

# MAXIMUM SECURITY SWITCH

*A New Standard In High Security*



## OVERVIEW

Securitron's Maximum Security Switch (MSS) represents the ultimate in position monitoring devices. It is used to monitor the open/closed status of doors, windows, gates, machinery safety barriers or other moving assemblies where either high security and/or safety are required. The high security balanced magnetic switch provides **superior defeat resistance**, easy, **accurate installation**, **false alarm reduction** and versatile **indoor-outdoor** application. The compact design is esthetically pleasing when installed. The optional remote test feature insures the operational integrity of each individual switch. The MSS is available with a jacketed cable for hidden routing throughout the frame or with stainless steel cable for a surface run installation. The MSS series is **UL listed** as a high security switch with indoor/outdoor rating, complies with DCID's, and has been accepted by DIA for use within SCIF's.

## UNMATCHED DEFEAT RESISTANCE

All high security switches strongly resist defeat with a single external magnet but may be vulnerable to more sophisticated attacks including physical removal of the switch module from the frame, physical removal of the magnet pack from the door, or acquisition of a **second magnet pack** which is then placed near the switch module while the door is opened.

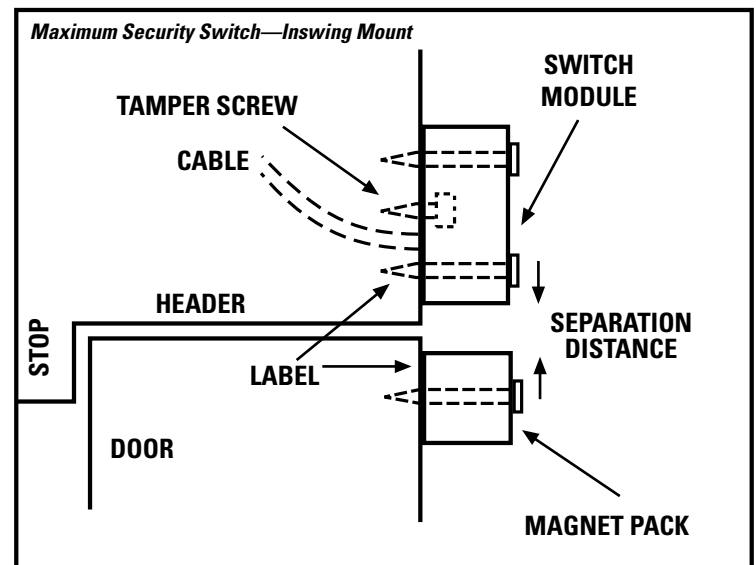
To defend against switch module removal, the MSS incorporates a hidden, normally closed tamper switch. An attempt to remove the switch module will result in an alarm. The tamper output can be separately monitored or connected in series with main switch output.

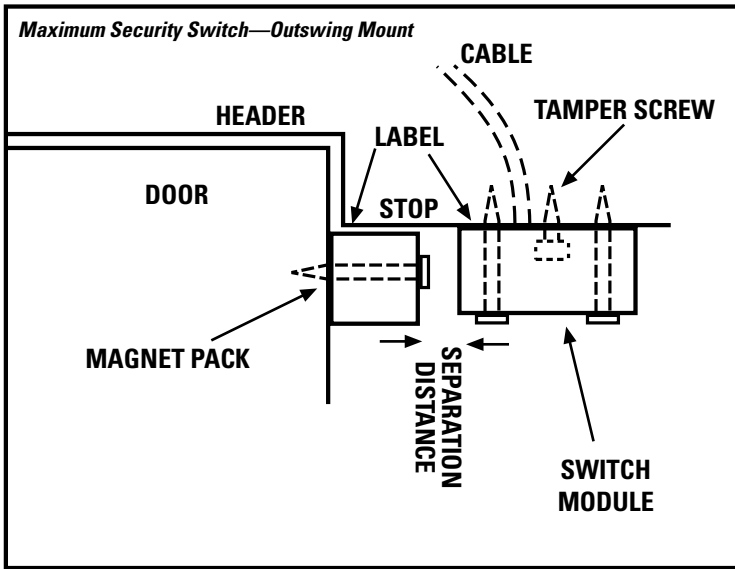
Removal of the magnet pack from the door is a more serious threat. Since the magnet pack is not wired, it cannot be monitored. To overcome this, the MSS utilizes **co-planar operation**. This requires that the magnet pack be in the same narrow read angle plane as the switch module. This restriction, coupled with the MSS's **unique mounting method** on both outswinging and inswinging doors, makes it virtually

