



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



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safety interlock switches

T4012

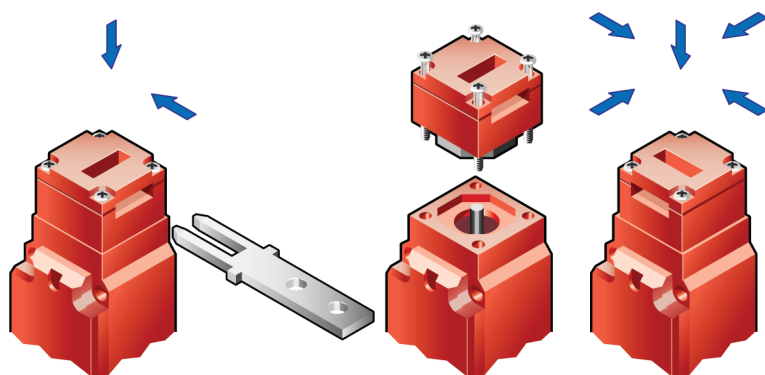
Universal Tongue-Operated Safety Interlock Switch

- Strong and versatile—the compact size of the strong, glass-filled thermoplastic housing allows this switch to be used in most applications.
- NEMA 6 enclosure enables these switches to withstand water washdown cleaning.
- Rotatable head gives eight possible actuator entry points for versatile installation. A blanking plug is supplied for the unused entry.
- Long life—these switches, with their stainless steel actuators, are designed for a minimum of two million actuations.
- Available in 2 or 4 contact pole versions. The 4 contact pole version provides 2 poles for dual channel safety monitoring and 2 additional poles for status monitoring.
- An optional stainless steel guide is available for demanding applications.

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



Contact Arrangements



Flexible 1 Actuator

15 degree flexibility may be adjusted with the set screw.



Flexible 2 Actuator

15 degree flexibility may be adjusted with the set screw.



Flat Actuator

Available with and without rubber bushings.



90-Degree Actuator

Available with and without rubber bushings.



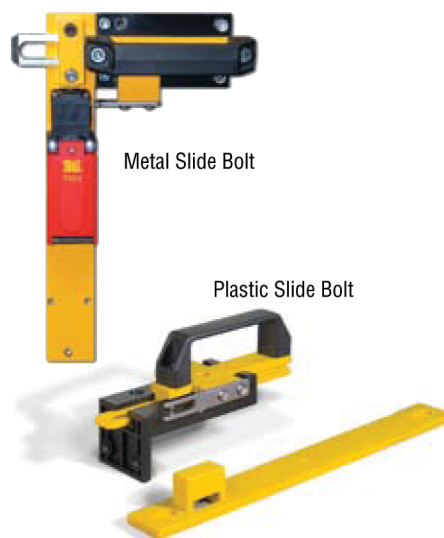
Optional Alignment Guide

Optional stainless steel alignment guide aids actuator entry and is easily installed.



Optional Slide Bolts

- Allows easy installation of switch on machine guards
- Actuator included (order switch separately)
- Integral handle included
- Robust for use with heavy doors
- Slotted hole in bolt permits attaching multiple padlocks
- Yellow color for easy recognition



Optional SLD Series

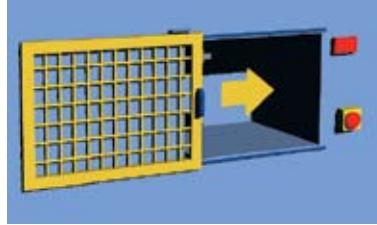


Optional switch locking devices are available. See accessories section for details.



