



SRB308IT-230VAC

- Level 1: Reset without edge detection, Optional Automatic reset function, Short-circuit recognition, Level 2: / Opener (NC) Normally open contact (NO)
- Multifunctional safety relay module for superior diagnostics and visualisation
- Suitable for the signal processing of outputs with contact sensors
- Suitable for signal processing of outputs connected to potentials (AOPDs), e.g. safety light grids/curtains
- Suitable for the signal processing of outputs with contact sensors
- 3 safety contacts, STOP 0
- 2 + 6 Signalling outputs

Data

Ordering data

Note (Delivery capacity)	Not available!
EAN (European Article Number)	4250116201563
eCl@ss number, Version 9.0	27-37-18-19
eCl@ss number, Version 11.0	27-37-18-19
ETIM number, version 6.0	EC001449
Replacement article number	101166107

Approval - Standards

Certificates	cULus EAC
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General data

Standards	IEC 61508 IEC/EN 60204-1 EN 60947-5-1 EN ISO 13849-1
Climatic stress	EN 60068-2-78
Enclosure material	Glass-fibre reinforced thermoplastic, ventilated
Material of the contacts, electrical	AgSn0, Ag-Ni, self-cleaning, positive drive
Gross weight	480 g

General data - Features

Stop-Category	0
Electronic Fuse	Yes
Wire breakage detection	Yes
Short-circuit recognition	Yes
Removable Terminals	Yes
Start input	Yes
Feedback circuit	Yes
Automatic reset function	Yes
Reset edge detection	Yes
Earth connection detection	Yes
Integral System Diagnostics, status	Yes
Number of auxiliary contacts	2
Number of LEDs	5
Number of openers	2
Number of undelayed semi-conductor outputs with signaling function	6

Number of safety contacts	3
Number of signalling outputs	6

Safety appraisal

Standards	EN 60947-5-1 IEC 61508
Mission Time	20 Year(s)
Common Cause Failure (CCF), minimum	65

Safety appraisal - Relay outputs

Performance level, stop 0, up to	e
Category, Stop 0	4
Diagnostic Coverage (DC) Level, Stop 0	$\geq 99\%$
PFH-Value Stop 0	$2.00 \times 10^{-8} / \text{h}$
Safety Integrity Level (SIL), Stop 0, suitable for applications in	3

Mechanical data

Mechanical life, minimum	10,000,000 Operations
Mounting	Snaps onto standard DIN rail to EN 60715

Mechanical data - Connection technique

Terminal Connector	Screw connection rigid or flexible
Terminal designations	IEC/EN 60947-1
Cable section, minimum	0.25 mm ²

Cable section, maximum 2.5 mm²

Tightening torque of
Clips 0.6 Nm

Mechanical data - Dimensions

Width 45 mm

Height 100 mm

Depth 121 mm

Ambient conditions

Degree of protection of
the enclosure IP40

Degree of protection of
the mounting space IP54

Degree of protection of
clips or terminals IP20

Ambient temperature,
minimum -25 °C

Ambient temperature,
maximum +45 °C

Storage and transport
temperature, minimum -40 °C

Storage and transport
temperature, maximum +85 °C

Resistance to vibrations
to EN 60068-2-6 10 ... 55 Hz, Amplitude 0.35 mm

Resistance to shock 30 g / 11 ms

Ambient conditions - Insulation value

Rated impulse withstand
voltage U_{imp} 4 kV

Overvoltage category III

Degree of pollution to 2
VDE 0110

Electrical data

Frequency range	50 Hz 60 Hz
Rated operating voltage	230 VAC -15% / + 10%
Operating current	125 mA
Rated AC voltage for controls, 50 Hz, minimum	215 VAC
Rated control voltage at AC 50 Hz, maximum	253 VAC
Rated AC voltage for controls, 60 Hz, minimum	215 VAC
Rated control voltage at AC 60 Hz, maximum	253 VAC
Utilisation category AC-15	230 VAC
Utilisation category AC-15	1.5 A
Utilisation category DC-13	24 VDC
Utilisation category DC-13	1.2 A
Electrical power consumption	3 W
Electrical power consumption	3 VA
Contact resistance, maximum	0.1 Ω
Note (Contact resistance)	in new state
Drop-out delay in case of "emergency stop", maximum	15 ms
Pull-in delay at automatic start, maximum, typically	60 ms

Pull-in delay at RESET, 200 ms
typically

Electrical data - Digital inputs

Conduction resistance, 40 Ω
maximum

Electrical data - Electromagnetic compatibility (EMC)

EMC rating EMC-Directive

Status indication

Indicated operating Position relay K2
states Position relay K1
 Internal operating voltage U_i
 Position relay K3

Other data

Note (applications) Guard system
 Pull-wire emergency stop switches
 Safety light curtain
 Emergency stop button

Notes

Note (General) Inductive loads (e.g. contactors, relays, etc.) are to be suppressed by means of a suitable circuit.

Circuit example

Note (Wiring diagram) 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.

Relay outputs: Suitable for 2 channel control, for increase in capacity or number of contacts by means of contactors or relays with positive-guided contacts.

The control recognises cross-short, cable break and earth leakages in the monitoring circuit.

Connect potential p-type outputs of safety light grids/curtains to S12/S22. The devices must have the same reference potential.

2 channel control 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 (H2). (example without cross-wire monitoring)

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 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."

F1 = Hybrid fuse

F2 = Fuse for signalling outputs

Schmersal, Inc., 15 Skyline Drive, Hawthorne, NY 10532

The details and data referred to have been carefully checked. Images may diverge from original. Further technical data can be found in the manual. Technical amendments and errors possible.

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