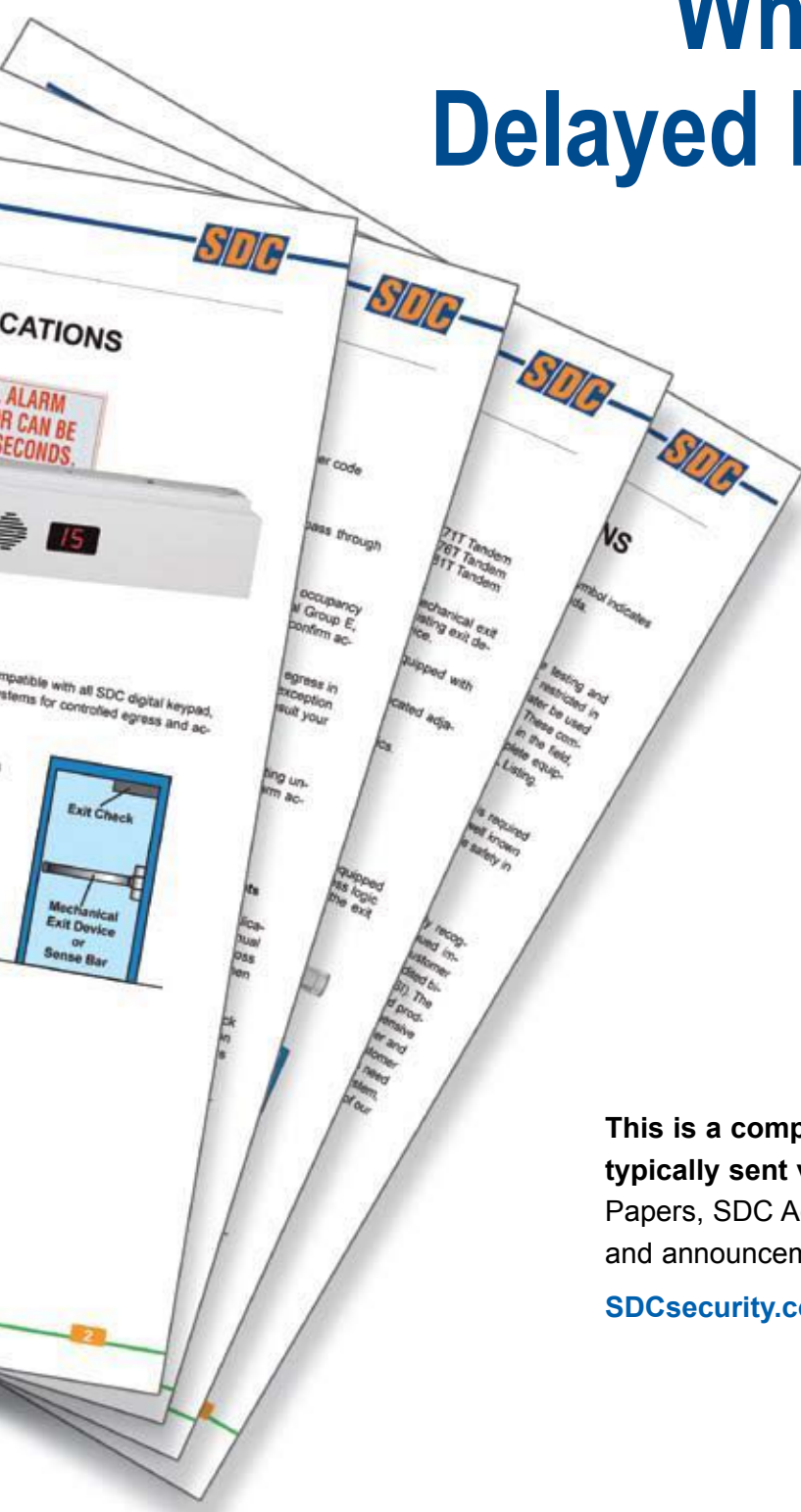




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# White Papers: Delayed Egress Hardware



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## ESSENTIAL LISTING & PERFORMANCE SPECIFICATIONS

This is a complimentary sampling. White papers are typically sent via SDC E-News. To receive all SDC White Papers, SDC Academy Schedule, product application info and announcements, go to:

[SDCsecurity.com/newsletter.aspx](http://SDCsecurity.com/newsletter.aspx)

SECURITY DOOR CONTROLS

## DELAYED EGRESS APPLICATIONS

By Richard Geringer, V.P. Marketing

February 18, 2008

Mounted to the header of an exit door, the Exit Check® consists of a magnetic lock with exit delay logic. When unauthorized egress is initiated, the SDC Exit Check® delays egress for 15 seconds. Concurrently an alarm will sound. Meanwhile, the person exiting must wait while personnel or security respond. The door unlocks after 15 seconds have elapsed, permitting egress. A signal from the fire life safety system will release the lock for uninhibited egress in an emergency. A 30 second exit delay may be used where permitting by AHJ.

### Airport & Public Facility Security & Safety

Control pedestrian traffic in government centers or public transportation facilities, including airport jetways and tarmacs.

### Loss Prevention

Provide theft protection of merchandise, technology and other valuables, such as art and museum artifacts.

### Health Care Facilities

Restrict the egress of rehab patients or infants in maternity wards for their own safety and security.

### Compatible with Wandering Patient and Infant Tracking Systems

When used with a patient tracking system the delayed egress device is normally unlocked for facility personnel to come and go freely. When a patient wearing a wireless tracking bracelet wanders near the door, the delayed egress device will then lock while the patient tracking system alarm is activated. Should the patient attempt to exit through the door, the locking device will delay patient egress for 15 seconds and the lock alarm will sound.



### Access Control

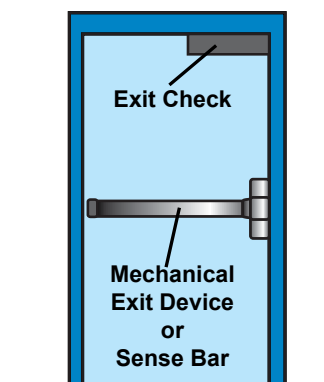
The SDC Exit Check is compatible with all SDC digital keypad, card or biometric reader systems for controlled egress and access.

### Remote Annunciation

The SDC Exit Check includes outputs for lock energized, egress initiated and door unlocked status. Optional monitoring includes a magnetic bond sensor for tampering detection and indication the door is locked with full holding power, and an integrated door status sensor that confirms whether or not the door has been opened after lock release.

### Typical Reset Devices

A manual reset is typically built in the delayed egress lock. Where the manual reset is not built into the delayed egress device, or a more convenient method of reset is preferred, an SDC 707R or 708R reset keyswitch or 928 digital keypad reset station may be specified.



# DELAYED EGRESS & BUILDING CODES

By Richard Geringer, V.P. Marketing

February 18, 2008

The following information is for reference only and is not intended to substitute the IBC, IFC and local prevailing code and AHJ requirements. Refer to IBC and IFC sections 1008.8.6 **Delayed Egress Locks for complete details.**

Today, most states have adopted the International Building Code (IBC) and International Fire Code (IFC) published by the International Code Council. These building and fire codes provide the minimum criteria for delayed egress systems. Only a few states may still use the NFPA 101 Life Safety Code or NFPA 5000 Building Construction and Safety Code, while the City of Chicago enforces a delayed egress code similar to the older BOCA National Building Code. Code groups including UBC, SBC and BOCA have merged to create the IBC and IFC code. Local authorities may dictate more rigorous conditions than found in these codes.

You should always check with the local AHJ (authority having jurisdiction) for approval and requirements for delayed egress installation. You may acquire code and AHJ contact information for your state or city at [www.reedfirstsource.com](http://www.reedfirstsource.com) under the link titled **Building Codes**.

