Rev. 12.07

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

T4012

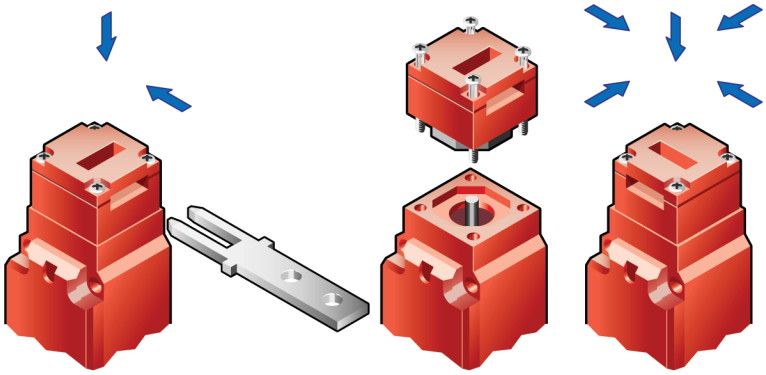
Universal Tongue-Operated Safety Interlock Switch

- 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.

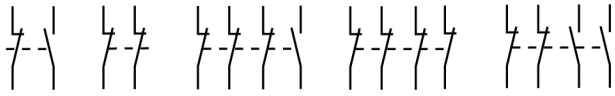
A Go to the Engineering Guide
For in-depth information on safety standards and use.

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

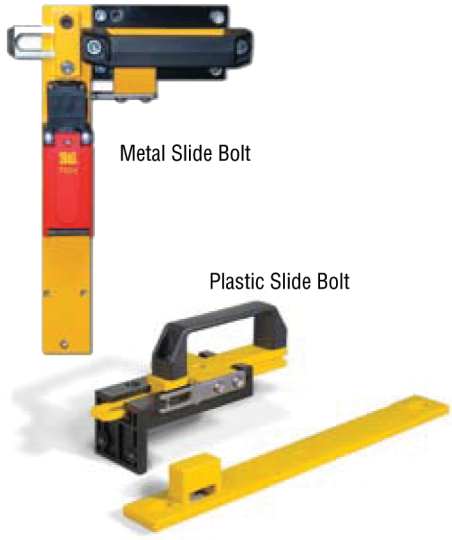
Available with and without rubber bushings.

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



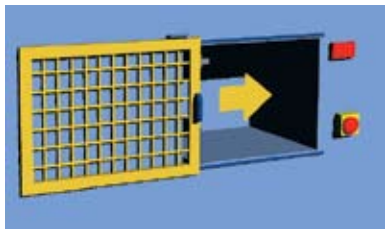
Optional SLD Series

NEW!

