



Conforms to EN60204-1, EN954-1, VDE 0113-1
UL and C-UL listed, BG approved



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safety monitoring relays

SR103AM

Dual Channel Safety Monitoring Relay

- Power requirements—the SR103AM will accept 24 VAC/DC, 115 VAC, or 230 VAC
- Inputs—the SR103AM will accept single or dual N/C inputs or dual inputs from a light curtain (see SR102AM for application wiring for a light curtain)
- Outputs—the SR103AM has 3 N/O outputs to route power to the coils of power contactors, plus 1 N/C auxiliary output for signaling purposes
- External Device Monitoring (EDM) is provided with a N/C loop between S11/S12 and S21 on the SR103AM
- Monitored manual or automatic/manual reset modes are available on the SR103AM. Monitored manual reset requires closure of the reset circuit followed by opening of the circuit. Reset occurs when circuit is opened. Auto reset requires only closure of the reset circuit as reset occurs when circuit is closed.

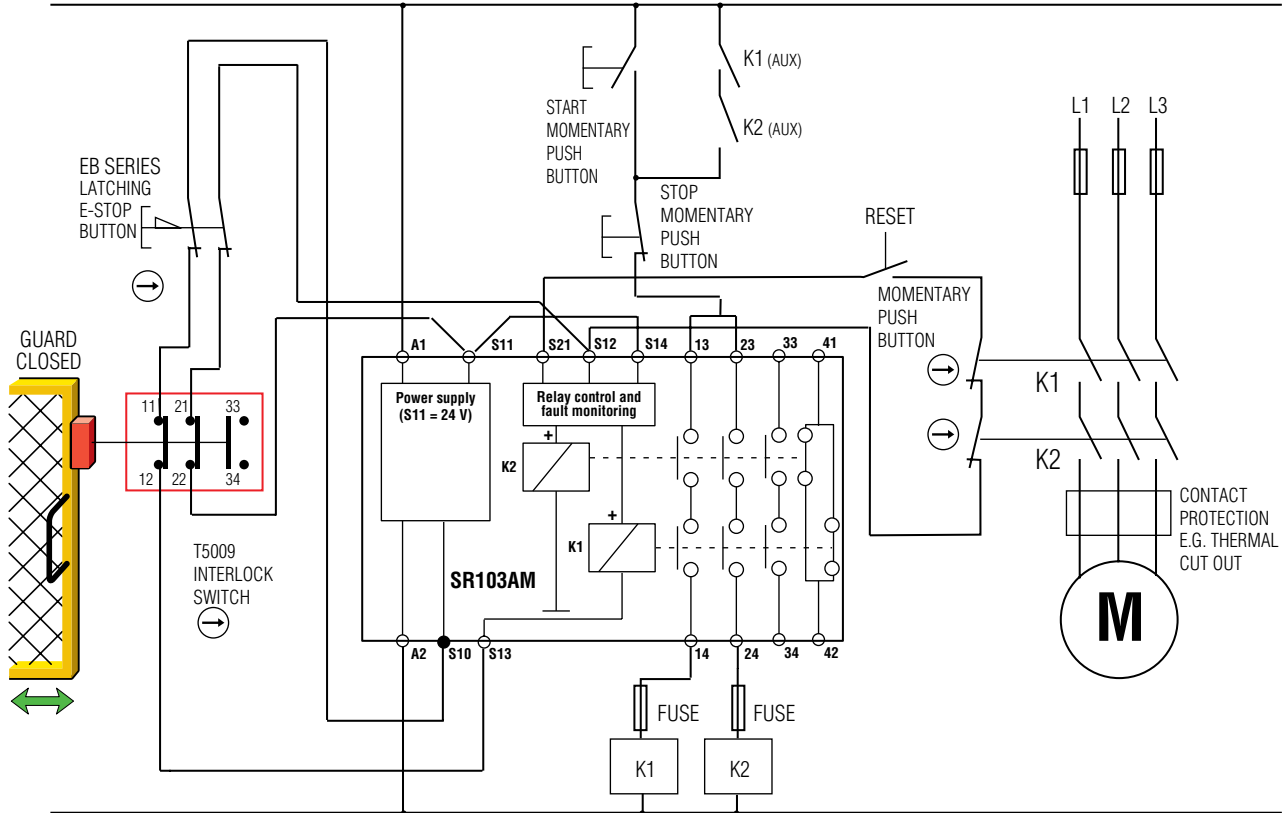


Application



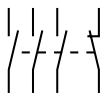
See the SR102AM for wiring to a light curtain

24VAC/DC, 110VAC, 230VAC



For a full explanation of the circuit operating principle and fault detection, see "Common Circuit Examples" in the Engineering Section of this catalog.

