# LEADERS IN LATCH RETRACTION



Motorized ELR for Access Control



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# INTRODUCTION

In 2012 SDC released the QuietDuo™ LR100 series, the first motorized electric latch retraction (ELR) kits, enabling electrification of mechanical exit devices and leading the industry transition from solenoids to motors. Since then, we've been "quietly" leading ELR upgrades for access control. This includes retrofit solutions for most brands of exit devices and additional SDC innovations; such as, exit devices and mortise locksets with factory-installed ELR as well as automatic door operators with a built-in 1 amp+ power supply to power them.

#### THE PURPOSE AND ORIGINS OF ELECTRIC LATCH RETRACTION

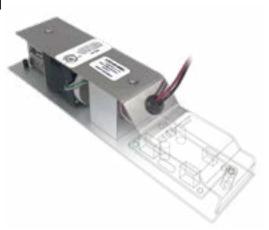
ELR was originally designed for entrance and exit doors with panic or fire exit hardware to provide remote unlocking, remote dogging, access control or automatic door operator functionality. When energized an electric solenoid would retract the exit device latch and pull the pushpad on most devices into the dogged (depressed) position enabling momentary or sustained push and pull operation of the door. The latch retraction mechanism may be activated by an access control, remote control device or building automation system.

#### SOLENOID ELR VS. MOTORIZED ELR

Electric solenoids have been used successfully for decades in electronic locking devices like electric bolt locks to electrically operate the deadbolt for either failsafe or failsecure operation and in exit devices to electrically retract the latchbolt. However, during periods of extended use, solenoids can become quite heated and noticeably sluggish. With advancements in electric motor technology, the use of a motorized ELR device provides several advantages over solenoids including lower current draw, quieter operation and proven superior durability over time.

#### WHY SDC'S MOTORIZED ELECTRIC LATCH RETRACTION

From retrofit ELR field kits to exit devices and mortise locksets, all SDC ELR products use the same motorized technology to provide both latch retraction and dogging. Additionally, all are grade 1 and UL listed. Because of their low current draw, SDC ELR products can be powered by the built-in 1 amp+ power supply that comes standard in SDC's AUTO series low energy operators. This eliminates the need for a separate power supply! SDC's LR100 series retrofit ELR kits not only eliminate the need for costly replacements of existing exit devices, but also deliver cost savings during installation. For example, select exit device brands do not require removal of the device from the door.

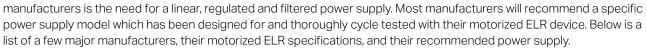


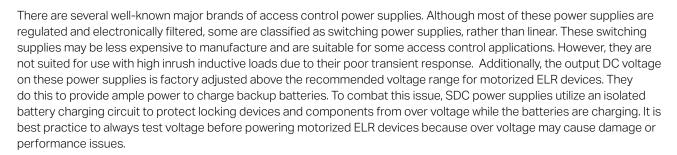
# PROPER POWER FOR MOTORIZED PRODUCTS

Over the last several years, there has been an industry shift in the electrification of panic bar devices, particularly in the area of electric latch retraction. The major brands are finally moving away from solenoid driven devices and are focusing on new, motor-driven latch retraction solutions. SDC has been a step ahead designing motorized ELR kits for over a decade. The use of a motorized device provides several advantages over solenoids including:

- Lower current draw allowing for longer wire runs and more energy efficient operation
- 2. Quieter operation
- 3. Proven superior durability over time

The use of motorized devices also demands specific power supply requirements. Common among all motorized ELR



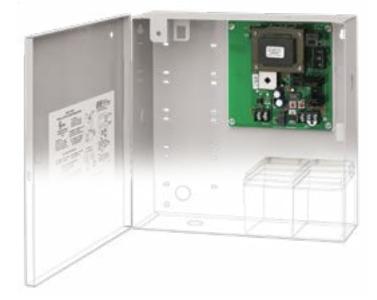


75-85% of access control operating problems and technical support calls are due to power issues. To learn more about avoiding access control power problems, download our "Access Control Power" brochure.

