

# PoE SOLUTIONS



Power over Ethernet  
Capable Locking Hardware

*the lock behind the system*



# INTRODUCTION

## PoE Solutions Integrate Into the Network Without An IT Expert

Converting door openings to electronic access control (EAC) can be accomplished without regards to whether they must integrate with a PC-operated access control system or network - or by relying upon some of the many proprietary access control systems on the market today.



Instead, PoE (power over ethernet) capable locking hardware can be a viable alternative for integrating a door opening into an EAC system without being an enterprise IT expert. PoE hardware and

components connect to an IP-enabled controller using the ethernet cable that already exists in the facility, avoiding heavy cost commitments associated with complex, over-sized enterprise wide systems. They also allow door hardware experts who are not IT and software experts to avoid callbacks for software and hardware conflicts, incorrect network settings or even general liability for IT issues that may not be the result of the door conversion to EAC.

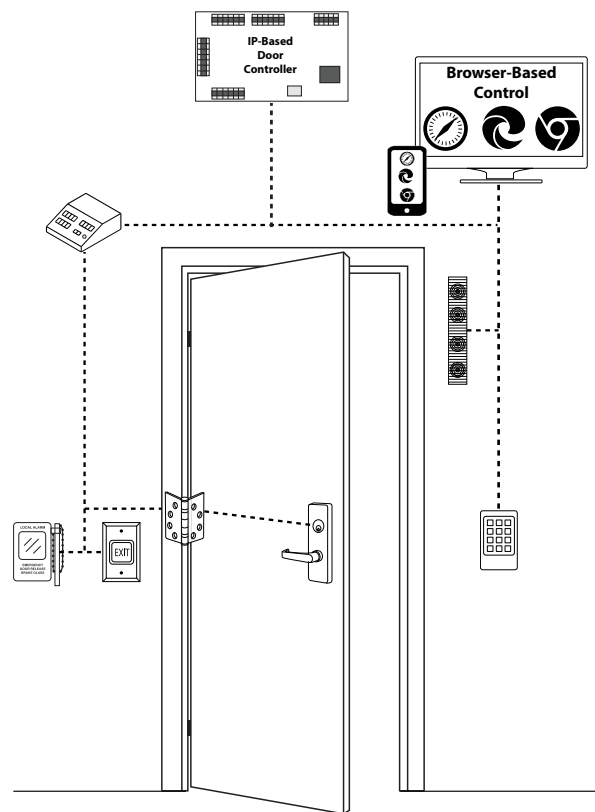
PoE solutions can use ethernet to power low-voltage access and egress devices and control door access via web browser from a desktop, tablet or smartphone. They're perfect for serving the smaller company or single facility that doesn't require a full-blown, complex and expensive enterprise wide system, yet wants the convenience and 24/7 access of a PC-based access control system. And they can be expanded to power and control up to 100 door openings or more using low-voltage magnetic locks, key and exit switches, electrified exit devices, electrified locksets, electric bolt locks, automatic door operators - even cabinet locks.

Central to any PoE-based solution is an IP-based door access controller powered by Ethernet cables, connected to the existing network structure, and browser-based – requiring no software to install. Simply plug the controller into a wired LAN connection and use the web browser on a computer or smartphone to setup and manage the system. PoE/IP-based controller

solutions allow for quick installations. However, it should be noted that some consultation is still required. In most cases, you cannot simply plug into a network switch without having some direction from an IT administrator because coordination is needed to determine the available ports and range of IP addresses.

Here's a typical PoE door control solution using an IP-based door controller:

### Single Door PoE Solutions Example Using an IP-Based Door Controller



Physical electronic access control solutions utilizing low-voltage PoE hardware, components and IP-based door controllers are particularly suited to tenant improvement and retrofit projects, providing the ability to purchase and install just what's needed without having to invest in a more costly, enterprise system designed for larger facilities. The beauty of this approach is that they are usually easy to expand as needs grow without the front-end commitment to

an over-sized solution. Look for door controllers and optional expansion boards for multi-door applications that are non-brand specific to the access or egress control hardware.

Depending on the type of installation and whether it's a single door or multiple doors, you'll need to survey where the Ethernet cable is and/or where electricity is available to power the system. If using the existing ethernet cable you may need to install a PoE injector or splitter to provide power to your components. If, in your power survey you realize that additional power is required from a power supply, you may need to install a PoE injector to provide the additional power to the system.

As with any tenant improvement or low-voltage implementation via ethernet cable, we recommend that installers are comfortable with ethernet network best practices and test any installation using an inexpensive ethernet cable tester before startup. Also, by following industry standards – ANSI/TIA-1005-M.I.C.E and ANSI/TSI-569C.0 (cable lengths) – many issues can be eliminated that may be residuals of previous installations.

