

Dual-Channel Safety Monitoring Relay

- Power requirements—the SR103AM will accept 24 VAC/DC or 115 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.



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

Specifications

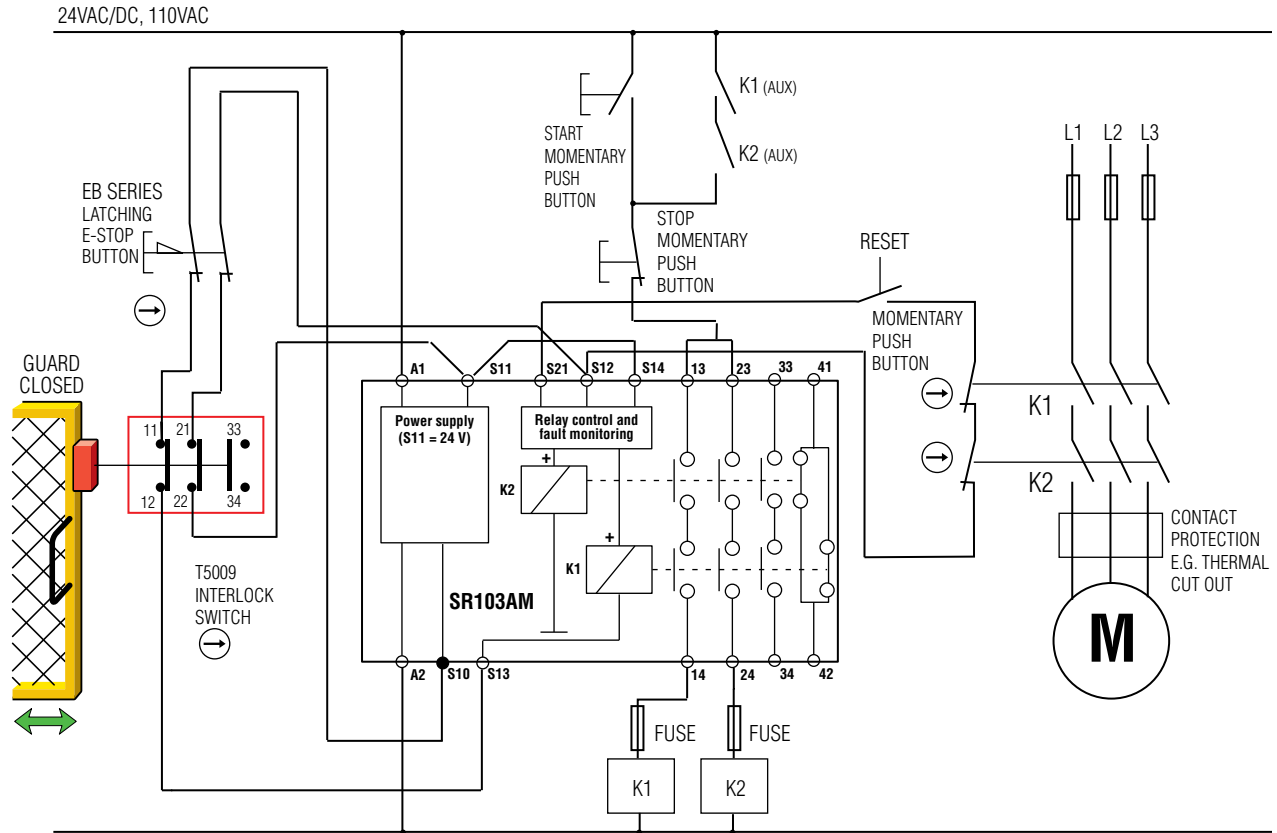
Electrical	All Models	SR103AM01	SR103AM02
Power Supply:	±10%, 50-60 Hz	24 VAC/DC	115 VAC
Power Consumption:	Approx. 1 VA		
Safety Inputs:	1 N/C or 2 N/C or 2 solid state (light curtain)		
Max Input Resistance:	800 Ohms per channel		
Outputs:	3 N/O + 1 N/C auxiliary		
Output Rating AC:	Inductive AC-15, 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 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, TÜV Rheinland		
Safety Category:	Cat. 4 per EN954-1 (SR103 internal operation)		

Specifications are subject to change without notice.

