

# Common Interlock Installation Problems

## Application Note AN-002

This application note describes two common problems that technicians encounter in the field when installing both standard and custom interlock modules.

### Noise from Magnetic Locks & Strikes

Without protection, breaking the circuit of a 24V magnetic lock or electric strike can easily create a spike of a thousand volts or more! Such spikes wreak havoc with *all* microprocessor controlled equipment. Consequently, to prevent failures such as lock-ups and other random glitches you *must* provide varistor (MOV) protection across the relay contacts of any circuit being used to switch magnetic locks or strikes! We include one MOV for each locking device that we are switching via our interlock (either automatic doors that are unlocked when idle, or manual doors). *Proper operation is not guaranteed without the use of these devices.*

It has been our experience that connecting the MOV across the switching device (relay contacts) provides better overall protection from transients than connecting it directly across the offending device (lock or strike).

### Other Common Problems

Automatic doors that are slow to open can also cause a problem. What happens is that the interlock delivers the “unlock and open” trigger pulse, then expects the door to be on its way open by the time the trigger pulse finishes. If the door is slow enough that the position switch never changes state during this window, the software sees the “door closed” state of the position switch and continues to the next door, resulting in an interlock violation. Obviously, you will never see this if overlapping (memorized) door requests are not present...so it appears that the interlock is failing randomly. *The cure is to increase the time delay for the automatic doors within the interlock software.* This gives the door more time to “get its act together,” so to speak, and will completely eliminate the problem. To assist in avoiding this problem, beginning in late 2009, all custom software now has the default time delay for automatic doors at two (2) seconds instead of one (1) second.