

## Universal Tongue-Operated Safety Interlock Switch

- Strong and versatile—the compact size of the strong, glass-filled polyester housing and metal reinforced cam allows this popular switch to be used in most applications
- NEMA 6 enclosure enables these switches to withstand water washdown cleaning.
- Rotatable head gives four possible actuator entry points for versatile installation. A blanking plug is supplied for the unused entry.
- Small swing radius allows use on doors with a swing radius as small as 2.5 in. when using the optional flexible actuators
- The 4 contact poles provide 2 poles for dual channel safety monitoring and 2 additional poles for status monitoring
- Optional connector makes installation easy
- An optional stainless steel head is available



Conforms to EN1088, EN292, EN60947-5-1, EN60204-1  
UL and C-UL listed

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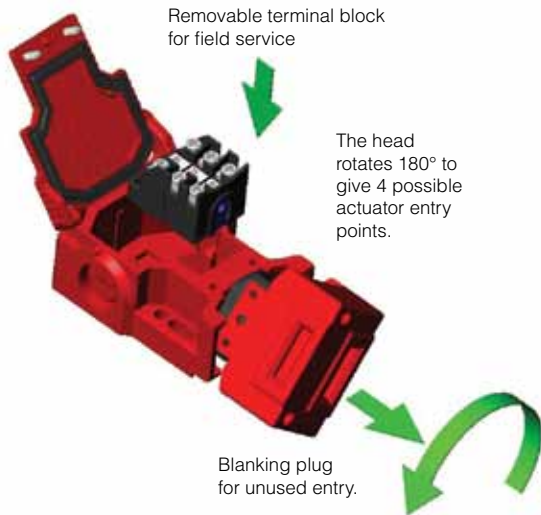
## Specifications

Electrical	All Models	T5009	T5009-6
Contact Configurations:		2 N/C + 1 N/O	2 N/C + 2 N/O, 3 N/C + 1 N/O, 4 N/C
Safety Contacts:	2 N/C positive break		
Switching Ability	AC: 500 V–1 A, 240 V–3 A, 120 V–6 A DC: 250 V–0.5 A, 24 V–2.5 A		
Safety Contact Gap:	> 2 mm (0.079 in.)		
Auxiliary Contacts:		1 N/O	1 N/C + 1 N/O, 2 N/C, 2 N/O
Max Switching Current/Volt/Amp:	500 V/500 VA		
Minimum Current:	5 V 5 mA DC		
Electrical Life:	1 x 10 <sup>6</sup> minimum		
<b>Mechanical</b>			
Mounting:	Any position		
Mounting Hardware:	2 x M5 screws		
Actuator Travel for Positive Opening:	7 mm (0.275 in.)		
Min Operating Radius:	60 mm (2.5 in.) with Flex 1 actuator; 175 mm (6.89 in.) with standard actuator		
Break Contact Min Force:	12 N (2.7 lb.)		
Max Actuation Speed:	160 mm/sec (6.30 in./sec)		
Max Actuation Frequency:	2 cycles/sec		
Case Material:	UL listed, glass-filled polyester, optional stainless steel head		
Actuator Material:	Stainless steel		
Wiring Entry:	M20 with 1/2 in. NPT adapter included, 1/2 in. NPT, 6-pin micro AC connector 1/2 in.–20		
Weight:	160 g (5.6 oz.)		
Color:	Red		
Mechanical Life:	1 x 10 <sup>6</sup> minimum		
<b>Environmental</b>			
Protection:	IP67 (NEMA 6)		
Operating Temperature:	-25 to 80°C (-13 to 176°F)		
Cleaning:	Water washdown		
<b>Compliance</b>			
Standards:	EN1088, EN292, EN60947-5-1, EN60204-1, UL508		
Approvals/Listings:	CE marked for all applicable directives, UL and C-UL		

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.

## Operation



**Flex 1**  
15° flexibility in any direction.



**Flex 2**  
15° flexibility in two directions.



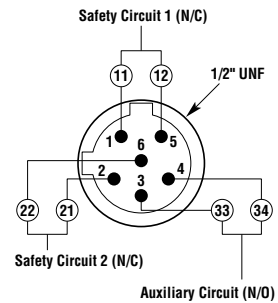
### Optional SLD Series

Optional switch locking devices are available. See accessories section for details.

