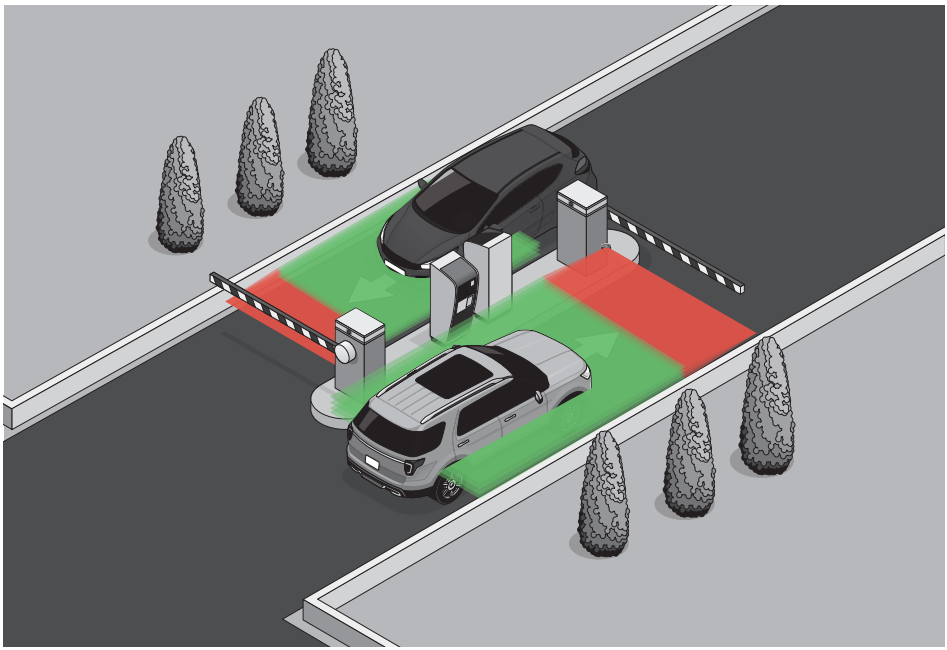
ENGLISH

APPLICATION QUICK GUIDE

LZR®-H100 / BARRIER ARMS



This document is intended as a quick-reference for LZR-H100 activation and presence sensors installation on barrier arms.

Before beginning installation, review safety information and general product information in the full User's Guide (75.5984).

BEA, INC. INSTALLATION/SERVICE COMPLIANCE EXPECTATIONS

BEA, Inc., the sensor manufacturer, cannot be held responsible for incorrect installations or incorrect adjustments of the sensor/device; therefore, BEA, Inc. does not guarantee any use of the sensor/device outside of its intended purpose.

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Once installation or service work is complete, a safety inspection of the door/gate shall be performed per the door/gate manufacturer's recommendations and/or per AAADM/ANSI/DASMA guidelines (where applicable) for best industry practices. Safety inspections must be performed during each service call – examples of these safety inspections can be found on an AAADM safety information label (e.g. ANSI/DASMA 102, ANSI/DASMA 107, UL294, UL325, and International Building Code).

Verify that all appropriate industry signage, warning labels, and placards are in place.

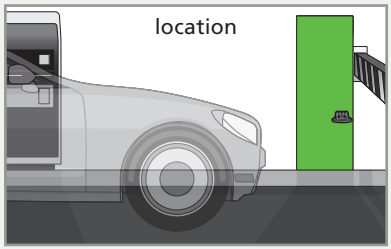
AAADM ANSI Member DASMA Door & Access Systems Manufacturers Association International IDA International Door Association Enhancing the Value and Professionalism of Door & Access Systems Dealers

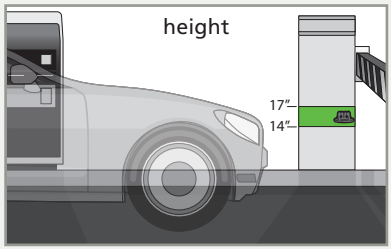
1 MOUNTING

Mount the LZR Bracket Accessory (10LBA) to the barrier arm's operator.

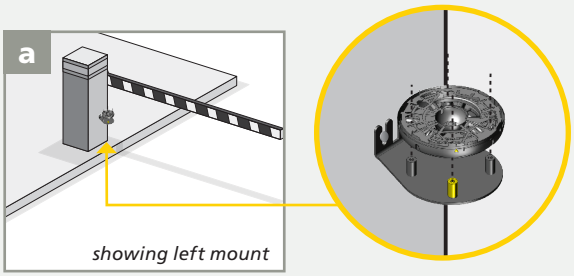
Be sure to observe:

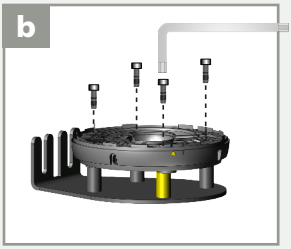
- installation location on the operator – side of the operator that faces the traffic lane
- installation height on the operator – average vehicle bumper height (~ 14 – 17 inches from ground)





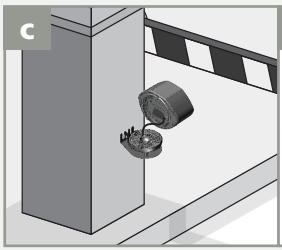
Next, mount the sensor to the LZR Bracket Accessory, as shown in steps a – e.

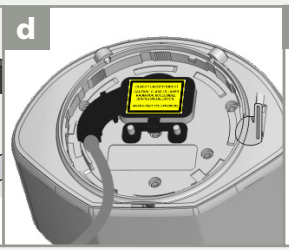


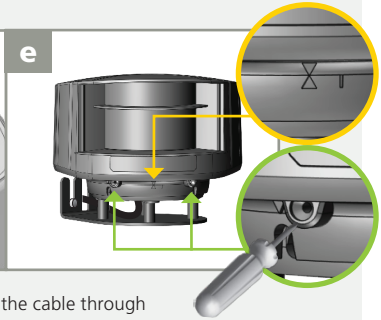


a) Based on the left/right mounting selection, observe the orientation of the base on the bracket. The arrow on the base should align with the correct peg of the bracket.

b) Secure the base to the bracket using the 4 screws provided with the bracket. Be sure to tighten to avoid vibrations.
Screw type: hexagon socket-head screw, DIN 912 M4 × 6mm







c) Open the connector cover, plug in the connector, and route the cable through the cable conduit.

d) Close the connector cover. *Be sure to not pinch the cable.*

e) Position the sensor on the base. Turn the sensor until the two triangles are aligned. Lock the sensor to the base by tightening the two lock screws.

2 WIRING

Wire the sensor to the controller.

