse polarity protection	
On version $U_B = 24V$ DC	
Power consumption	
at 24V DC	1,5 W

Degree of contamination (external, according to EN 60947-1)	2
Connection cross-section	0,14 ... 2,5 mm ²
Test voltage	
Control system/contacts	2,5 kV
Control voltage	
On S11	24 V
Control current	
S11...S14	40 mA
LED indicator	2 status displays (green) for relays K1 and K2
Safety contacts 17/18, 27/28, 37/38	
Type of output	
NO	Relay contacts, positively driven (redundant) [2]
Switching voltage	
AC	max.250 V
DC	max.24 V
Switching current	at 24Vmin.20 mA
Cumulative current	For all contactsmax.10,5 A [3]
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 per contact
Switching characteristics	Safety contacts with adjustable time-delay
Delay time	
Continuously adjustable	1 ... 30 s
Auxiliary contacts S25/S26	
Type of output	
NC	As monitoring contact for safety relay
Switching characteristics	Auxiliary contacts with adjustable time-delay

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 [4]
Category	3 [5]
PFHD	1.03×10^{-7} [6]
Number of switching cycles	
≤ 0.1 A at 24 V DC	max.400000 1/Jahr
≤ 1 A at 24V DC	max.73000 1/Jahr
≤ 3 A at 24V DC	max.17000 1/Jahr
Mission time	20 y [7]

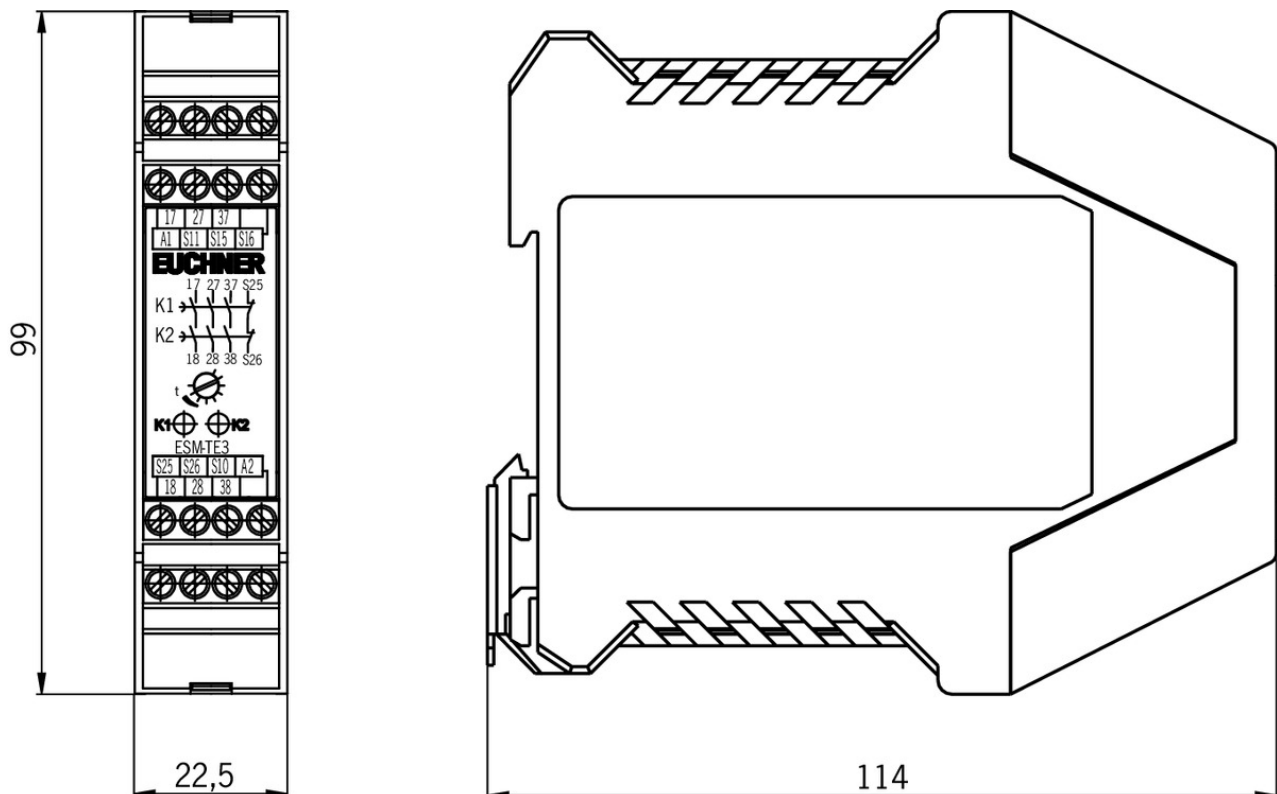
[1] All the electrical connections must either be isolated from the mains supply by a safety transformer according to EN 61558-2-6 with limited output voltage in the event of a fault, or by other equivalent isolation measures.

[2] Positively driven relay according to EN 50205

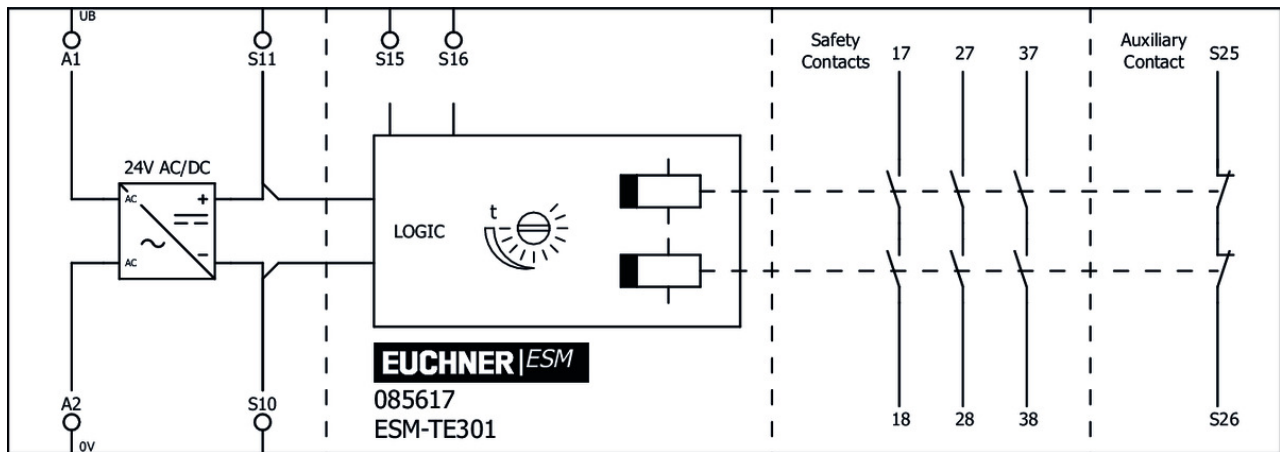
[3] Also applies for UL

[4, 5, 6, 7] This value is dependent on the number of switching cycles and the switching current.

Dimension drawing



Block diagram



Instructions

▼ Sicherheits-Kontakterweiterung ESM-TE3..

	Doc. no.	Version	Language	Download
Sicherheits-Kontakterweiterung ESM-TE3..	090075	08-02/15		0.6 MB
Time-Delayed Safety Relay ESM-TE3..	090075	08-02/15		0.5 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 Declaración UE de conformidad Déclaration UE de conformité Dichiarazione di conformità EU declaration of conformity	2090791	15-04/17	 	0.3 MB