



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, sliding, swing and folding door applications.
 - 2. Entrance and exit applications
- B. Related Sections:
 - 1. Division 16 Section 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. Underwriters Laboratories (UL) UL 325 – Standard for Door, Drapery, Gate, Louver, and Window Operators and Systems
 - 2. American National Standards Institute (ANSI) and Builders' Hardware Manufacturers Association (BHMA)
 - 3. ANSI/BHMA A156.10: American National Standard for Power Operated Pedestrian Doors
 - 4. ANSI/BHMA A156.19: American National Standard for Power Assist and Low Energy Power Operated Doors
 - 5. ANSI/BHMA A156.27 American Standard for Power and Manual Operated Revolving Pedestrian Doors
 - 6. American Association of Automatic Door Manufacturers (AAADM)

1.02 DEFINITIONS

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

1.03 PERFORMANCE REQUIREMENTS

- A. Provide an automatic entrance door sensor capable of providing motion detection activation via microwave (motion detection) K-band (24.125GHz) with a touch-less switch for sterile environments.
- B. Thermal Range Requirements: Provide sensor that can be used in all climates and allow for thermal range from - 4°F (20°C) to +131°F (+55°C).

- C. Mounting Location: Wall mounted within a single gang or double gang electrical conduit box.
- D. Detection Range: 4" to 24" (10cm to 60cm) adjustable.
- E. Immunity: Sensor shall be immune to electrical and radio frequency interference.
- F. Relay Output Hold Time:
 - 1. Pulse mode: 0.5 seconds.
 - 2. Toggle mode: Detection activates the relay and a second detection deactivates the relay.
- G. Certifications: Electromagnetic compatibility (EMC) according to 2004/108/EC, FCC: G98-MS08, IC: 4680A-MS08.
- H. Sensor must be capable of being installed in interior or exterior environments. Exterior environments should use a silicone seal between faceplate and mounting surface.
- I. Housing: Sensor shall be made of polycarbonate with or without lettering and graphic (hand wave), and available in black, white or cream colors.
 - 1. Single Plate (Gang): 2.75" (70mm) X 4.5" (114mm)
 - 2. Double Plate (gang): 4.5" (114mm) X 4.5" (114mm)

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 holds a certification from 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, 156.27 or 156.19 when inspected by an AAADM certified inspector.

1.05 COORDINATION

- A. Electrical System: Coordinate layout and installation of sensor 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 personnel who holds a valid AAADM certificate: technician to perform necessary adjustments, service and affect repairs during warranty period.

PART 2 - PRODUCTS

2.01 AUTOMATIC ENTRANCE DOOR SENSOR

- A. Acceptable Manufacturer: B.E.A. Inc, 100 Enterprise Drive, Pittsburgh, PA 15275, 412-249-4100. www.beasensors.com. No substitutes accepted.

2.02 PRODUCT

- A. Product to be: B.E.A. 10MS08U: Sensor with microwave motion sensor.
- B. Dimensions specify either:
 - 1. Single Plate (Gang): 2.75" (70mm) X 4.5" (114mm) or
 - 2. Double Plate (gang): 4.5" (114mm) X 4.5" (114mm)
- C. Mounting Height: A minimum of 36 in. and a maximum of 48 in., or as specified by the local building codes.
- D. Finish Polycarbonate, specify:
 - 1. Black, White or Cream
 - 2. Graphic: Specify one:
 - a. Plain
 - b. Text (Wave to Open) & Hand Graphic
 - c. Graphic Only (hand wave)

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 surface-mounted and concealed units above header using concealed fasteners to greatest extent possible.
- B. Shall be installed and certified by a certified AAADM inspector.
- C. Door Operators: Connect door operators to electrical power distribution system as specified in Division 16 Section.

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.

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, 156.27 or other applicable ANSI/BHMA standards. Ensure to place appropriate AAADM labels and completed inspections stickers in the appropriate place for the type of door system selected.