

## Access Control Study Guide

Access Control is a combination of controlling the locking and unlocking of doors, tracking, controlling and / or restricting who opens doors and when. Some reasons to use access control systems are to increase security, increase accountability of staff, and to identify and track personnel as they move throughout the facility. The limitations of traditional locks that justify the use of access control are unauthorized key duplication, lost and unreturned keys, and uncontrolled access.

The most common access control system readers consist of the following types: magnetic stripe readers, proximity readers, and barcode readers. Amongst proximity readers, keypad controls, barcode readers, and magnetic stripe readers, proximity readers are the most secure technology. Passive radio frequency and active radio frequency are types of proximity card technology that are currently available to access control installers. With a proximity reader, mounting the reader on metal, wood, or near an electrical device can affect reader range, as well as other limiting factors (installers should consult the installation specifications provided by the manufacturer). A smart card is an access control card with a microchip that can store additional data and/or a picture. Two of the advantages of magnetic stripe and bar code cards are the low cost and ease of use but the disadvantages of magnetic strip and bar code cards are their limited durability, ease of compromise, and ease of duplication.

Numerous types of electric locks such as door strikes, electromechanical bolts, magnetic locks, and electric mortise locks (electric knobs) can be used in access control systems. Magnetic locks are often used in access control systems. Some characteristics of magnetic locks are size and pounds of holding pressure. A magnetic lock can be released by the access control system controller, or by using a request to exit motion detector, request to exit push button, or a crash bar. In access control systems, fail-safe means that if the electrical power fails, doors unlock. Fail safe locks lock the door when power is applied and unlock the door when power is removed, and fail secure locks lock the door when power is removed and unlock the door when power is applied. Most electric locks can be specified to be fail safe or fail secure, except the magnetic lock, which is always fail-safe. When choosing what type of electric locking product would be best to use, you must consider whether you only need to control access to the building, or if you are also controlling egress.

Biometric devices are some of the newest devices added to access control systems. Retinal scans, fingerprint scans and hand geometry are all forms of biometric devices used in access control systems. Using an access control card or keypad code or key can make a biometric system even more reliable.

When installing access control systems in commercial applications, one should be knowledgeable of and follow any Building or Life Safety Codes. Fire Systems are required to interconnect with Access Control systems for life safety purposes. When a fire alarm system trips in a building, the magnetic door locks should automatically unlock allowing free egress from the building.

According to many city codes, a person should be able to exit a building that incorporates access control without any special knowledge to exit the building.

Access control systems can be simple or complex - depending on the needs of the customer.

Access control levels can allow cardholders access to different areas, allow cardholders access at specific times, or restrict cardholders access to specific areas at different times. Access Control Systems can also be used in elevators to control access to different floors. Some systems provide for an Anti-pass back feature, which is a system designed to discourage or prevent a user from passing the same card back to another user to allow entry. Access control systems may also contain time zones. A time zone on an access control system is a period of time when a door can be unlocked or a period of time when a door can be locked, or a period of time during which a card will or will not operate.