## IBC AND IFC REQUIREMENTS FOR DELAYED EGRESS

1. The delayed egress lock must be approved or listed and shall be permitted for installation on doors serving occupancy levels as specified per prevailing code (refer to your prevailing code and consult your AHJ for complete details).
2. The doors must unlock upon activation of an automatic sprinkler system or automatic fire detection system.
3. The door(s) must unlock upon loss of power controlling the delayed egress locking device.
4. The delayed egress locks shall be unlocked by a signal from the fire command center.  
**Important Note:** Some cities may also require a remotely located manual reset station attended at all times by trained personnel.
5. Applying no more than 15 lbs of pressure for a maximum of 1 second (known as a 1 second nuisance delay) will start an irreversible process to unlock the door in 15 seconds. The AHJ may permit up to 30 seconds.
6. An alarm must sound at the opening upon initiation of the release process.
7. A sign must be applied to the door stating, "PUSH UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 SECONDS". Letters must be 1" high x 1/8" stroke. The sign shall indicate 30 seconds where applicable.

8. Emergency lighting is required as prescribed per code
9. The lock must be manually reset at the door.
10. A building occupant may not be required to pass through more than one delayed egress equipped door.

## CODE OCCUPANCY DIFFERENCES

IBC and IFC permit the use of delayed egress in any occupancy with the exception of Assembly Group A, Educational Group E, and High Hazard Group H. Consult your local AHJ to confirm acceptance for any occupancy.

NFPA 101 and NFPA 5000 permits the use of delayed egress in low and ordinary hazard content occupancies with the exception of main entrance/exit doors in Assembly Group A. Consult your local AHJ to confirm acceptance for any occupancy.

## CODE OPERATIONAL DIFFERENCES:

**Nuisance Delay:** The nuisance delay assists in preventing unnecessary initiation of the irreversible exit delay and alarm activation.

IFC/IBC/Chicago - 1 second maximum  
NFPA - 3 second maximum

## Building Code Manual or Automatic Reset Requirements

**IBC / IFC / NFPA** - When the lock has been released by application of manual force to the releasing device, a means of manual reset is required adjacent to the door. When released by loss of power or the fire detection system, all locks may relock when power is restored or the fire detection system is reset.

**California** – Regardless of the means of delayed egress lock release, whether by manual force, loss of power or deactivation by the fire protection system, relocking of the delayed egress device shall be by manual means only at each door.

**Chicago** –The door will automatically reset 30 seconds after the door has been opened and then closed. Reopening the door before the end of the 30 second cycle will restart the 30 second cycle. When released by loss of power or the fire detection system all locks may relock when power is restored or the fire detection system is reset.

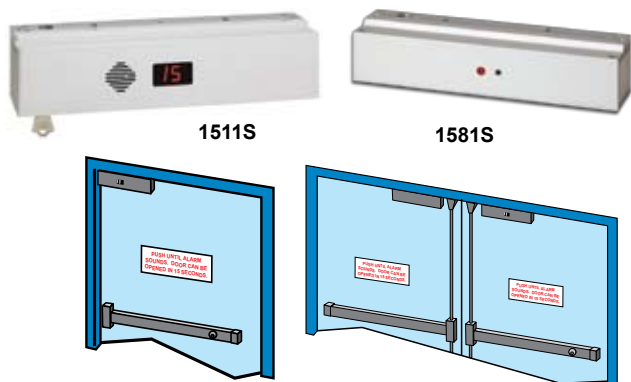
# THREE DELAYED EGRESS CONCEPTS & THEIR ATTRIBUTES

By Richard Geringer, V.P. Marketing

April 14, 2008

## INTEGRATED DELAYED EGRESS LOCK

Consists of an electromagnetic lock with built-in delayed egress logic. A keyswitch is typically built into the lock for reset and control. (Except 1581S)



### SDC Integrated Models

**1650 lbs:** 1511SNAKV Single; 1511TNAKV Tandem

**Energy saver 1200 lbs:** 1511SNAKVE Single; 1511TNAKVE Tandem

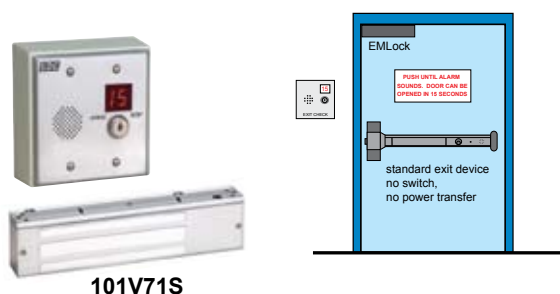
**Mini 650 lbs:** 1581SND

### Application Attributes

- Latching door application: Activated by door movement when used with existing standard mechanical exit device or lockset. No power transfer device required.
- Non-latching door application: May be used on non-latching glass doors equipped with an exit sensor bar. Applying pressure to sense bar activates device. Power transfer device required.
- Reset and bypass controls may be built into the lock or wall mounted (see product specifications)
- Typically the most economical installation with the least components and minimum wiring.
- Applicable to new or retrofit installations.