Note:

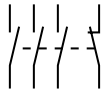
The safety contacts of the Omron STI switches are described as normally closed (N/C)—i.e., with the guard closed, actuator in place, and the machine able to be started.

Application



For a full explanation of the circuit operating principle and fault detection, see "Common Circuit Examples" in The Safety Library Section of this catalog on page A62

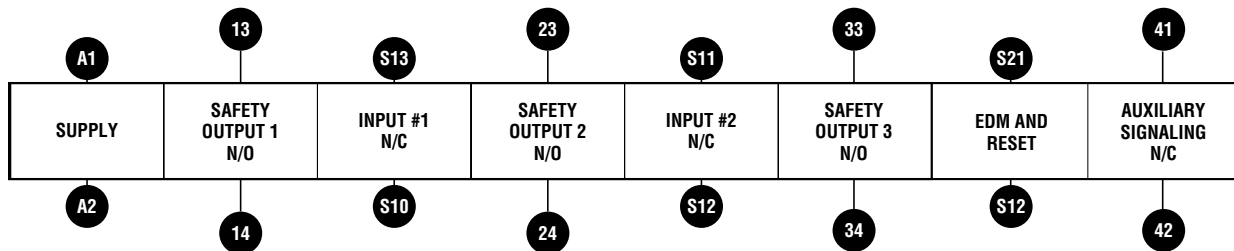
Output Contact Arrangements



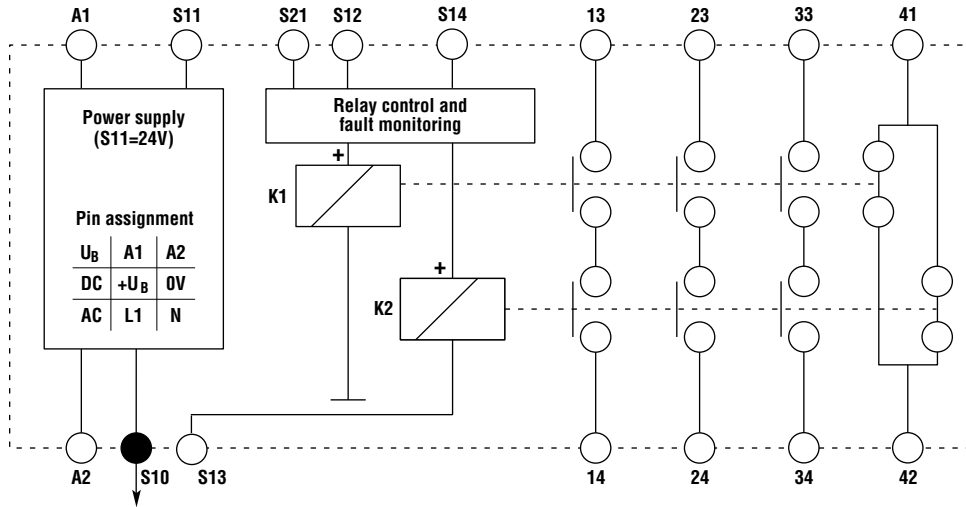
Terminal Pin Assignments

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

Terminal Connections



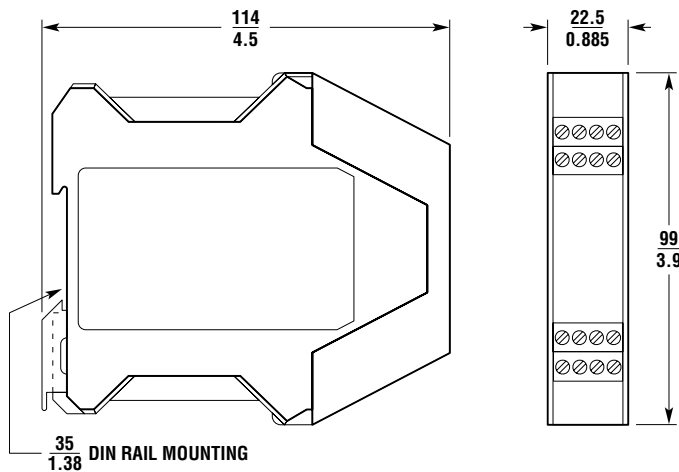
Block Diagram



Dimensions

(mm/in.)

SR103AM



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

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