Manufacturer	Model/Series	Current	Voltage	Mfr Recommended Power Supply*
SDC	LR100	700 mA or 1 Amp Inrush / 180 mA Holding	24 VDC ± 10%	602RF or 631RF
Command Access	MLRK1	2 Amp Peak / 250 mA Holding	24 VDC ± 10%	PS210
Adams Rite	8000MLR	850 mA Inrush / 370 mA Holding	24 VDC ± 10%	PS-EXIT
Von Duprin	QEL	1.4 Amp Inrush / 140 mA Holding	24 VDC ± 10%	PS902
ACSI	1550K-MD	1 Amp Inrush / 400 mA Holding	24 VDC ± 10%	1420

<sup>\*</sup> Recommendation for single units only. Powering more than one unit requires higher amperage power controllers.

# www.sdcsec.com/pwrguide



# HYBRID POWER CONTROLLERS

In 1994 SDC introduced the 602 power controller – the first hybrid supply to combine the efficiency (low heat generation) of switching power supplies and the rugged inductive load handling capability of linear power supplies to meet the unique needs of access control locking devices.

Unlike camera system power requirements, access control systems draw more current for locking hardware and during access



control-related events. As the industry transitions from solenoid-based electric locking devices to motorized devices, demand for specific power supply requirements has also increased.

SDC's 12/24VDC class 2 hybrid power supplies have been designed specifically to meet these needs and reduce power system issues with extra filtering, heavy-duty circuitry for inductive loads and multi-door applications, and an isolated battery charging circuit to protect locking devices and components from over voltage while the batteries are charging. With the addition of SDC programmable controllers or relay modules, the user-friendly modular designs ensure versatility, interface capability and easy installation of virtually any electric locking devices, access controls and related fire life safety equipment.

#### SWITCHING VS. LINEAR VS. HYBRID POWER SUPPLIES

Switching power supplies are small, inexpensive and very efficient, but have trouble handling inductive loads produced by access control locking devices. Additionally, switching power supplies all create AC noise voltage which affects performance of access control components.

Linear power supplies are AC noise free and can handle inductive loads, but are inefficient and generate heat.

Hybrid power supplies (like SDC's) combine the efficiency of switching supplies with the inductive load handling capability of linear supplies. Additionally, hybrid power supplies feature extra filtering to provide clean-noise-free power.











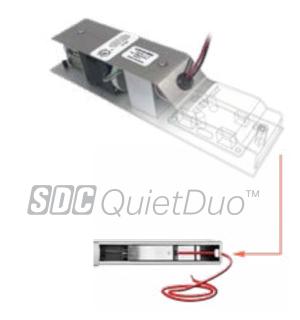
# www.sdcsec.com/hybridpower

#### LR100 Series

#### Retrofit Flectric Latch Retraction Kits

SDC's LR100 series retrofit ELR kits enable electric access control and dogging of panic and fire rated mechanical exit devices. When energized the motor retracts the exit device latch and pulls the pushpad into the dogged (depressed) position enabling momentary or sustained push and pull operation of the door. The latch retraction mechanism may be activated by an access control, remote control device or building automation system. A door sequencer is not required for a pair of manual doors when connected to a suitable power supply. The exit device always provides uninhibited egress.

The patented design was the first retrofit motorized ELR kit brought to market and has been recognized as the market leader ever since. The use of a motorized ELR device provides several advantages over solenoids including lower current draw, quieter operation and proven superior durability over time. Designed with cost savings in mind, SDC's LR100 series retrofit ELR kits not only eliminate the need for costly replacements of existing exit devices, but also provide cost savings on installation and power



requirements due to significantly less labor time and current draw when compared to competitive retrofit kits. LR100 kits retrofit select exit device brands without removing the device from the door.

LR100 models are one unit completely housed within the rail of the device behind the access cover, whereas LR100-EM models are two piece space saver units, intended to gain up to one inch in spacing within the device. This is accomplished by placing the controller board externally to accommodate smaller field cut devices for smaller openings or where space is limited within the rail.

#### FFATURES AND BENEFITS

- Motorized electric latch retraction and dogging
- Panic and fire rated devices
- Simultaneous latch retraction, dogging and pushpad depression
- · High traffic use
- Low current draw
- Low energy operator compatible



#### LR100 Series Datasheet



LR100VDK Von Duprin Field Install ELR Kit, 98/99, 36" - 48" LR100FAK Dor-O-Matic Field Install ELR Kit, 1790/1690, 36"

COMMON PART NUMBERS

LR100FCK First Choice Field Install ELR Kit, 3790/3690, 36"

www.sdcsecurity.com/LR100-Datasheet

#### S4000 Series

#### Electrified Industrial Rim & Vertical Rod Exit Devices

There are many different brands of cost effective commercial exit devices on the market. The vast majority of these devices are strictly mechanical. Today's market demands an economical industrial exit device with motorized ELR. Not only does SDC's S4000 series of electrified industrial exit devices satisfy both market needs for a cost-effective exit device with ELR, but the S4000 also comes standard with request-to-exit (REX) monitoring, enabling access control compatibility.