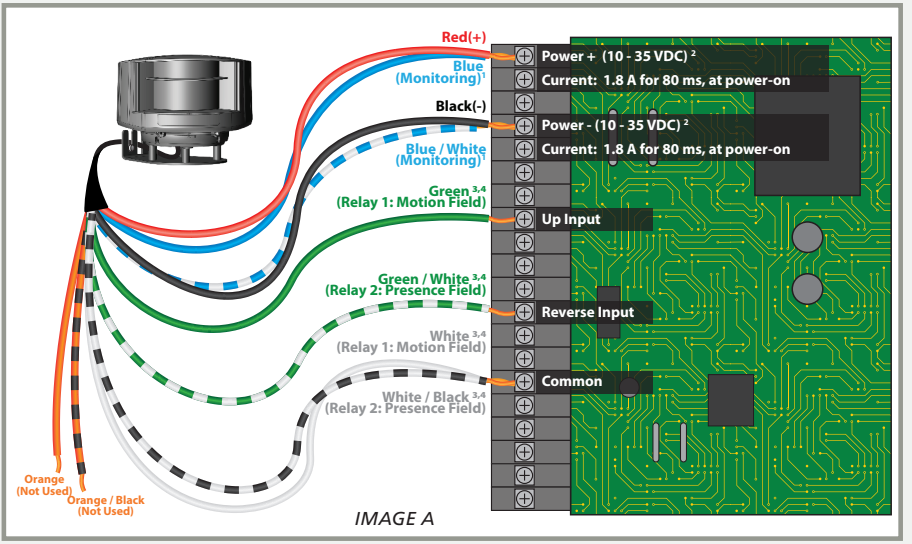


IMAGE A

[1] If monitoring is not utilized, apply power to monitoring wires. If power is not applied to these wires, you will see only the power LED illuminated (blue), indicating that the sensor is not wired correctly.

[2] BEA recommends a separate power supply (10PSST242, see IMAGE B) if the VDC and/or current above cannot be confirmed.

[3] If the motion or presence field is not needed for your application, cap off the associated wires.

[4] The sensor is defaulted with motion field output at N.O. and presence field output as N.C. To adjust output logic, see below.

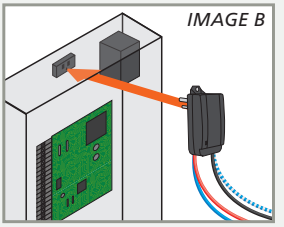
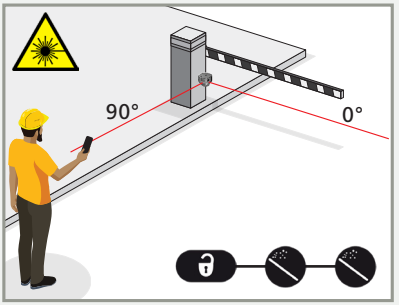


IMAGE B

1. MOT = NO, PRES = NC
2. MOT = NC, PRES = NO
3. MOT = NC, PRES = NC
4. MOT = NO, PRES = NO

3 FIELD POSITIONING: Alignment

Verify sensor alignment.



Activate the visible laser beams by remote control.

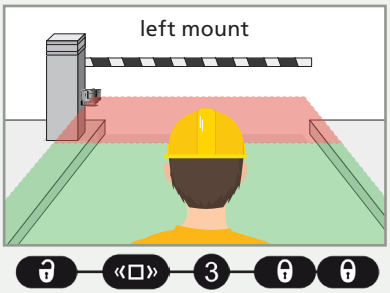
Verify:

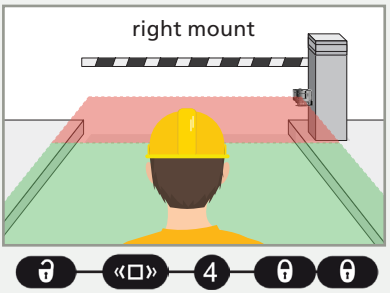
- **0° beam = parallel to barrier arm**
- **90° beam = parallel to traffic lane**

When aligned, turn off the beams using the same remote control sequence ().

3 FIELD POSITIONING: Mounting Side

Determine if you will be installing as a left-mount or right-mount installation. Then, program the sensor for the correct mounting side.

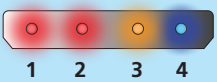




If retro-reflective reference spot is needed for alignment, see User's Guide for more remote control sequence options.

FIELD SETUP – NOTES

LED INDICATORS:



1 motion field detection
2 presence field detection
3 error
4 power

detection

no detection

DISABLE A FIELD:

To disable a field during setup or service:

PROGRAMMING METRIC DIMENSIONS:

The sensor understands only metric values.

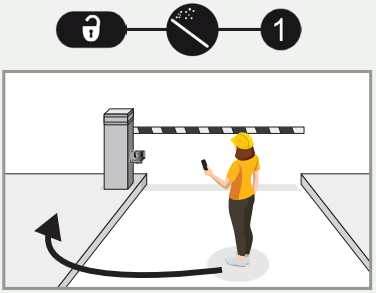
Scan the QR code with your smartphone for a conversion calculator, or see Appendix D in the User's Guide for a conversion chart.

Additionally, the sensor reads to one decimal point, so you must round to nearest tenth.

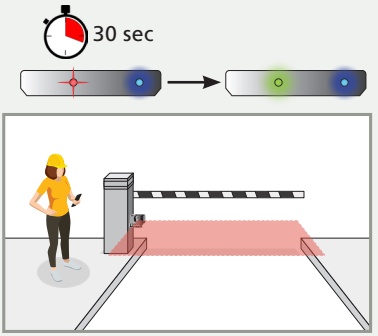
EXAMPLE CONVERSIONS			
Imperial measurement	Metric conversion	Value to enter	Remote control input
5′	1.524 m	1.5	C 1 5
15′	4.572 m	4.6	C 4 6
30′	9.144 m	9.1	C 9 1

4 FIELD SETUP: Presence Field

A: Perform a teach-in of the PRESENCE FIELD environment.



Launch a teach-in using the remote control and be sure to remove yourself and any other potential disturbances from the field within 3 seconds.

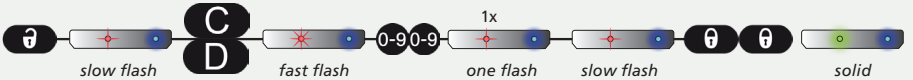


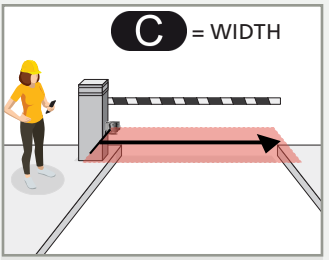
The Presence Field LED will flash red for ~30 seconds while the sensor learns the presence field environment.

The Presence Field LED will turn green when the teach-in is finished.

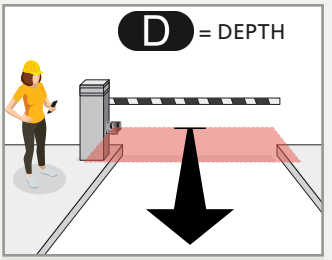
Ensure that no disturbances enter the field during the teach-in.

B: Set the PRESENCE FIELD dimensions.





Minimum: 0.5 m (20")
Maximum: 9.6 m (30')
Default: 9.6 m (30')



Minimum: 0.5 m (20")
Maximum: 9.6 m (30')
Default: 2 m (6.5')

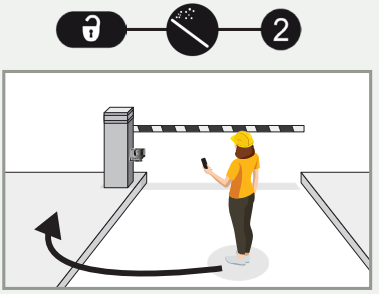
Finally, perform a final teach-in (1) before completing presence field setup.

