

Emergency-Stop and guard door monitoring

SRB 308 IT

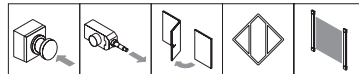


- Multifunctional safety relay module for superior diagnostics and visualisation
- Signal evaluation of potential-free contacts, e.g. emergency stop command devices, position switches with safety function, solenoid interlocks and safety sensors
- Signal evaluation of potential outputs, for instance safety light curtains and grids
- 1 or 2 channel control
- 3 enabling paths, Stop 0
- 2 signalling contacts (NC/NO)
- optionally cross-wire monitoring, reset with edge detection or automatic start
- 5 LEDs to show operating conditions
- 6 diagnostic outputs for the operating state
- start-up test
- With hybrid fuse
- Control Category 4 to EN 954-1
- Plug-in terminals

Technical data

Standards:	IEC/EN 60204-1, EN 954-1, BG-GS-ET-20
Stop category	3x Stop 0
Control category:	4
Start conditions:	Reset button with edge detection, auto start
Enclosure:	glass-fibre reinforced thermoplastic, ventilated
Termination:	plug-in, screw terminals
Cable section:	max. 2.5 mm ² solid or multi-strand lead (incl. conductor ferrules)
U _e :	24 VDC -15%/+20%, residual ripple max. 10% 24 VAC, 48 VAC, 115 VAC, 230 VAC -15%/+10%
Frequency range:	50/60 Hz (on AC operational voltage)
I _e :	max. 0.125 A
Protection class:	terminals IP 20 enclosure IP 40 to EN 60529
Power consumption:	max. 3 VA, 3 W
Max. fuse rating:	Internal electronic trip F1, tripping current > 0.5 A, reset after disconnection of supply voltage
Monitored inputs	1 or 2 channels
Feedback circuit:	yes
Drive circuits:	S11/S12, S21/S22, S31/S32: max. 28 VDC
Utilisation category:	AC-15, DC-13
Enabling contacts:	3 enabling paths
Switching capacity:	enabling paths: 6 A/230 VAC, 6 A/24 VDC
Fuse rating:	enabling paths: 6 A slow blow
Signalling contacts:	1 NC contact / 1 NO contact
Switching capacity:	Indicating contact: 2 A/24 VDC
Signalling output:	Y1 - Y6: 6 transistor outputs, 100 mA total
Contact material:	AgNi, AgSnO, self-cleaning, positive action
Contact resistance:	max. 100 mΩ in new condition
External auxiliary voltage:	A1.1: 24 VDC -10%/+10%
Pull-in delay:	≤ 60 ms / ≤ 200 ms (Auto-start/Reset button)
Drop-out delay:	≤ 20 ms
Air clearances and creepage distances:	DIN VDE 0110-1 (04.97), 4 kV/2
Overvoltage category:	III to DIN VDE 0110
Degree of pollution:	2 to DIN VDE 0110
Ambient temperature:	- 25 °C ... + 45 °C (Derating curve on request)
Mechanical life:	10 million operations
Function display:	6 LEDs
Weight:	340 g
Dimensions:	45 x 100 x 121 mm

Approvals



Ordering details

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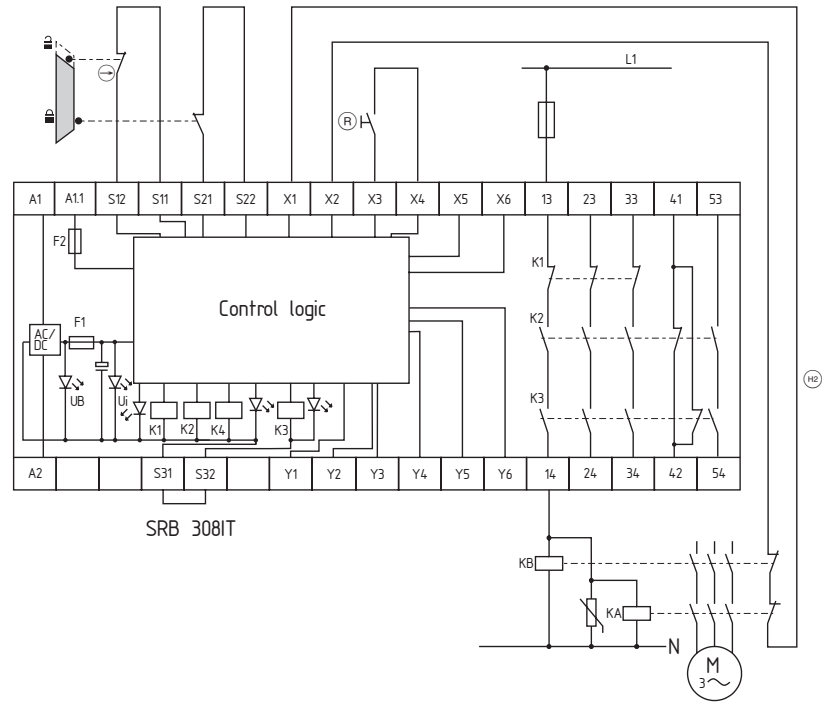
No.	Replace	Description
①	24V	24 VAC/DC
	48V	48 VAC
	115V	115 VAC
	230V	230 VAC

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Note

- 2 channel control (Example without cross-wire monitoring), shown for a guard-door monitor with two contacts, of which at least one contact has positive break, with external reset button (R) and feedback circuit (H)
- The control recognises cross-wire shorts, cable breakage and earth leakages in the monitoring circuit.
- Duties: Suitable for 2 channel control, for increase in capacity or number of contacts by means of contactors or relays with positive-guided contacts.
- F1 = Hybrid fuse
- F2 = Fuse for signalling outputs
- For 2-channel control with cross-wire monitoring, connect the NC contact to S11/S12 and S31/S32 and bridge S21/S22
- For 1-channel control, connect the NC contact to S11/S12 and bridge S21/S22 and S31/S32
- Start function / Reset button
The function „trailing edge“ is programmed by means of the „AF“ switch located underneath the housing cover (switch position = 1). The automatic start is programmed by bridging terminals X3/X5 and by switching the „AF“ switch to 0. The time offset between the channels is approx. 100 ms. An endless time offset between the channels 1 and 2 is programmed by bridging the terminals X3/X6.
- Connect potential p-type outputs of safety light grids/curtains to S12/S22. The devices must have the same reference potential.

Wiring diagram



LED

Function indication:

The integrated LEDs indicate the following operating states.

- Position relay K1
- Position relay K2
- Position relay K3
- Supply voltage UB
- Interne Operating voltage Ui

Note

The wiring diagram is shown with guard doors closed and in de-energised condition.

The ISD tables (Integral System Diagnostics) for analysis of the fault indications and their causes are shown in the appendix.