SDC's S4000 elevates itself as the premier device in the market for a low price without compromising an inch of its superior quality.

The S4000 with factory installed motorized ELR and REX makes application as easy as install - power - done.



#### FEATURES AND BENEFITS



- · Compact industrial design
- Durable stainless steel construction
- · Corrosion resistant
- Scratch, fingerprint and impact resistant touch pad
- · High traffic use
- UL305 panic-rated, grade 1 durability
- Low-energy automatic door operator compatible
- · Request-to-exit (REX) standard
- Trim options available

#### **APPLICATIONS**

- · Hollow metal, wood and mineral core doors
- · Panic and fire rated devices
- · New or retrofit construction
- Rim and surface vertical rod devices
- Single or pair of doors
- Wide stiles (4" minimum)



#### S4000 Series Datasheet



www.sdcsecurity.com/S4000-Datasheet

#### **COMMON PART NUMBERS**

 S4101PU36RE
 Rim, Exit Only, Panic, 630, 36", REX, ELR

 S4101FU36RE
 Rim, Exit Only, Fire, 630, 36", REX, ELR

 S4203PU36RE
 SVR, Exit Only, Panic, 630, 36", REX, ELR

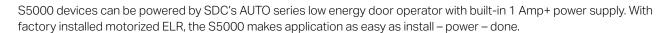
#### S5000 Series

#### Electrified Storefront Rim & Vertical Rod Exit Devices

SDC's S5000 series electrified storefront devices are heavy duty, code compliant alternatives to magnetic locks for storefront applications that meet the market need for storefront exit devices with motorized ELR standard for access control compatibility.

These UL305 panic-rated exit devices are American made, featuring all metal construction that is particularly suited to new or retrofit aluminum glass entrances for both manual and automated door openings.

Nightlatch functionality is available through the use of a rim key cylinder for medium and wide stile doors making these exit devices perfect for industrial, healthcare, education and retail aluminum glass applications. For applications that do not require nightlatch function for key override in the event of power loss, then exit only \$5000 devices can be utilized on narrow stile doors.







- Storefront design
- · High traffic use
- UL305 panic-rated, grade 1 durability
- Low-energy automatic door operator compatible
- Request-to-exit (REX) optional
- Latch status (LS) optional

#### **APPLICATIONS**

- · New or retrofit construction
- Aluminum glass doors and frames
- · Rim, surface and concealed vertical rod devices
- Single or pair of doors
- Narrow, medium and wide stiles
- Hinge, center pivot and offset pivot



#### S5000 Series Datasheet



www.sdcsecurity.com/S5000-Datasheet

#### **COMMON PART NUMBERS**

 \$5101PV36E
 Rim, Exit Only, Panic, 628, 36", ELR

 \$5101PY36E
 Rim, Exit Only, Panic, 335, 36", ELR

 \$5801PV42E
 CVR, Exit Only, Panic, 628, 42", ELR

#### S6000 Series

#### Electrified Architectural Rim & Vertical Rod Exit Devices

SDC's S6000 series electrified architectural rim and vertical rod exit devices offer several electrified options to complement your access control system and meet virtually any application. UL listed and ANSI/BHMA A156.3 Grade 1 compliant, S6000 series devices comply with all national and state building and fire life safety codes.

Designed for a modern look and quiet push pad operation, S6000 series devices are panic or fire rated exit devices and are available in rim mount or surface vertical rod configurations.



