



Life Safety Requirements

Access control systems are designed to restrict access throughout a building or campus to the proper individuals. However, in all cases, a person must be able to exit through any door freely without needing any tools, keys or special knowledge. The exit must also only take one operation, which means that there cannot be two separate locks on a door. This is true for all doors except under special circumstances, such as certain areas within a hospitals and prisons.

The National Fire Protection Association (NFPA) has set up guidelines for all aspects of fire safety in these situations. In NFPA 101, chapter 5, the NFPA sets guidelines for locks and latches, which state that “doors shall be arranged to be opened readily from the egress side whenever the building is occupied. Locks, if provided, shall not require the use of a key, a tool, or special knowledge or effort for operation from the inside of the building.” The NFPA’s guidelines also state that doors “shall be openable with not more than one releasing operation.”

Best Practice

When installing electronic access control, you must consider all life safety regulations. In many instances, the mechanical locks that are already used on your doors are providing the means of free egress. For example, when an electric strike is used to electronically release a door, the mechanical lock that is on the door provides free egress. If there is not a mechanical means of egress, then egress needs to be provided electronically.

If a magnetic lock, electric bolt or other electrified device that does not have a built-in egress control is used, it must be fail safe. This means that when there is no power, the lock is unlocked and allows free egress.

There are other requirements.

1. There must be two egress controls that directly break power to the electrified lock for redundancy. One device automatically releases when it detects someone coming to the door. If power fails to this device, it must cut power to the lock. The second device must be located within 5 feet of the door, say “push to exit” and have a built-in timer that continues to directly cut power for a minimum of 30 seconds.
2. The power supply must have an emergency interface relay (EIR) that is connected to the fire control system. Once activated, the EIR directly cuts power to the access control system until the fire control system is reset.

The Difference Between Request to Exit and Egress Control

A request to exit (REX) is an input device that sends a contact closure to an access control panel to signal a valid exit. The decision to release the door is made by the access control system, not the signaling device.

An egress control directly releases the locking mechanism to allow free egress at the door. It makes this decision independent of the access control

system. If there is a loss of power to the egress control, it cuts power to the lock as well. Egress controls will also include a REX that signals the access control system that there is a valid exit.

Three Types of Egress Control

1. Motion egress uses a passive infrared motion detector. It directly releases the lock if motion is detected or the power fails. It also signals the access control system that this is a valid exit. It does this through two separate relays.
2. Egress buttons have momentary switch with a built-in 30 second timer that is either electronic or pneumatic. It must say “Push to Exit.”
3. Egress bars rely on pushing on the bar to activate the switch and to release the lock. As long as the bar is being pushed, power is directly cut to the lock. Egress bars can have a secondary switch that is used as a REX to validate the exit.

Anixter Solutions

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