■ Applications

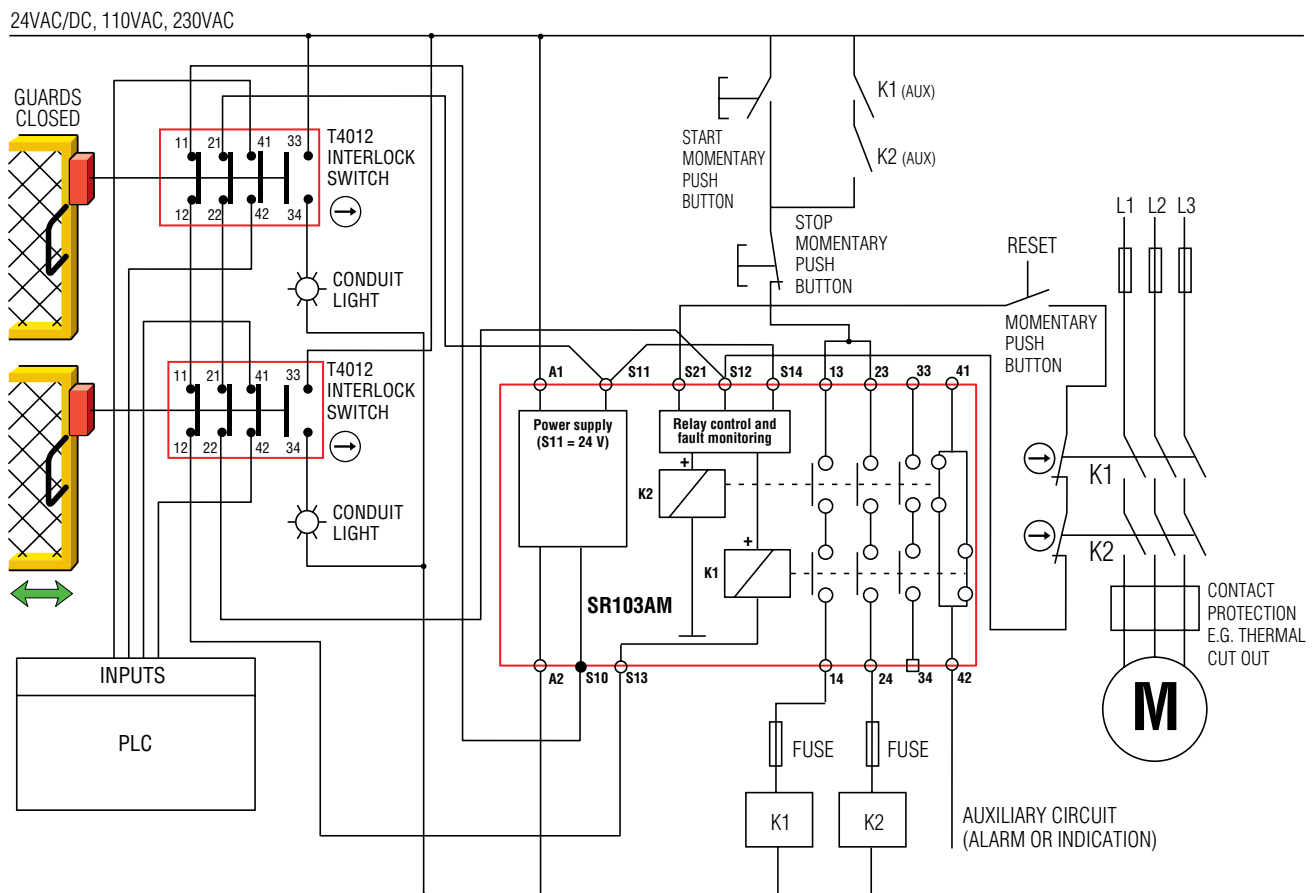
Typical applications are on sliding guard doors or swinging guard doors.



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

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N For More Guarding Products
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■ Specifications

Electrical		All Models
Contact Configurations:		1 N/C + 1 N/O, 2 N/C, 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:		230 V, 4 A
DC:		24 V, 4 A
Contact Material:		Silver alloy, gold flashed
Auxiliary Contacts:		1 N/O, 2 N/O
Minimum Switching Voltage:		12 V at 10 mA
Minimum Switching Current:		1 mA at 24 V
Mechanical		
Mounting:		Any position
Mounting Hardware:		2 x M5 screws (not supplied)
Actuator Travel for Positive Opening:		5 mm (0.197 in.)
Min Operating Radius:		Approximately 100 mm (3.9 in.) with flex actuator Approximately 1000 mm (39 in.) with flat or 90-degree actuator
Break Contact Min Force:		25 N (5.6 lb.)
Max Actuation Speed:		20 m/min.
Max Actuation Frequency:		112 cycles/min.
Case Material:		Glass-fibre reinforced thermoplastic
Actuator Material:		Stainless steel
Wiring Entry:		3 x M20 conduit with 0.5 in. NPT adapter
Weight:		141 g (5 oz.)
Color:		Black with red lid
Mechanical Life:		2 x 10 ⁶ minimum
Environmental		
Protection:		IP67 (NEMA 6)
Operating Temperature:		-20 to 80°C (-4 to 176°F)
Cleaning:		Water washdown
Compliance		
Standards:		EN1088, EN292, EN60947-5-1, EN60204-1
Approvals/Listings:		CE marked for all applicable directives, UL and C-UL, BG

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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Technical drawing of the M5000 series actuator, showing front, side, and top views with dimensions and a table of necessary travel and permissions.