#### **FEATURES AND BENEFITS**



- · Architectural design
- Durable stainless steel construction
- Corrosion resistant
- · High traffic use
- UL305 panic-rated, grade 1 durability
- Low-energy automatic door operator compatible
- Request-to-exit (REX) optional
- Latch status (LS) optional
- Trim options available

#### **APPLICATIONS**

- New or retrofit construction
- · Hollow metal, wood and mineral core doors
- Panic and fire rated devices.
- Rim and surface vertical rod devices
- Single or pair of doors
- Wide stiles (4" minimum)



#### S6000 Series Datasheet



www.sdcsecurity.com/S6000-Datasheet

#### **COMMON PART NUMBERS**

**S6101PU36E** Rim, Exit Only, Panic, 630, 36", ELR **S6101PU42E** Rim, Exit Only, Panic, 630, 42", ELR **S6201FU36E** SVR, Exit Only, Fire, 630, 36", ELR

#### S6300 Series

#### **Electrified Architectural Mortise Exit Devices**

SDC's S6300 series electrified architectural mortise exit devices offer several electrified options to complement your access control system and meet virtually any application. UL listed and ANSI/BHMA A156.3 Grade 1 compliant, S6300 series devices comply with all national and state building and fire life safety codes.

Designed for a modern look and quiet push pad operation, S6300 series devices are panic or fire rated exit devices in mortise configurations.



# **SDC** Spectra™

#### FEATURES AND BENEFITS



- · Architectural mortise design
- Durable stainless steel construction
- Corrosion resistant
- · High traffic use
- UL305 panic-rated, grade 1 durability
- Low-energy automatic door operator compatible
- Request-to-exit (REX) optional
- Latch status (LS) optional
- Trim options available

#### **APPLICATIONS**

- New or retrofit construction
- · Hollow metal, wood and mineral core doors
- · Panic and fire rated devices
- · Mortise devices
- Single or pair of doors
- Wide stiles (4" minimum)



#### S6300 Series Datasheet



www.sdcsecurity.com/S6300-Datasheet

#### **COMMON PART NUMBERS**

**S6303PRRU36EEE** Mortise, Nightlatch, Panic, RHRB, 630, 36", ELR **S6303FLRU36EEE** Mortise, Nightlatch, Fire, LHRB, 630, 36", ELR **S6314PRRU36EEE** Mortise, Passage, Panic, RHRB, 630, 36, ELR

#### 7600 Series

#### Motorized Latch Retraction Controlled Mortise Locks



Motorized ELR mortise locksets provide for access control of openings in commercial, industrial and institutional facilities where code compliance, dependable operation and resistance to physical abuse is required. These code compliant electric mortise locksets stay latched even when unlocked, maintaining fire door integrity.

SDC's 7600 series motorized ELR controlled mortise locksets incorporate a grade 1 heavy duty mortise lock and vandal resistant clutch that is proprietary to all SDC locksets. The motorized ELR feature is designed for use on fire rated doors to provide access control and building and fire life safety compliance. Door stays latched even when de-energized. Ideal for automatic door operator applications. All SDC mortise locks feature a keyswitch to manually retract the latch.

#### FEATURES AND BENEFITS

- · Heavy duty mortise lock design, grade 1
- Vandal resistant clutch
- Motorized ELR control
- Key latch retraction
- Field selectable function
- Field reversible handing
- High traffic use
- UL10C fire-rated
- Low-energy automatic door operator compatible
- Request-to-exit (REX) optional
- Latch status (LS) optional
- Trim options available
- Schlage trim compatible

#### **APPLICATIONS**

- New or retrofit construction
- 13/4" door thickness, ANSI A156.13 door prep
- · Locked both sides, failsecure
- · Locked outside only, failsecure
- Unlocked both sides, passage



#### 7600 Series Datasheet



www.sdcsecurity.com/7600-Datasheet

#### COMMON PART NUMBERS

Z7620LQRE Unlocked Both Sides, Passage, LH, 626, REX, Eclipse
 Z7652RQRE Locked Outside Only, Failsecure, RH, 626, REX, Eclipse
 Z7632RQRG Locked Both Sides, Failsecure, RH, 626, REX, Galaxy

#### 7700 Series

#### Motorized Latch Retraction & Solenoid Controlled Mortise Locks



Motorized ELR mortise locksets provide for the access control of openings in commercial, industrial and institutional facilities where code compliance, dependable operation and resistance to physical abuse are required. These code compliant electric mortise locksets stay latched even when unlocked, maintaining fire door integrity.

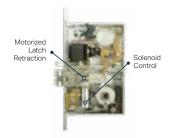
SDC's 7700 series motorized ELR and solenoid controlled mortise locksets incorporate a grade 1 heavy duty mortise lock and vandal resistant clutch that is proprietary to all SDC locksets. The motorized ELR feature is designed for use on fire rated doors to provide access control and building and fire life safety compliance. Door stays latched even when de-energized. Ideal for automatic door operator applications. The solenoid controls the inside, outside or both door levers. The motorized ELR and solenoid control features combine versatile passage functionality with failsafe or failsecure access control while meeting ADA compliance. All SDC mortise locks feature a mortise cylinder to manually retract the latch.