This ensures that any possible environmental changes that may have occurred during the setup process are captured.

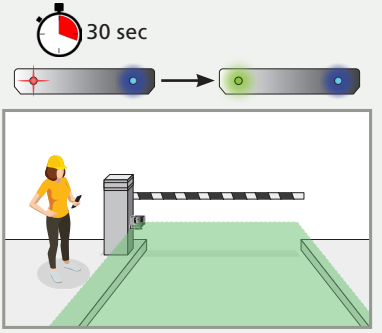
Be sure to walk test after setting the presence field dimensions.

4 FIELD SETUP: Motion Field

A: Perform a teach-in of the MOTION FIELD environment.



Launch a teach-in using the remote control and be sure to remove yourself and any other potential disturbances from the field within 3 seconds.



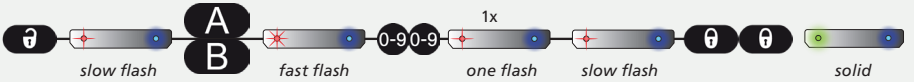
The Motion Field LED will flash red for ~30 seconds while the sensor learns the motion field environment.

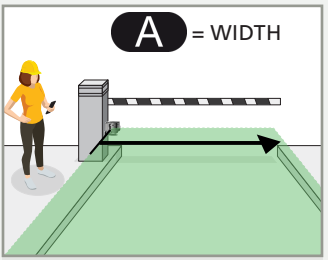
The Motion Field LED will turn green when the teach-in is finished.

Ensure that no disturbances enter the field during the teach-in.

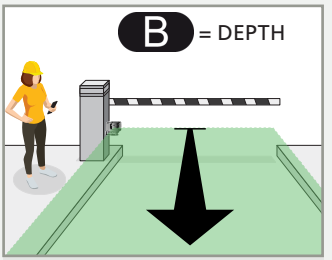
If the Motion Field LED stays red and no moving objects are in the detection field, reduce the size of the motion field (see below) or launch a new teach-in.

B: Set the MOTION FIELD dimensions.





Minimum: 0.5 m (20")
Maximum: 9.6 m (30')
Default: 9.6 m (30')



Minimum: 0.5 m (20")
Maximum: 9.6 m (30')
Default: 9.6 m (30')

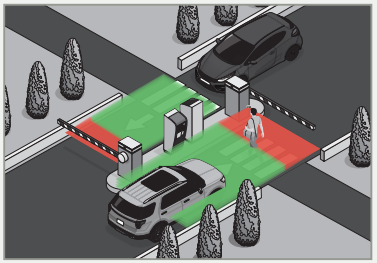
Perform a final teach-in (2) before completing motion field setup.

This ensures that any possible environmental changes that may have occurred during the setup process are captured.

Be sure to walk test after setting the motion field dimensions.

5 FINE TUNING

Finish programming the sensor by considering the following conditions and make adjustments as needed.



Do you need to reject pedestrian traffic in the motion field?

YES: Increase the Pedestrian Filter.

NOTE: If pedestrians are still detected after selecting 3, increase Pedestrian Filter incrementally up to 5.

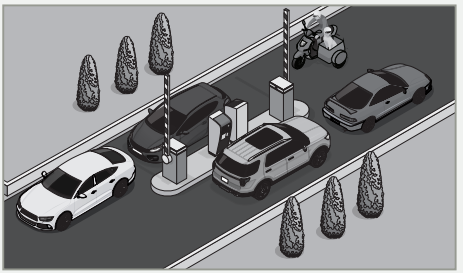
NO: Leave at default.

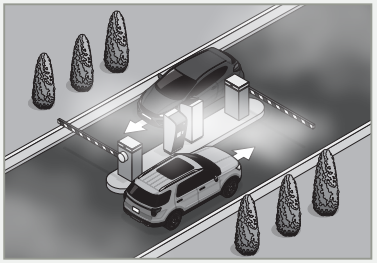
Will tailgating cause application limitations?

YES: Decrease the Maximum Presence Time.

NO: Leave at default.

NOTE: Reference User's Guide for more information on adjustments.

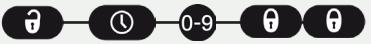




Will fog cause application limitations?

YES: Increase the Immunity and Detection Delay.

and



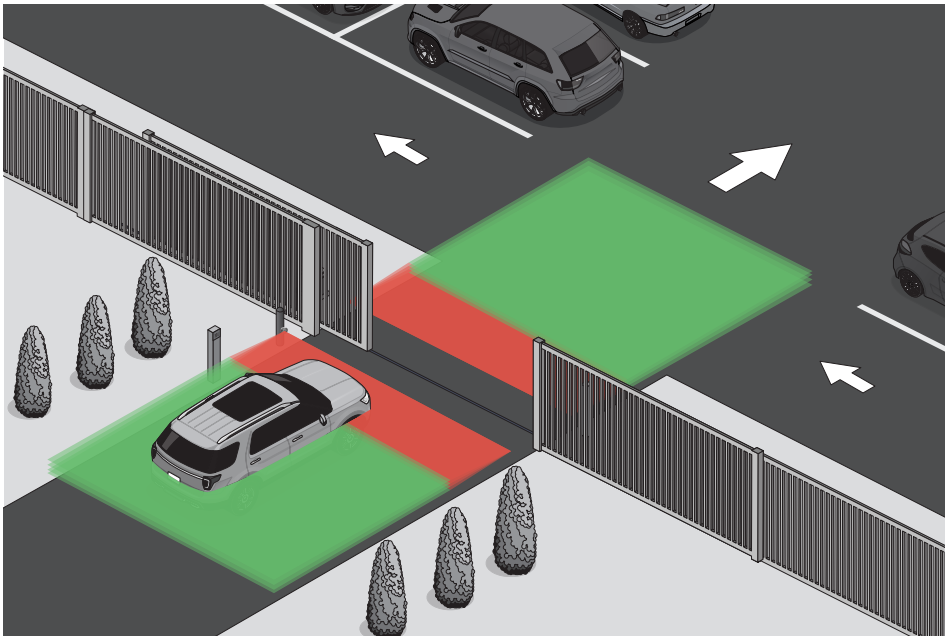
NOTE: If fog continues to cause detection, increase Detection Delay incrementally up to 9.

NO: Leave at default.

ENGLISH

APPLICATION QUICK GUIDE

LZR®-H100 / SLIDING GATES



This document is intended as a quick-reference for LZR-H100 activation and presence sensors installation on sliding gates.

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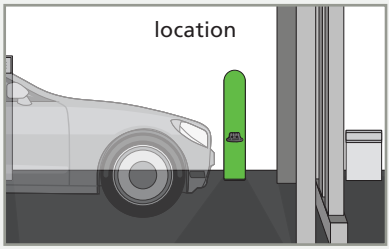
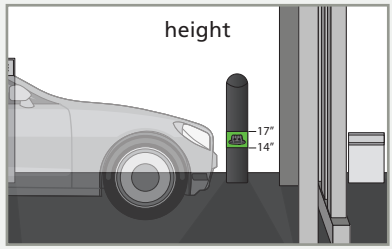
1 MOUNTING

Mount the LZR Bracket Accessory (10LBA) to the post.

