CHOOSING AN ELECTRIC STRIKE – WHAT YOU NEED TO KNOW

By: Product Marketing Coordinator at RCI

These days there are many manufacturers of strikes to choose from and there are many things that have to be considered when buying one.

For this reason we have put together an outline of the most important considerations to keep in mind when choosing a strike:

WHAT FUNCTION WILL THIS LOCK BE FULFILLING?

Is the lock going to be controlled by card access, pushbutton, keyless entry, phone actuated, etc., or just a simple push button initiated by staff to let someone through a main door?

IN WHAT SORT OF FRAME WILL THE ELECTRIC STRIKE BE INSTALLED?

There are many kinds of door openings. The most common openings fall into three categories: aluminum, hollow metal and wood.

ALUMINUM FRAMES

You will need to consider:

- How much frame depth?
- What hardware is existing?
- Header space?
- Do I have glass sidelights?

HOLLOW METAL DOORS AND FRAMES

You need to consider:

- Is the frame factory prepared?
- Do I have a dust box?
- What is the construction?
- Is it a fire listed opening?

WOOD DOORS

Most strikes for this application have been designed specifically for wood frames in order to be installed properly and securely.

DO YOU NEED MONITORING OPTIONS?

If a visual or other signal is required to indicate electric strike status, a 'monitoring' strike is needed. Two switches are typically added, one is activated by the latch bolts penetration of the strike and the other by the solenoid plunger that blocks the strikes release.

These can be used with a door position switch to indicate that a door is closed and secure. These switches can also be used to trigger an alarm, operate an automatic door or illuminate a red or green light to indicate 'door locked'.

DO YOU NEED OTHER OPTIONS?

Most electric strikes can be made to accommodate odd frame conditions and other problems, such as using an extended lip for use on a center pivoted door, milled ramps for a deadlocking rim exit device, etc.

WHAT TYPE OF LOCK OR HARDWARE IS ON THE DOOR?

There are cylindrical, mortise and rim type locks. Each type has its advantages and disadvantages; however, on all types of locks, pay particular attention to the latch bolt projection. This may range anywhere from 3/8–7/8" and will usually help determine what type of strike to use.

FAIL SAFE OR SECURE?

Fail Secure — the door or gate will be unlocked when power is applied to it. This means that when the power fails or is turned off the lock will stay locked and will not open.

Fail Safe — electricity is applied constantly to electric strike to keep the door or gate locked. To unlock the electricity is removed.

The Fail Safe electric strike is used more in public buildings such as hotels, hospitals and office buildings, securing an automatic unlock of the door in the event of a power failure and, of course, to comply with most building codes.

AC OR DC CURRENT?

When AC power is applied to an electric strike it generates a buzzing noise indicating to the person at the door that the door is unlocked. When DC voltage is applied to the electric strike it will generate a click and will remain unlocked until the voltage is removed.

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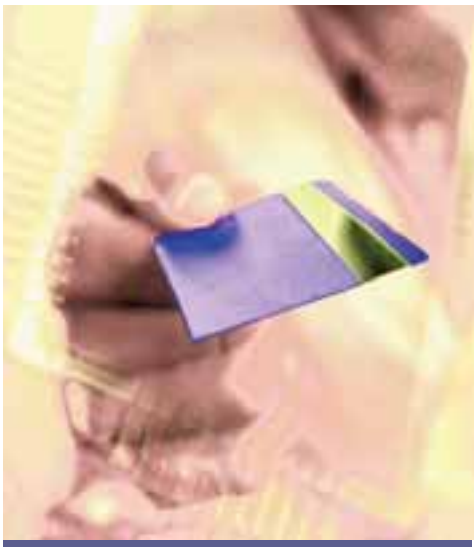
SMART CARD TECHNOLOGY – THE SECURE CHOICE

By: Jennifer Dyall, Keyscan Inc.

As technology evolves so must our response to security and access control. In the world of access control the basic principles of limiting access and carrying a single secure credential continue to be the focus, but with increasing awareness of smart cards, more integrators and end-users are recognizing the benefits and true security of the technology.

Concerns about card duplication and counterfeiting of 125 kHz proximity cards are increasing and the price differential of smart cards versus traditional 125 kHz proximity has dropped dramatically, making the choice to go with smart cards a lot more appealing.

The 13.56 MHz smart card provides a higher level of security over traditional 125 kHz proximity. A traditional 125 kHz proximity card reveals its card serial number anytime it is energized by a reader for verification by the physical access control system, making the card susceptible to "card sniffing". As with any aging technology, countervailing technology has emerged making card counterfeiting a legitimate concern wherever 125 kHz proximity technology is used. With smart card technology, there are multiple layers of authentication. First the reader checks the card for validity with a series of encrypted challenge and response codes before the card will transmit its secured access control identification.



This card encryption routine provides a higher level of security that simply is not available with the 125 kHz proximity technology.

Beyond the card encryption and inherent higher level of security, smart cards have built-in memory capability which provides a host of solutions for various integration applications, including logical access, e-cash and time and attendance systems with a single credential. When used with a biometric reader, the biometric template (usually a fingerprint) is stored directly onto the smart card. By keeping the owner in control of their own biometric template the security of biometric authentication is available without the privacy concerns of lost or stolen database information. A single database may contain thousands of fingerprints or other biometric templates, leaving users open to identity theft.

While traditional 125 kHz proximity is still favoured by some installers, savvy and forward-thinking integrators are beginning to transition to smart cards and are able to provide their customers with a higher level of security. In many new installations, for instance any facility requiring FIPS201 or TWIC standards, smart card technology is demanded because of its versatility.

When it comes to security there should be no compromises. Smart card technology is the most secure choice and is a natural fit for access control.

For more information, visit
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Not matching the strike current to the supply current can cause problems. A DC strike being powered by an AC power supply will result in a strike that buzzes but does not unlock.

Alternatively, using an AC strike with a DC power supply will seem to work properly but the AC solenoid in the electric strike is constructed with less coil wire causing the unit to have lower resistance. This causes excessive heat and eventual failure.

WHAT PRICE CAN I EXPECT TO PAY?

Prices are usually reflective of the quality and/or reliability of most electric strikes, as is the case with any other product.

CRITERIA TO CONSIDER:

- Strength: durability, tamper resistance, materials of construction
- Cycle life: Frequency of use and life expectancy. The more cycles per day (generally exceeding 20 uses per day) the higher the need for a more expensive strike.
- Warranty: Assurance of Reliability
- Certification: UL1034 Burglary and other attack tests
- Labeling: Fire Rated

WHAT VOLTAGE OUTPUT DO YOU NEED?

After determining whether the operation of the strike will be intermittent or continuous, then, current drain of all the components (access control devices, sensors, monitors, electric strikes, etc) in the system need to be assessed to make sure your power supply has enough current to operate all devices.

WIRING

Wiring is one of the least considered factors when quoting that can cause many problems if not properly addressed.

Keep in mind that if you increase your wire length you must increase your wire gauge. Likewise, the lower your voltage, the larger your wire gauge must be.

If you are unsure, ask around to determine which distributor or manufacturer has the best knowledge-based customer service staff to help you in making the best decision for your job at hand.

References:

- *Top 10 Questions on Electric Strikes*, Ray Baldwin, CEO, JLM Wholesale

- *A Locksmith's Guide to Selecting an Electric Door Strike*, 2003, Kevin Davison

- *Choosing an Electric Strike*, Tom Rubenoff

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