

# Top Door Alarm<sup>®</sup>

## ARCHITECTURAL SPECIFICATION

### Generation 3

### DIVISION 08 – OPENINGS

### SECTION 08 71 00 – DOOR HARDWARE

#### PART I GENERAL

##### 1.01 SUMMARY

- A. WORK INCLUDED: Furnishing, installation and interface of a suicide deterrent and alarm system, detecting attempts at suicide by supporting a ligature in a door assembly. The system includes, but is not limited to, sensor systems, visual and audible indicators, controller systems and user interfaces as required for proper operation.
- B. RELATED SECTIONS:
  - 1. 08 12 00 Metal Frames
  - 2. 08 13 00 Metal Doors
  - 3. 08 14 00 Wood Doors
  - 4. 08 15 00 Plastic Doors
  - 5. 08 16 00 Composite Doors
  - 6. 08 17 00 Integrated Door Opening Assemblies
  - 7. 28 26 13 Electronic Personal Safety Detection Systems

##### 1.02 SYSTEM DESCRIPTION

The Top Door Alarm<sup>®</sup> system will detect the presence of a ligature (such as a bed sheet, towel, etc.) before pressure is applied. Furthermore, the system shall be self-monitoring. The display panel shall have an LCD display that will show the time and location of the event. Upon detection, a visual indicator shall be activated at the location of the event, as well as at a remote display panel, typically located in the nurse's station. In addition, an audible alarm shall also be activated in a predetermined hallway location, as well as at the remote display panel in the nurse's station. Once initiated, the alarm will remain active even if the ligature is removed. The alarm shall be manually reset using the keyed switch located near the door jamb. After being reset, the audible and visual indicators will be cleared. The system shall record and display up to 200 recent events in an electronic log, available for immediate review. All event messages are stored for a period of one (1) year and are available for download. This system has the capability of recording events, including the date and time of each event, and shall be accessible for review as required. The system is designed as a deterrent only and Door Controls USA makes no assertion the system will prevent all attempts at suicide.

##### 1.03 SUBMITTALS

- A. PRODUCT DATA: Submit manufacturer's complete component specifications.
- B. INSTALLATION DATA: Submit installation diagrams.
- C. SHOP DRAWINGS: Submit shop drawings, if required by customer.

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- D. CLOSEOUT SUBMITTALS: Submit the following:
1. Manufacturer's Operation and Maintenance Manual: Submit six (6) copies upon project final acceptance.
  2. Manufacturer's Warranty Document: Submit one (1) copy upon project final acceptance.

## 1.04 QUALITY ASSURANCE

- A. INSTALLERS QUALIFICATIONS: Installers shall be experienced in performing work of this nature, specializing in the installation and service of manual doors, door hardware and/or related systems. Installation personnel shall be trained and certified by Door Controls USA, Inc.
- B. MANUFACTURER'S QUALIFICATIONS:
1. Manufacturer shall have a minimum of five (5) years of experience in the general automatic door market. Experience shall include manufacturing, sales, installation and service of all types of manual and automatic doors, door hardware and related systems.
  2. Manufacturer shall have a minimum of five (5) years of experience, specializing in the healthcare facilities market. Experience shall include manufacturing, sales, installation and service of all types of manual and automatic doors, door hardware and related systems. Furthermore, experience shall specifically include at least five (5) years working with federal healthcare facilities, as well as state and local facilities.

## 1.05 DELIVERY, STORAGE AND HANDLING

- A. DELIVERY: Items shall be delivered in factory's original, unopened, undamaged containers with identification labels intact.
- B. STORAGE AND PROTECTION: Items shall be stored off ground, under cover, protected from weather and construction activities.

## 1.06 PROJECT/SITE CONDITIONS

- A. FIELD MEASUREMENTS: Installer shall examine the location, and shall advise of any site conditions unacceptable for proper installation of product.
- B. INSTALLATION: The system shall be installed in accordance with the manufacturer's specifications.

## 1.07 WARRANTIES

- A. The Top Door Alarm<sup>®</sup> system is warranted against defects in material and workmanship for a period of one (1) year from the date of installation.