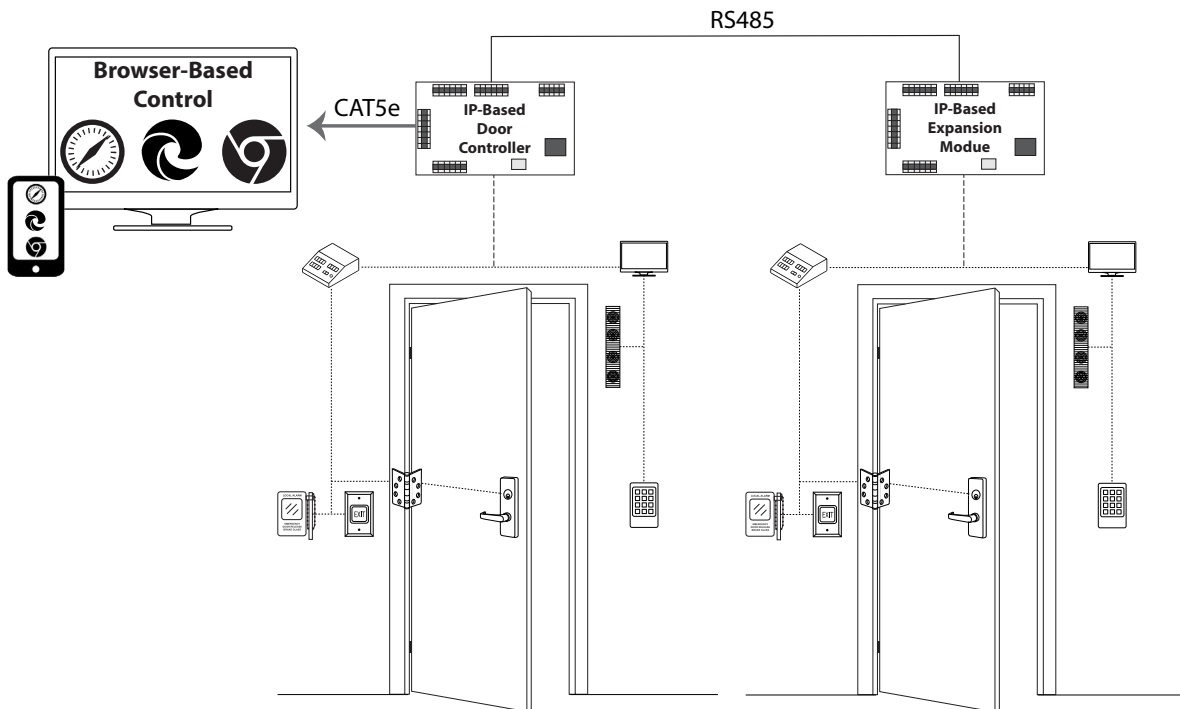
A word of caution: don't forget that any PoE access and egress solution using IP-based door control still needs to meet all existing fire and life safety code compliance. This includes using UL294 approved hardware where required.

That said, using viable, legacy ethernet cable with PoE hardware and an IP-based controller, will save time, money and manpower and will not require the services of an enterprise network expert. Bring safe, secure, easy to implement door access control to what we call the network's edge, without the headaches of more costly, more complicated enterprise solutions. And expand from a single door up to 100 or more doors in the future depending on the need.

In this way doors can be upgraded without needing an IT expert and using PoE capable locking hardware and IP-based door controllers to bridge the gap between traditional locking hardware and IT Networks.

As always, consult the local Authority Having Jurisdiction (AHJ) for compliance requirements before starting any door installation project.

### Multi-Door PoE Solutions Example Using an IP-Based Door Controller + Expansion Module



# PoE COMPATIBLE PRODUCTS

## How Does PoE Work?

Ethernet cables that meet CAT5/6 standards consist of four twisted pairs of cable. PoE sends power over two of these pairs to PoE-enabled devices. The original IEEE (Institute of Electrical and Electronic Engineers) 802.3af-2003 PoE standard – Type 1 - provides up to 15.4W of DC power per port while the PoE+ standard (IEEE 802.3at-2009) – Type 2 - allows for up to 30W of power. There are new Type 3 and Type 4 standards which send power over four pairs of wires to provide up to 60W and 100W of DC power per port, respectively.



## Integration and Flexibility

SDC's low-voltage PoE compatible products typically require 12 or 24VDC and between 0.2 to 10.8W to operate, well within the range of PoE and PoE+ standards. Typical, single door IP-based application upgrades with access to existing ethernet cables are the simplest to accomplish with the available power.

Multi-door upgrades may require additional power supplies to achieve, depending on the total power

requirements of the door components and accessories to be installed. Fortunately, SDC's PoE compatible door hardware products provide integration flexibility for any project.



Depending on the power survey, an SDC IPPro® controller board and/or door station expansion board can be installed in one or more power supplies to not only control one or more doors, but to also provide the necessary power for all the door components for the retrofit. In addition, SDC's low-voltage PoE compatible products can run at 24VDC if desired, increasing efficiency, longevity and reliability.

