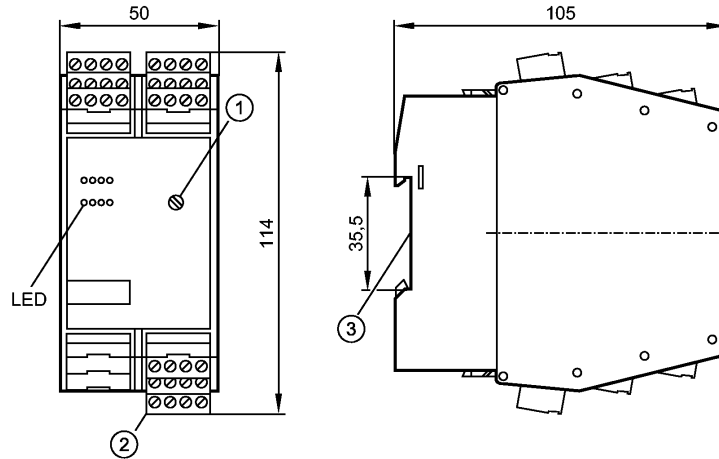




Safety switch gear

Evaluation systems for safety and hazardous areas



- 1: Rotary switch for switch-off delay
- 2: Combicon connector with screw terminals
- 3: Mounting on DIN rail



Made in Germany

Product characteristics

Safety relay

Terminal block Phoenix Contact MSTBO

For the connection of electronic and mechanical fail-safe sensors/switches and for use as two-hand control

Complies with the requirements:

EN ISO 13849-1: category 4 PL e

IEC 61508: SIL 3

EN 574: type III C

Electrical data

Electrical design

Operating voltage	[V]
Current consumption	[mA]
Power-on delay time	[s]

Relay	
Operating voltage	24 DC (19.2...30 DC); incl. 5 % residual ripple
Current consumption	< 500
Power-on delay time	6

Inputs

Current through feedback contacts[mA]

Input characteristics

Current through feedback contacts	> 10
Input characteristics	S34, S43: "1": > 11 V, 6 mA "0": < 5 V, < 500 µA

Outputs

Output function

Output data

3 safety-related NO contacts (floating) without delay;  
2 non safety-related signal outputs without delay (1 x NO, 1 x NC, floating contacts)  
2 safety-related NO contacts (floating) with switch-off delay  
1 signal output (positive switching) with delay

Output data	S33: push-pull short-circuit proof "0": Isink ~ 30 mA "1": Isource ≥ 50 mA, U > 18 V S44: "0": Ires ≤ 300 µA "1": Isource ≥ 50 mA, U > 18 V Y7: "0": Ires ≤ 300 µA "1": Isource ≥ 11 V (30 mA), ≥ 15 V (15 mA)
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Contact rating

Short-circuit protection

6 A, 250 V AC / 24 V DC (≥ 6 mA); max. total current: 12 A  
The contacts are to be protected by means of fuses with a nominal current of < 3.6 A.

# G1502S - Safety relay - eclass: 27272401 / 27-27-24-01

Reaction times	
Duration of switch-off test pulses [µs]	≤ 500
Environment	
Ambient temperature [°C]	-25...55
Protection	IP 20
Safety classification	
Mission time TM [h]	≤ 175200
Safety-related reliability PFHd [1/h]	< 5.86E-09 *)
MTTFd [Years]	122 *)
DC/CCF/Cat.	99 % / 80 % / 4
B10d	≤ 400000
Mechanical data	
Housing materials	PA (polyamide)
Weight [kg]	0.54
Displays / operating elements	
Display	Voltage green Fault 2x red Switching status 3x yellow Input pulses 2x yellow
Electrical connection	
Connection	Combicon connector with screw terminals
Accessories	
Accessories (included)	Combicon connector with screw terminals
Remarks	
Remarks	Additional comments concerning the cULus approval (UL 508): <ul style="list-style-type: none"> <li>• Maximum ambient temperature 55°C (in the control cabinet)</li> <li>• The safety functions were not assessed by UL. The approval has been made according to UL 508 for general applications.</li> <li>• Use 60/75°C copper conductors only.</li> <li>• For use in pollution degree 2 environment</li> <li>• Same polarity (phase) referred to the output contacts</li> </ul> *) with h(op) = 24 h, d(op) = 365 days, t(cycle) = 3600 s
Pack quantity [piece]	1
Other data	

Response time [ms]		
	Release	Safety requirement
Fail-safe sensors/switches with 2 x PNP	70	30
Clocked fail-safe sensors	160	100
Two-hand control using electronic sensors	70	30
Two-hand control using mechanical switches	110	30
Mechanical fail-safe switches (e-stop)	110	30