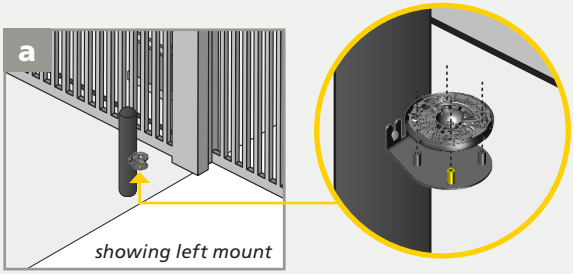
Be sure to observe:

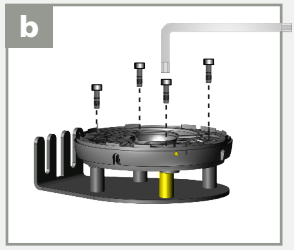
- installation location on the post – side of the post that faces the traffic lane
- installation height on the post – average vehicle bumper height (~ 14 – 17 inches from ground)





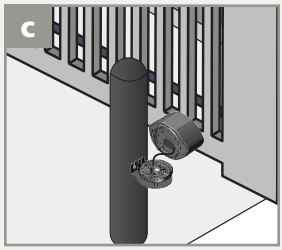
Next, mount the sensor to the LZR Bracket Accessory, as shown in steps a – e.

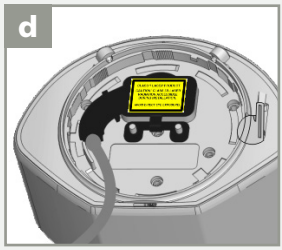


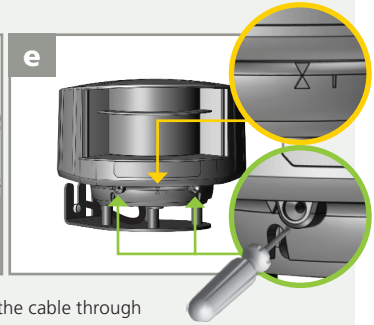


a) Based on the left/right mounting selection, observe the orientation of the base on the bracket. The arrow on the base should align with the correct peg of the bracket.

b) Secure the base to the bracket using the 4 screws provided with the bracket. Be sure to tighten to avoid vibrations.
Screw type: hexagon socket-head screw, DIN 912 M4 × 6mm







c) Open the connector cover, plug in the connector, and route the cable through the cable conduit.

d) Close the connector cover. *Be sure to not pinch the cable.*

e) Position the sensor on the base. Turn the sensor until the two triangles are aligned. Lock the sensor to the base by tightening the two lock screws.

2 WIRING

Wire the sensor to the controller.

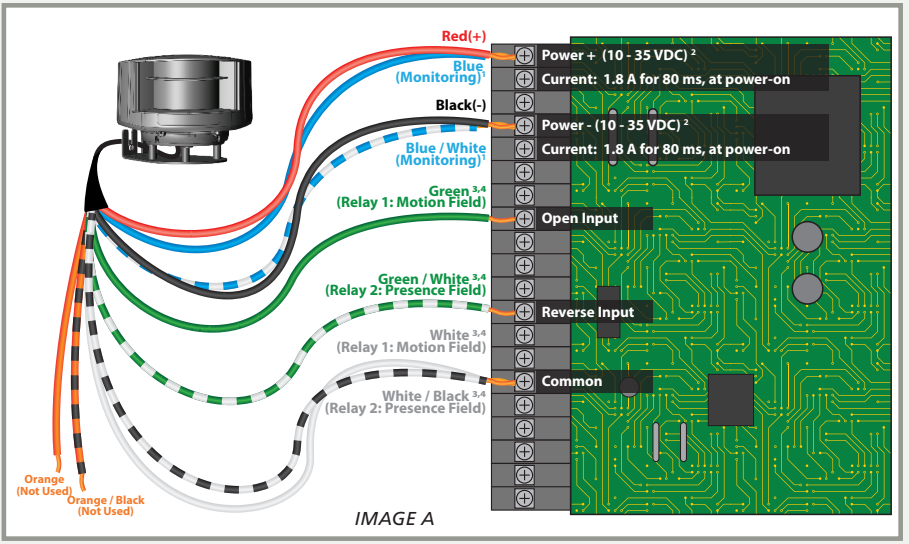


IMAGE A

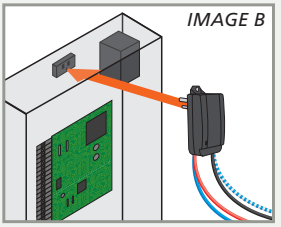
[1] If monitoring is not utilized, apply power to monitoring wires. If power is not applied to these wires, you will see only the power LED illuminated (blue), indicating that the sensor is not wired correctly.

[2] BEA recommends a separate power supply (10PSST242, see IMAGE B) if the VDC and/or current above cannot be confirmed.

[3] If the motion or presence field is not needed for your application, cap off the associated wires.

[4] The sensor is defaulted with motion field output at N.O. and presence field output as N.C. To adjust output logic, see below.

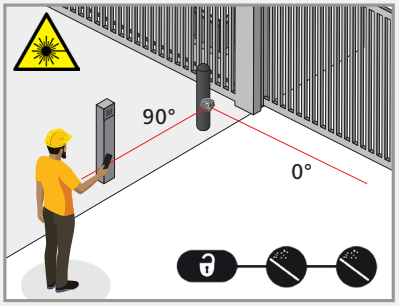
IMAGE B



1 MOT = NO, PRES = NC
2 MOT = NC, PRES = NO
3 MOT = NC, PRES = NC
4 MOT = NO, PRES = NO

3 FIELD POSITIONING: Alignment

Verify sensor alignment.



Activate the visible laser beams by remote control.

Verify:

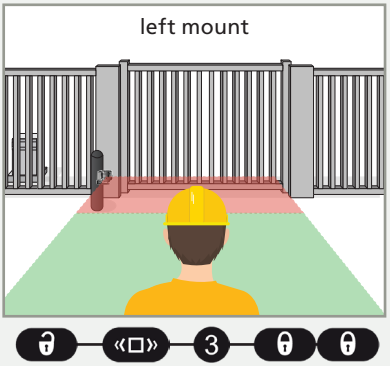
- **0° beam = parallel to gate**
- **90° beam = parallel to traffic lane**

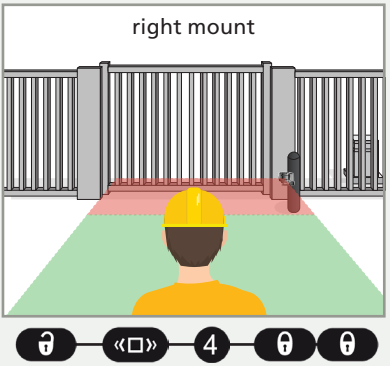
When aligned, turn off the beams using the same remote control sequence ().

3 FIELD POSITIONING: Mounting Side

Determine if you will be installing as a left-mount or right-mount installation.

Then, program the sensor for the correct mounting side.

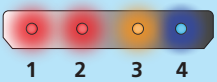




If retro-reflective reference spot is needed for alignment, see User's Guide for more remote control sequence options.