### Power (Watts) = V (Volts x I (Current in Amps)

I (Amps)	POWER (Watts) 12VDC	I (Amps)	POWER (Watts) 12VDC	I (Amps)	POWER (Watts) 12VDC
0.1	1.2	1.4	16.8	3.6	43.2
0.2	2.4	1.6	19.2	3.8	45.6
0.3	3.6	1.8	21.6	4	48
0.4	4.8	2	24	4.2	50.4
0.5	6	2.2	26.4	4.4	52.8
0.6	7.2	2.4	28.8	4.6	55.2
0.7	8.4	2.6	31.2	4.8	57.6
0.8	9.6	2.8	33.6	5	60
0.9	10.8	3	36	5.2	62.4
1	12	3.2	38.4	5.4	64.8
1.2	14.4	3.4	40.8	5.6	67.2

# THE FUTURE OF SECURITY IS NOW

SDC's line of PoE capable locking hardware and access controls allows facilities to use existing network infrastructure to easily integrate and connect to an access control system using ordinary ethernet cable in a PoE enabled network. Cost savings are achieved through simpler installations, and reduced infrastructure by using the same ethernet cable for data and power, and improved energy efficiency via low power (12VDC) controllers and devices.

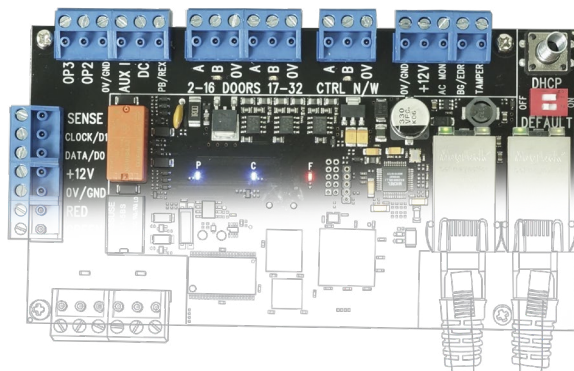
SDC's PoE solutions are the same robust and proven electric locks, devices, and access controls we've been designing, engineering and building in America for over 50 years. Now they're ensured to work in PoE environments where energy efficiency, flexibility and green and sustainable requirements reach all the way to electronic hardware and locks for controlling door openings.

SDC IPPro® IPD series IP-based single door access controllers bring safe, secure, easy to implement door access control to the network's edge without the headaches of more costly, more complicated enterprise solutions. They allow expansion from one standalone door up to a 100-door "grid." Every IPPro® controller comes with secure, built-in software to manage up to 32 doors from any standard web browser. Or download our FREE PLUS PC-Client software to control up to 100 doors from a single PC, tablet or smartphone.



Both software choices provide sophisticated and robust access control without tying up precious IT network resources or exposing it to vulnerabilities like traditional, enterprise-based access control security systems can.

The future of security is now with SDC's PoE solutions.



## SDC IPPro®

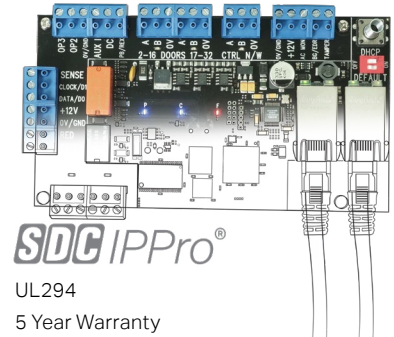
# IP-BASED CONTROLLERS

## IPD Series

### SAFE, SECURE & EASY TO IMPLEMENT NETWORK CONTROL

**IPDCE** IPPro Controller Board

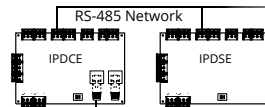
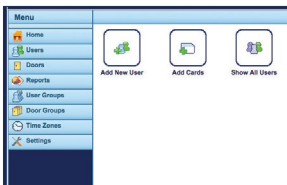
**IPDSE** IPPro Door Station Expansion Board



### 1 - 32 Doors



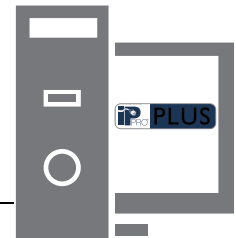
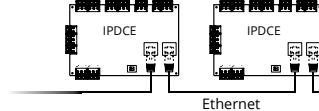
Browser-Based  
No Software Required  
Simple Installation and Setup



### 1 - 100 Doors



Free Role-Based Software  
Different Interfaces By User Type  
Two Ports Eliminate Long Cable Runs to Connect Additional IP Devices



