

CSI SPECIFICATION SECTION 8.
SECTION [08460]
SENSORS FOR AUTOMATIC DOORS

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes the following types of automatic entrance/exit door sensors:
 - 1. Exterior and interior, revolving, swing and folding door applications.
 - 2. Entrance and exit applications

- B. Related Sections:
 - 1. Division 16 Sections for electrical connections including conduit and wiring for automatic entrance door operators.
 - 2. Division 08.71.13 and 08.71.16 for door hardware connections for automatic doors.

- C. REFERENCES
 - 1. American National Standards Institute (ANSI) / Builders' Hardware Manufacturers Association (BHMA):
 - a. ANSI/BHMA A156.10: American National Standard for Power Operated Pedestrian Doors.
 - b. ANSI/BHMA A156.19: American National Standard for Power Assist and Low Energy Power Operated Doors
 - 2. American Association of Automatic Door Manufacturers (AAADM)

1.02 DEFINITIONS

- A. Secondary Activation Device: A motion or presence sensing device that, when actuated, sends an electrical signal to the door operator to open the door, re-open or hold a door open.

- B. Safety Device: A presence sensing device that prevents a door from opening or closing or stops, stalls, or reverses a door when appropriate.

1.03 PERFORMANCE REQUIREMENTS

- A. Provide an automatic entrance, door mounted sensor for swing doors, utilizing Infrared Triangulation Technology that provides protection during door travel. Sensor shall be capable of providing safety or secondary activation for swing doors.

- B. For swing doors: Sensor shall be coupled with a capable automatic door control to provide safety on the push and pull side of an automatic swing door.

- C. Requirements:
 - 1. Utilizes Distance measure technology via PSD – Position Sensitive Device.
 - 2. Each sensor module shall be capable of providing a maximum detection field width of 15”.
 - 3. Sensor shall provide Dip Switches for adjustment and configuration while using single button for sensor setup.

4. Sensor shall utilize only one cable to the door control where sensors are secured to the door face.
 5. Each Sensor Module angle shall be adjustable by turning adjustment screw without removing module from extrusion
 6. Each module shall be modular design, a MASTER or add on module SLAVE with automatic function recognition.
 7. Each OA-Edge shall have LED indicators for testing or troubleshooting, visible with covers installed.
 8. Each Module shall have 4 IR spots per module (2 or 4 spot dipswitch selectable)
- D. Adjustments: Shall be capable of being adjusted to comply with ANSI 156.10 (2011), Section 8.2.2.3. The use of a remote control to make adjustments shall not be accepted.
- E. Mounting Height: 4' 11" to 9' 10".
- F. Output: Sensor shall have 2 independent output relays.
- G. Time at Detection: <75ms max.
- H. Presence Detection:
1. Active Infrared with distance measurement via triangulation and utilizes I.N.C. (Intelligent Noise Cancellation)
 2. Detection Field: 15 in. (W) x 2.76 in. (D) (at 6' – 10" mounting height).
 3. Number of modules in one chain: Maximum 4 modules.
 4. Four active spots per module.
 5. Maximum presence detection time: Infinite
- I. Environmental Conditions:
1. Temperature Range: -4°F (-25°C) to +131°F (+55°C).
 2. Degree of Protection: IP54

1.04 QUALITY ASSURANCE

- A. Installer Qualifications: Manufacturer's authorized representative who is an AAADM certified inspector and employed by a company who regularly engages in the installation and service of pedestrian automatic doors as its primary business. And installer holds a certification approved by the manufacturer.
- B. Manufacturer Qualifications: A qualified manufacturer with a manufacturing facility that specializes in automatic door sensor devices.
 1. Product must be compliant to applicable ANSI Standards 156.10 when inspected by an AAADM certified inspector.

1.05 COORDINATION

- A. Electrical System: Coordinate layout and installation of sensors systems to automatic entrance door assemblies with connections to power supplies and other electrical component systems as supplied by others.

1.06 WARRANTY

- A. Automatic Entrance Door Sensors shall be free of defects in material and workmanship for a period of one (1) year from the date of substantial completion.

- B. During the warranty period the Owner shall engage a factory-trained automatic door installer/service technician who holds a valid AAADM certificate: Technician to perform necessary adjustments, service and affect repairs.

PART 2 - PRODUCTS

2.01 AUTOMATIC ENTRANCE DOOR SENSOR

- A. Acceptable Manufacturer: Optex Technologies, Inc. 3882 Del Amo Blvd, Suite 604, Torrance, CA 90503, 800-877-6656. www.ot-inc.com . No substitutes accepted.

2.02 PRODUCT

- A. Optex OA-Edge: Comprised of one master module with the option to add additional slave modules connected for a maximum of four modules. (Up to 4 modules).
- B. OA-Edge 1 (One Master module), OA-Edge 2 (One Master Module and One Slave Module), OA-Edge 3 (One Master Module and 2 Slave modules) Standard lengths for 13.5, 34.5, 40, 44.
- C. Mounting Height: 4' 11" to 9' 10"
- D. Finish: Anodized Black Aluminum and Black Polycarbonate.

PART 3 - EXECUTION

3.01.1 INSPECTION

- A. Examine conditions for compliance with requirements for installation tolerances.

3.02 INSTALLATION

- A. Do not install damaged components.

3.02.1 Factory installed and on-site installed units.

- A. Install plumb and level near the top rail of each door leaf/ wing. Conceal fasteners to the greatest extent possible.
- B. Shall be installed and inspected by a certified AAADM inspector.
- C. Door Operators: Connect door operators to electrical power distribution system as specified in Division 16 Sections.

3.02.2 FIELD QUALITY CONTROL

- A. An AAADM certified inspector shall test and inspect each automatic entrance door to determine compliance of installed systems with applicable ANSI standards.
- B. AAADM certified inspection for compliance with ANSI 156.10. Ensure to place appropriate AAADM labels and completed inspections stickers in the appropriate place for the type of door system selected.

3.02.3 ADJUSTING

- A. Adjust door operators, controls, and hardware for smooth and safe operation, for weather-tight closure, and complying with requirements in ANSI/BHMA A156.10 and other applicable ANSI/BHMA standards.

3.03 WARRANTY

- A. One year warranty shall be issued from time of installation, followed by an AAADM certified inspection, for compliance with ANSI 156.10. Ensure to place appropriate AAADM labels and completed inspections stickers in the appropriate place for the type of door system selected.