FIELD SETUP – NOTES

LED INDICATORS:



1 motion field detection
2 presence field detection
3 error
4 power

detection

no detection

DISABLE A FIELD:

To disable a field during setup or service:

PROGRAMMING METRIC DIMENSIONS:

The sensor understands only metric values.

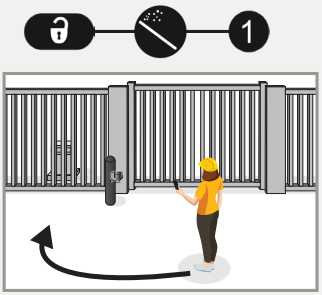
Scan the QR code with your smartphone for a conversion calculator, or see Appendix D in the User's Guide for a conversion chart.

Additionally, the sensor reads to one decimal point, so you must round to nearest tenth.

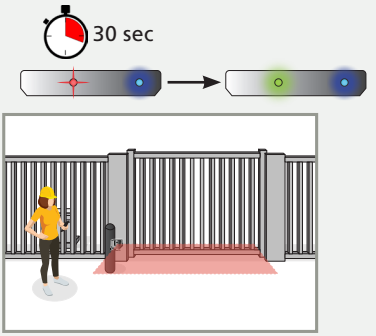
EXAMPLE CONVERSIONS			
Imperial measurement	Metric conversion	Value to enter	Remote control input
5′	1.524 m	1.5	C 1 5
15′	4.572 m	4.6	C 4 6
30′	9.144 m	9.1	C 9 1

4 FIELD SETUP: Presence Field

A: Perform a teach-in of the PRESENCE FIELD environment.



Launch a teach-in using the remote control and be sure to remove yourself and any other potential disturbances from the field within 3 seconds.

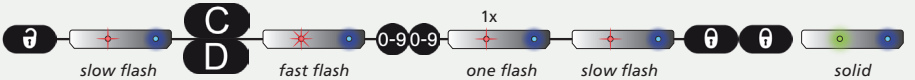


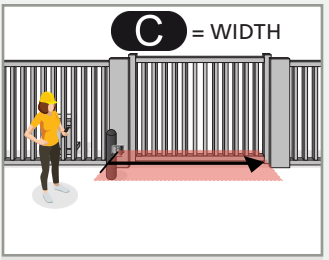
The Presence Field LED will flash red for ~30 seconds while the sensor learns the presence field environment.

The Presence Field LED will turn green when the teach-in is finished.

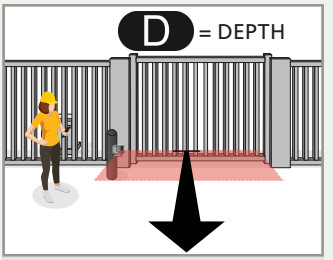
Ensure there are no disturbances enter the field during the teach-in.

B: Set the PRESENCE FIELD dimensions.





Minimum: 0.5 m (20")
Maximum: 9.6 m (30')
Default: 9.6 m (30')



Minimum: 0.5 m (20")
Maximum: 9.6 m (30')
Default: 2 m (6.5')

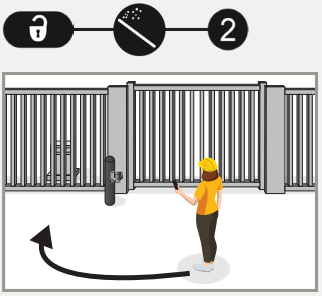
Finally, perform a final teach-in (1) before completing presence field setup.

This ensures that any possible environmental changes that may have occurred during the setup process are captured.

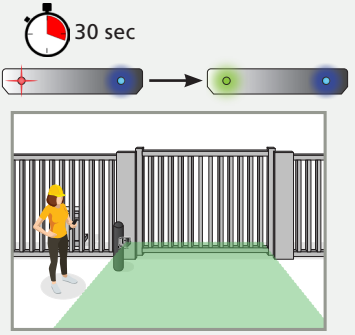
Be sure to walk test after setting the presence field dimensions.

4 FIELD SETUP: Motion Field

A: Perform a teach-in of the MOTION FIELD environment.



Launch a teach-in using the remote control and be sure to remove yourself and any other potential disturbances from the field within 3 seconds.



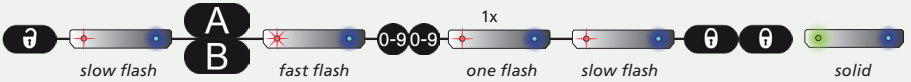
The Motion Field LED will flash red for ~30 seconds while the sensor learns the motion field environment.

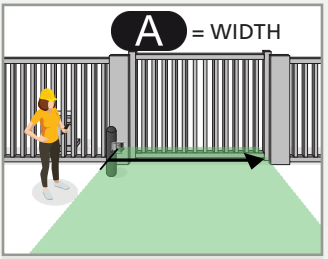
The Motion Field LED will turn green when the teach-in is finished.

Ensure there are no disturbances enter the field during the teach-in.

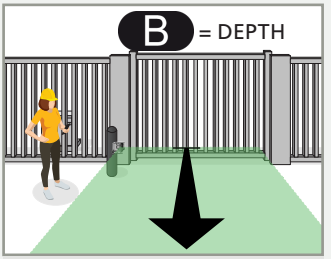
If the Motion Field LED stays red and no moving objects are in the detection field, reduce the size of the motion field (see below) or launch a new teach-in.

B: Set the MOTION FIELD dimensions.





Minimum: 0.5 m (20")
Maximum: 9.6 m (30')
Default: 9.6 m (30')



Minimum: 0.5 m (20")
Maximum: 9.6 m (30')
Default: 9.6 m (30')

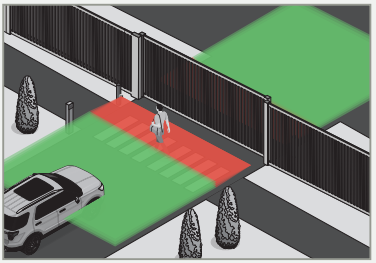
Perform a final teach-in () before completing motion field setup.

This ensures that any possible environmental changes that may have occurred during the setup process are captured.

Be sure to walk test after setting the motion field dimensions.

5 FINE TUNING

Finish programming the sensor by considering the following conditions and make adjustments as needed.



Do you need to reject pedestrian traffic in the motion field?

YES: Increase the Pedestrian Filter.

NOTE: If pedestrians are still detected after selecting 3, increase Pedestrian Filter incrementally up to 5.

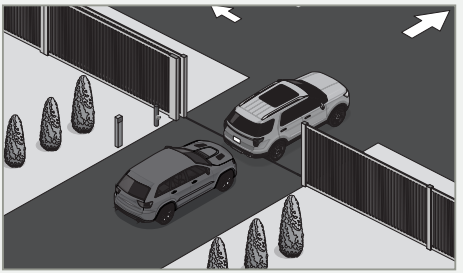
NO: Leave at default.

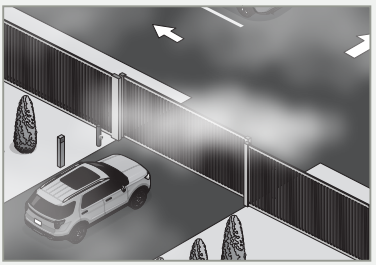
Will tailgating cause application limitations?