#### FEATURES AND BENEFITS

- Heavy duty mortise lock design, grade 1
- Vandal resistant clutch
- Motorized ELR and solenoid control
- Key latch retraction
- · High traffic use
- UL10C fire-rated
- Low-energy automatic door operator compatible
- Request-to-exit (REX) optional
- · Latch status (LS) optional
- Trim options available
- Schlage trim compatible

#### **APPLICATIONS**

- New or retrofit construction
- 13/4" door thickness, ANSI A156.13 door prep
- · Locked both sides, failsecure or failsafe
- · Locked outside only, failsecure or failsafe





#### 7700 Series Datasheet



www.sdcsecurity.com/7700-Datasheet

#### COMMON PART NUMBERS

Z7750LQRE Locked Outside Only, Failsafe, LH, 626, REX, Eclipse
 Z7732LQRE Locked Both Sides, Failsecure, LH, 626, REX, Eclipse
 Z7750RQRG Locked Outside Only, Failsafe, RH, 626, REX, Galaxy

#### **AUTO Series**

#### Low Energy Swing Door Operators

SDC's AUTO series low energy swing door operator with built-in 1 amp+ power supply provides the ability to power motorized ELR without a separate power supply to integrate easily with popular access and egress control hardware.



The AUTO series low energy swing door operator provides hands-free, low-

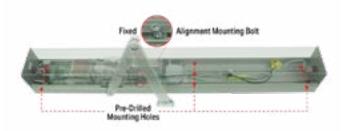
power point of entry door control for low-power retrofit of any building entrance with an exit device. The state-of-the-art microprocessor-based unit is self-tuning and self-learning while offering non-handed operation, full mechanical stops and a variety of interface options for sensors, push plates, fire alarms and electrified locks.

SDC operators feature fast, single technician installation pre-drilled mounting holes and a fixed mounting bolt for hanging the drive unit. They are the perfect product to meet US and Canadian disability compliance for door installation in retail storefronts, office buildings, campuses and healthcare facilities.

#### FEATURES AND BENEFITS

Easy, single technician installation

- Pre-dilled mounting holes
- · Slotted back plate for easy mounting
- Fixed mounting bolt for hanging drive unit



Single button setup, self-tuning, self-learning

- Automatically adjusts torque for different door sizes/weights
- Calculates opening and closing force to meet ADA compliance
- · Calculates door travel
- Memory is non-volatile

Built-in 1 amp+, 24VDC power supply

- Powers and controls magnetic locks, electric strikes and motorized latch retraction
- · Onboard lock sequencing



#### **AUTO Series Datasheet**



www.sdcsecurity.com/AUTO-Datasheet

#### COMMON PART NUMBERS

AUTOS136V Single, Push, 20mm Spindle, 36" Door, 39" Housing, 628
 AUTOS236V Single, Pull, 20mm Spindle, 36" Door, 39" Housing, 628
 AUTOS136Y Single, Push, 20mm Spindle, 36" Door, 39" Housing, 335

# **COMMON ELR APPLICATION SOLUTIONS**



#### Access & Egress Security Solutions Brochure

Common ELR application solutions can be found on pages 9, 10, 16-18, 31 and 37.



www.sdcsecurity.com/Solutions-Brochure

#### **Automated Mortise Lock Access Control**



Access & Egress Security Solutions Brochure Page 16

#### Hands Free ADA Compliant Access Control



Access & Egress Security Solutions Brochure Page 17

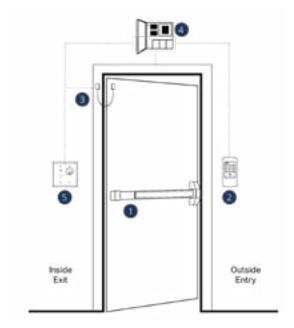
# **COMMON ELR APPLICATION SOLUTIONS**

#### **Exit Device Retrofit Access Control**

# Inside Exit Cutaide Entry

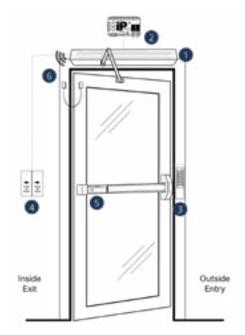
Access & Egress Security Solutions Brochure Page 9

