



Conforms to EN574 Cat. IIIC, EN60204-1, EN954-1, VDE 0113-1  
 UL and C-UL listed, BG approved



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safety monitoring relays

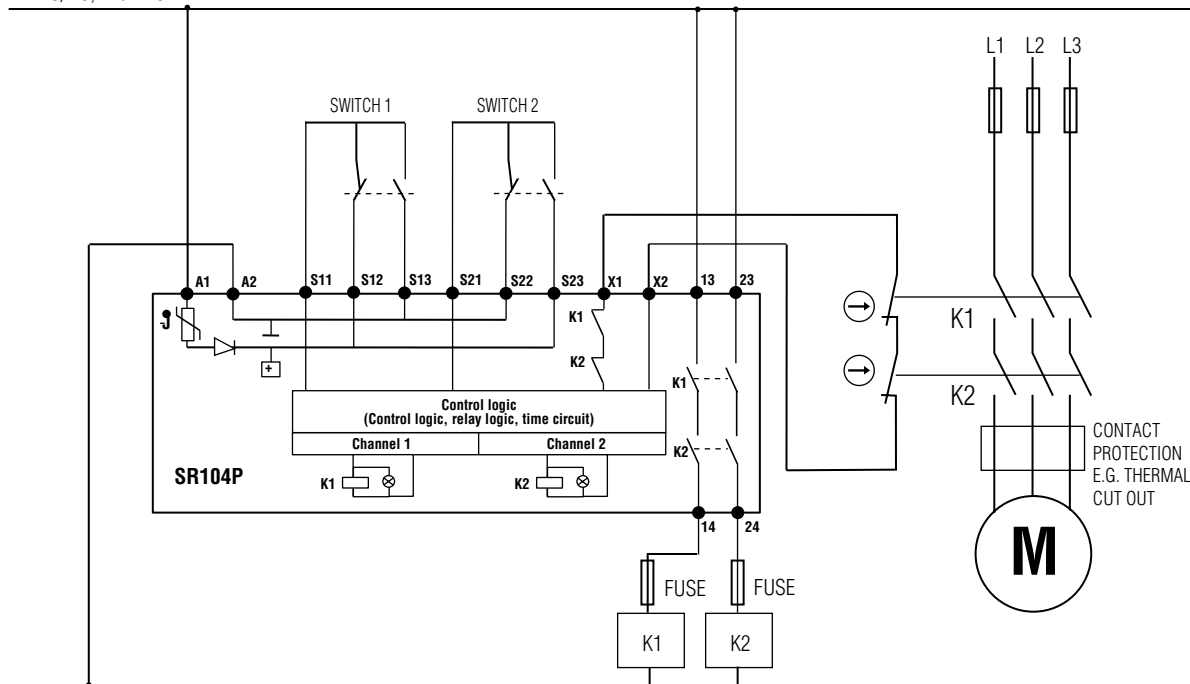
# SR104P

## Two-Hand Control Safety Monitoring Relay

- Power requirements—the SR104P will accept 24 VAC/DC and 115 VAC
- Inputs—controls and monitors two-hand control switches to ensure that both switches are operated within 0.5 seconds of each other
- Outputs—the SR104P has 2 N/O outputs to route power to the coils of power contactors
- External Device Monitoring (EDM) is provided with a N/C loop between X1 and X2 on the SR104P

Application

24VAC/DC, 115 VAC



The SR104P only allows machine operation if both buttons are operated at the same time. Operating one button or both buttons and then releasing one will not start the machine.

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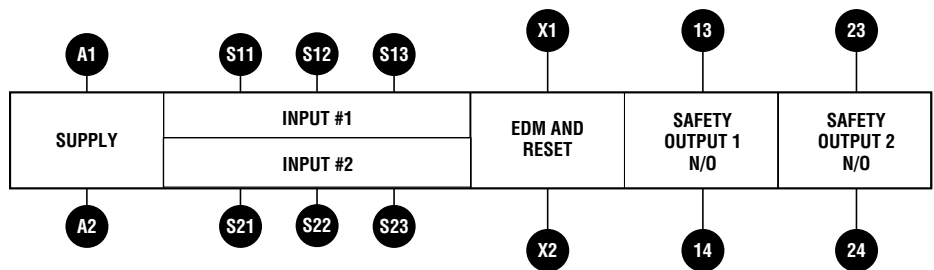
Output Contact Arrangements