### IPPro Kits

**IPPRO-SKE** IPPro Starter Kit  
(IPDCE, IPI-30 and IPS-12 included)

**602RFIPDC** IPPro Power Kit  
(1 Amp Power Supply with Cabinet, IPDC, 12VR included)

**602RFIPDS** IPPro Expansion Power Kit  
(1 Amp Power Supply with Cabinet, IPDS, 12VR included)

### Power Injectors & Splitters

**IPI-30** IPPro Injector, 30W PoE+

**IPS-12** IPPro Splitter, 12VDC PoE+



### Wiegand Readers & Digital Keypads

**IPRW300** Wiegand Reader, Mullion Mount

**IPRW500** Wiegand Reader, Single Gang Mount

**918WU** Indoor Keypad, Wiegand Output

**920PW** Keypad with Integrated Proximity Reader, Wiegand Output

**923PW** Narrow Keypad with Integrated Proximity Reader, Wiegand Output



**PLUS Hardware** is used by the installer to set up controllers, doors and user profiles.

- Enable and edit IPPro controllers
- Enable and edit door settings
- Create event filters
- Enable e-mail notifications

**PLUS Manage** is used by system administrators to facilitate database changes required on a day-to-day basis, and offers various reporting tools.

- Create, view, and edit users
- Add access and holiday schedules
- Generate user and event reports

**PLUS Server** is used by system administrators to perform specialized tasks, such as database backups, firmware updates, importing/exporting users.

- Perform manual or schedule automatic backups
- Import/export users
- Perform IPPro firmware updates

Live system events can be monitored from either module!

# RETROFIT ELR KITS

## IP100 Series

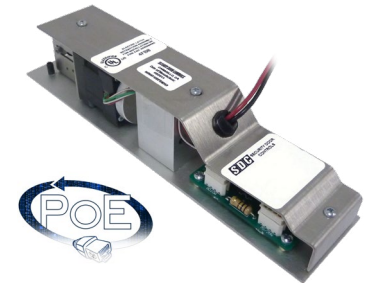
### RETROFIT ELECTRIC LATCH RETRACTION PoE KITS

**IP100** Motorized Electric Latch Retraction PoE Kit

**IP100-EM** Motorized Electric Latch Retraction PoE Kit, External Module

Retrofit ELR Kit  
 12 VDC ± 10%  
 700 mA Inrush  
 200 mA Continuous

**SDC QuietDuo™**



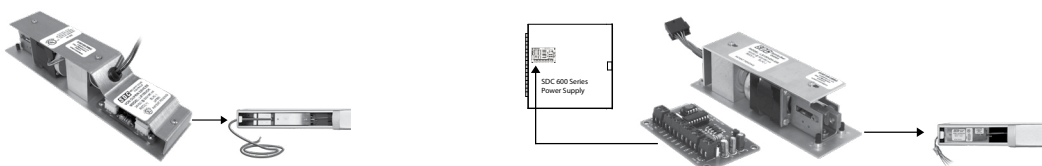
**SDC's QuietDuo™ IP100 series retrofit electric latch retraction PoE kits** enable electric access control and dogging of panic and fire rated mechanical exit devices. When energized the motor retracts the exit device latch and pulls the pushpad into the dogged (depressed) position enabling momentary 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. No door sequencer is required for a pair of manual doors. The exit device always provides uninhibited egress.

SDC's retrofit motorized electric latch retraction kits are designed to be field installed. However, SDC also offers to install the kit at SDC's factory. Simply send the mechanical

