



Conforms to EN1088, EN60947-5-1, EN292, EN60204-1, EN50081, EN50082  
UL and C-UL listed



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safety interlock switches

# TL5012

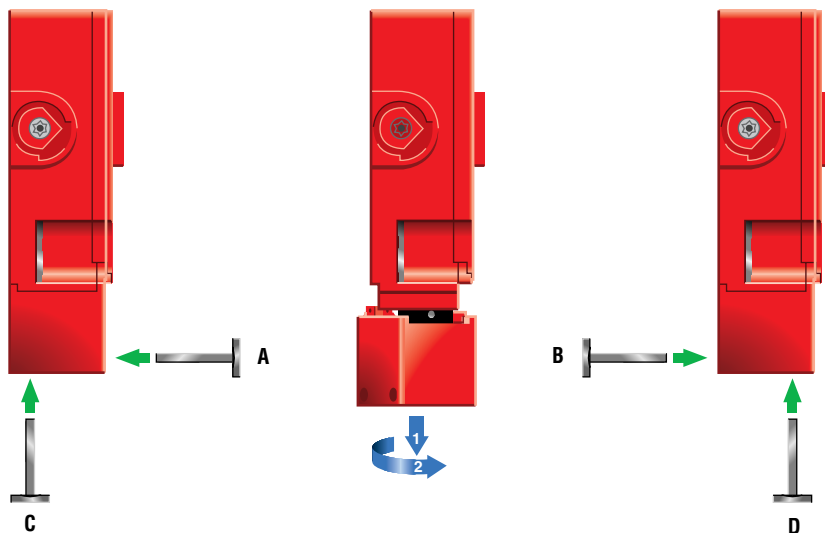
## Compact Safety Interlock Switch with Guard Door Locking

- High locking force of 1000 N (225 lb.) locks guard door shut until machine is safe to enter
- NEMA 6 enclosure enables the TL5012 to withstand water washdown cleaning
- Lid-mounted status light is on when solenoid is energized, indicating that solenoid has unlocked the guard door
- Easy installation—compact footprint of 2.25 x 5.25 in. and rotatable head allowing 4 possible actuator entry points makes installation easy
- Optional override key allows manual unlocking of the guard while, at the same time, locking the safety contacts open
- Long life—the TL5012, with its stainless steel actuator, is designed for a minimum of one million actuations.

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

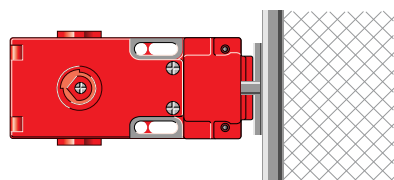
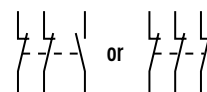
**N** **For More Guarding Products**  
See Section N for safeguarding cutting and turning machines

■ **Operation**



The head rotates 180° to give four possible actuator entry points. Once the required entry has been selected, attach catch case to the switch.

**Contact Arrangements**

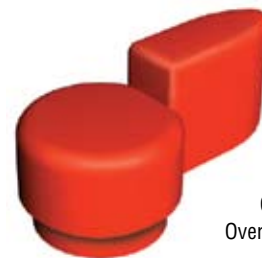


A distance of 2.45 mm or less is required between face of switch and face of actuator for switch to lock.

Locking Force = 1000 N (225 lb.) maximum

**Emergency Override**

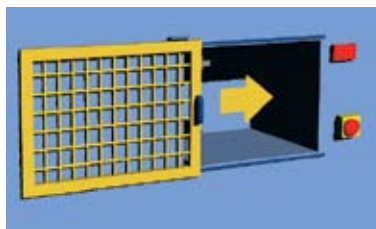
The TL5012's locking mechanism can be overridden in emergencies by using either a torx screwdriver or the override key.



Optional Override key

■ **Applications**

Typical applications are on sliding guard doors or swinging guard doors that must remain locked until a signal is applied to unlock the guard door.



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## Application Monitoring Units



### SR223SMT Timer Unit

Used with the TL4024 for machines with constant overrun. Gives a timed delay to the lock/release signal. Failsafe and adjustable to a range of times from 1.0 seconds up to 31 seconds.

 For information on the SR223SMT, see page H82



### SR125SMS Stop Motion Sensing Unit

Used with the TL4024 for machines with inconstant or variable overrun. Senses back EMF of AC or DC motors. Failsafe and adjustable to a range of 0.01 V to 0.10 V.

 For information on the SR125SMS, see page H42



### Safety Monitoring Relay Units

Safety monitoring relays ensure a maximum level of safety by monitoring all wiring in the safety circuit, including switches and contactors. Any fault and the power to the machine is switched off. A variety of safety monitoring relay units are available.