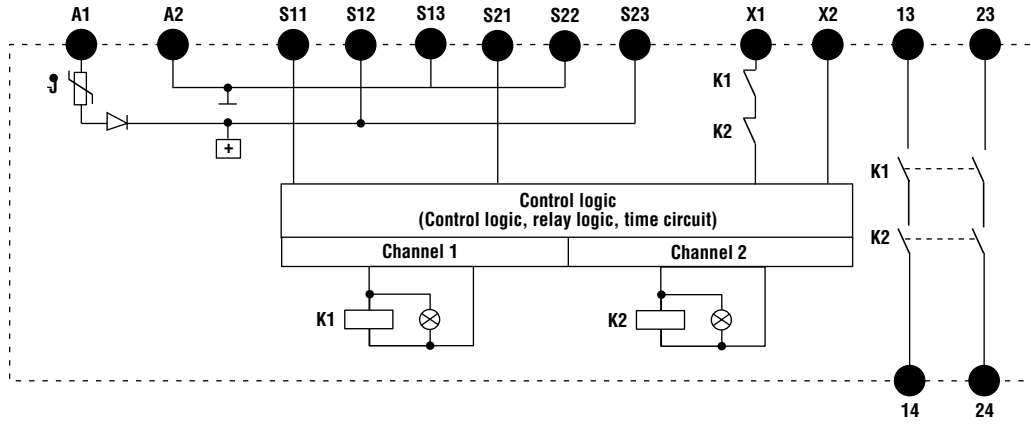
Terminal Pin Assignments

	⊘	⊘	S21		A1	⊘	⊘	X1
	⊘	⊘	S22		S11	⊘	⊘	X2
14	⊘	⊘	S23		S12	⊘	⊘	13
24	⊘	⊘	A2		S13	⊘	⊘	23

Terminal Connections



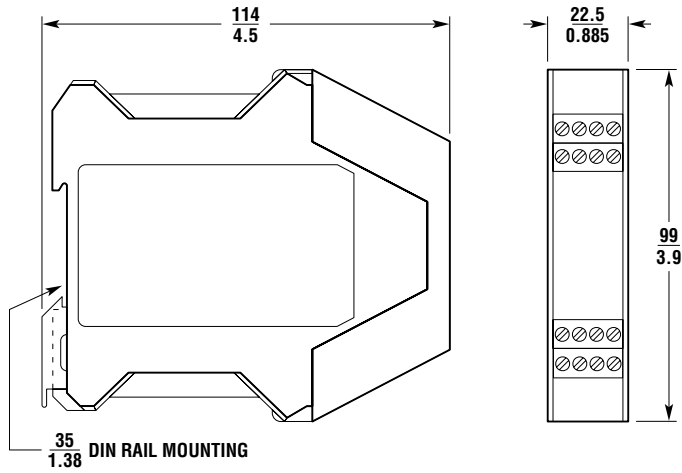
## ■ Block Diagram



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## ■ Dimensions — mm/in.

SR104P



**A** Go to the Engineering Guide  
For in-depth information on  
safety standards and use.

## ■ Specifications

Electrical	All Models	SR104P01	SR104P02
<b>Power Supply:</b>	±10%, 50-60 Hz	24 VAC/DC	115 VAC
<b>Power Consumption AC:</b>	Approx. 2.5 VA		
<b>Power Consumption DC:</b>	Approx. 1.5 W		
<b>Safety Inputs:</b>	2 x 2 pole (1 N/C + 1 N/O) hand switches		
<b>Relay Outputs:</b>	2 N/O		
<b>Max Switched AC:</b>	Inductive AC-15, 4 A/230 V		
<b>Max Switched DC:</b>	Inductive DC-13, 2 A/24 V		
<b>Min Switched Current/Voltage:</b>	20 mA/24 V		
<b>Impulse Withstand Voltage:</b>	2500 V		
<b>Max Drop-Out Time:</b>	35 ms (90 ms by removing supply voltage)		
<b>Max Output Fuse:</b>	6 A quick-acting or 4 A slow-acting		
<b>Contactor Monitoring:</b>	N/C loop between X1 and X2		
<b>Mechanical</b>			
<b>Mounting:</b>	35 mm (1.38 in.) DIN rail		
<b>Case Material:</b>	Fiber-filled Polyamid PA6.6		
<b>Max Wire Size:</b>	1 x 2.5 mm <sup>2</sup> (14 AWG) stranded		
<b>Weight:</b>	200 g (7 oz.)		
<b>Color:</b>	Red		
<b>External Switches:</b>	None		
<b>Indication:</b>	Green = K1 Closed, Green = K2 Closed		
<b>Mechanical Life:</b>	1 x 10 <sup>7</sup> operations		
<b>Environmental</b>			
<b>Enclosure Protection:</b>	IP20 terminals, IP40 (NEMA 1) housing		
<b>Operating Temperature:</b>	24 VAC/DC: -15 to 60°C (5 to 140°F) 115 VAC: -15 to 40°C (5 to 104°F)		
<b>Humidity:</b>	93% RH at 40°C (104°F)		
<b>Compliance</b>			
<b>Standards:</b>	EN 60204-1, EN 574 Cat. IIIC, EN 954-1, VDE 0113-1		
<b>Approvals/Listings:</b>	CE marked for all applicable directives, UL and C-UL, BG		
<b>Safety Category:</b>	Cat. 4 per EN954-1 (SR104 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	Part No.
SR104P01	24 VAC/DC	2 x 2 pole (1 N/C + 1 N/O) hand switches	2 N/O	44510-1041
SR104P02	115 VAC	2 x 2 pole (1 N/C + 1 N/O) hand switches	2 N/O	44510-1042