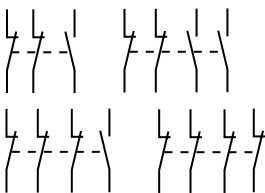


### Optional Connector for 3-Pole Switches

6-Pin Male, Micro AC, 1/2-20 UN2A

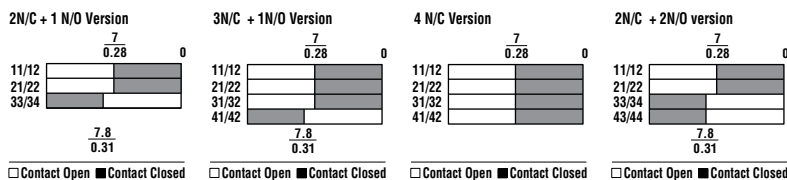


## Contact Arrangements



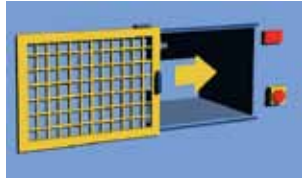
Minimum Allowable Radius for Actuator Entry				
44501-0755	175 mm	175 mm	175 mm	175 mm
44501-0785	175 mm	175 mm	175 mm	175 mm
44501-0790	175 mm	175 mm	175 mm	175 mm
44501-0765	175 mm	50 mm	60 mm	175 mm
44501-0760	60 mm	60 mm	60 mm	60 mm

### Contact Block Operation at Withdrawal of Actuator

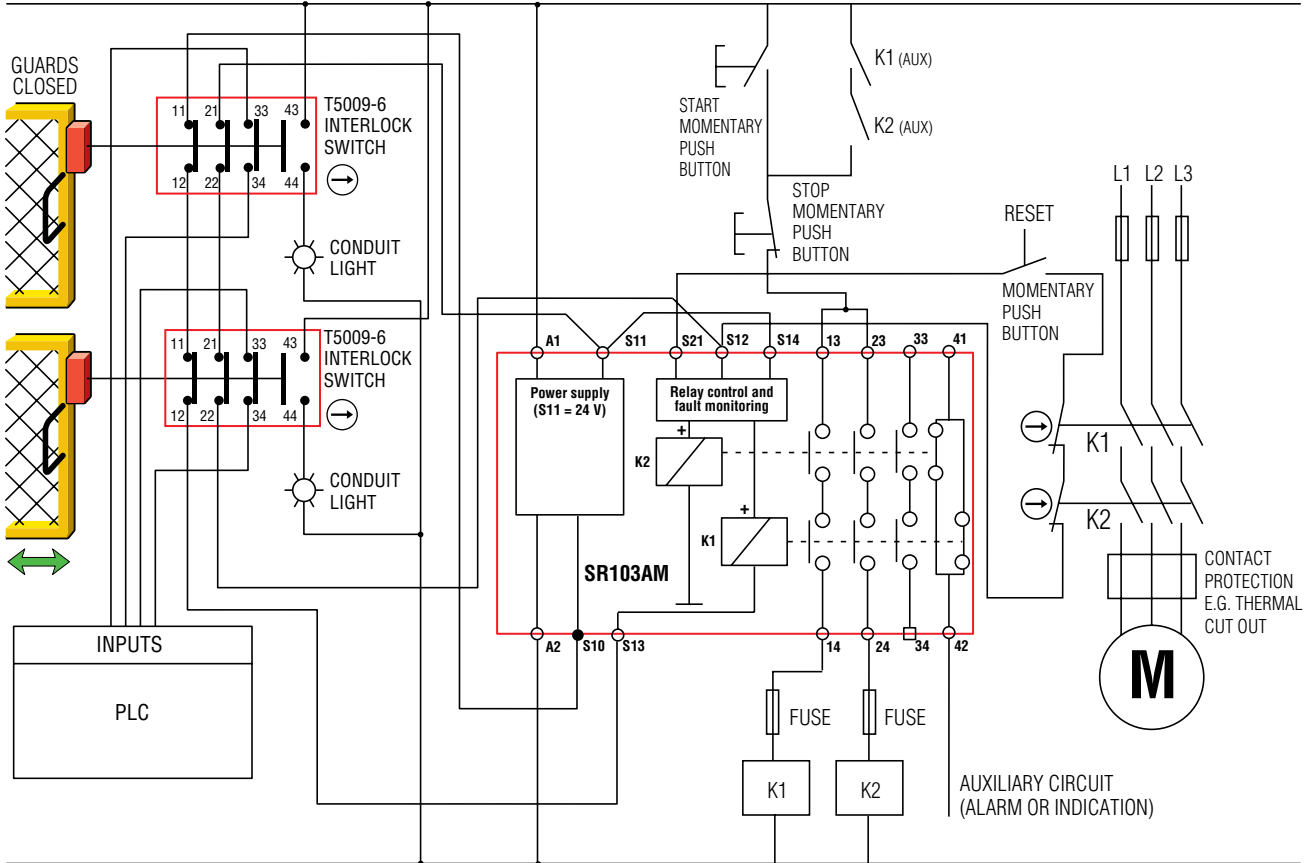


## Applications


Typical applications are on sliding guard doors or swinging guard doors with a 2.5 in. minimum swing radius when using the flexible actuators.



