SR103AM

SpeedSPEC www.sti.com 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.

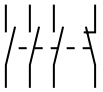
Note:
The safety contacts of the STI switches are described as normally closed (N/C)—i.e., with the guard closed, actuator in place, and the machine able to be started.

Select models are available for Rapid Delivery.

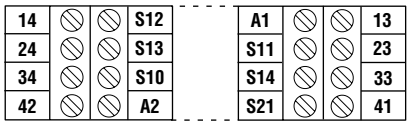
Visit this product on www.sti.com for details.

Application

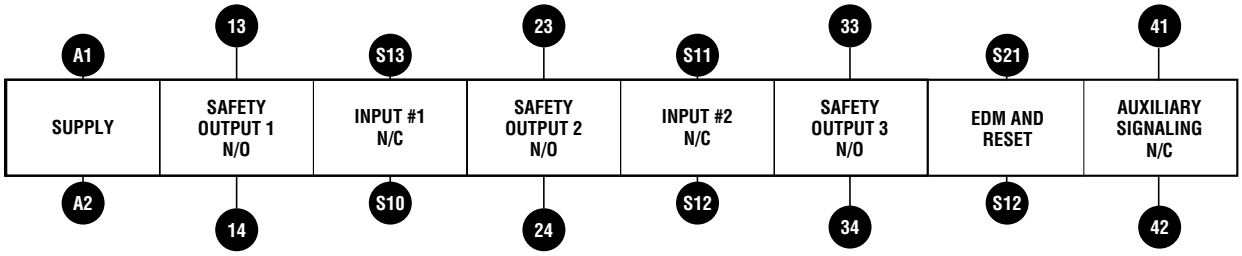
Output Contact Arrangements

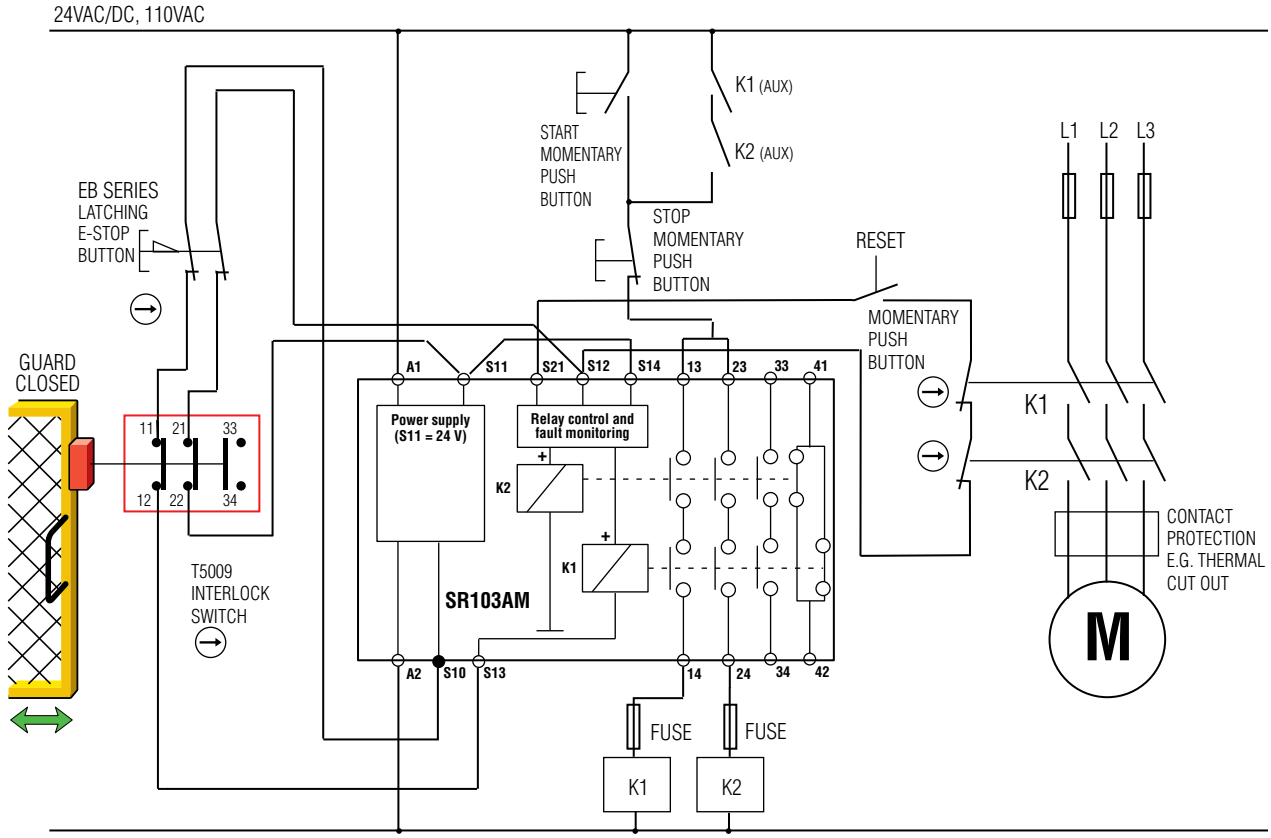


Terminal Pin Assignments