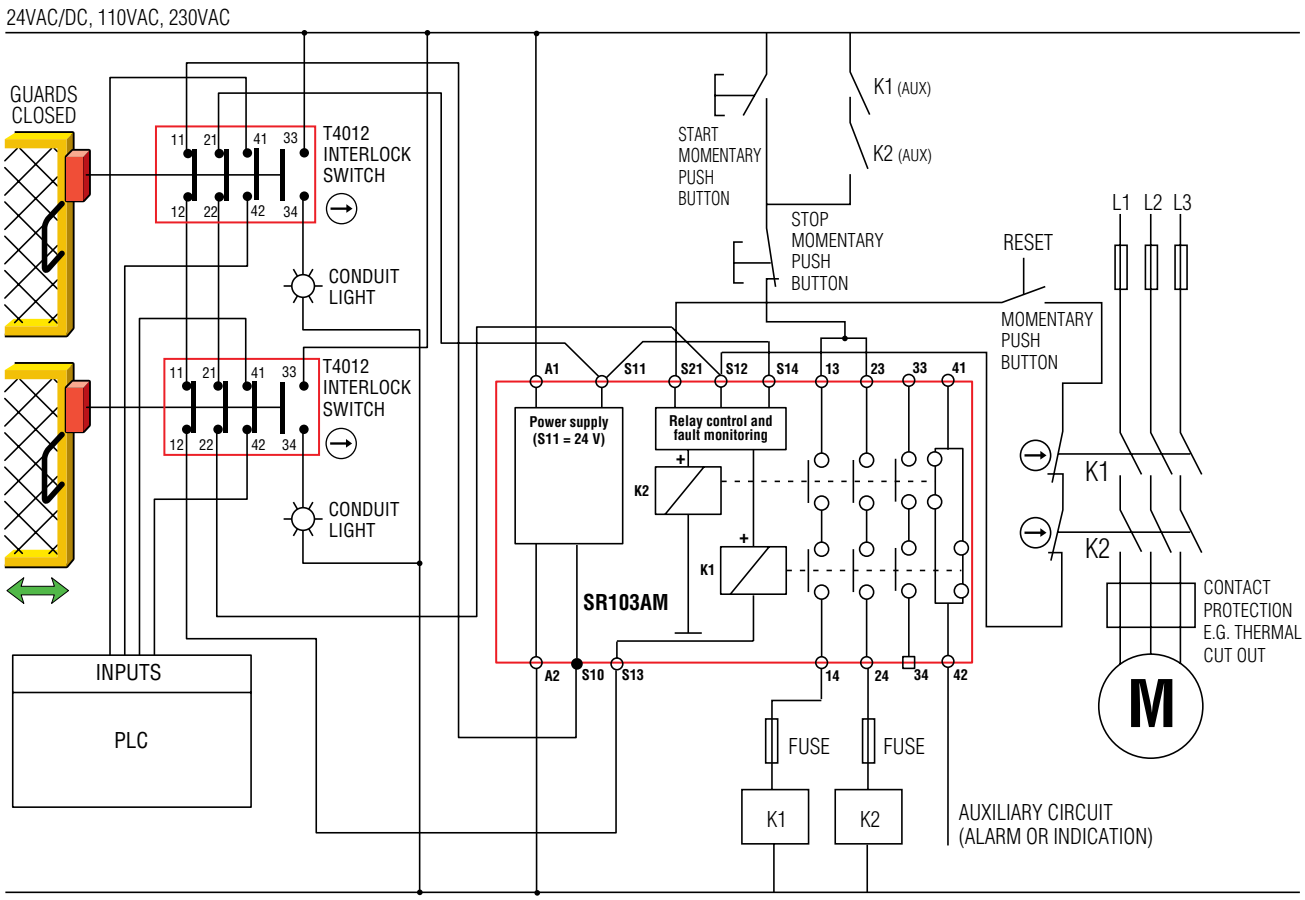
Optional switch locking devices are available. See accessories section for details.

■ 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.