YES: Decrease the Maximum Presence Time.

NO: Leave at default.

NOTE: Reference User's Guide for more information on adjustments.

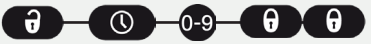




Will fog cause application limitations?

YES: Increase the Immunity and Detection Delay.

and



NOTE: If fog continues to cause detection, increase Detection Delay incrementally up to 9.

NO: Leave at default.

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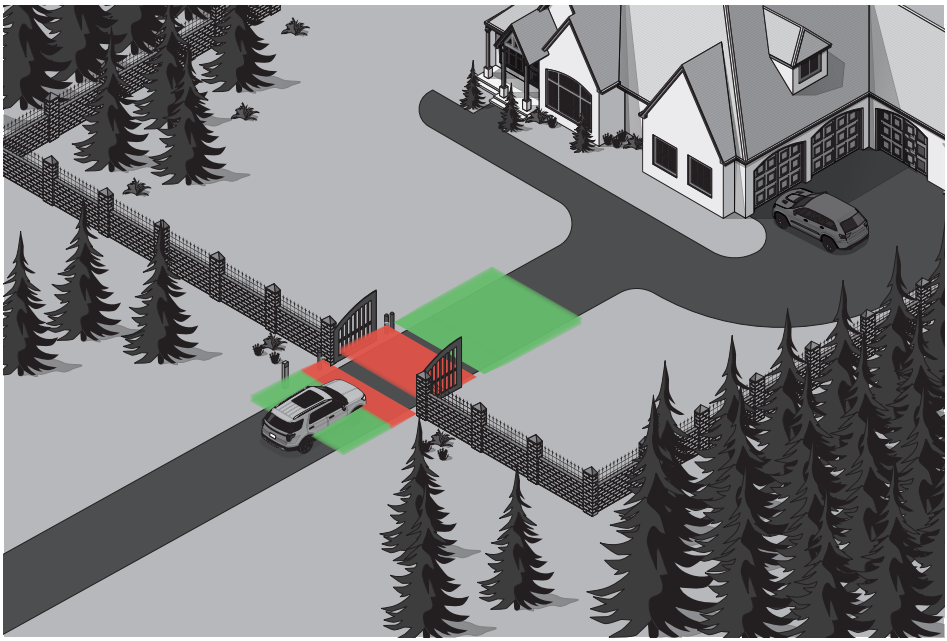
ENGLISH

APPLICATION QUICK GUIDE

LZR®-H100 / SWING GATES



This document is intended as a quick-reference for LZR-H100 activation and presence sensors installation on swing gates.

Before beginning installation, review safety information and general product information in the full User's Guide (75.5984).

BEA, INC. INSTALLATION/SERVICE COMPLIANCE EXPECTATIONS

BEA, Inc., the sensor manufacturer, cannot be held responsible for incorrect installations or incorrect adjustments of the sensor/device; therefore, BEA, Inc. does not guarantee any use of the sensor/device outside of its intended purpose.

BEA, Inc. strongly recommends that installation and service technicians be AAADM-certified for pedestrian doors, IDA-certified for doors/gates, and factory-trained for the type of door/gate system.

Installers and service personnel are responsible for executing a risk assessment following each installation/service performed, ensuring that the sensor/device system performance is compliant with local, national, and international regulations, codes, and standards.

Once installation or service work is complete, a safety inspection of the door/gate shall be performed per the door/gate manufacturer's recommendations and/or per AAADM/ANSI/DASMA guidelines (where applicable) for best industry practices. Safety inspections must be performed during each service call – examples of these safety inspections can be found on an AAADM safety information label (e.g. ANSI/DASMA 102, ANSI/DASMA 107, UL294, UL325, and International Building Code).

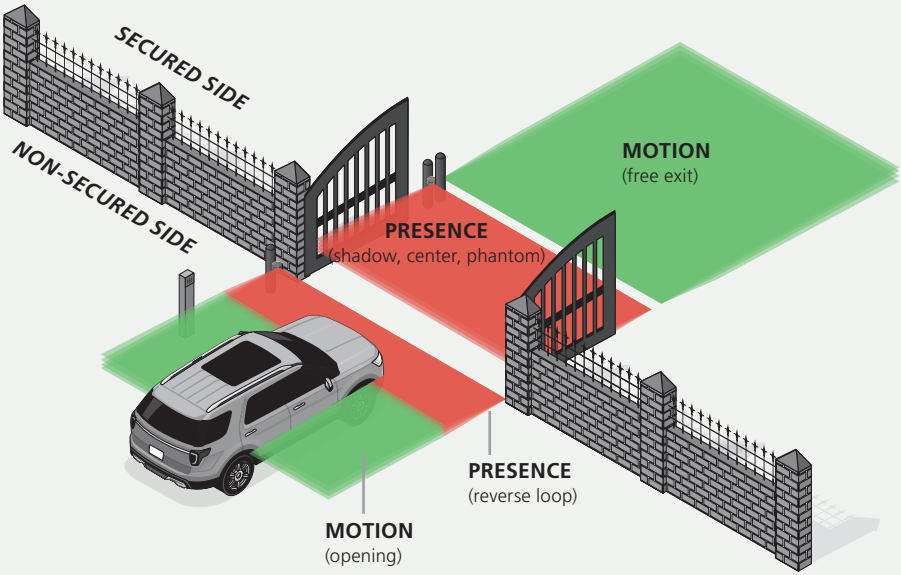
Verify that all appropriate industry signage, warning labels, and placards are in place.

AAADM ANSI Member DASMA Door & Access Systems Manufacturers Association International IDA International Door Association Enhancing the Value and Professionalism of Door & Access Systems Dealers

WHAT IS A SHADOW LOOP?

A shadow loop prevents gate movement when a stopped car has been detected within the path of the swing gate.

In a shadow loop application, three LZR-H100 sensors are recommended for opening, presence, and free-exit activation.



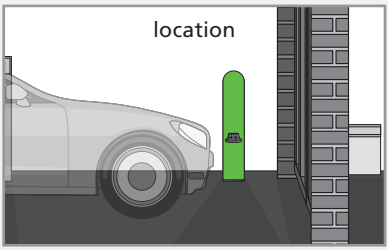
Note that for this application, the gate operator must have shadow loop functionality.

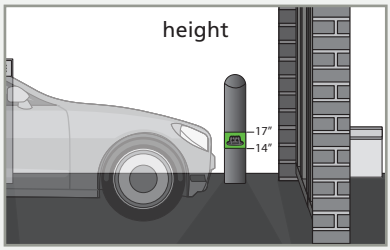
1 MOUNTING

Mount the LZR Bracket Accessory (10LBA) to the post.