Dimensions (mm):

- Front View:
 - Top: 31 (1.22)
 - Height: 125 (4.92)
 - Width: 42 (1.65)
 - Bottom: 16 (0.63)
 - Internal: 32 (1.26)
 - Internal: 22 (0.87)
 - Internal: 3.5 (0.14)
 - Internal: 35 (1.38)
 - Internal: 43 (1.69)
- Side View:
 - Height: 40 (1.57)
 - Width: 30 (1.18)
 - Width: 31 (1.22)
 - Internal: 4.1 (0.16)
 - Internal: 3 (0.12)
 - Internal: 5.1 (0.2)
 - Internal: 16 (0.63)
- Top View:
 - Width: 16 (0.63)
 - Height: 16 (0.63)
 - Internal: 16 (0.63)

Other Dimensions:

- Insertion depth: h
- Insertion depth: V
- M = 0.6Nm
- * Thread (3x)

Table: Necessary Min. Travel + Permissions

Operating Direction	Actuator (standard)
Horizontal (h)	28 + 2 1.10 + 0.1
Vertical (v)	29.5 + 1 1.16 + 0.1

**** Fixed position for safety-related applications (screw M5)**

*** M20 x 1.5**

Table: Necessary Min. Travel + Permissions (continued)

Operating Direction	Actuator (standard)
Horizontal (h)	28 + 2 1.10 + 0.1
Vertical (v)	29.5 + 1 1.16 + 0.1

Technical drawing of the door handle assembly showing front, side, and top views with dimensions in mm and inches.

Front View Dimensions:

- Top plate width: 14 mm (0.55 in)
- Top plate thickness: 0.55 mm
- Top plate hole diameter: Ø5.5 (0.216 in)
- Top plate hole offset: 0.16 mm
- Top plate hole diameter: 29 mm (1.14 in)
- Top plate hole offset: 1.14 mm
- Top plate hole diameter: 40 mm (1.575 in)
- Top plate hole offset: 1.575 mm
- Top plate hole diameter: 23 mm (0.91 in)
- Top plate hole offset: 0.91 mm
- Top plate hole diameter: 40 mm (1.57 in)
- Top plate hole offset: 1.57 mm
- Top plate hole diameter: 28 + 7 mm (1.1 + 0.28 in)
- Top plate hole offset: 1.1 + 0.28 mm

Side View Dimensions:

- Top plate thickness: 33.2 mm (1.31 in)
- Top plate hole diameter: 35 mm (1.38 in)
- Top plate hole offset: 1.38 mm

Top View Dimensions:

- Top plate thickness: 35 mm (1.38 in)
- Top plate hole diameter: 35 mm (1.38 in)
- Top plate hole offset: 1.38 mm

Labels:

- Adjustment Screw
- Min. door radius 100 (3.94 in)

Technical drawing of a door handle showing dimensions in mm and inches:

- Top section: 35 mm (1.38 in)
- Section below top: 58 mm (2.28 in)
- Section below that: 20 mm (0.79 in)
- Section below that: 98 mm (3.46 in)
- Bottom section: 3 mm (0.12 in)
- Overall width: 15 mm (0.59 in)
- Overall height: 5.5 mm (0.22 in)
- Min. door radius: 1000 mm (39.4 in)

Technical drawing of a door handle assembly. The drawing includes a side view of the handle and a top view of the mounting plate. Dimensions are provided in inches (top) and millimeters (bottom). The side view shows a handle with a circular grip and a rectangular base. The top view shows a rectangular plate with two circular mounting holes. The dimensions are as follows:

- Side View:
 - Overall height: 30 in (1.18 in)
 - Height of the grip: 35 in (1.38 in)
 - Height of the base: 3 in (0.12 in)
 - Radius of the grip: 47 in (1.85 in)
 - Radius of the base: 5.5 in (0.22 in)
- Top View:
 - Overall width: 48 in (1.89 in)
 - Distance between mounting holes: 20 in (0.8 in)
 - Distance from edge to mounting hole: 18 in (0.7 in)
 - Radius of the mounting holes: 15 in (0.59 in)

Min. door radius $\frac{1000}{39.4}$

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T4012 90-DEGREE ACTUATOR

T4012 90-DEGREE ACTUATOR	Contacts	Wiring Entry	Part No.
T4012-011SM	1 N/C + 1 N/O	M20/NPT adapter	44538-0010
T4012-020SM	2 N/C	M20/NPT adapter	44538-0020
T4012-031SM	3 N/C + 1 N/O	M20/NPT adapter	44538-0030
T4012-022SM	2 N/C + 2 N/O	M20/NPT adapter	44538-0040
T4012-040SM	4 N/C	M20/NPT adapter	44538-0050

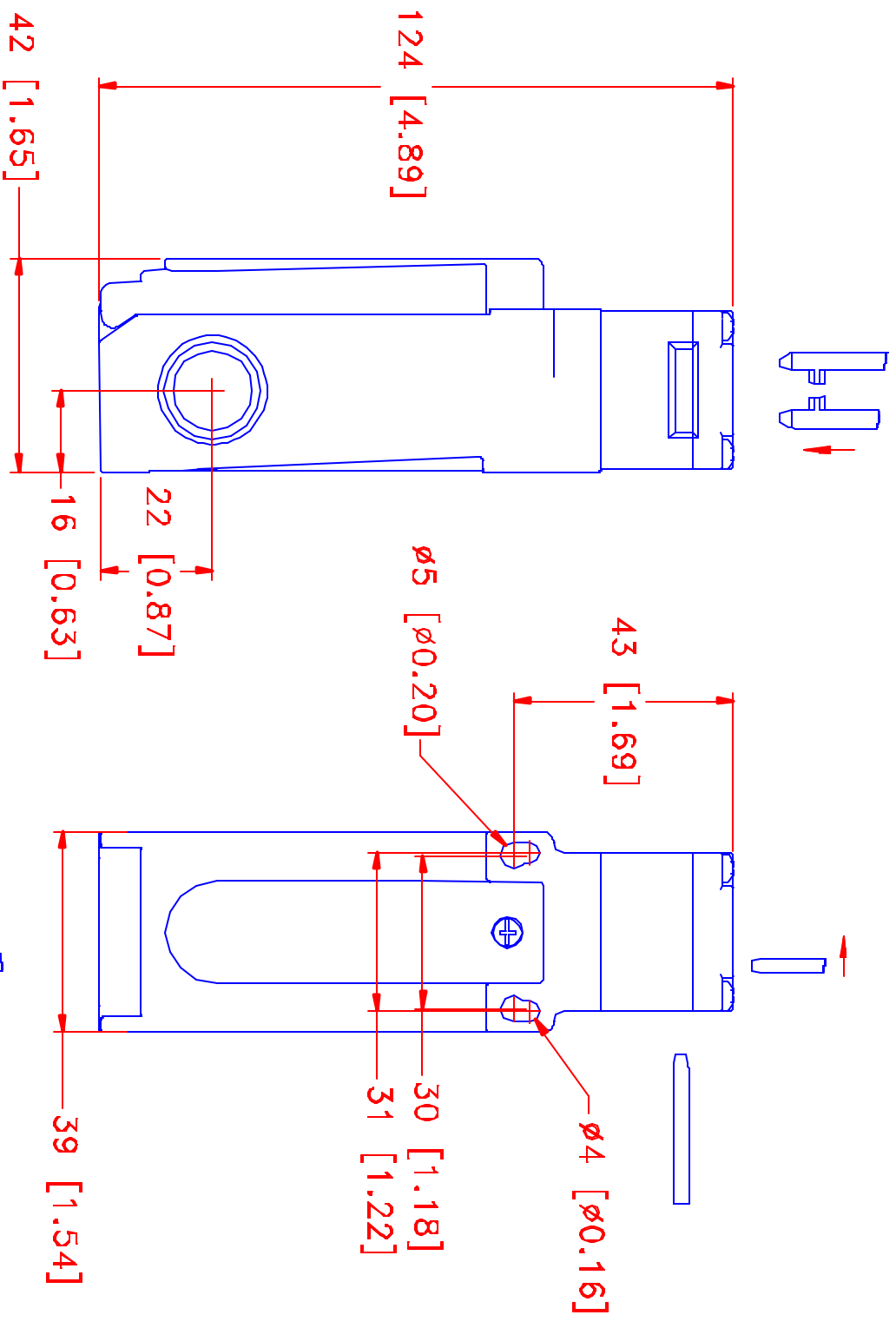
T4012-011TM	1 N/C + 1 N/O	M20/NPT adapter	44538-0110
T4012-020TM	2 N/C	M20/NPT adapter	44538-0120
T4012-031TM	3 N/C + 1 N/O	M20/NPT adapter	44538-0130
T4012-022TM	2 N/C + 2 N/O	M20/NPT adapter	44538-0140
T4012-040TM	4 N/C	M20/NPT adapter	44538-0150