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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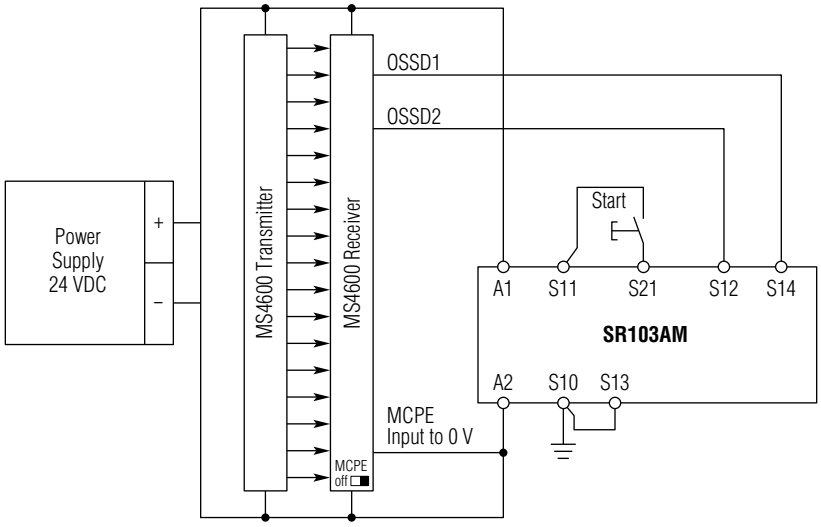
Application (continued)

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.

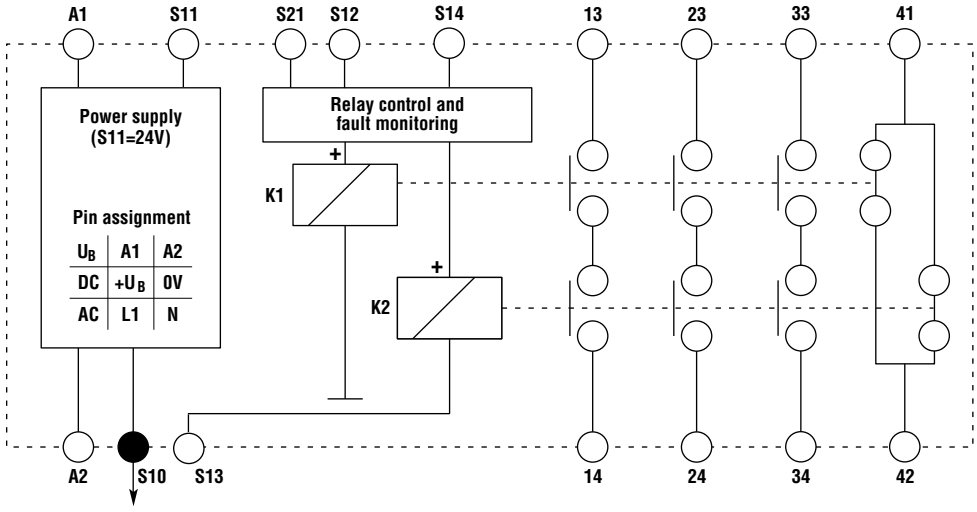
If the MPCE function is not being used on the MS4600 light curtain, the function must be "disabled", and the MPCE input wire must be connected to 0 V (GND).

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.)

J

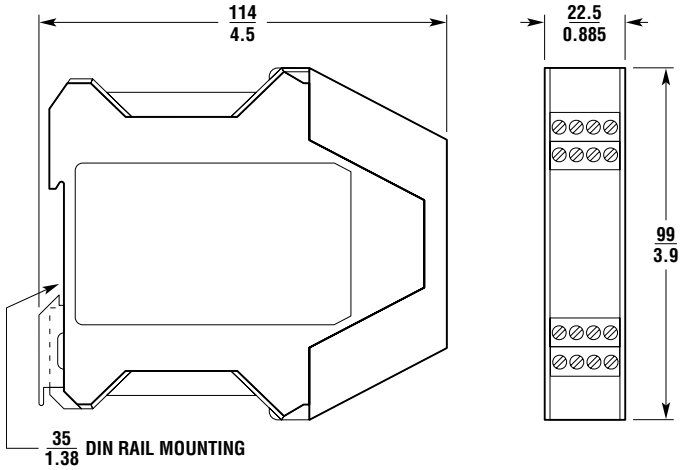
Block Diagram



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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