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

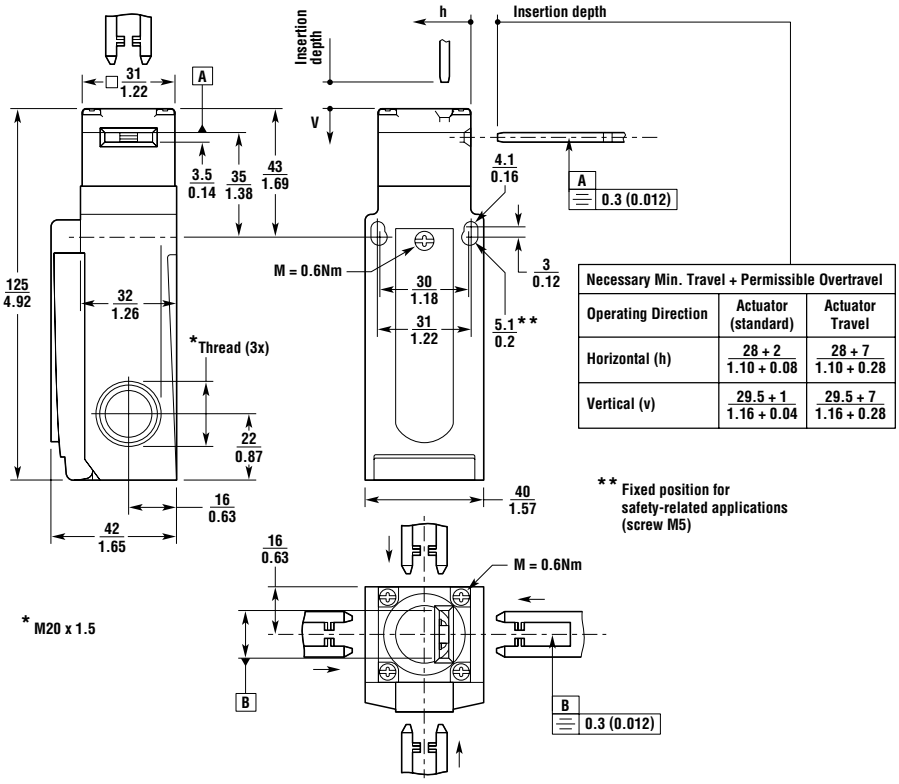
Specifications

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.

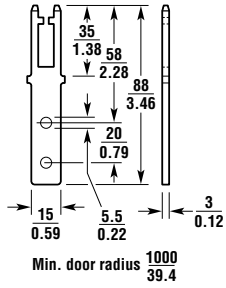
Note: The safety contacts of the Omron STI switches are described as normally closed (N/C)—i.e., with the guard closed, actuator in place, and the machine able to be started.

■ Dimensions — mm/in.

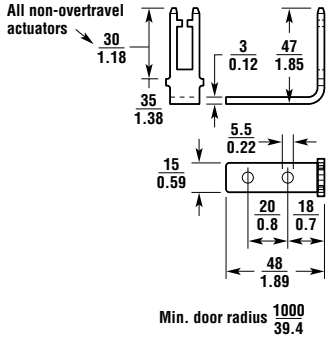


Necessary Min. Travel + Permissible Overtravel		
Operating Direction	Actuator (standard)	Actuator Travel
Horizontal (h)	28 + 2 1.10 + 0.08	28 + 7 1.10 + 0.28
Vertical (v)	29.5 + 1 1.16 + 0.04	29.5 + 7 1.16 + 0.28

