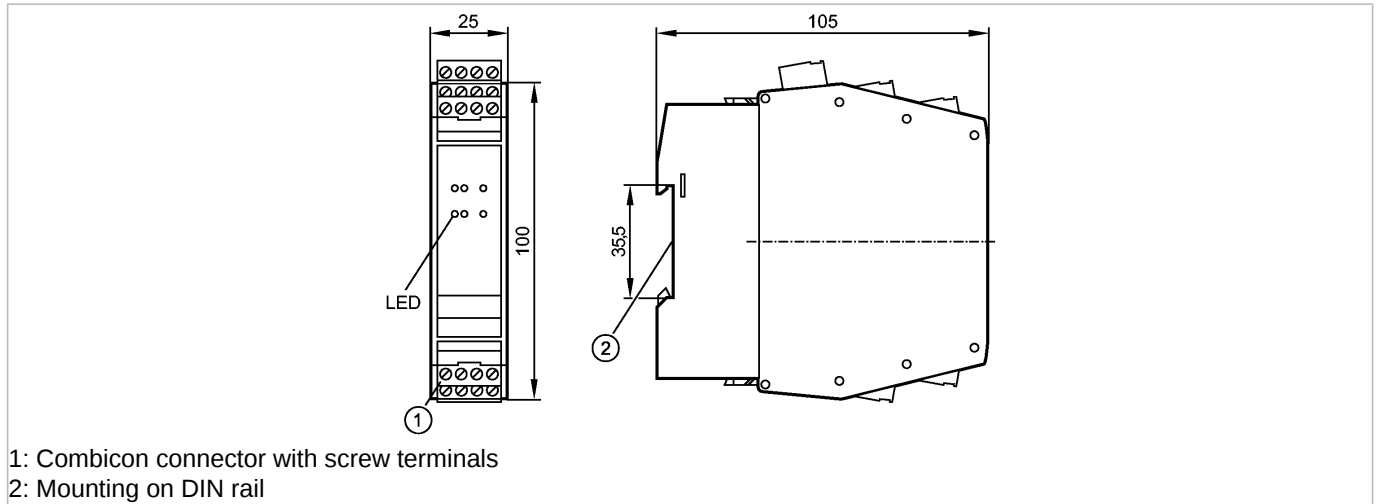


G1501S

Safety switch gear

Evaluation systems Safety



1: Combicon connector with screw terminals
2: Mounting on DIN rail



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 IIIC

Electrical data

Electrical design	Relay
Operating voltage [V]	24 DC (19.2...30 DC); incl. 5 % residual ripple
Current consumption [mA]	< 200

Inputs

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

Outputs

Output function	2 safety-related NO contacts (floating contacts); 1 signal output (positive switching)
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)
Contact rating	6 A, 250 V AC / 24 V DC (≥ 6 mA)
Short-circuit protection	The contacts are to be protected by means of fuses with a nominal current of < 3.6 A.

Reaction times

Power-on delay time [s]	6
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Environment

G1501S

Safety switch gear

Evaluation systems Safety

Ambient temperature	[°C]	-25...55
Protection		IP 20

Safety classification

Mission time TM	[h]	≤ 175200
Safety-related reliability PFHd	[1/h]	< 2.2E-09 *)
MTTFd	[Years]	136 *)
DC/CCF/Cat.		99 % / 80 % / 4
B10d		≤ 780000

Mechanical data

Housing materials		PA (polyamide)
Weight	[kg]	0.28

Displays / operating elements

Display	Voltage green Marginal signal red Switching status 2x yellow Input pulses 2x yellow
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Electrical connection

Connection	Combicon connector with screw terminals
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Accessories

Accessories (included)	Combicon connector with screw terminals
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Remarks

Remarks	Additional comments concerning the cULus approval (UL 508): <ul style="list-style-type: none"> • Maximum ambient temperature 55°C (in the control cabinet) • The safety functions were not assessed by UL. The approval has been made according to UL 508 for general applications. • Use 60/75°C copper conductors only. • For use in pollution degree 2 environment • Same polarity (phase) referred to the output contacts *) with h(op) = 24 h, d(op) = 365 days, t(cycle) = 8640 s
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Pack quantity	[piece]	1
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Other data

Response time [ms]	release	Safety requirement
Fail-safe sensors/switches with 2 x PNP	40	30
Clocked fail-safe sensors	160	180
Two-hand control using electronic sensors	40	30
Two-hand control using mechanical switches	110	30
Mechanical fail-safe switches (e-stop)	110	30