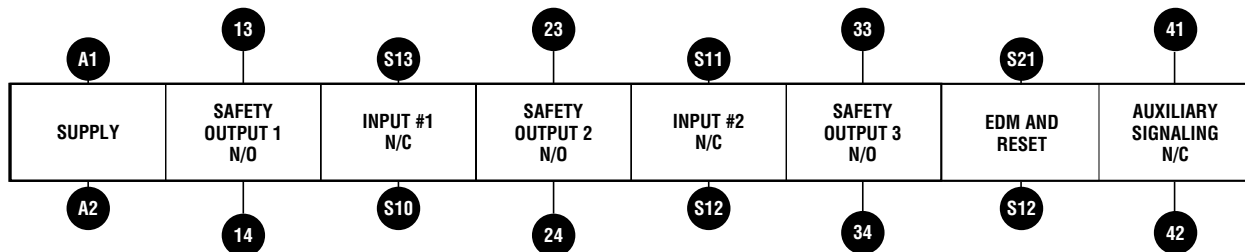
Output Contact Arrangements



Terminal Pin Assignments

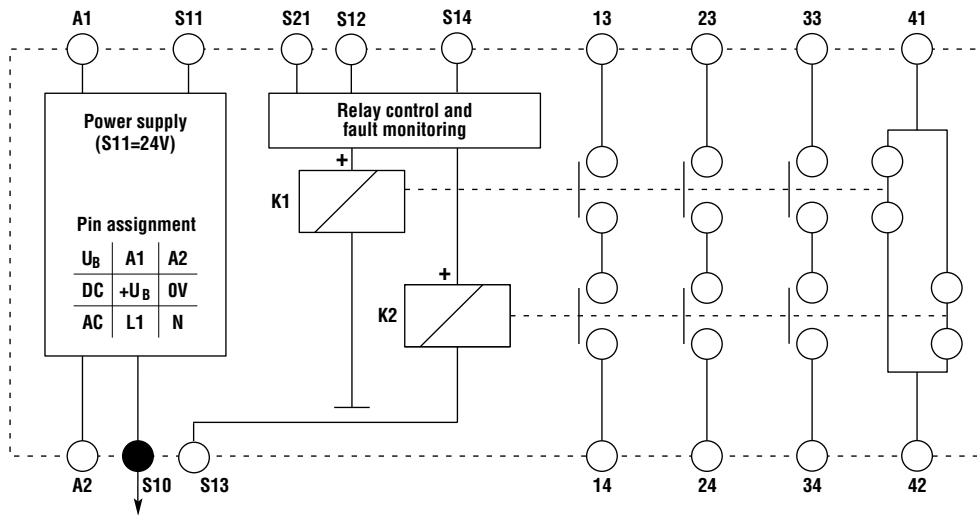
14	⊗	⊗	S12	A1	⊗	⊗	13
24	⊗	⊗	S13	S11	⊗	⊗	23
34	⊗	⊗	S10	S14	⊗	⊗	33
42	⊗	⊗	A2	S21	⊗	⊗	41

Terminal Connections



SR103AM

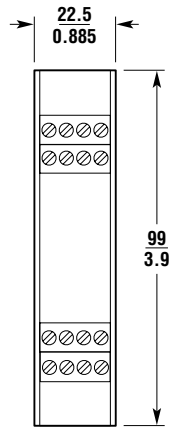
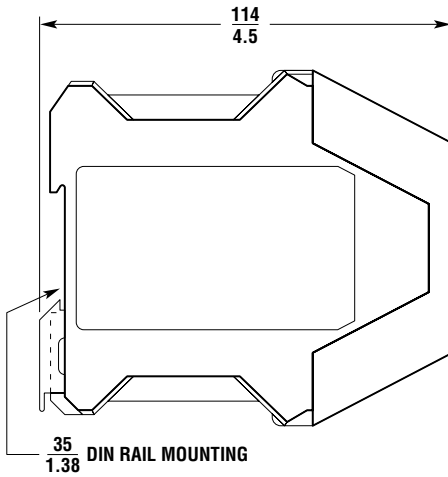
■ Block Diagram



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■ Dimensions — mm/in.

SR103AM



safety monitoring relays

■ Specifications

Electrical	All Models	SR103AM01	SR103AM02	SR103AM03
Power Supply:	±10%, 50-60 Hz	24 VAC/DC	115 VAC	230 VAC
Power Consumption:	Approx. 1 VA			
Safety Inputs:	1 N/C or 2 N/C or 2 solid state (light curtain)			
Max Input Resistance:	800 Ohms per channel			
Outputs:	3 N/O + 1 N/C auxiliary			
Output Rating AC:	Inductive AC-15, 3 A/230 VAC			
Output Rating DC:	Inductive DC-13, 2 A/24 V			
Min Switched Current/Voltage:	10 mA/10 V			
Impulse Withstand Voltage:	2500 V			
Max Drop-Out Time:	12 ms (75 ms by removing supply voltage)			
Max Output Fuse:	6 A quick-acting or 4 A slow-acting			
Reset Mode:	Monitored manual (S11-S21) or automatic/manual (S12-S21)			
Contactors Monitoring:	N/C loop S11/S12-S21			
Mechanical				
Mounting:	35 mm (1.38 in.) DIN rail			
Case Material:	Fiber-filled Polyamide PA6.6			
Max Wire Size:	1 x 2.5 mm ² (14 AWG) stranded			
Weight:	230 g (8.1 oz.)			
Color:	Red			
External Switches:	None			
Indication:	Green = K1 Closed, Green = K2 Closed			
Mechanical Life:	1 x 10 ⁷ operations			
Environmental				
Enclosure Protection:	IP20 terminals, IP40 (NEMA 1) housing			
Operating Temperature:	24 VAC/DC: -15 to 40°C (5 to 104°F) 115/230 VAC: -15 to 40°C (5 to 104°F)			
Humidity:	93% RH at 104°C (219°F)			
Compliance				
Standards:	EN 60204-1, EN 954-1, VDE 0113-1			
Approvals/Listings:	CE marked for all applicable directives, UL and C-UL, BG			
Safety Category:	Cat. 4 per EN954-1 (SR103 internal operation)			

Specifications are subject to change without notice.

Note: The safety contacts of the Omron STI switches are described as normally closed (N/C)—i.e., with the guard closed, actuator in place, and the machine able to be started.

■ Ordering

Model	Supply	Inputs	Outputs	Auxiliary	Part No.
SR103AM01	24 VAC/DC	2 N/C	3 N/O	1 N/C	44510-1031
SR103AM02	115 VAC	2 N/C	3 N/O	1 N/C	44510-1032
SR103AM03	230 VAC*	2 N/C	3 N/O	1 N/C	44510-1033

*230 VAC units are available on special order. Minimum quantities may apply.