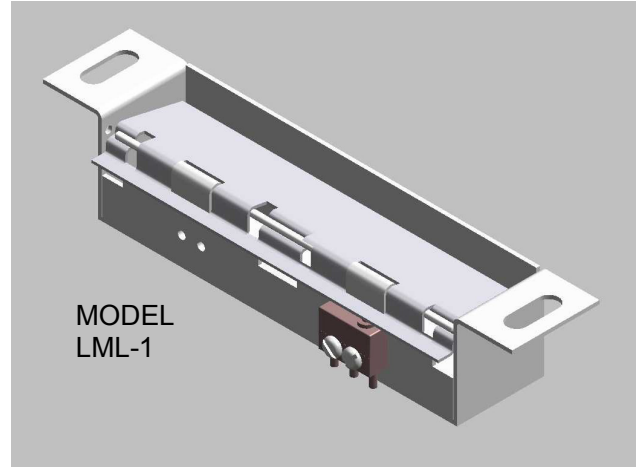


SECURITRON MODEL LMS-1, LML-1, LML-2 LATCH MONITOR INSTALLATION AND OPERATING INSTRUCTIONS

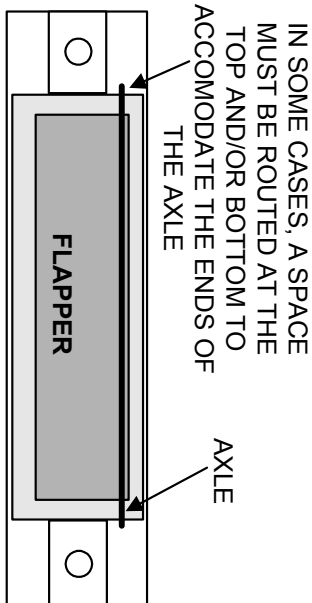
1. DESCRIPTION

The latch monitor provides an **SPDT dry output** which switches when a **door is latched or unlatched**. It can also **monitor a deadbolt**. The most common use for the latch monitor is to connect to an alarm system and report on door status. When used in this way, the latch monitor provides higher security assurance than the more commonly employed magnetic contacts as they can report a door as "closed" when it is still unlatched or unbolted. A second use for the latch monitor is to **initiate delayed exit** when the latch is withdrawn from the inside on a door equipped with a Magnalock and logic timing equipment.

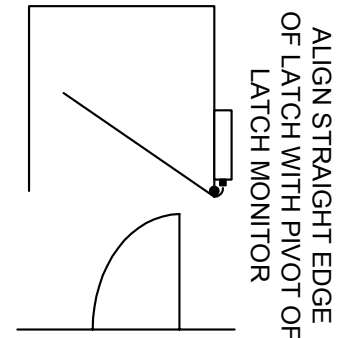
The latch monitor mounts behind the strike plate and is therefore **concealed** for optimum appearance. The three models differ as follows: The LMS-1 includes a single SPDT switch and is sized for a 2 3/4" ANSI cut-out. The LML-1 includes a single switch and is sized for a 4 7/8" ANSI cut-out. The LML-2 includes two separate switches and is sized for a 4 7/8" ANSI cut-out. The LML-2 is capable of separately monitoring a latch and deadbolt.



2. PHYSICAL INSTALLATION



Generally, physical installation is simply a matter of unscrewing the strike, placing the latch monitor in the cavity behind the strike, making provision for connecting the wires and replacing the strike. Note however that you must **orient the latch monitor correctly**. The straight edge of the latch must face the pivot point of the latch monitor's rocker plate. If the rounded edge of the latch faces the pivot point, an excessive gap between the door edge and frame could lead to the latch monitor failing to detect the latch. The drawing at the right shows correct orientation when viewed from above. Finally, note that when you are monitoring a deadbolt, orientation doesn't matter as the deadbolt has no rounded edge.



On metal doors, you will nearly always find an adequate opening for the latch monitor. In rare cases, you may find that the slight extension of the axle beyond the case will interfere with the strike opening and require routing. See the drawing to the left. On **wooden doors**, however, you will generally have to chisel out a space for the latch monitor behind the strike. The two U.S. ANSI standard sizes offered will work with the great majority of strikes employed in North America, excepting panic bar latches.

3. OPERATION

Note that the use of a "rocker plate" filling nearly the entire opening of the latch monitor means that the unit will function correctly without the need for any field adjustment. The latch or deadbolt can strike the plate **on any part of its surface** and the output will switch. Switching occurs during the first movement of the plate so the latch doesn't need to penetrate deeply into the opening. Note also that when the latch or bolt is

thrown, the rocker plate is **mechanically separated** from the switch so that rough use of the door will not wear or damage the switch.

Two monitoring methods are possible for locks which include **both a latch and a deadbolt**. With the **LML-1** (single rocker plate and switch) you will get a secure report when either the latch or deadbolt is thrown. When you use the **LML-2**, (two rocker plates; two switches) you are able to separately monitor the latch and deadbolt to record two different levels of security.

Finally note that tampering or mechanical failure of the unit will nearly always lead to it continuously reporting secure. The typical example is that the rocker plate can be jammed down by introduction of a foreign object into the opening. This avoids false alarm signals but fails to show when the door is not secure. For best system reliability therefore, the unit should be **periodically tested** to confirm that the output changes state as the latch seats and is withdrawn.

4. WIRING

The latch monitor has three wires (per switch) that are assigned by color as follows:

White = Common

Red = N.C.

Black = N.O.

Because we're using the terms normally open and normally closed, it's necessary to define what we mean by "normal". **The normal condition of the latch monitor is when it is reporting secure** (the latch or dead bolt is engaged). So, for example, you'll read a closed circuit between White and Red if you meter the unit in the secure condition (latch is engaged) but you'll read open if you meter it in the alarm condition (door is open). **Maximum contact ratings are 2 Amps at 24V.**

Securitron's Latch Monitor series is covered under US patent #5,757,269

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