BY KERBY LECKA

Case Study: Dance Studio Traffic Control and School Safety

During the last decade, all the news headlines and public attention has been rightly focused on K-12 and higher education facilities in response to school shootings. With each tragic incident, the nation demands more action to find ways to protect our children. Our industry has responded with a variety of systems and solutions designed to improve school safety & security. Consequently, more demand has created more competition among door hardware, security dealers and distributors, installers and system integrators providing expertise and solutions to fill this demand.

How about looking at a part of the educational market that we believe is underserved by our industry and therefore, under the radar for many of your competitors? Yet, it's still a part that represents an incredible opportunity for the application of security and life safety applications. We're talking about the almost 30,000 estimated U.S.-based instructional schools[1] that offer instruction in the arts, including dance, art, drama, music, language, exam prep and tutoring as well as sports and athletics—including gymnastics, cheerleading, basketball, volleyball and martial arts.

Many of these types of schools are located in suburban business parks, where rents are less expensive than traditional retail space, but are easily accessible by parents to bring children for after-school, evening and weekend instruction. The operators of these schools are also attracted to these warehouse locations because they are more easily remodeled to fit their particular instructional needs within a budget. But, they must comply with all security and life safety requirements of the local AHJ before getting their occupancy certificates and holding classes. Here is one example of how this can be accomplished.

DANCE ALLIANCE OF CAMARILLO, CALIFORNIA

Dance Alliance of Camarillo provides dance instruction to families, primarily for ages three years through teen during the evenings and on Saturdays. Traffic control and school safety were the primary goals for the retrofit of 3,200 square feet of leased warehouse into a dance studio located in a typical suburban industrial park.

Secondary goals included code compliance with the local AHJ to convert this warehouse space for larger occupancy. The studio needed to

PHOTOS AND ILLUSTRATIONS COURTESY OF SDC

A

provide access control with credential capabilities for 9 – 10 employees and overnight maintenance personnel, while having the ability to provide traffic control for 40 plus students per hour and parents coming in and out during class sessions.

On the one hand, the studio wanted to provide free storefront access during business hours, while limiting access and egress to interior spaces so that instructors could conduct classes with young students in relative safety, free from parental interference and distractions. On the other hand, the owners wanted multiple functions like audit trails, camera system interface and remote monitoring of four primary openings – storefront door, interior lobby door, executive office door and back door – to ensure safety and security while mitigating liability issues associated with occupancy and emergency egress. **(A)**

LOWER COST IP-BASED ACCESS CONTROL

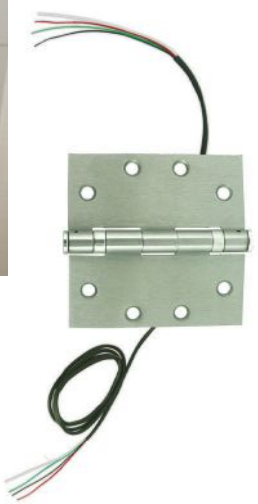
IP-based Single Door Access Controllers were selected to bring safe, secure, easy-to-implement door access control without the headaches of costlier, more complicated enterprise solutions. Each of the four primary door openings—two exterior, two interior—received Wiegand output digital keypads with prox reader. The systems were configured and managed from secure, user-friendly, built-in software provided with the single door controllers to manage each door from any standard web browser. Real-time monitoring, user management and audit trail up to 5,000 events (standard) were included with the door controller software. **(B)**

B

The storefront door received a narrow mullion digital keypad to fit the entrance style common to these commercial installations. The storefront door exit device was electrified with a latch retraction kit to provide access control and dogging capability during business hours. A multi-color LED exit annunciator was frame mounted on the interior of the door storefront to provide easily visible door status. **(C)**

The back door emergency exit received an expansion IP-based single door controller and digital keypad with prox reader. The reader was mounted to the exterior concrete wall with an optional privacy and rain shroud. An electrified mortise exit device was retrofitted to the back door. Both digital keypads are weather and vandal resistant.

C



Power was delivered to each door exit device via cost-effective, surface-mounted, electric power transfer loops featuring stainless steel armored flex conduit. Each door upgrade helped meet occupancy requirements critical to securing approval to open the business while saving in upgrade costs. A door prop alarm with status LED, audible alarm and keylock switch for reset/bypass was added to the back door to prevent student use and control behavior. **(D)**

A third expansion IP-based single door access controller and digital keypad with prox reader was placed at the interior studio entrance door linking the lobby to a staging area for dancers to limit access and provide traffic control to the main dance studio. This door was retrofitted with an electrified cylindrical lockset to provide access control with

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J

code compliance and has a magnetic door holder with wireless remote control to release and/or lock the door for convenience - instead of holding the door open as students enter and leave before and after class. **(E)**

A final expansion IP-based single door access controller and digital keypad with prox reader was installed at the executive office entry—retrofitted with an electrified cylindrical lockset—to provide privacy and security for data server and financial records. Each of these doors were equipped with a power transfer hinge using concealed wires to transfer power from the frame to electrified locksets for control and monitoring capability. The door to the main dance studio from the staging area required a rim mount panic exit device for legal exiting and life safety code compliance to meet occupancy load requirements. **(F)**

Now, the studio owners can control the storefront exterior, have the flexibility to provide keyfob, keypad or prox credentials to staff, view audit trails and remotely monitor and control their primary doors from any web-enabled device, including a smartphone. For added convenience, they can use a wireless remote fob to control the front door quickly on demand, or as the need arises. **(G)**

ADDITIONAL CONSIDERATIONS

Two standalone, battery powered electronic locksets with digital keypad were installed to provide safety and privacy for an employee bathroom—which doubles as a safe room—and a utility closet containing cleaning supplies. Neither of these rooms required a network connection, audit trail or remote access control. **(H)**

Additionally, a dancer's lounge off the main lobby features a magnetic door holder with wireless remote for privacy and noise control. A public bathroom accessible from the main lobby received another multi-color LED exit annunciator above the entrance, connected to a passive infrared sensor on the inside to indicate occupancy when in use. **(I)**

Two general purpose 2 amp power supplies with battery backup and field selectable 12VDC or 24VDC outputs were installed to provide 12V for power for all non-locking devices and more efficient 24V power for all locking hardware. **(J)**

Finally, 13 security cameras were strategically placed throughout the facility to provide remote access monitoring, to allow parents to view internal dance studio class on lobby TVs without interfering, and to mitigate liability issues associated with poor student behavior.

This dance studio school safety and security solution is a typical example of the type of retrofit solution that door hardware, security dealers and distributors, installers and system integrators can provide to these type of instructional schools catering to parents and children. Although no two applications will be alike, this study can be used as a guide for providing cost-effective traffic control and school safety while complying with local AHJ's to achieve occupancy.

Further, the owners and operators of these private instructional facilities can gain a measure of control and flexibility in monitoring access and egress and decrease risk

With a new focus on this underserved segment of the educational institute market, door and hardware professionals can enjoy less competition and more opportunities while bringing their invaluable security and safety expertise to private instructional facilities. +

[1]NAICS Industry Codes 61161, 61162, 61163, 611691

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