

10. Safety monitoring modules
10.8 Safety monitoring modules for special applications
10.8.8 Monitoring of safety light grids/curtains and safety laser scanners using SCR 1R




Features

- Control Category 4 to EN 954-1
- Feedback circuit to monitor external contactors
- Operating voltage 24 VDC
- Start push button or automatic start function
- 2 enabling paths
- Signal processing for electrical signal outputs and potential-free contacts
- Can also be used as Emergency Stop relay for Stop Category 0 to EN 60204-1
- For operation with restart interlock and contactor monitoring
- Two LED's to indicate the switching condition of the internal positive-guided relays

Dimensions 22.5 x 82 x 98.8 mm

Part number	Operating voltage	24 VDC
	Standard version	SCR 1R

Approvals 
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10.8.10 Technical data

	SLB 400-C	SCR 1R	SCM 3R / SCM 3RQ
Standards:	IEC 61496-1/-2	IEC/EN 60204-1; DIN VDE 0801/-A1; EN 954-1; EN 1088	
Control Category:	4		
Start-up test:	Yes		
Enclosure material:	Glass-fibre reinforced plastic		
Mounting:	Snaps onto standard DIN rail to EN 50022		
Screw terminals:	Max. 4 mm ² (incl. conductor ferrules)	Max. 2.5 mm ² (incl. conductor ferrules)	
Protection class:	Terminals IP 20; Enclosure IP 40 to IEC/EN 60529		
Operating voltage U _e :	24 VDC ± 15 %	24 VDC – 15 % / + 20 %	
Operating current I _e :	0.3 A w/o additional transistor outputs		– –
Power consumption:	–	2.6 W	3.2 W plus consumption of sensors and muting lamps
Inputs:	S1; S2:		S11/S12/S13; S21/S22/S23:
Input resistance:	Approx. 2 kΩ to ground	–	–
Input signal "1":	10 ... 30 VDC	–	–
Input signal "0":	0 ... 2 VDC	–	–
Max. cable length:	100 m of 0.75 mm ² conductor	–	–
Outputs:	2 enabling paths		–
Utilisation category:	AC-15; DC-13		
Rated operating current / voltage I _e /U _e :	2 A/250 VAC; 2 A/24 VDC		3 A/230 VAC; 2 A/24 VDC
Switching voltage:	Max. 250 VAC		
Load current:	Max. 3 A	Max. 6 A	Max. 4 A
Switching capacity:	Max. 750 VA	Max. 1,500 VA	Max. 1,000 VA
Max. fuse rating:	4 A (quick blow)	6 A (slow blow)	4 A (slow blow)
Additional outputs:	Additional transistor outputs Y1, Y2; – U _e - 4 V; 100 mA total, short-circuit proof, p-switching	–	Indication outputs Y2, Y3; Max. 250 mA per output
Switch-on time:	–	< 250 ms	< 200 ms
Response time :	≤ 25 ms	< 20 ms	> 500 ms
Monitoring for synchronism of muting sensors:			1.5 s
Indications:	ISD	LED	
EMC rating:	Conforming to EMC Directive		
Max. switching frequency:	10 Hz		
Overvoltage category:	II to DIN VDE 0110		
Degree of pollution:	3 to DIN VDE 0110		
Resistance to vibration:	10 ... 55 Hz/amplitude 0.35 mm ± 15 % at the regulation point		
Resistance to shock:	30 g/11 ms	15 g/11 ms	
Ambient temperature:	0 °C ... + 55 °C	– 25 °C ... + 55 °C	0 °C ... + 40 °C
Storage and transp. temp.:	– 25 °C ... + 70 °C		
Note:	Inductive loads (contactors, relays, etc.) are to be suppressed by a suitable circuit.		

Optoelectronic muting sensors are available on request by Schmersal EOT.