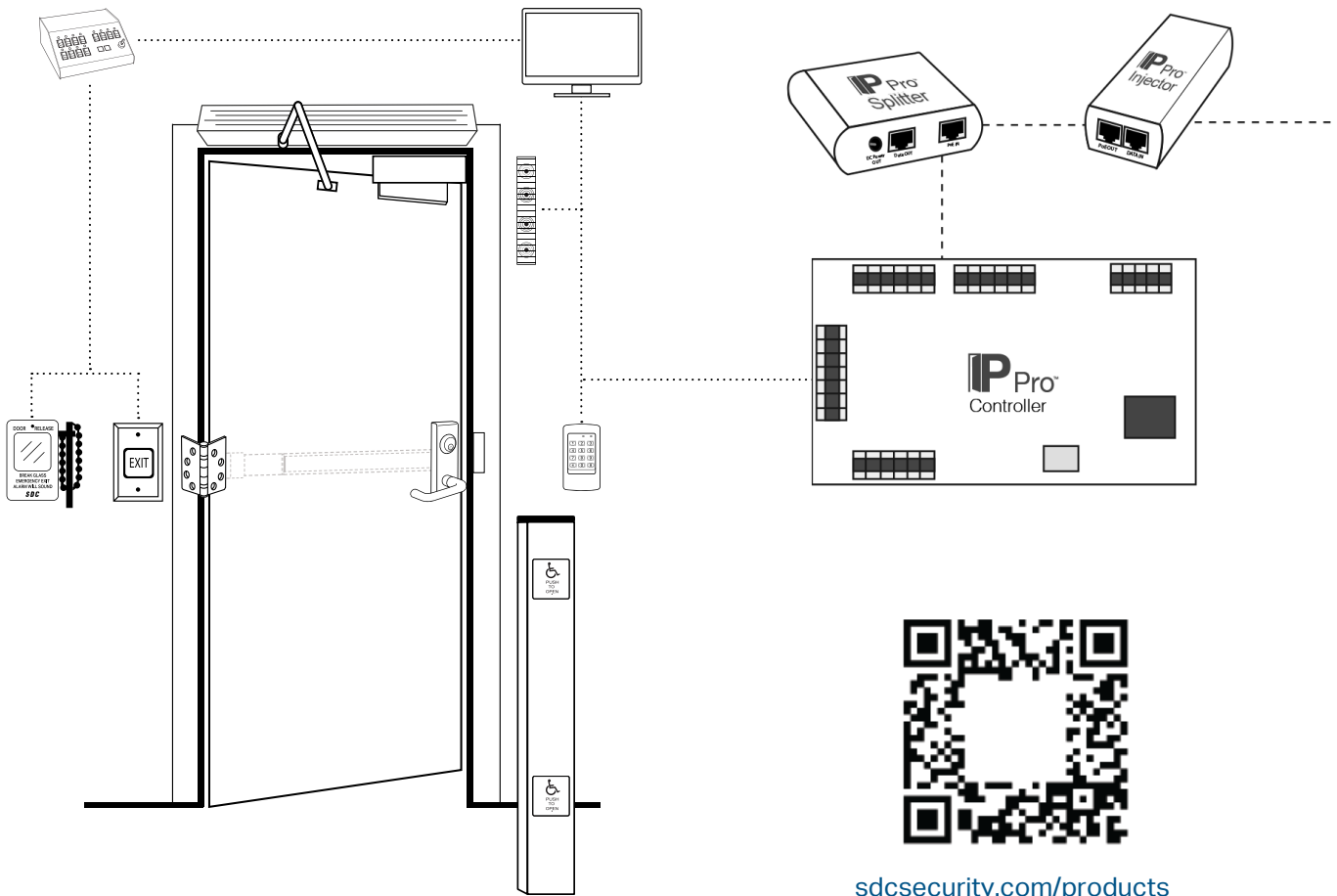
exit device brand of your choice to SDC for factory install. The table below outlines exit device compability and part numbers for both field install and factory installed IP100 kits.

Brand	Opening	Rim	SVR	CVR	Mortise	Field Install
Adams Rite	36"	8700 / 8800 / 3700	-----	-----	-----	IP100ARK*
Corbin Russwin	36"	ED5200 / ED4200	-----	-----	-----	IP100CRK*
Falcon	36"	25-R / F-25-R / 24-R / F-24-R	-----	-----	-----	IP100FRK
Hager	36" - 48"	4501-RIM	4501-SVR	-----	-----	IP100HK
Sargent	36" - 48"	8800	8700	-----	-----	IP100SGK*
Sargent	30"	8800	8700	-----	-----	IP100SGK-EM*
SDC	36" - 48"	S6100	S6200	-----	-----	IP100SDCK
Von Duprin	36"	98 / 99 / 33A / 35A	9827 / 9927 / 3327A / 3527A	-----	-----	IP100VDK
Von Duprin	42" - 48"	98 / 99 / 33A / 35A	9827 / 9927 / 3327A / 3527A	-----	-----	IP100VDK-42/48
Yale	36"	7100 / 7102 / 7200	-----	-----	-----	LR100YDK

\* Models do not retract pushpad, only retract the latch.



# COMPONENT CONSIDERATIONS



[sdcsecurity.com/products](https://sdcsecurity.com/products)

## LOCKING DEVICES

- Electromagnetic Locks
- Electromagnetic Shear Locks
- Delayed Egress Locks
- Electric Strikes
- Electrified Locksets
- Exit Devices & Retrofit ELR Kits
- Electric Bolt Locks

## ACCESS CONTROLS

- IP-Based Controllers
- Keypad & Readers
- Key Switches

## EGRESS CONTROLS

- Egress Devices
- Exit Switches & Sensors
- Emergency Door Releases

## ADA CONTROLS

- Low Energy Operators
- Push Plates & Panels
- Bollards

## POWER TRANSFER DEVICES

- Power Transfer Devices

## POWER SUPPLY & DOOR CONTROLS

- Power Controllers
- Door Controllers

## REMOTE CONTROLS & ANNUNCIATORS

- Remote Control Consoles
- Door Prop Alarms & Annunciators

## ACCESSORIES & MISC

- Accessories

## ELECTROMAGNETIC LOCKS



In 1983 SDC launched its first electromagnetic lock offering as EMLocks®. Later, after multiple improvements and patents, EMLock® became the established industry name for premium electromagnetic locks. The name “EMLock” is still widely used synonymously with electromagnetic locks in the industry today. Today, SDC’s electromagnetic product offering has expanded to meet narrow header, sliding door, gate, cabinet and hazardous applications.

[sdcsecurity.com/magneticlocks](http://sdcsecurity.com/magneticlocks)

## ELECTROMAGNETIC SHEARLOCKS



SDC’s HiShear® electromagnetic shear locks are designed, engineered and built in America for openings that require an architecturally superior appearance. Long recognized as a cut above alternatives on the market, SDC HiShear® electromagnetic shear locks are available in concealed, semi-concealed and surface mount models.