## COMPONENT DELAYED EGRESS SYSTEM

Typically consists of a magnetic lock and separate 2 or 3 gang wall mount box with delayed egress logic mounted adjacent to the door. Other component systems may house delayed egress logic in the power supply or separate remote enclosure.



101V71S

### SDC Component Systems

**Energy Saver 1200 lbs:** 101V71S Single; 101V71T Tandem

**Outdoor 1200 lbs:** 101V76S Single; 101V76T Tandem

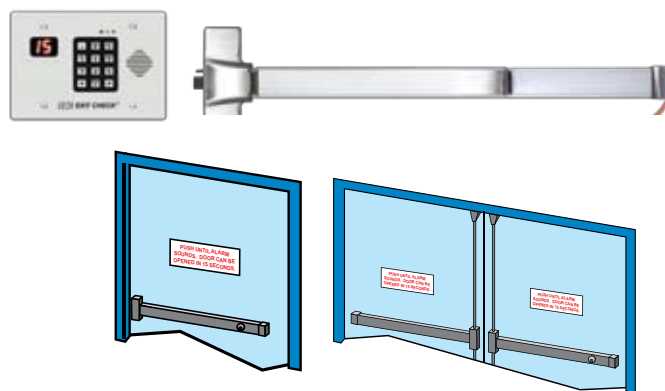
**Mini 650 lbs:** 101V81S Single; 101V81T Tandem

### Application Attributes

- Latching door application: Activated by door movement when used with existing standard mechanical exit device or lockset. No power transfer device required.
- Non-latching door application: May be used on non-latching glass doors equipped with an exit sensor bar. Applying pressure to sense bar activates device. Power transfer device required.
- Reset and bypass controls are conveniently located adjacent to the door in a surface or flush mount enclosure.
- Smaller lock housings provide for better aesthetics.
- Weatherized lock available for outdoor applications.
- Applicable to new or retrofit installations

## DELAYED EGRESS EXIT DEVICE

A latching exit device equipped with solenoid or motor that is controlled by delayed egress logic typically housed in separate enclosure or in the exit bar.



### SDC Delayed Egress Exit Device

**Rim Mount:** D6100

**Mortise:** D6300

**Surface Vertical Rod:** D6200

**Concealed Vertical Rod:** D6800

### Application Attributes

- Latching door application: Activated by depressing exit device push pad.
- Delayed egress electronics located in exit bar or remote enclosure (see product specifications)
- UL listed power transfer device required for fire rated doors.
- Reset and bypass controls are conveniently located in the exit device.

# LISTING AND PERFORMANCE SPECIFICATIONS

By Richard Geringer, V.P. Marketing

April 14, 2008

## ABOUT ANSI AND BHMA

When choosing a quality delayed egress device, look for the proper listing and performance specifications. The American National Standards Institute (ANSI) has adopted design and performance standards established by the Builders Hardware Manufacturers Association (BHMA). **All delayed egress devices should meet the following applicable standards.**



### ANSI/BHMA Standard A156.4 for Delayed Egress Locking Systems

This standard provides minimum criteria for all delayed egress electronic logic, initiation and reset process. In addition, refer to ANSI/BHMA A156.23 for minimum magnetic lock requirements and ANSI/BHMA A156.5 for minimum exit device requirements.

### ANSI/BHMA Standard A156.23 for Magnetic Locks

This standard details minimum mechanical, electrical and holding force requirements for magnetic delayed egress locks. These rigorous standards also place electromagnetic door locks in three categories based on cycle performance capability. All SDC Exit Check Delayed Egress Locks are ANSI/BHMA A156.23 Grade 1 Compliant.