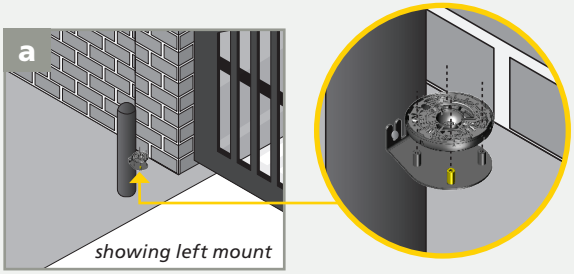
Be sure to observe:

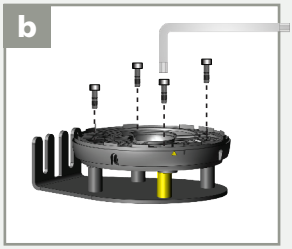
- installation location on the post – side of the post that faces the traffic lane
- installation height on the post – average vehicle bumper height (~ 14 – 17 inches from ground)





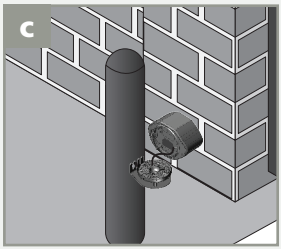
Next, mount the sensor to the LZR Bracket Accessory, as shown in steps a – e.

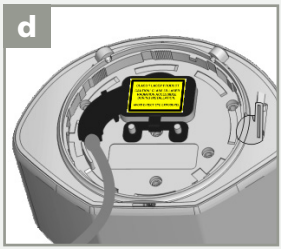


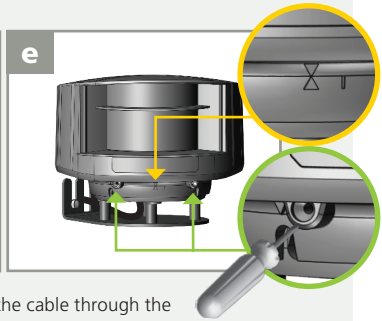


a) Based on the left/right mounting selection, observe the orientation of the base on the bracket. The arrow on the base should align with the correct peg of the bracket.

b) Secure the base to the bracket using the 4 screws provided with the bracket. Be sure to tighten to avoid vibrations.
Screw type: hexagon socket-head screw, DIN 912 M4 × 6mm







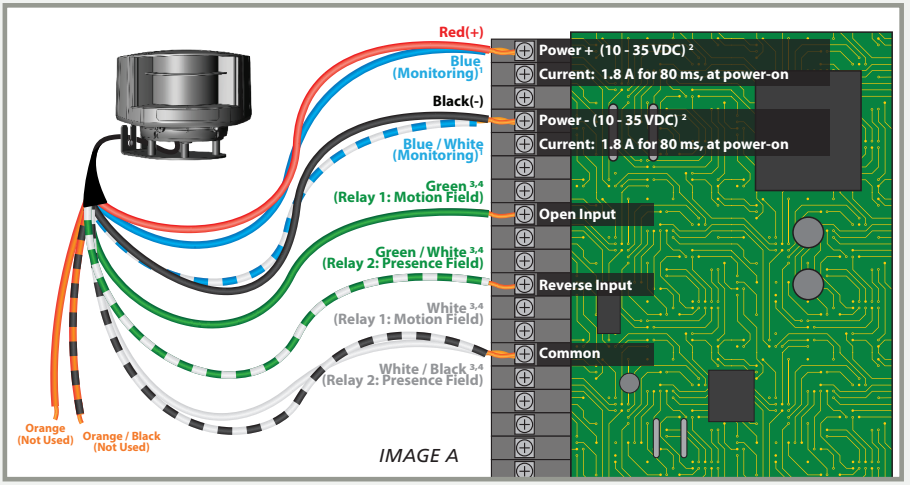
c) Open the connector cover, plug in the connector, and route the cable through the cable conduit.

d) Close the connector cover. *Be sure to not pinch the cable.*

e) Position the sensor on the base. Turn the sensor until the two triangles are aligned. Lock the sensor to the base by tightening the two lock screws.

2 WIRING

Wire the sensor to the controller.

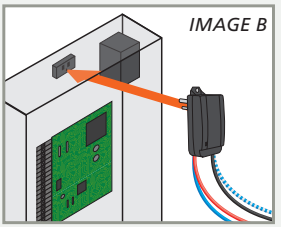


[1] If monitoring is not utilized, apply power to monitoring wires. If power is not applied to these wires, you will see only the power LED illuminated (blue), indicating that the sensor is not wired correctly.

[2] BEA recommends a separate power supply (10PSST242, see IMAGE B) if the VDC and/or current above cannot be confirmed.

[3] If the motion or presence field is not needed for your application, cap off the associated wires.

[4] The sensor is defaulted with motion field output at N.O. and presence field output as N.C. To adjust output logic, see below.

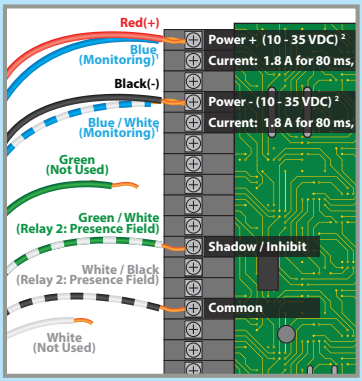


1 MOT = NO, PRES = NC
2 MOT = NC, PRES = NO
3 MOT = NC, PRES = NC
4 MOT = NO, PRES = NO

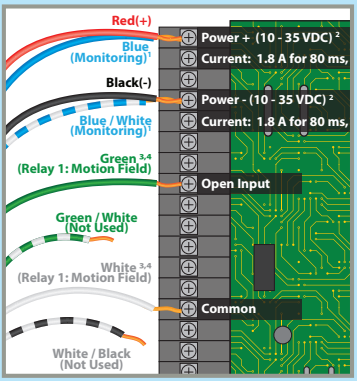
SHADOW LOOPS APPLICATIONS

Wire the three sensors for a shadow loop application:

- *Sensor for unsecured side - use diagram above*
- *Sensors for secured side - use diagrams below*



SECURED SIDE - Presence

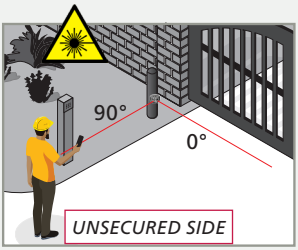


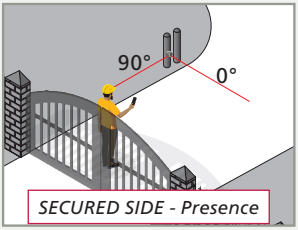
SECURED SIDE - Motion

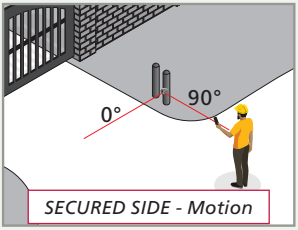
3 FIELD POSITIONING

Verify sensor alignment.

If retro-reflective reference spot is needed for alignment, see User's Guide for more remote control sequence options.







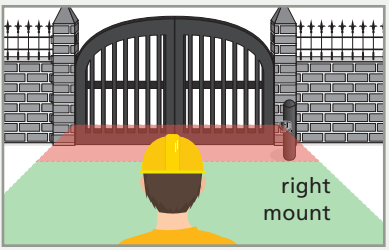
Activate the visible laser beams by remote control.

Verify:

- **0° beam = parallel to gate**
- **90° beam = parallel to traffic lane**

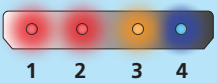
When aligned, turn off the beams using the same remote control sequence ( ).