#### **Exit Device Perimeter Access Control**



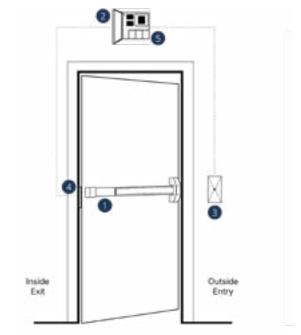
Access & Egress Security Solutions Brochure Page 10

#### **Automated Entrance IP-Based Access Control**



Access & Egress Security Solutions Brochure Page 18

#### **Food Processing Facilities**



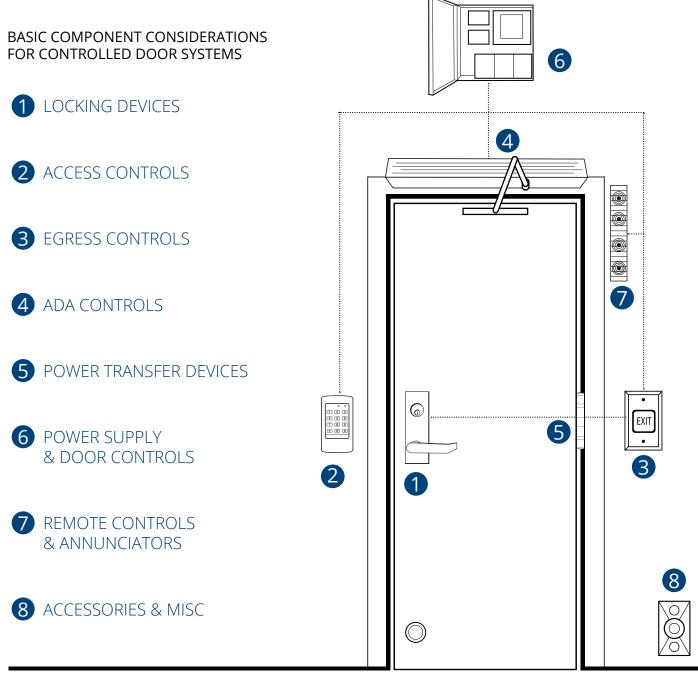
Access & Egress Security Solutions Brochure Page 37

# COMPLETE COMPONENT CONSIDERATIONS

With a robust toolbox of over 35,000 SDC access & egress control components at your fingertips, you can assemble turnkey solutions to address both market-specific and application-specific requirements for almost any door opening imagined – while addressing a variety of factors, including:

- Level of Security
- Budget Restrictions
- Type of Door or Frame

- Life Safety Codes
- Aesthetics
- Retrofit or New Construction





















Electromagnetic Locks

Electromagnetic Shear Locks

**Delayed Egress** Locks

**Electric Strikes** 

Electrified Locksets

Exit Devices & Retrofit ELR Kits

Electric **Bolt Locks** 

#### **2** ACCESS CONTROLS











IP-Based Controllers

Keypads & Readers

Standalone Locksets

**Key Switches** 

#### **EGRESS CONTROLS**









**Egress Devices** 

**Exit Switches** & Sensors

Emergency Door Releases











Low Energy Operators

Push Plates & Panels

Bollards

#### **5** POWER TRANSFER DEVICES







Loops



Mortise Transfer



Wireless Transfer

## POWER SUPPLY & DOOR CONTROLS





**Power Controllers** 

**Door Controllers** 

## 7 REMOTE CONTROLS & ANNUNCIATORS







Door Prop Alarms & Annunciators

### **8** ACCESSORIES & MISC



Electromagnetic Door Holders



**Door Position** Monitoring



Latch & Deadbolt Monitoring Strikes



Wireless Transmitters & Receivers



Communicating **Bathroom Switches** 

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- Installation Instructions
- Comparison Charts
- UL Listings
- 3 Part Specs

- Videos
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- 2 Take a photos of your door opening
- 3 Submit photos of your door opening
- 4 Receive a complete access and egress electrified solution

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Our award-winning app includes labor-saving DoorSnap<sup>™</sup> functionality. SDC will recommend a cost effective solution with product information links to retrofit the opening for access & egress control locking hardware.