 For information on Safety Monitoring Relays, see page H1

## Specifications

Electrical	TL5012-1	All Models	TL5012-2
<b>Contact Configurations:</b>	2 N/C + 1 N/O		3 N/C
<b>Safety Contacts:</b>	2 N/C positive break		3 N/C positive break
<b>Switching Ability</b>			
<b>AC:</b>	500 V–1 A, 250 V–2 A, 100 V–5 A		
<b>DC:</b>	250 V–0.5 A, 24 V–2 A		
<b>Safety Contact Gap:</b>	> 2 mm (0.079 in.)		
<b>Auxiliary Contacts:</b>	1 N/O		
<b>Max Switching Current/Volt/Amp:</b>	500 V/500 VA		
<b>Minimum Current:</b>	5 V 5 mA DC		
<b>Electrical Life:</b>	1 x 10 <sup>6</sup> minimum		
<b>Solenoid Supply Voltage:</b>	24 VDC/AC or 110 VAC or 220 VAC		
<b>Solenoid Power:</b>	7 W, approx. 900 mA inrush		
<b>Solenoid Rating:</b>	100% duty		
<b>Mechanical</b>			
<b>Mounting:</b>	Any position		
<b>Actuator Travel for Positive Opening:</b>	Contacts open when solenoid is energized		
<b>Mounting Hardware:</b>	2 x M5 screws		
<b>Min Operating Radius:</b>	Approximately 175 mm (7 in.) with standard actuator		
<b>Max Holding Force:</b>	1000 N (225 lb.)		
<b>Max Actuation Speed:</b>	160 mm/sec (6.3 in./sec)		
<b>Max Activation Frequency:</b>	1 cycle/sec		
<b>Case Material:</b>	UL listed, glass-filled polyester		
<b>Actuator Material:</b>	Stainless steel		
<b>Wiring Entry:</b>	1 x M20 conduit with 0.5 in. NPT adapter		
<b>Weight:</b>	260 g (9.2 oz.)		
<b>Color:</b>	Red		
<b>Mechanical Life:</b>	1 x 10 <sup>6</sup> minimum		
<b>Environmental</b>			
<b>Protection:</b>	IP67 (NEMA 6)		
<b>Operating Temperature:</b>	-20 to 60°C (-4 to 176°F)		
<b>Cleaning:</b>	Water washdown		
<b>Compliance</b>			
<b>Standards:</b>	EN1088, EN60947-5-1, EN292, EN60204-1, EN50081, EN50082		
<b>Approvals/Listings:</b>	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.

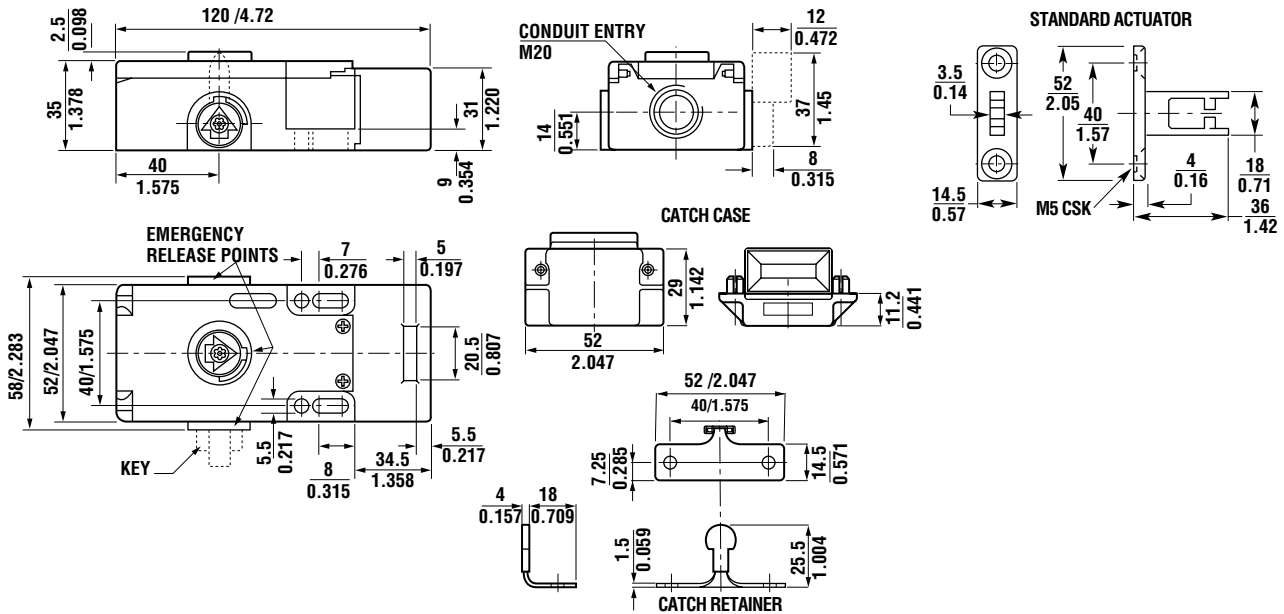
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■ Dimensions — mm/in.



■ Ordering

Model	Solenoid	Contacts	Wiring Entry	Part No.
TL5012-1024SM (standard actuator)	24 VAC/DC	2 N/C + 1 N/O	1 x M20 with NPT adapter	44530-0010
TL5012-1110SM (standard actuator)	110 VAC	2 N/C + 1 N/O	1 x M20 with NPT adapter	44530-0020
TL5012-1220SM (standard actuator)	220 VAC*	2 N/C + 1 N/O	1 x M20 with NPT adapter	44530-0030
TL5012-2024SM (standard actuator)	24 VAC/DC	3 N/C	1 x M20 with NPT adapter	44530-0050
TL5012-2110SM (standard actuator)	110 VAC	3 N/C	1 x M20 with NPT adapter	44530-0060
TL5012-2220SM (standard actuator)	220 VAC*	3 N/C	1 x M20 with NPT adapter	44530-0070
Override key, molded plastic				44530-0700
Spare standard actuator (without catch and catch case)				44519-0700
Spare mechanical catch kit (use with standard actuator only)				44501-0740
Spare alignment guide (plastic)				44501-0770
Spare M20 to 0.5 in. NPT adapter				44512-0110
M20 Cord Grip				44512-0090
Conduit Lights (see pages G239 & G240)				
Accessories (see page G238)				

\*220 VAC units are available on special order. Minimum order quantities may apply.

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