## 1.08 OWNERS INSTRUCTIONS / COMMISSIONING

- A. INSTRUCTION: Distributor/Installer shall provide a minimum of two (2) hours on-site operational training.
- B. COMMISSIONING: Factory supplied test protocol, *Top Door Alarm<sup>®</sup> Component Certification Document*, shall be executed and test results documented for final acceptance of the system.

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## PART II PRODUCTS

### 2.01 MANUFACTURER

Door Controls USA, Inc.  
321 VZ County Road 4500, Ben Wheeler TX 75754  
800-437-3667  
DoorControlsUSA.com

### 2.02 COMPONENTS

#### A. DOOR OR JAMB MOUNTED SENSORS

1. Presence detection sensors are mounted at the top of the assembly and will detect the presence of a ligature before pressure is applied by a patient.
2. Optional presence detection sensors are mounted on the bottom of the door leaf and will detect the presence of a ligature before pressure is applied by a patient.
3. Power and signals from door mounted sensors shall be routed through a transfer hinge.
4. Sensor circuits are redundant, providing tamper resistant, failsafe detection.

#### B. POWER TRANSFER HINGE: Shall be a customized configuration, continuous hinge with:

1. Transfer location shall be at the top of the continuous hinge.
2. Transfer portion of the hinge can be a removable module for improved service access.
3. Transfer portion of the continuous hinge shall include a hospital tip.
4. Optional center pivot hinges shall be used in lieu of continuous hinges.

#### C. LOCAL VISUAL INDICATOR

1. Shall be located outside each room covered by the system.
2. Shall be similar in style to the existing nurse call lights.
3. Shall be mounted to the existing ceiling or wall surface.

#### D. LOCAL RESET SWITCH

1. Shall be installed on the corridor side of the opening, adjacent to the door jamb of each opening covered by the system.
2. Shall be a momentary contact keyed switch.
3. Shall be keyed to utilize the same keying per the Owner's request.

#### E. REMOTE DISPLAY PANEL

1. Remote display panel shall be located in the nurse's station.
2. Remote display panel shall be self-monitoring.
3. Remote display panel shall provide an LCD display notification for each door covered by the system.
4. Remote display panel shall provide an audible indicator activated by an alarm from any door covered by the system.
5. Remote display panel shall provide continuous diagnostics of the system and shall activate an audible indicator in the event of system tampering, or any other deviation from normal status.

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6. Remote display panel shall provide for data tracking of alarm activation and deactivation.
  7. Remote display panel shall provide for deviations from normal status.
  8. Alarm components shall be 24VDC.
  9. Power connection must be to the facility's emergency power, 120VAC.
  10. Remote display panel shall be connected to a battery backup to ensure system integrity during brief interruptions in facility power such as when switching from normal source to back-up generators.
- F. REMOTE AUDIBLE INDICATOR(S)
1. Remote audible indicators shall be no more than 120dB.
  2. Single audible indicator shall be located in the hallway near the doors covered by the system.
  3. Optional additional audible indicator may be located within 200 feet of the nurse's station.
- G. CABLING
1. Cabling shall be plenum rated.
  2. Cabling shall be routed in the overhead space above the finished ceiling.
  3. Cabling shall be secured to the existing structure within the overhead ceiling space.

## PART III EXECUTION

### 3.01 EXAMINATION

Examine the location and advise of any site conditions unacceptable for proper installation of the product. These conditions include but are not limited to the following:

- A. Identification and planning for project access, onsite staging areas, site configuration/temporary construction enclosures, and work hours.
- B. Power supply (not provided by DC USA) must be available and verified to have the following characteristics:
  1. 120VAC.
  2. Maximum current required by system not to exceed 4A.
  3. Dedicated circuit NOT required.
  4. Must be supplied from the facility emergency power system.

### 3.02 INSTALLATION

- A. Installation personnel shall be trained and certified by Door Controls USA, Inc.
- B. System shall be installed in accordance with manufacturer's installation specifications.
- C. Coordination with adjacent work shall be maintained.
- D. Installation shall be coordinated with facility requirements (such as electric power).

### 3.03 ADJUSTING

- A. Installer shall adjust door, hardware and sensors for smooth operation and proper performance.