

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



Conforms to EN62061, EN60947-5-1, EN ISO 13849-1, EN ISO 13849-2, EN574
UL and C-UL listed
TÜV Rheinland approved

Specifications

Electrical	All Models	SR104P01	SR104P02
Power Supply:	±10%, 50-60 Hz	24 VAC/DC	115 VAC
Power Consumption AC:	Approx. 2.5 VA		
Power Consumption DC:	Approx. 1.5 W		
Safety Inputs:	2 x 2 pole (1 N/C + 1 N/O) hand switches		
Relay Outputs:	2 N/O		
Max Switched AC:	Inductive AC-15, 4 A/230 V		
Max Switched DC:	Inductive DC-13, 2 A/24 V		
Min Switched Current/Voltage:	20 mA/24 V		
Impulse Withstand Voltage:	2500 V		
Max Drop-Out Time:	35 ms (90 ms by removing supply voltage)		
Max Output Fuse:	6 A quick-acting or 4 A slow-acting		
Contactors Monitoring:	N/C loop between X1 and X2		
Mechanical			
Mounting:	35 mm (1.38 in.) DIN rail		
Case Material:	Fiber-filled Polyamid PA6.6		
Max Wire Size:	1 x 2.5 mm ² (14 AWG) stranded		
Weight:	200 g (7 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 60°C (5 to 140°F) 115 VAC: -15 to 40°C (5 to 104°F)		
Humidity:	93% RH at 40°C (104°F)		
Compliance			
Standards:	EN62061, EN60947-5-1, EN ISO 13849-1, EN ISO 13849-2, EN574		
Approvals/Listings:	CE marked for all applicable directives, UL and C-UL, TÜV Rheinland		
Reliability			
per EN ISO 13849-1:	Cat. 4, PLe, PFHd 2.50E-08		

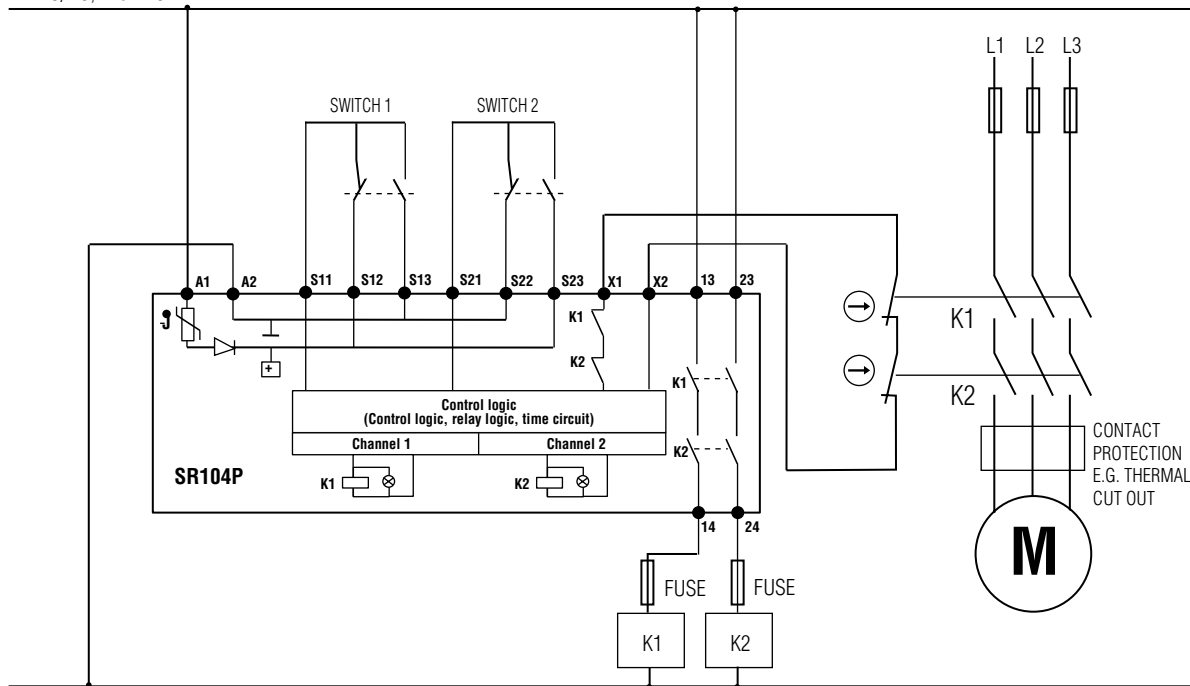
Specifications are subject to change without notice.

