

For full product information, visit www.sti.com. Use the SpeedSPEC Code for quick access to the specific web page.

Stop Motion Sensing Unit

- Power requirements—the SR125SMS45 will accept 24 VDC or 110 VAC
- Motion detection input—the SR125SMS45 detects the stop condition of all types of AC or DC motors by sensing the motor's back EMF across terminals Z1, Z2 and Z3
- Drive compatible—the SR125SMS45 will function with electronic motor control devices such as variable speed controllers, DC injection brakes, etc.
- Selectable speed limit—the SR125SMS45 has 1 N/O and 1 N/C outputs that are switched when motor speed reaches the adjustable preset limit (0.01 to 0.10 V) for the particular output
- Auxiliary output—the SR125SMS45 has 2 solid state auxiliary signaling outputs
- A Rapid Delivery Product: Select models are available for shipment today or within 3 to 5 days



Specifications

Electrical	All Models	SR125SMS4501	SR125SMS4502
Power Supply:	±10%	24 VDC	110 VAC
Power Consumption:		≤3.0 W	≤5.2 VA
Internal Fuse:	Electronic		
Safety Inputs:	Back EMF sensing between Z1 and Z2 and Z3		
Maximum Voltage Between Terminal Z1, Z2, Z3:	500 V (RMS)		
Detection Threshold:	0.01 V		
Relay Outputs:	1 N/O + 1 N/C switched at preset detection threshold		
Auxiliary Outputs:	2 solid state for signaling		
Max Switched AC:	Inductive AC-15, 1800 VA inrush, 180 VA maintained		
Max Switched DC:	Inductive DC-13, 1.2-1.5 A/24 V		
Min Switched Current/Voltage:	10 mA/17 V (provided that the contact has never been used with higher loads)		
Impulse Withstand Voltage:	4000 V		
Max Drop-Out Time:	n/a		
Max Output Fuse:	4 A slow-acting or 6 A fast-acting		
Reset Mode:	n/a		
Mechanical			
Mounting:	35 mm (1.38 in.) DIN rail		
Case Material:	Polyamide PA6.6		
Max Wire Size:	2 x 2.5 mm (14 AWG) stranded		
Weight:	AC: 0.33 kg (11.6 oz.); DC: 0.23 kg (8.1 oz.)		
Color:	Red with black body		
External Adjustment:	Motor speed preset via potentiometer		
Indication:	Green = Power On, Green = Channel 1 activated, Green = Channel 2 activated, Green = CH1 + CH2 activated		
Environmental			
Enclosure Protection:	IP20 terminals, IP40 (NEMA 1) housing		
Operating Temperature:	-10 to 55°C (14 to 131°F)		
Compliance			
Standards:	EN60947-1/5, EN61000-6, EN62061, EN62061, EN ISO 12100-2, EN ISO 13849-1/2		
Approvals/Listings:	CE-marked for all applicable directives, UL and C-UL, CSA, TÜV		

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.

