

ANSI 156.10 2017

AUTOMATIC DOOR SENSOR PERFORMANCE REQUIREMENTS



This document highlights the current ANSI 156.10 standards as applicable to sensing requirements for automatic swing doors.

Disclaimer: This document does not replace the standard itself. For compliance, always refer to the more specific and detailed language of the standard.

ACTIVATION

SECTIONS 8.1.1 – 8.1.2

A motion sensor shall detect a minimum 28-inch high person moving towards the center of the door at a rate of 6 inches per second (see image 1).

The minimum width shall be the width of the clear door opening and the minimum depth shall be effective to within 5 inches of the closed door and extending out 43 inches.

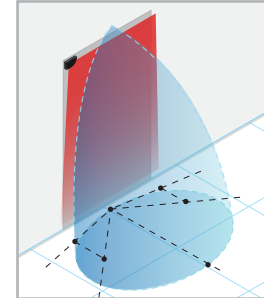


IMAGE 1

motion sensor

SAFETY

SECTION 8.1.3

Presence sensors shall detect a 28-inch high (minimum), stationary person within the detection areas for a minimum of 30 seconds.

SECTION 8.2.2.1 (overhead presence sensors) – see image 2

- Shall be the width of the door opening less 5 inches from each side
- Shall be maximum of 5 inches from a closed door
- Shall be a minimum of 5 inches beyond the leading edge of an open door

SECTION 8.2.2.2 (overhead presence sensors, cont.)

All overhead presence sensors are required to work in conjunction with at least one additional supplementary presence sensor:

- Photo beam near the leading edge of an open door – see image 3
When detection occurs the photo beam shall cause the door to continue to close until detection by both the overhead presence sensor and photo beam are clear
- Door-mounted sensor on at least the swing side of the door leaf – see image 4
The door-mounted sensor shall cause the door to stop, slow its opening or re-opening to the industry standard of 4 inches per second (otherwise known as “backcheck speed”)

Note: The minimum detection field allowed is for ½ the door width, measured from the leading edge of the door.

SECTION 8.2.2.3 (door-mounted presence sensors) – see image 5

Shall be effective to the industry-known terminology as the “5-5-1 rule.” This rule states that the fields on both sides of the door must be capable of detecting a 28-inch high (minimum) person who is fully within the detection zone:

- 5 inches from the face of the door
- 5 inches from the pivot or hinge area
- 1 inch from the leading edge of the door

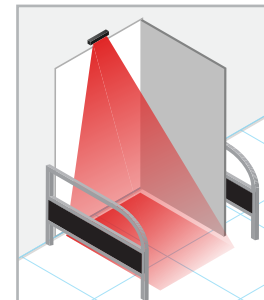


IMAGE 2

overhead presence sensor

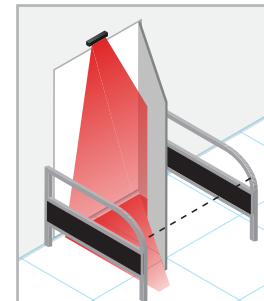


IMAGE 3

overhead presence sensor
+
photo beams

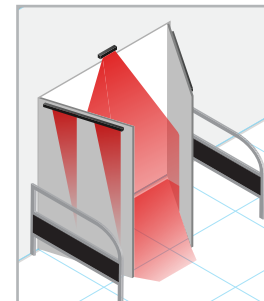


IMAGE 4

overhead presence sensor
+
door-mounted presence sensor

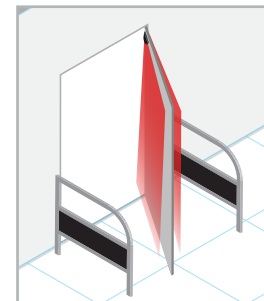


IMAGE 5

door-mounted presence sensor
(approach side)
+
door-mounted presence sensor
(swing side)