[sdcsecurity.com/Electromagnetic-Shear-Locks](http://sdcsecurity.com/Electromagnetic-Shear-Locks)

## DELAYED EGRESS LOCKS



Our egress devices delay an exit through a door by a specific amount of time. Concurrently an alarm sounds while security and personnel are alerted of unauthorized egress. Compatible with access controls and patient wandering systems, SDC ExitCheck® delayed egress locks release immediately in an emergency and comply with all national and regional building and fire life safety codes, including NFPA 101, Special Locking Arrangements.

[sdcsecurity.com/delayed-egress-locks](http://sdcsecurity.com/delayed-egress-locks)

## ELECTRIC STRIKES



SDC led the integration of electric strikes into the door hardware industry back in 1982. Today, SDC electric strikes are compatible with any access control and available in a variety of configurations to accommodate several types of mechanical locksets and door and frame styles - as well as failsafe and failsecure applications.

[sdcsecurity.com/electric-strikes](http://sdcsecurity.com/electric-strikes)

## ELECTRIFIED LOCKSETS



Since 1973 SDC has set the standard for security, safety and performance for electric locksets. HiTower®, Selectric® and Electra™ locksets provide both the locking and latching features required for fire rated doors to meet security needs and fire life safety code requirements.

[sdcsecurity.com/electrified-locksets](http://sdcsecurity.com/electrified-locksets)

## EXIT DEVICES & RETROFIT ELR KITS



SDC’s innovative industrial, storefront, and architectural exit devices and retrofit exit device electric latch retraction kits provide safe and reliable security, fire and life safety, and ADA code compliance.

[sdcsecurity.com/exit-devices](http://sdcsecurity.com/exit-devices)

## ELECTRIC BOLT LOCKS



In 1975, SDC invented the Spacesaver® 90° bolt lock design – a fundamental innovation in electronic access control now commonly used worldwide. Compatible with virtually any access control system, electromechanical bolt locks are available in failsafe and failsecure modes.

[sdcsecurity.com/Electric-Bolt-Locks](http://sdcsecurity.com/Electric-Bolt-Locks)

## IP-BASED CONTROLLERS



Every IPPro® controller comes with secure, built-in software to manage up to 32 doors from any standard web browser to allow for real-time monitoring, user management and audit trail up to 5,000 events. Or, download our FREE PLUS PC-Client software to control up to 100 doors from a single PC.

[sdcsecurity.com/IP-Based-Access-Control](http://sdcsecurity.com/IP-Based-Access-Control)

# COMPONENT CONSIDERATIONS

## KEYPADS & READERS



SDC has a variety of standalone digital keypad and proximity card access control systems equipment to meet virtually any need – many available with industry standard Wiegand 26 bit data transfer to interface with most access control systems.

[sdsecurity.com/Digital-Readers-Keypads](http://sdsecurity.com/Digital-Readers-Keypads)

## KEY SWITCHES



Early forms of access control began as manual key switches. Under SDC, key switches have evolved into an electrified access control method. SDC key switch assemblies provide an economical method of providing authorized control for a variety of applications and new or retrofit construction. Compatibility with a new or existing facility mechanical key system is maintained through the use of U.S. standard, 1" and 1 3/8" mortise key cylinders and interchangeable core cylinders (not included).

[sdsecurity.com/Key-Switches](http://sdsecurity.com/Key-Switches)

## EGRESS DEVICES



SDC egress devices are designed for the release of magnetic locks and the activation of delayed egress locks installed on non-latching doors. Request-to-exit push bars provide uninhibited egress through access-controlled openings equipped with magnetic locks, while eliminating the need for prior knowledge of egress operation and enabling egress with a single natural motion. Request-to-exit push bars also eliminate the need for wall mounted exit switches requiring prior knowledge to unlock the door.

[sdsecurity.com/egress-devices](http://sdsecurity.com/egress-devices)

## EXIT SWITCHES & SENSORS



SDC offers a variety of exit button and push button styles and contact configurations to fit several request-to-exit application needs. Additionally, SDC's wave-to-open switches and motion sensors provide hands free compliance and convenience for touchless applications using proven infrared detection technology.

[sdsecurity.com/Exit-Switches](http://sdsecurity.com/Exit-Switches)

## EMERGENCY DOOR RELEASES



SDC's line of emergency door releases (EDR's) are designed to provide a physical method of unlocking an electronic lock in the event of an emergency and may influence the approval of an electric locking system.

[sdsecurity.com/Emergency-Door-Releases](http://sdsecurity.com/Emergency-Door-Releases)

## LOW ENERGY OPERATORS



SDC's low energy swing door operators are designed for applications requiring ADA compliance, user convenience and touchless solutions. The state-of-the-art microprocessor-based operator is self-tuning and self-learning while offering non-handed operation, full mechanical stops, door sequencing and a variety of interface options for sensors, push-plates, fire alarms and electrified locks. A built-in 1 Amp power supply allows users to power electric latch retraction directly from the operator.