24VAC/DC, 110VAC, 230VAC



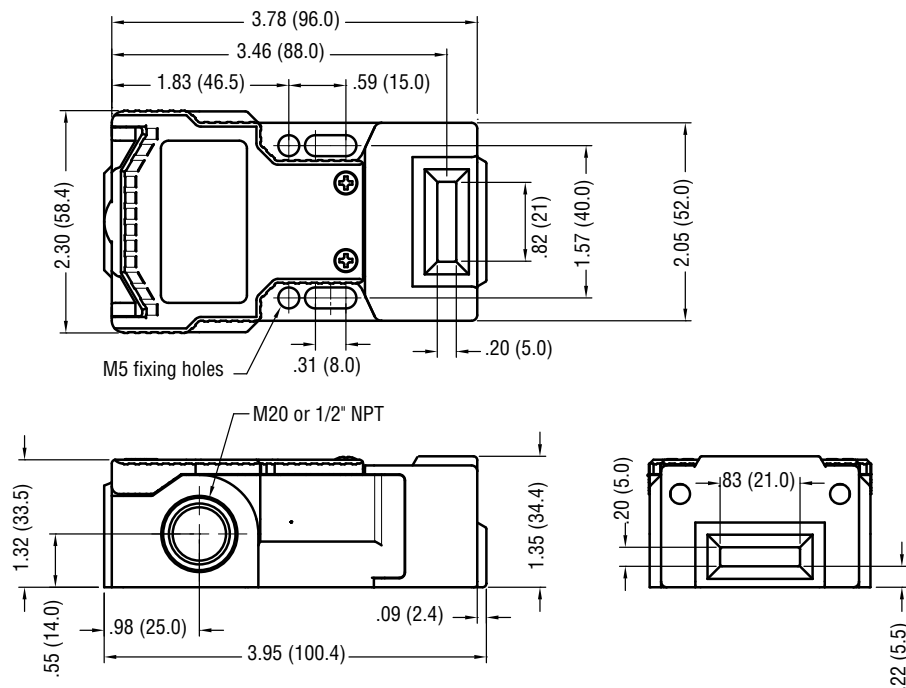
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 For a full explanation of the circuit operating principle and fault detection, see "Common Circuit Examples" in The Safety Library Section of this catalog.

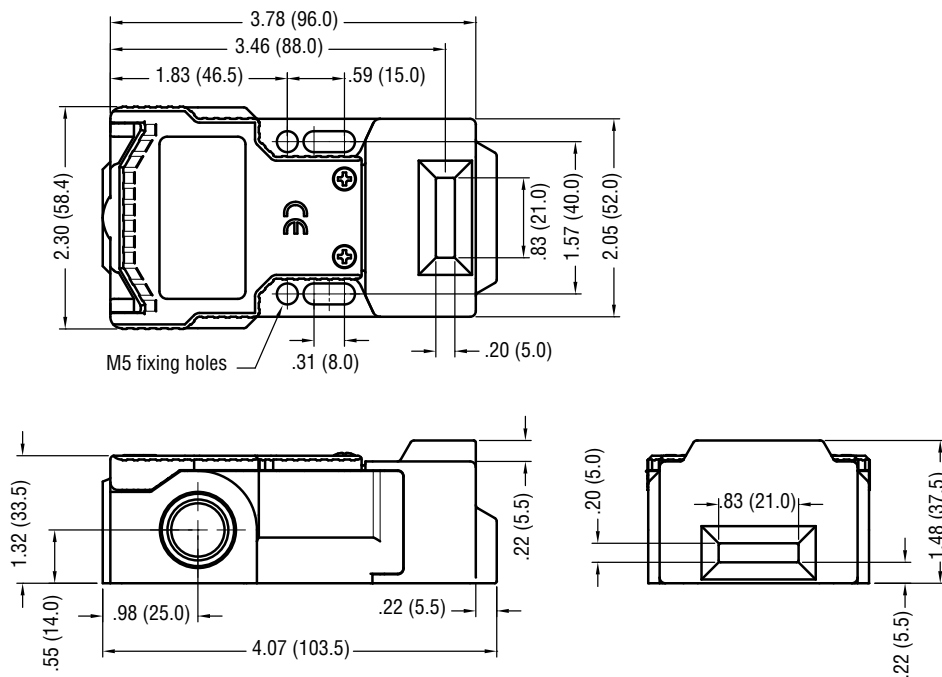
Dimensions

(mm/in.)

