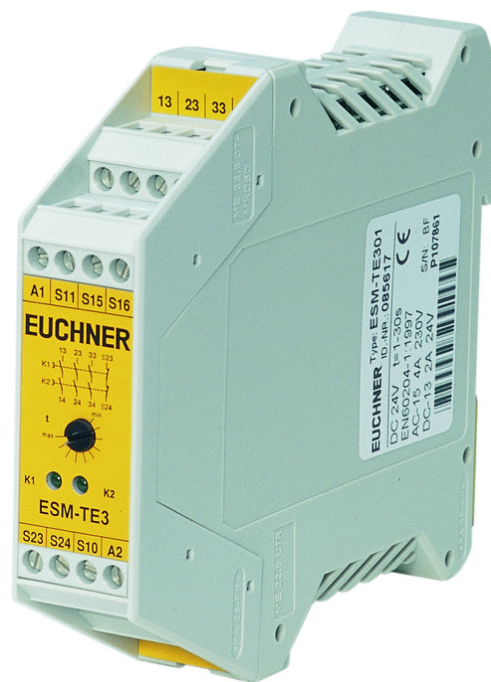


ITEM 097223 ESM-TE301-05S

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
- › Fixed time delay of 0.5 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.

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, floating, 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
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
Switching characteristics		Safety contacts with fixed time-delay
Delay time	Fixed	0,5 s
	Auxiliary contacts S25/S26	
Type of output	NC	As monitoring contact for safety relay
Switching characteristics		Auxiliary contacts with fixed 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 [3]	
Category	3 [4]	
PFH _D	1.03 x 10 ⁻⁷ [5]	
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

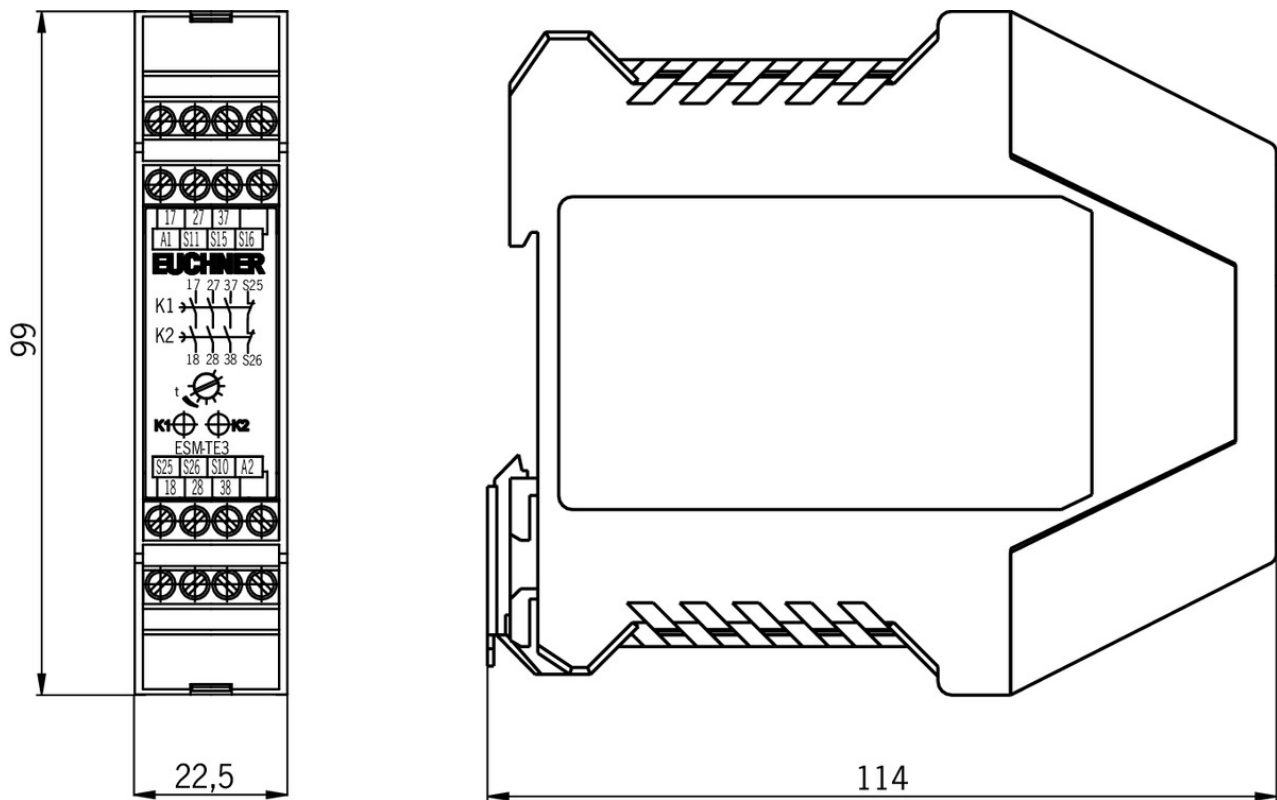
Mission time 20 y [6]

[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.

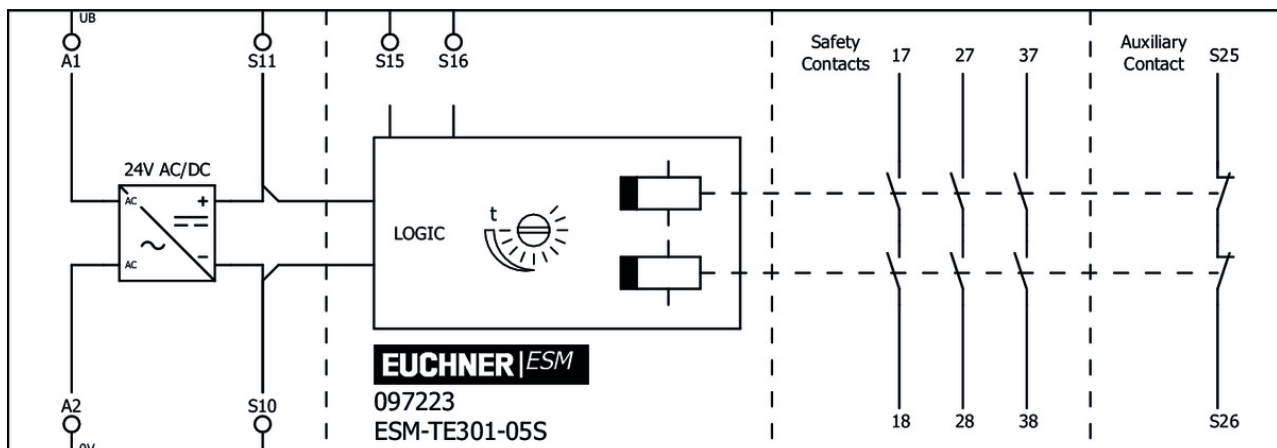
[2] Positively driven relay according to EN 50205

[3, 4, 5, 6] 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	2090791	15-04/17		 0.3 MB
Declaración UE de conformidad				
Déclaration UE de conformité				
Dichiarazione di conformità				
EU declaration of conformity			