

## Dual-Channel Multi-Purpose Safety Monitoring Relay

- Power requirements—the SR120MP will accept 24 VAC/DC or 110 VAC
- Inputs—the SR120MP provides dual-channel input from a variety of safety devices. The safety devices may be E-stops, interlock switches, or light curtains.
- Outputs—the SR120MP has 3 N/O outputs to route power to the coils of power contactors plus 1 N/C auxiliary output and 4 solid-state outputs for signaling purposes
- External Device Monitoring (EDM) is provided with a N/C loop between S33 and S34 on the SR120MP
- Selectable start modes—monitored manual or automatic start mode is selectable on the SR120MP



Conforms to EN60204-1, EN954-1, EN418, and EN61496-1 (Type 4)  
UL and C-UL listed, CSA and BG approved

## Specifications

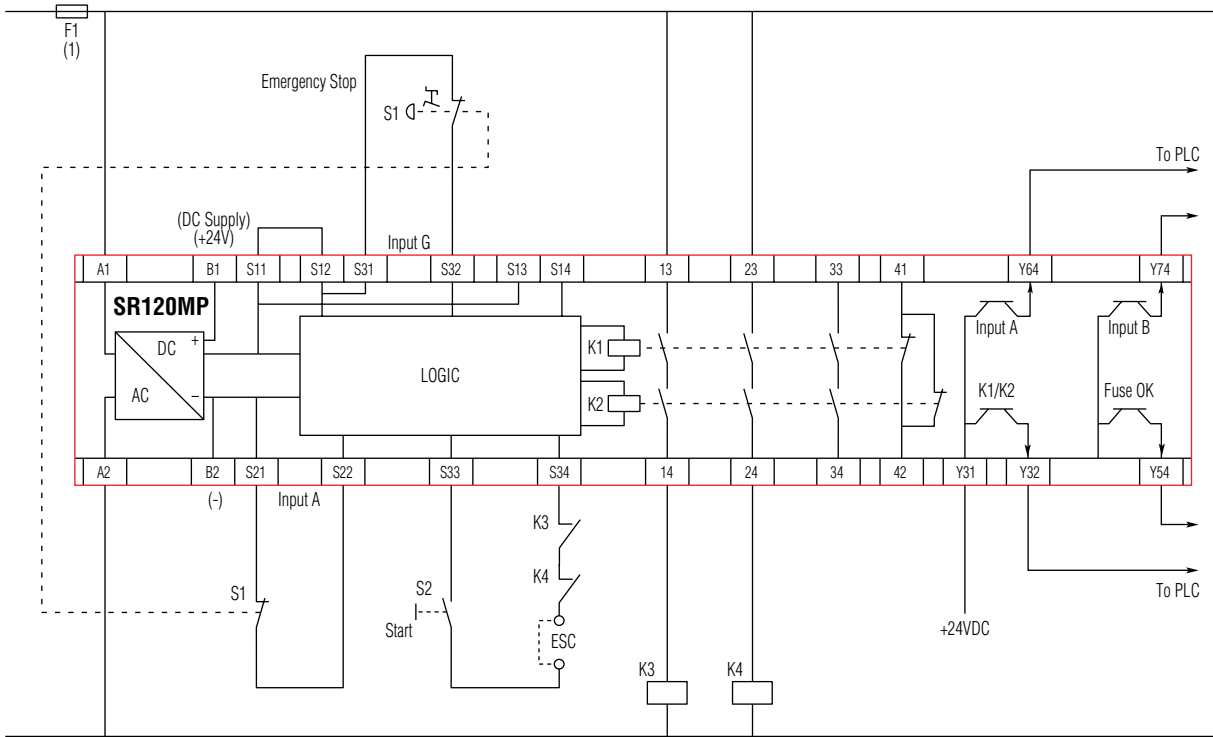
Electrical	All Models	SR120MP01	SR120MP02
Power Supply:	±10%	24 VAC/DC	110 VAC
Power Consumption:		≤5 VA/3 W	≤6 VA
Internal Fuse:	Electronic		
Safety Inputs:	1 N/C or 2 N/C or mat or light curtain		
Relay Outputs:	3 N/O + 1 N/C auxiliary (plus 4 solid-state signaling outputs)		
Max Switched AC:	Inductive AC-15, 1800 VA inrush, 180 VA maintained		
Max Switched DC:	Inductive DC-13, 1.25 A/24 VDC		
Min Switched Current/Voltage:	10 mA/17 V		
Impulse Withstand Voltage:	4000 V		
Max Drop-Out Time:	40 ms		
Max Output Fuse:	4 A slow-acting fuse or 6 A quick-acting fuse		
Start Mode:	Monitored manual or automatic/manual		
External Device Monitoring (EDM):	N/C loop between S33 and S34		
<b>Mechanical</b>			
Mounting:	35 mm (1.38 in.) DIN rail		
Case Material:	Polyamide PA6.6		
Max Wire Size:	0.2 to 1.5 mm <sup>2</sup> (24 to 16 AWG)		
Weight:		300 g (10.5 oz.)	400 g (14 oz.)
Color:	Red		
External Switches:	None		
Indication:	Green = Power on, Green = Input A active, Green = Input B active, Green = K1/K2 active		
Mechanical Life:	1 x 10 <sup>6</sup> operations		
<b>Environmental</b>			
Enclosure Protection:	IP20 terminals, IP40 (NEMA 1) housing		
Operating Temperature:	-10 to 55°C (14 to 131°F)		
<b>Compliance</b>			
Standards:	EN60204-1, EN954-1, EN418, EN61496-1 (Type 4)		
Approvals/Listings:	CE-marked for all applicable directives, UL and C-UL, CSA, BG		
Safety Category:	Cat. 4 per EN954-1 (SR120MP 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