impossible to remove the magnet pack from the door without signaling an alarm

If a **second Securitron magnet pack** is obtained, it cannot be employed to defeat the MSS for two reasons. **Co-planar** operation means that the switch module can only read one magnet pack at a time and we have built in an additional defense: MSS switch modules and magnet packs are **matched pairs**. By altering polarities, we are able to make only certain switch modules and magnet packs operate with each other. A criminal attempting to defeat the MSS will not know if he has a compatible magnet pack, as the polarities are not marked.

## TEMPLATED INSTALLATION FOR THE MOST RELIABLE OPERATION





### QUICK AND RELIABLE INSTALLATION

Other high security magnetic switches perform differently mounted on steel than on wood or aluminum, but the MSS is 100% magnetically shielded so it operates the **same way on all surfaces**. This allows us to supply an **installation template** with exact optimum separation distance so that as each MSS is mounted, you will know it is **centered within its operating gap** for the lowest chance of false alarms. It is not necessary to pre-check with an Ohmmeter in the field.

The MSS is supplied in two versions for different installation environments. For use on a door with hollow frame, the **MSS-1** provides a jacketed cable, which is **hidden in the doorframe**. This provides optimum appearance and security. For monitoring other types of openings, or where the cable cannot be hidden in the doorframe, the **MSS-1G** includes a 3-foot length of **stainless steel armor** to protect the cable in a surface run.

### BEST APPEARANCE

The MSS is more **compact** than competitive units and its mounting method has been laid out such that it installs unobtrusively on outswinging or inswinging doors without the need for external brackets and with the cable hidden. This also naturally maintains a stronger defense against tampering or removal. Note the cross section drawing to appreciate this benefit.

### REMOTE TEST OPTION

A building with many monitored openings must be assured that **each switch is functioning**. In certain high security installations, testing each switch is a procedural mandate. With Securitron's remote test option, this is done electronically from a central point rather than by opening each door.

The MSS uses a **unique two step test** on a three-wire circuit. Voltage is sent first to input #1 of all switches. If all switches go into alarm, the test is passed. Next, power is sent to input #2 and again, all switches must go into alarm. If a switch fails to alarm on both tests, it is completely non-functional probably due to tampering. A subtler defect is if a switch fails to go into alarm on one of the two tests. Part of its internal circuitry has failed so it is only operating as a standard low security switch and could be compromised.

### TECHNICAL DATA

**Main Output:** SPDT at maximum of 125 mA @24V or 250 mA @12V

**Tamper Output:** Closed when secure; open to alarm. 1 A maximum current.

**Operating temperature:** -40F to 150F (-40C to 65C)

**Operating gap:** Optimum centered separation distance is marked on each unit. It is typically between .3" - .475" (7.6MM-12MM). ± tolerance around this optimum separation ranges from .2" (5MM) to .3" (7.6MM).

**Size:** Magnet Pack: .75" x .75" x 4.25" (19 x 19 x 108MM); Switch Module: .75" x 1.5" x 4.25" (19 x 38 x 108MM)

**Finish:** Satin black standard

**U.S. Patent #5,668,533**

### ORDERING INFORMATION

**Model MSS-1** for jacketed hidden cable

**Model MSS-1G** for surface mount stainless steel cable protection.

**Model MSS-1C** is a concealed unit which fits into a standard ANSI 4 7/8" strike cutout. (not pictured)

Add "RT" to part number for remote test option (i.e. MSS-1-RT)

Contact the factory for the flush mount version.

Part Number	Description	Price
MSS-1	High Security Switch Surface Mount	\$130.00
MSS-1-RT	High Security Switch Surface Mount with Remote Test	\$160.00
MSS-1C	High Security Switch Concealed	\$130.00
MSS-1C-RT	High Security Switch Concealed Remote Test	\$160.00
MSS-1G	High Security Switch Surface Mount	\$130.00
MSS-1G-RT	High Security Switch Surface Mount Remote Test	\$160.00

**THE INDUSTRY'S ONLY UNCONDITIONAL LIFETIME WARRANTY.**