[sdsecurity.com/Auto-EntryControl](http://sdsecurity.com/Auto-EntryControl)

## PUSH PLATES & PANELS



SDC's push plates and panels combined with SDC's operators, bollards and locking devices allow for complete access and egress solutions for ADA compliant applications. Included are round and square push plates, as well as wall mount and full-size push panels. All types can be wireless or hardwired, bollard or wall mounted. ADA compliant solutions work seamlessly with low energy swing door operators like Auto EntryControl™.

[sdsecurity.com/PushPlates-Actuators-Touch-Panels](http://sdsecurity.com/PushPlates-Actuators-Touch-Panels)

## BOLLARDS



SDC's line of bollard posts are a practical alternative to wall mounted access controls or switches for entry doors. They combine visibility with convenience to meet or exceed accessibility and building code requirements throughout North America. A choice of surface mount or in-ground installation models and a variety of push plates and panels are offered. SDC's bollard posts are built with quality materials and attention to detail for durability in high traffic areas and harsh weather conditions.

[sdsecurity.com/Bollards](http://sdsecurity.com/Bollards)

## POWER TRANSFER DEVICES



From frame to door, SDC offers a range of proven power transfer devices including concealed mortise devices, wired door transfer hinges and wireless power transfer devices – all UL listed for 3hr Fire Rated Doors.

[sdcsecurity.com/power-transfer-devices](http://sdcsecurity.com/power-transfer-devices)

## POWER CONTROLLERS



SDC access control power supplies have been developed specifically to support access controls and electric locking hardware. They are UL listed and provide filtered and regulated linear DC power, with optional control logic, component interface, alarm interface and battery back-up to meet the requirements of single and multiple access-controlled openings. The circuitry design is ideal for the inductive loads generated by access control hardware for high performance and longevity.

[sdcsecurity.com/power-controllers](http://sdcsecurity.com/power-controllers)

## DOOR CONTROLLERS



SDC's door control relay modules ensure compatibility of access hardware components and simplify system installation and troubleshooting. Different modules may be specified for one power supply. The isolated relay design allows trigger signals over small gauge cable runs of 22 gauge wire up to 1,000 feet from the trigger device to the module. SDC's engineered system design services are available when you purchase SDC locks, control modules and power controllers for your door opening applications.

[sdcsecurity.com/Door-Control-Relay-Modules](http://sdcsecurity.com/Door-Control-Relay-Modules)

## REMOTE CONTROL CONSOLES



Recommended for access systems without computer management capability, SDC's remote control consoles provide a means of central supervision and control of single and multiple openings within a facility. Available in several configurations, the TCC and RCC consoles provide remote lock control, door status and lock status. The modular design permits configuration flexibility to meet the demands of different control and monitoring requirements.

[sdcsecurity.com/Desktop-Control-and-Annunciator-Consoles](http://sdcsecurity.com/Desktop-Control-and-Annunciator-Consoles)

## DOOR PROP ALARMS & ANNUNCIATORS



Multi-mode annunciators, like SDC's EA series door prop alarm, EA100 and 400 series LEDs, sirens, buzzers and speakers come in a variety of door, frame, wall, ceiling or single and double gang box configurations to provide the ultimate in door status indication, access control system compatibility and control. SDC door prop alarms are compatible with all access control systems but can also function as a standalone solution.

[sdcsecurity.com/Multi-Mode-Annunciators](http://sdcsecurity.com/Multi-Mode-Annunciators)

## ACCESSORIES



From wireless transmitter and receivers to durable electromagnetic door holder and releasing devices, to REX sensors, adjustable relock timers, door status ball and magnetic switch sensors, key cylinders, communicating bathroom products, latch and deadbolt monitoring, and from concealed contact to universal mounting enclosure - there's an SDC accessory to complement or enhance almost any access or egress component we sell.

[sdcsecurity.com/accessories](http://sdcsecurity.com/accessories)

# APPLICATION SOLUTIONS



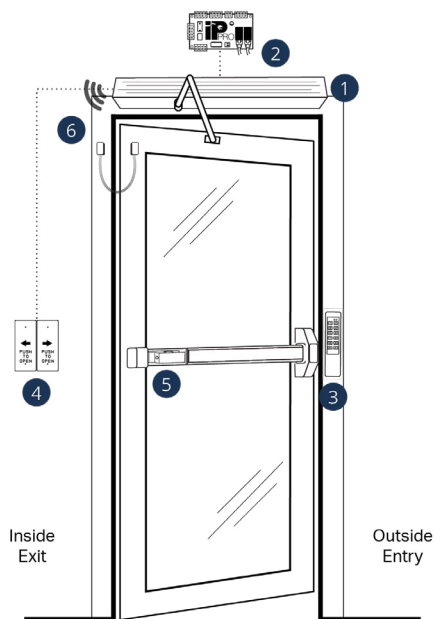
## Access & Egress Security Solutions Brochure

Common PoE application solutions can be found on pages 18 and 19.