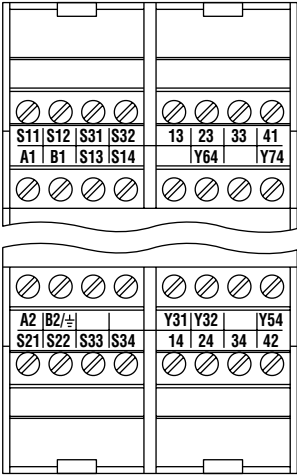
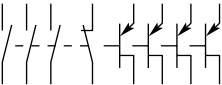


ESC: External Start Conditions

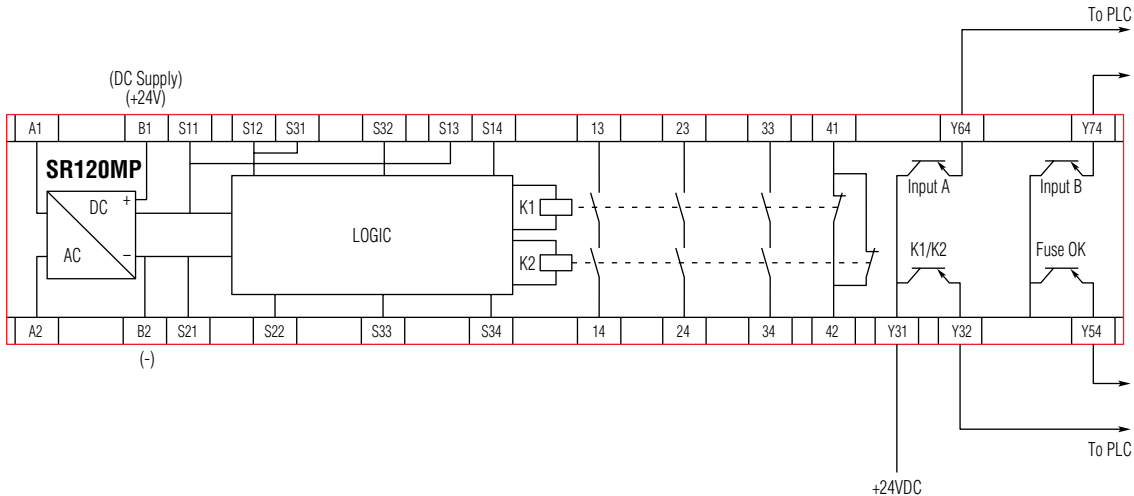
For a full explanation of the circuit operating principle and fault detection, see “Common Circuit Examples” in The Safety Library Section of this catalog.

Output Contact Arrangements

Terminal Connections

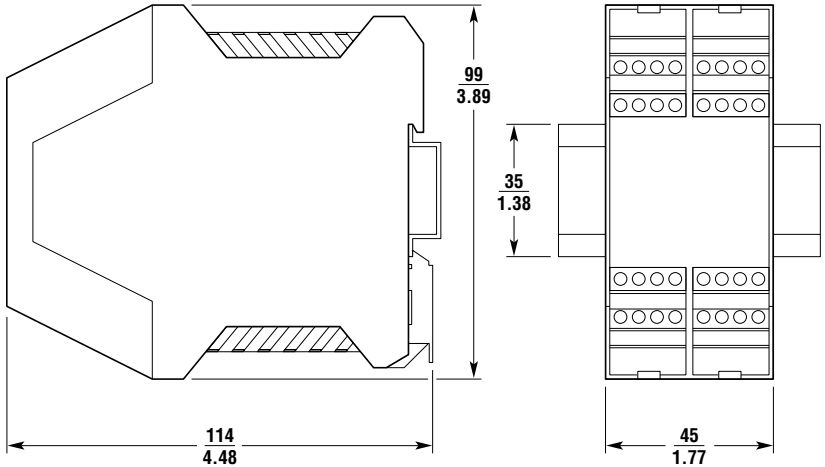


Block Diagram



Dimensions

(mm/in.)



Ordering

Model	Supply	Inputs	Outputs	Auxiliary	Part No.
SR120MP01	24 VAC/DC	2 N/C	3 N/O	1 N/C	44510-1201
SR120MP02	110 VAC	2 N/C	3 N/O	1 N/C	44510-1202