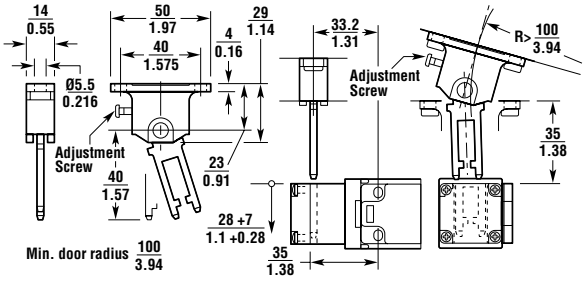
Overtravel Flat Actuator



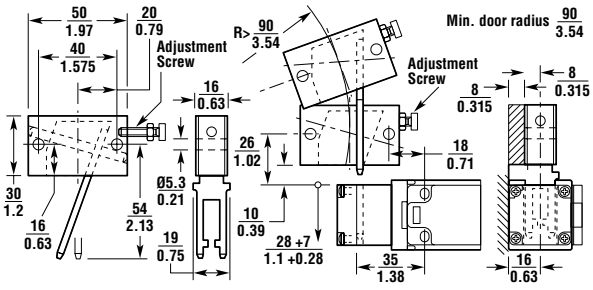
Overtravel 90-Degree Actuator



Flexible 1 Actuator



Flexible 2 Actuator

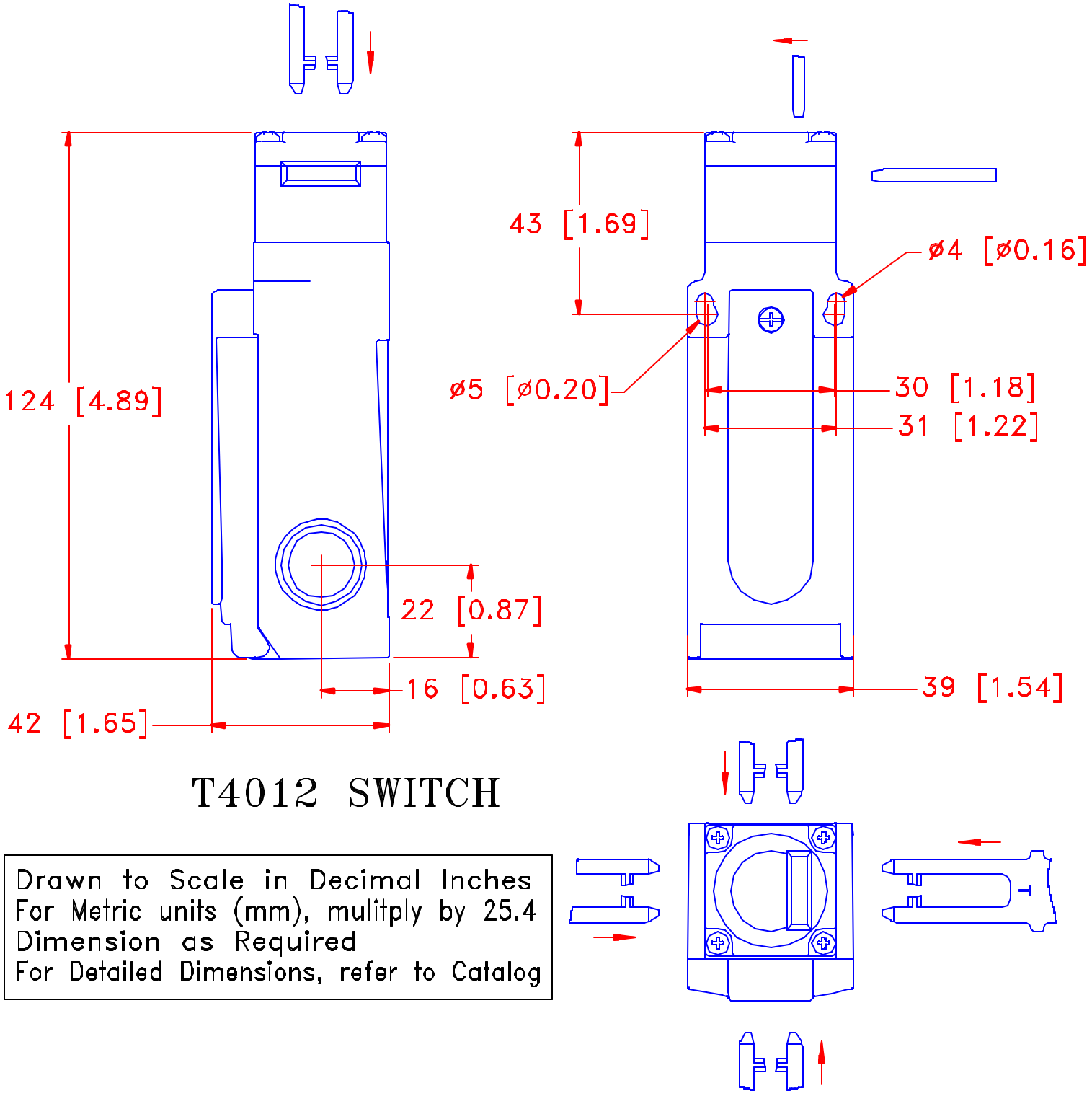


■ Ordering

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 FLAT ACTUATOR			
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



T4012 SWITCH

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