T5009, T5009-6 Switch with Plastic Head



T5009, T5009-6 Switch with Stainless Steel Head



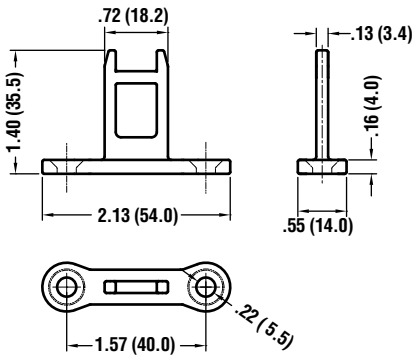
Dimensions (continued)

(mm/in.)

Standard & Flat Actuator Selections

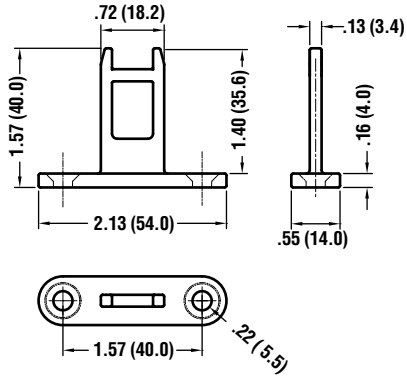
SA01-STD

44501-0755 (for use with plastic headed switches)



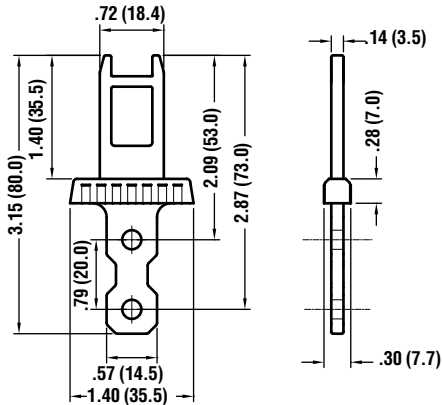
SA01-SSTD

44501-0785 (for use with stainless steel headed switches)



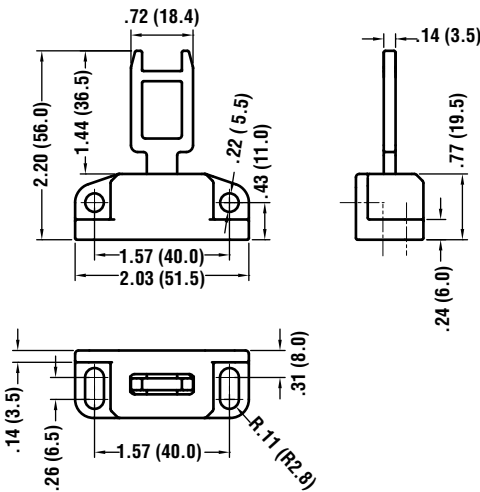
SA01-FSTD

44501-0790 (for use with plastic or stainless steel headed switches)



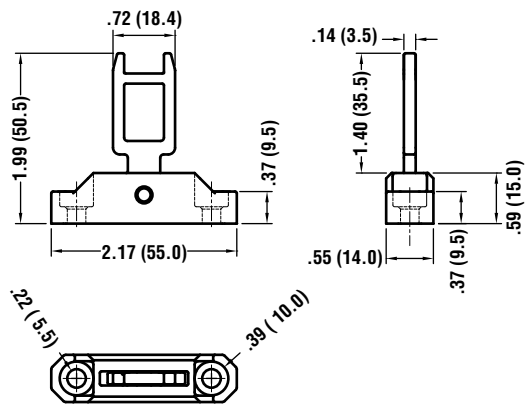
SA01-FLX1

44501-0760 (for use with plastic or stainless steel headed switches)



SA01-FLX2

44501-0765 (for use with plastic or stainless steel headed switches)