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.

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.

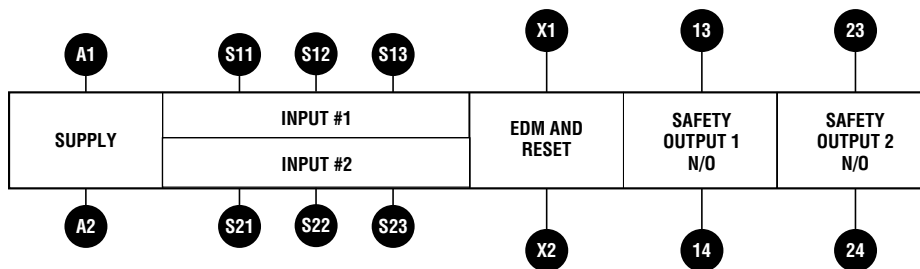
Output Contact Arrangements



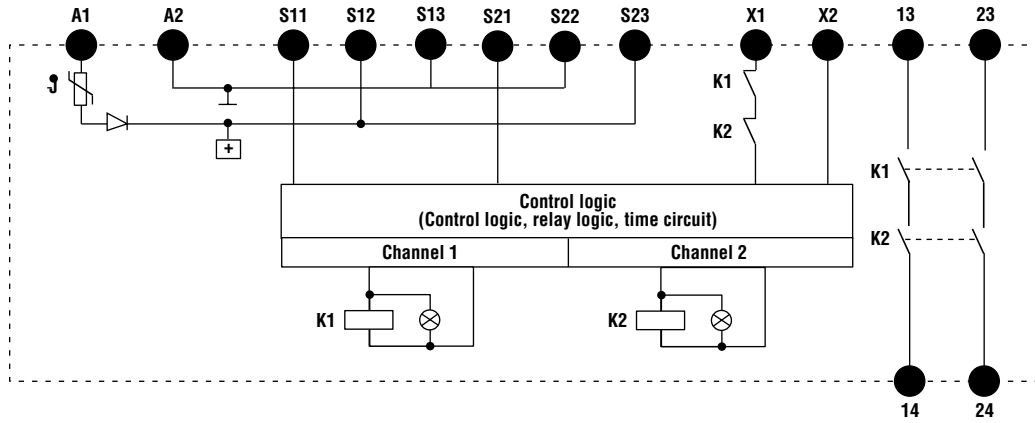
Terminal Pin Assignments

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

Terminal Connections



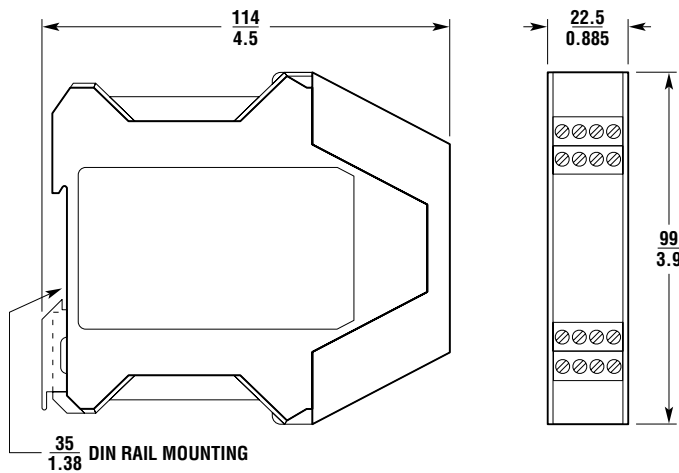
Block Diagram



Dimensions

(mm/in.)

SR104P



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

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