Determine if you will be installing as a left-mount or right-mount installation.
Then, program the sensor for the correct mounting side.



FIELD SETUP – NOTES

LED INDICATORS:



1 motion field detection
2 presence field detection
3 error
4 power

detection *no detection*

DISABLE A FIELD:

To disable a field during setup or service:

PROGRAMMING METRIC DIMENSIONS:

The sensor understands only metric values.

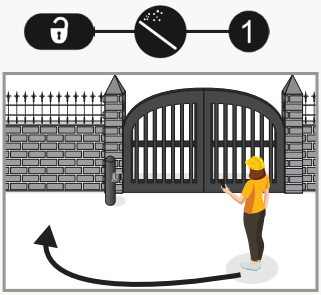
Scan the QR code with your smartphone for a conversion calculator, or see Appendix D in the User's Guide for a conversion chart.

Additionally, the sensor reads to one decimal point, so you must round to nearest tenth.

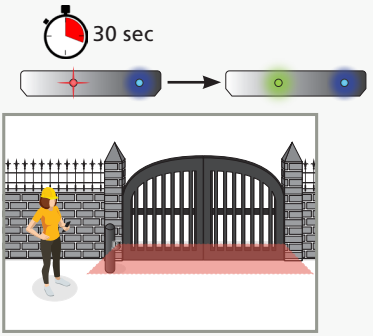
Imperial msmt.	Metric conversion	Value to enter	Remote control input
5′	1.524 m	1.5	C 1 5
15′	4.572 m	4.6	C 4 6
30′	9.144 m	9.1	C 9 1

4 FIELD SETUP: Presence Fields

A: Perform a teach-in of the PRESENCE FIELD environment.



Launch a teach-in using the remote control and be sure to remove yourself and any other potential disturbances from the field within 3 seconds.

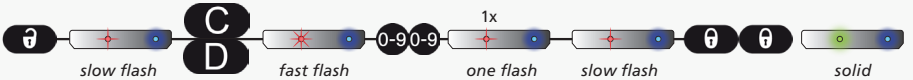


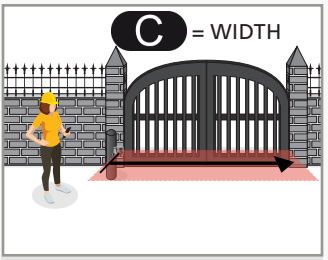
The Presence Field LED will flash red for ~30 seconds while the sensor learns the presence field environment.

The Presence Field LED will turn green when the teach-in is finished.

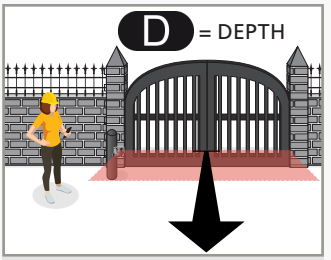
Ensure there are no disturbances enter the field during the teach-in.

B: Set the PRESENCE FIELD dimensions.





Minimum: 0.5 m (20")
Maximum: 9.6 m (30')
Default: 9.6 m (30')



Minimum: 0.5 m (20")
Maximum: 9.6 m (30')
Default: 2 m (6.5')

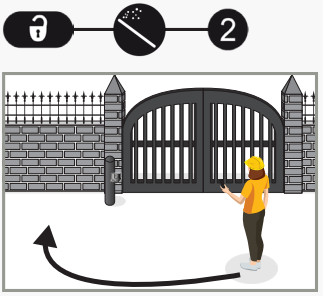
Finally, perform a final teach-in (1) before completing presence field setup.

This ensures that any possible environmental changes that may have occurred during the setup process are captured.

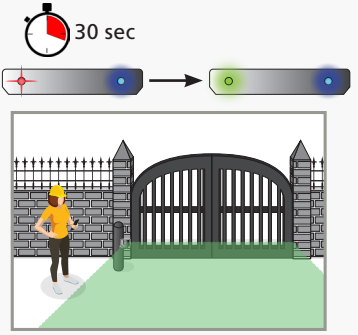
Be sure to walk test after setting the presence field dimensions.

4 FIELD SETUP: Motion Fields

A: Perform a teach-in of the MOTION FIELD environment.



Launch a teach-in using the remote control and be sure to remove yourself and any other potential disturbances from the field within 3 seconds.



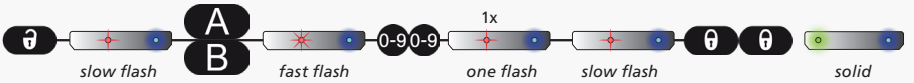
The Motion Field LED will flash red for ~30 seconds while the sensor learns the motion field environment.

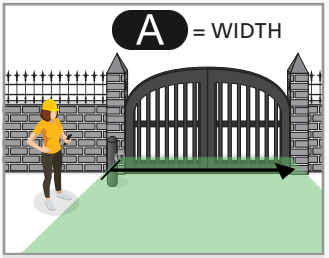
The Motion Field LED will turn green when the teach-in is finished.

Ensure there are no disturbances enter the field during the teach-in.

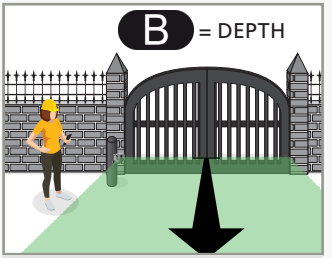
If the Motion Field LED stays red and no moving objects are in the detection field, reduce the size of the motion field (see below) or launch a new teach-in.

B: Set the MOTION FIELD dimensions.





Minimum: 0.5 m (20")
Maximum: 9.6 m (30')
Default: 9.6 m (30')



Minimum: 0.5 m (20")
Maximum: 9.6 m (30')
Default: 9.6 m (30')

Perform a final teach-in (

) before completing motion field setup.

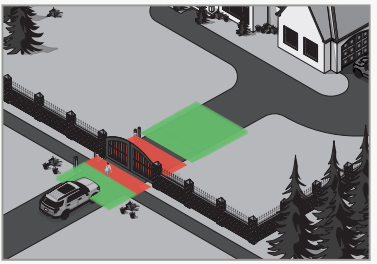
This ensures that any possible environmental changes that may have occurred during the setup process are captured.

Be sure to walk test after setting the motion field dimensions.

5 FINE TUNING

Finish programming the sensor by considering the following conditions and make adjustments as needed.

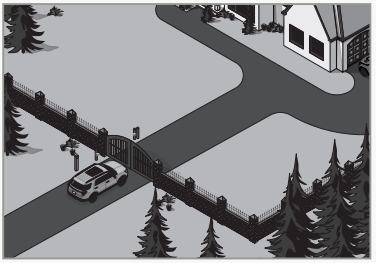
Do you need to reject pedestrian traffic in the motion field(s)?



YES: Increase the Pedestrian Filter.

NOTE: If pedestrians are still detected after selecting 3, increase Pedestrian Filter incrementally up to 5.

NO: Leave at default.



Will fog cause application limitations?

YES: Increase the Immunity and Detection Delay.

and

NOTE: If fog continues to cause detection, increase Detection Delay incrementally up to 9.

NO: Leave at default.