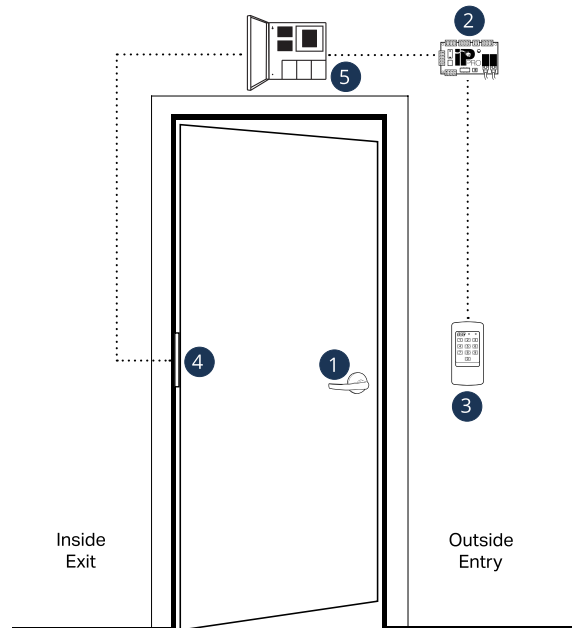
[sdcsecurity.com/Solutions-Brochure](http://sdcsecurity.com/Solutions-Brochure)

## Automated Entrance IP-Based Access Control



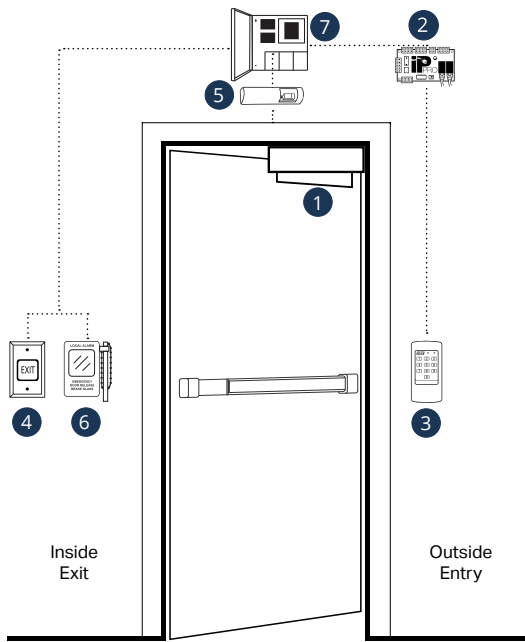
Access & Egress Security Solutions Brochure Page 18

## Network Edge Physical Security for Data Rooms

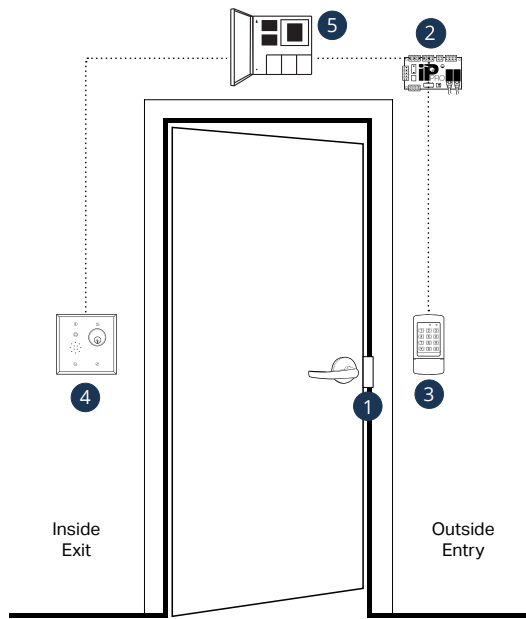


Access & Egress Security Solutions Brochure Page 19

### Magnetic Lock IP-Based Access Control



### Electric Strike IP-Based Access Control



# CHECK OUT **SDC ONLINE** FOR ALL YOUR PROJECT NEEDS

Our fully featured website has all the information, solutions and tools you'll need, including:

- Data Sheets
- Installation Instructions
- Videos
- Priceshets
- Comparison Charts
- Document Library
- Solution Flyers
- UL Listings
- Image Library
- Cool Tools
- 3 Part Specs
- And More!



[www.sdcsecurity.com](http://www.sdcsecurity.com)



# Need Help Building Your Solution?

Use **DoorSnap™** in the free **SDC App** for your door retrofit projects



## SDC Solution Experts Will Craft Personalized Solutions For You!

- 1 Open the SDC App and select DoorSnap™
- 2 Take a photos of your door opening
- 3 Submit photos of your door opening
- 4 Receive a complete access and egress electrified solution

Download the FREE SDCSecurity App now!

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