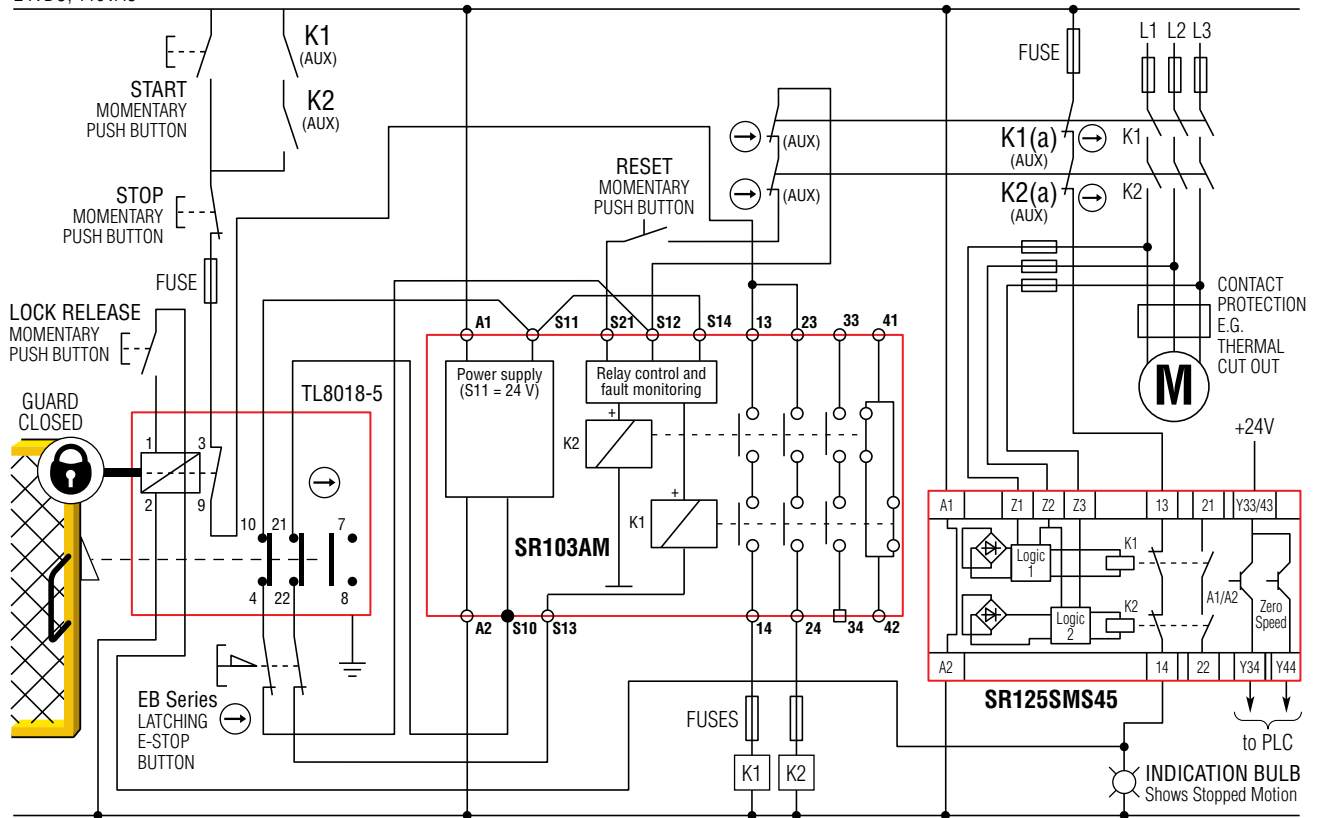


Select models are available for Rapid Delivery.

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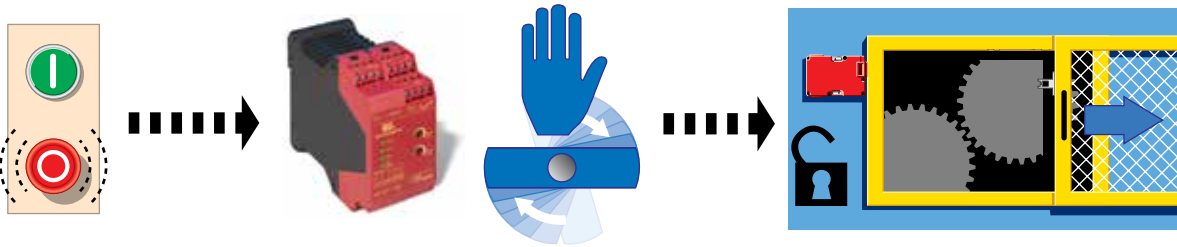
Application

24VDC, 110VAC



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 A-31.

Operation

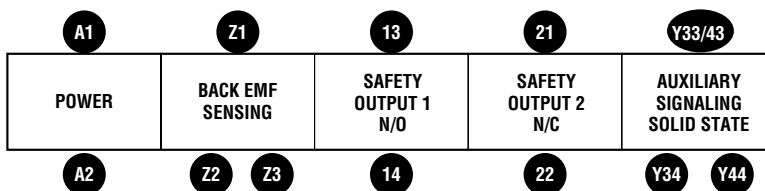


Stop signal
to motor

SR125SMS45 detects back EMF of
motor and senses when hazardous
motion has ceased, then signals
guard locking switch to unlock

Guard locking switch unlocks guard
allowing safe access to machine

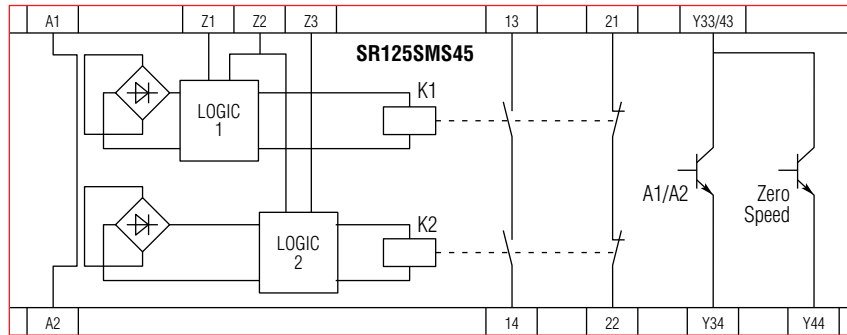
Terminal Connections



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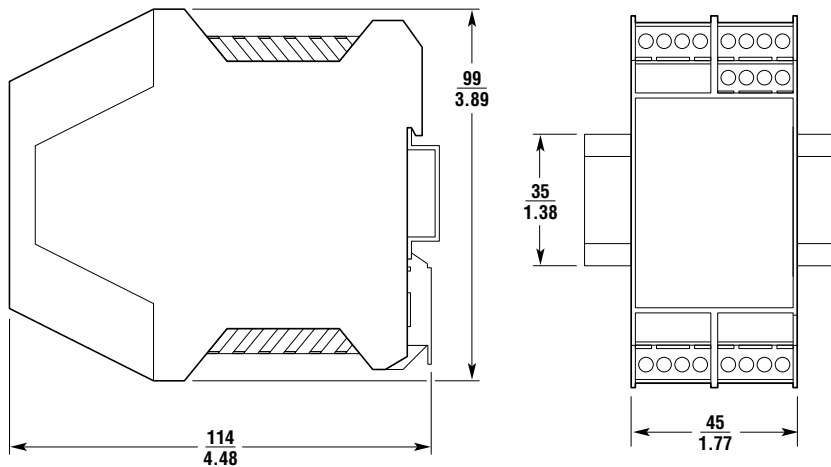
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Block Diagram



Dimensions

(mm/in.)



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Ordering

Model	Supply	Inputs	Outputs	Auxiliary	Part No.
SR125SMS4501	24 VDC	Back EMF Sensing	1 N/O + 1 N/C	2 Solid State	44510-1271
SR125SMS4502	110 VAC	Back EMF Sensing	1 N/O + 1 N/C	2 Solid State	44510-1272

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