■ Ordering (continued)

T4012 FLEX 2 ACTUATOR	Contacts	Wiring Entry	Part No.
T4012-011F2M	1 N/C + 1 N/O	M20/NPT adapter	44538-0210
T4012-020F2M	2 N/C	M20/NPT adapter	44538-0220
T4012-031F2M	3 N/C + 1 N/O	M20/NPT adapter	44538-0230
T4012-022F2M	2 N/C + 2 N/O	M20/NPT adapter	44538-0240
T4012-040F2M	4 N/C	M20/NPT adapter	44538-0250
T4012 FLEX 1 ACTUATOR			
T4012-011F1M	1 N/C + 1 N/O	M20/NPT adapter	44538-0310
T4012-020F1M	2 N/C	M20/NPT adapter	44538-0320
T4012-031F1M	3 N/C + 1 N/O	M20/NPT adapter	44538-0330
T4012-022F1M	2 N/C + 2 N/O	M20/NPT adapter	44538-0340
T4012-040F1M	4 N/C	M20/NPT adapter	44538-0350
SWITCH ONLY MODELS (no actuators and no adapters included)			
T4012-011	1 N/C + 1 N/O	M20	44538-2010
T4012-020	2 N/C	M20	44538-2020
T4012-031	3 N/C + 1 N/O	M20	44538-2030
T4012-022	2 N/C + 2 N/O	M20	44538-2040
T4012-040	4 N/C	M20	44538-2050
ACCESSORIES			
Standard Actuators			
Replacement flat actuator			44534-0700
Replacement 90-degree actuator			44534-0710
Replacement flex 2 actuator			44534-0720
Replacement flex 1 actuator			44534-0730
Standard Actuators with Rubber Bushing			
Replacement flat actuator RB			44534-0740
Replacement 90-degree actuator RB			44534-0750
Overtravel Actuators			
Replacement flat actuator OT			44534-0701
Replacement 90-degree actuator OT			44534-0711
Replacement flex 2 actuator OT			44534-0721
Replacement flex 1 actuator OT			44534-0731
Overtravel Actuators with Rubber Bushing			
Replacement flat actuator OTRB			44534-0741
Replacement 90-degree actuator OTRB			44534-0751
Slide Bolts			
Bracket with handle for right-hung door (yellow metal)			44534-8130
Bracket with handle for left-hung door (yellow metal)			44534-8140
Bracket (galvanized)			44534-8020
Plastic slide bolt for right or left-hung doors for T4012 (yellow)			44534-8070
Handle without snap-in (use with 44534-8020 bracket) (galvanized)			44534-8000
Handle with snap-in (use with 44534-8020 bracket) (galvanized)			44534-8010
Miscellaneous			
Stainless steel alignment guide (must use with overtravel Actuators)			44534-0780
Latch spring (provides greater retention force for actuator)			44534-0760
Lockout bar (prevents insertion of actuator into switch)			44534-0770
Replacement head for T4012			44534-0790

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T4012 SWITCH

Drawn to Scale in Decimal Inches
For Metric units (mm), multiply by 25.4
Dimension as Required
For Detailed Dimensions, refer to Catalog