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## Ordering

Model	Contacts	Wiring Entry	Part No.
<b>T5009 Switch Only</b>			
T5009-021M	2NC+1NO BBM	3 x M20/NPT	44501-0010
T5009-021N	2NC+1NO BBM	3 X 1/2 NPT	44501-0020
T5009-021QD	2NC+1NO BBM	6-pin Micro AC Conn.	44501-0030
T5009-021SSM (Stainless Steel Head)	2NC+1NO BBM	3 x M20/NPT	44501-0040
T5009-021SSN (Stainless Steel Head)	2NC+1NO BBM	3 X 1/2 NPT	44501-0050
T5009-021SSCC (Stainless Steel Head)	2NC+1NO BBM	6-pin Micro AC Conn.	44501-0060
<b>T5009 Standard Actuator</b>			
T5009-021SM	2NC+1NO BBM	3 x M20/NPT	44501-0110
T5009-021SN	2NC+1NO BBM	3 X 1/2 NPT	44501-0450
T5009-021SCC	2NC+1NO BBM	6-pin Micro AC Conn.	44501-0410
T5009-021FSSM (Stainless Steel Head)	2NC+1NO BBM	3 x M20/NPT	44501-0500
T5009-021FSSN (Stainless Steel Head)	2NC+1NO BBM	3 X 1/2 NPT	44501-0520
<b>T5009 Flex 1 Actuator</b>			
T5009-021F1M	2NC+1NO BBM	3 x M20/NPT	44501-0120
T5009-021F1N	2NC+1NO BBM	3 X 1/2 NPT	44501-0170
<b>T5009 Flex 2 Actuator</b>			
T5009-021F2M	2NC+1NO BBM	3 x M20/NPT	44501-0440
T5009-021F2N	2NC+1NO BBM	3 X 1/2 NPT	44501-0470
<b>T5009-6 Switch Only</b>			
T5009-6022M	2NC+2NO BBM	3 x M20/NPT	44501-1020
T5009-6022N	2NC+2NO BBM	3 X 1/2 NPT	44501-1025
T5009-6031M	3NC+1NO BBM	3 x M20/NPT	44501-1030
T5009-6031N	3NC+1NO BBM	3 X 1/2 NPT	44501-1035
T5009-6040M	4NC BBM	3 x M20/NPT	44501-1040
T5009-6040N	4NC BBM	3 X 1/2 NPT	44501-1045
T5009-6022SM (Stainless Steel Head)	2NC+2NO BBM	3 x M20/NPT	44501-2020
T5009-6022SN (Stainless Steel Head)	2NC+2NO BBM	3 X 1/2 NPT	44501-2025
T5009-6031SM (Stainless Steel Head)	3NC+1NO BBM	3 x M20/NPT	44501-2030
T5009-6031SN (Stainless Steel Head)	3NC+1NO BBM	3 X 1/2 NPT	44501-2035
T5009-6040SM (Stainless Steel Head)	4NC BBM	3 x M20/NPT	44501-2040
T5009-6040SN (Stainless Steel Head)	4NC BBM	3 X 1/2 NPT	44501-2045
<b>T5009-6 Standard Actuator</b>			
T5009-6022SM	2NC+2NO BBM	3 x M20/NPT	44501-3020
T5009-6022SN	2NC+2NO BBM	3 X 1/2 NPT	44501-3025
T5009-6031SM	3NC+1NO BBM	3 x M20/NPT	44501-3030
T5009-6031SN	3NC+1NO BBM	3 X 1/2 NPT	44501-3035
T5009-6040SM	4NC BBM	3 x M20/NPT	44501-3040
T5009-6040SN	4NC BBM	3 X 1/2 NPT	44501-3045
<b>Actuators For Plastic Headed T5009, T5009-6 Switches</b>			
SA01-STD, Standard Actuator T5009, T5009-6, Plastic Head Switches			44501-0755
<b>Actuators For Stainless Steel Headed T5009, T5009-6 Switches</b>			
SA01-SSTD, Standard Actuator for T5009, T5009-6 Stainless Steel Head Switches			44501-0785
<b>Actuators Compatible with both Plastic and Stainless Steel Headed T5009, T5009-6 Switches</b>			
SA01-FLX1, Flex 1 Actuator T5009, T5009-6, Plastic or SS Headed Switches			44501-0760
SA01-FSTD, Flat Actuator T5009, T5009-6, Plastic or SS Headed Switches			44501-0790
SA01-FLX2, Flex 2 Actuator T5009, T5009-6, Plastic Head Switches			44501-0765
<b>Accessories</b>			
Spare M20 to 1/2" NPT Adapter			44512-0110
M20 Cord Grip			44512-0090

BBM = Break Before Make Contacts

 = Highlighted **Rapid Delivery** products are available for shipment today or within **FIVE** days.

 For information on Accessories, including Conduit Lights and Cables with Mating Connectors, see page G227.