- ANSI/BHMA Grade 1 – 1,000,000 Cycles (SDC)
- ANSI/BHMA Grade 2 – 500,000 Cycles
- ANSI/BHMA Grade 3 – 250,000 Cycles

### ANSI/BHMA Standard A156.5 for Exit Device

This standard provides minimum load and cycle capabilities of mechanical exit devices. All SDC exit devices meet ANSI/BHMA Grade 1 requirements for installation on up to 3 hr fire rated doors.

## BHMA CERTIFICATION

The BHMA Certification indicates that the delayed egress lock complies with all ANSI and BHMA performance criteria, and that it has passed an independent static pull test, and a dynamic impact test for holding force. To maintain BHMA Certification, locks are periodically re-tested and evaluated by Intertek Laboratories to ensure they continue to meet ANSI/BHMA A156.23 and A156.5 standards. This is the only certification in the industry that verifies that the magnetic door lock design and holding force continues to meet ANSI/BHMA standards.



## REQUIRED UL LISTINGS

The UL Listing confirms that the design is electrically safe and has been tested for the purpose the product was intended. All delayed egress devices should meet the following applicable UL test requirements.

**UL Listed - FWAX Special Locking Arrangements:** Indicates that delayed egress magnetic lock or exit device has been tested for minimum UL requirements for delayed egress devices.

**UL Listed - GWXT Auxiliary Lock:** Indicates the magnetic lock portion of the delayed egress device has been tested for electrical safety and the purpose for which it was intended.

**UL10C** Positive Pressure Compliant



**UBC** Classified in accordance with Uniform Building Code standard 7-2 "Fire Test for Door Assemblies"

**UL Listed - Fire Exit Hardware:** Indicates that the exit device has been tested for minimum UL requirements of fire exit hardware for use on fire rated doors.

**Canadian Listing:** The C preceding the listing symbol indicates that the product is also UL Listed for use in Canada.

## The World of Difference Between UL 'Listed' ® and UL 'Recognized' ®

UL's Component Recognition Service covers the testing and evaluation of individual components that are incomplete or restricted in performance capabilities. These components will later be used in complete end-products or systems listed by UL. These UL recognized components are not intended for separate installation in the field, they are intended for use as components of complete equipment submitted for investigation and subsequent UL Listing.



3774-0324:103

## STATE LISTINGS

### California State Fire Marshal Listed

This listing is required for California installations. The State of California is well known for consistently setting the highest standards for fire life safety in the world.



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## White Papers: Delayed Egress Hardware, Chapter 4 **NEW!**



### ISO 9001:2000 CERTIFICATION

SDC is part of a select group of ISO 9001:2000 Certified manufacturers that practice an internationally recognized quality management program based on continued improvement of daily operations, product quality and customer satisfaction. The SDC quality management system is audited biannually and certified by British Standards Institution (BSI). The ISO 9001 registration is verification for the customer and product end user that the manufacturer practices a comprehensive quality management program. While the primary customer and end user benefits include higher product quality and customer satisfaction, ISO certification also reduces the customer's need to conduct audits of the manufacture's quality control system, promoting ease of national and international trade. A copy of our ISO 9001 registration is available on request.

### WHAT DISTRIBUTORS AND INSTALLERS NEED FOR A COMPETITIVE EDGE

For a competitive edge, specify and promote the listing and performance attributes of the components you are providing with your installations. Include information on code compliance, city and state listings, quality (ISO 9001:2000), performance certification (ANSI/BHMA), specific laboratory listings (UL), service ease and warranty.

### WHAT BUILDING OWNERS MUST KNOW AND REQUIRE FROM THEIR INSTALLERS

Know and understand the products being installed, or specify a preferred manufacturer yourself. Request that details about product and application code compliance are supplied with the installation bid, such as, city and state compliance, manufacturer quality management (ISO 9001:2000), performance certification (ANSI/BHMA), laboratory listings (UL), service ease and warranty. This information may be a deterrent to having an inspector reject an installation today, or even at a later date when NFPA 80 changes take effect. Additionally, non-compliance of components could lead to potential liability should a fire or life safety emergency occur in your facility.

