Safety controllers

SRB 324ST V.3



- Suitable for the signal treatment of potentialfree contacts, e.g. emergency stop command devices, position switches, interlocking devices with and without interlocking function and magnetic safety switches
- Suitable for the signal treatment of potentialloaded outputs, e.g. electronic safety sensors with p-type semi-conductor outputs as well as safety light grids and light curtains
- 1 or 2 channel control
- 3 safety contacts, STOP 0; 2 safety contacts, STOP 1, adjustable 1 ... 30 s
- 4 signalling outputs
- 6 LEDs to show operating conditions
- With hybrid fuse
- Optional: Short-circuit recognition, manual reset with edge detection in fail-safe circuit, automatic reset function

Approvals



Ordering details

SRB 324ST-24V V.3

Technical data

Standards:	IEC/EN 60204-1; EN 60947-5-1; EN ISO 13849-1; IEC 61508
Start conditions:	Automatic or start button (monitored)
Feedback circuit (Y/N):	Ves
ON delay with automatic start:	tvp. 400 ms
ON delay with reset button:	
Drop-out delay in case of emergence	(13-14: 23-24: 33-34): < 30 ms
Drop-out delay on supply failure":	y stop. (13-14, 20-24, 03-04). $=$ 30 ms
Pated operating voltage LL:	24 \/DC 15%/+20% residual ripple may 10%:
valed operating voltage O _e .	
	24 VAC - 15%/+10%
-requency range.	
-use rating for the operating voltage	internal electronic protection;
trippi	ng current F I: $> 2.5 \text{ A}$, F2: $> 50 \text{ mA} (S11-S31)$, $> 800 \text{ mA} (X4)$;
	reset after disconnection of supply voltage
nternal electronic protection (Y/N):	yes
Power consumption:	3.2 W; 7.1 VA, plus signalling output
Nonitored inputs:	
Short-circuit recognition:	optional
Wire breakage detection:	yes
Earth connection detection:	yes
Number of NC contacts:	2
Number of NO contacts:	0
Max. conduction resistance:	max. 40 Ω
Outputs:	
Stop category:	0/1
Number of safety contacts:	5 (STOP 0: 13-14; 23-24; 33-34)
	(STOP 1: 47-48; 57-58)
Number of auxiliary contacts:	1 (61-62)
Number of signalling outputs:	3 (Y1-Y3)
Vax, switching capacity of the safet	v contacts: (STOP 0: 13-14: 23-24: 33-34): 250 VAC. 8 A
	(STOP 1: 47-48: 57-58): 250 VAC, 6 A
	obmic (inductive in case of appropriate protective wiring)
Max switching capacity of the auxili	any contacts: 24 VDC 2 A
Max. switching capacity of the signs	illing outputs: 24 VDC 100 mA: residual current: 200 mA
Itilisation category to EN 60947.5	
Euco rating of the sofety contacto:	(STOD 0: 12 14: 22 24: 22 24): 9 A dow blow
use failing of the safety contacts.	(STOP 0. 13-14, 23-24, 33-34). 6 A Slow blow
	(STOP 1. 47-40, 57-50). 0.5 A Slow blow
-use rating of the auxiliary contacts	Z A Slow Dlow
-use rating of the signalling outputs	500 mA (Internal electronic protection F3)
Viechanical life:	10 million operations
Ambient conditions:	
Ambient temperature:	−25 °C +60 °C
Storage and transport temperature:	−40 °C +85 °C
Protection class:	Enclosure: IP40, Terminals: IP20, Clearance: IP54
Vlounting:	Snaps onto standard DIN rail to EN 60715
Connection type:	Screw terminals, plug-in
Cable section:	0.25 2.5 mm²
Dimensions (Height x Width x Depth	ı): 100 x 45 x 121 mm



Classification

Safety parameters:

CE

Salety parameters.	
Standards:	EN ISO 13849-1, IEC 61508, EN 60947-5-1
PL:	STOP 0: up to e; STOP 1: up to d
Category:	STOP 0: up to 4; STOP 1: up to 3
PFH value:	STOP 0: ≤ 2.00 x 10 ⁻⁸ /h; STOP 1: ≤ 2.00 x 10 ⁻⁷ /h
SIL:	STOP 0: up to 3; STOP 1: up to 2
Mission time:	20 years

The PFH values of $2.00 \times 10^{-8}/h$ and $2.00 \times 10^{-7}/h$ applie to the combinations of contact load (current through enabling contacts) and number of switching cycles (n-op/y) mentioned in the table below. At 365 operating days per year and a 24-hours operation, this results in the below-mentioned switching cycle times (t-cycle) for the relay contacts. Diverging applications upon request.

Contact load	n-op/y	t-cycle
20 %	525,600	1.0 min
40 %	210,240	2.5 min
60 %	75.087	7.0 min
80 %	30,918	17.0 min
100 %	40,010	12.0 min
100 %	12,223	43.0 min

Safety controllers

Note

Connection of an AZM 200 solenoid interlock to the SRB 324ST V.3 safety controller



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

LED

Note

The integrated LEDs indicate the following operating states.

- Position relay K1
- Position relay K2
- Position relay K3Position relay K4
- Supply voltage U_B
- Internal operating voltage U_i