OPEN UP NEW HORIZONS

APPLICATION NOTE

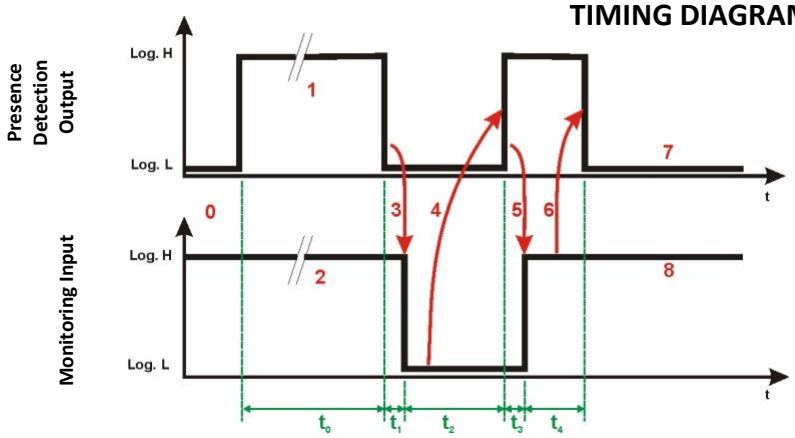



Monitoring by voltage

BEA Products to which this Information Sheet applies:

- ✓ IXIO-DT1
- ✓ IXIO-ST
- ✓ LZR-i30
- ✓ QuadScan
- ✓ Wizard G3
- ✓ Iris

TIMING DIAGRAM



NB.: assuming Presence Sensor Output in Passive Mode (NC-contact opening in detection state)

0 Presence Sensor in normal state (non-detection).

1 Presence Sensor in detection state (target within the detection field).

2 Monitoring Input in normal state.

3 Presence Sensor recovering from detection state (target out of detection field) → before closing the door, the door controller initiates a test of the sensor and its wiring by un-powering the monitoring input of the sensor (log. L).

4 The sensor recognizes the change of state of its monitoring input and verifies the internal state of the sensor. If the sensor is OK, it changes the state of the presence output to detection state.

5 The door controller recognizes the change of state of the Presence Sensor output and can consider that the sensor as well as the wiring is OK. The controller then re-powers the monitoring input of the sensor (log. H).

6 The sensor recognizes that the monitoring input has been turned back to normal state (log. H) and as a consequence, it turns the Presence Sensor output back to non-detection state.

7 Presence Sensor output in normal state (non-detection).

8 Monitoring input in normal state.

t_0 Time during which the presence sensor is in detection state (time during which a target is in the detection field - or - the maximum presence detection time).

t_1 Delay imposed by the door controller before initiating a monitoring request (depends on reaction time of door controller)

t_2 Delay imposed by the sensor for internal check after receiving the monitoring request and changing the state of its presence detection output.

t_3 Delay imposed by the door controller to recognizing the answer of the sensor upon a monitoring request.

t_4 Delay imposed by the sensor to recognize the reception of the sensors answer and its reaction to turn the monitoring input back to default state.

The door controller should consider that delay t_2 between issuing the monitoring request (3) and the response from the sensor (4) must be between 200µs and 50ms.

Periodicity of the monitoring: - Before each dangerous movement (ex. door closing movement)
- Once per hour

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APPLICATION NOTE

LZR Center Mount

BEA Products to which this Information Sheet applies:

- ✓ **LZR-i30**

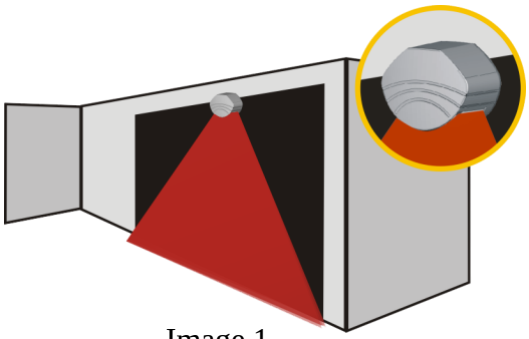
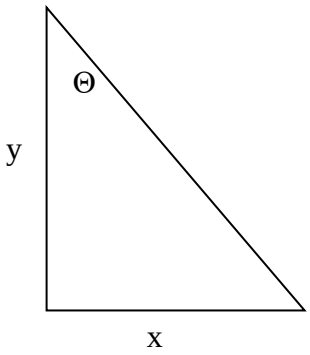


Image 1

When mounting the LZR in the center of the door (directly over head) please reference Table 1 below for mounting height versus door width to ensure that the full door width is covered. Multiple sensors may be needed to cover the full width of the door. Please note that even though the full width of the door is covered, the entire area of the door opening will not. Please reference inactive (black) zones in Image 1 above.

Door Width (ft)	Mounting Height (ft)
5	2.25
6	2.70
7	3.15
8	3.60
9	4.05
10	4.50
11	4.95
12	5.40
13	5.85
14	6.30
15	6.75
16	7.20
17	7.65
18	8.10
19	8.55
20	9.00
21	9.45
22	9.90
23	10.35
24	10.80
25	11.26
26	11.71
27	12.16
28	12.61
29	13.06
30	13.51

Table 1 : Door Width vs. Mounting Height



CALCULATION :
$y=x/\tan(\Theta)$

VARIABLES :
y = Mounting Height (ft)
x = ½ Door Width (ft)

CONSTANTS :
Θ = ½ Sensing Angle = 48 (degrees)