Safety Monitoring Relays SR103AM





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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.
- A Rapid Delivery Product: Select models are available for shipment today or within 3 to 5 days









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)						
Contactor 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)						
Storage Temperature:	-25° to 70°C (-13 to 158°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 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.



Select models are available for Rapid Delivery.

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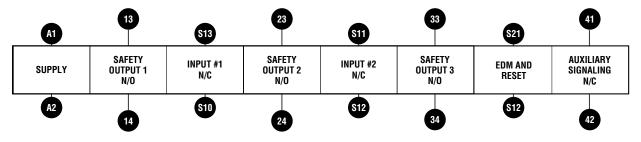
Output Contact Arrangements

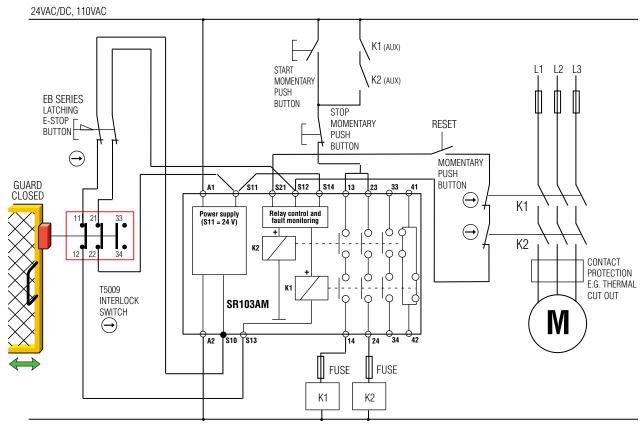
Terminal Pin Assignments



14		0	S12	 A1		0	13
24		0	S13	S11	0	\Diamond	23
34	0	0	S10	S14	0	\bigcirc	33
42			A2	S21		0	41

Terminal Connections





For a full explanation of the circuit operating principle and fault detection, see "Common Circuit Examples" in The Expert Area Section of this catalog on page A31.

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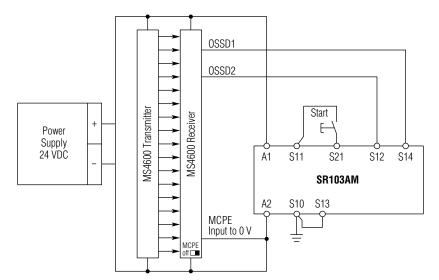




Application (continued)

MS4600 Connected to SR103AM

(MPCE monitoring disabled)



MPCE Monitoring "Disabled"

The start switch shown connected between S11 and S21 provides a monitored manual start function. Switch must be closed and then opened to activate a start. For auto-start, connect a wire between S21 and S12 and no connection between S11 and S21.

If the MPCE function is not being used on the MS4600 light curtain, the function must be "disabled", and the MPCE input wire must be connected to 0 V (GND).

MPCE Monitoring "Enabled"

When using an SR103AM with an MS4600 light curtain, MPCE monitoring may be performed through the safety monitoring relay using terminals S12, S21. This method of MPCE monitoring only allows for Auto Restart/Manual Restart Mode of the safety monitoring relay. If Monitored Manual Restart Mode with MPCE Monitoring is desired, the MPCE Monitoring must be enabled and performed through the MS4600 light curtain. Place wire jumper between terminals S12, S21of the safety monitoring relay. Configure the MS4600 for Start/Restart Interlock Mode. The Monitored Manual Reset is now controlled through the MS4600 light curtain. (See MS4600 Manual for configuration and wiring details of MS4600 light curtain.)



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