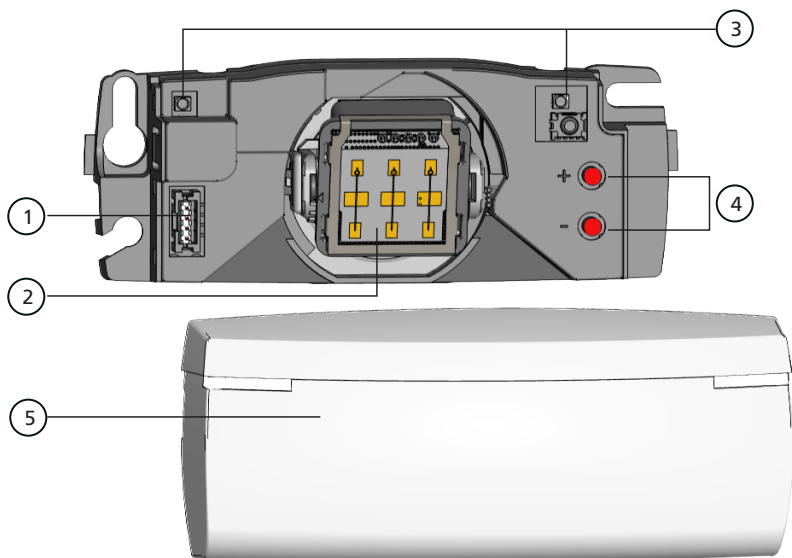




Visit website for
available languages of
this document.

R2E-ARTEK

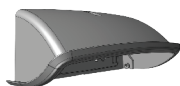
Microwave sensor for
request-to-exit applications



harness (35.1563)

1. main connector
2. antenna
3. LEDs
4. push buttons
5. cover

AVAILABLE ACCESSORIES



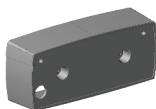
Rain accessory
10EARA



Ceiling accessories
10EACA (white)
10EACA-BLK (black)



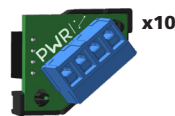
Replacement cover
35.0319 (white)



Spacer
10EAGLEARTEKSPACER



Bracket accessory
10EABA



Retrofit Interface
(pack of 10)
(10EARETOFITPACK)

TECHNOLOGY / PERFORMANCE

Technology	microwave
Detection mode	motion
Transmitter frequency	24.15 GHz
Transmitter radiated power	< 20 dBm EIRP
Transmitter power density	< 5 mW/cm²
Max. detection range (at 7' mounting height)	wide: 13' x 6.5' narrow : 6.5' x 7'
Min. detection speed	2 in/s

ELECTRICAL

Supply voltage*	12 – 24 VAC ±10% (50 – 60 Hz) 12 – 24 VDC +30% / -10%
Max. power consumption	< 1 W
Output*	solid-state relay (free of polarity)
Max. switching voltage	30 VAC / 42 VDC
Max. switching current	100mA (resistive)

PHYSICAL

Mounting height	6 – 15'
Tilt angles	0 – 90° vertical -30 – 30° lateral
Temperature range	-4 – 131 °F (-20 – 55 °C)
Dimensions	4.72" (L) x 1.96" (H) x 1.96" (W)
Material	ABS
Weight	120 g
Cable length	8'

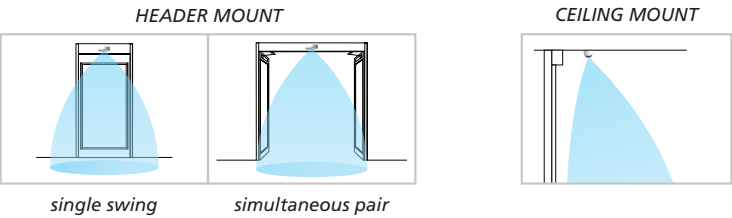
COMPLIANCE

Degree of protection	IP54
FCC certification	FCC: G9B-100606 IC: 4680A-100606

* External electrical sources must be within specified voltages, max 100 W, and ensure double insulation from primary voltages

Specifications are subject to change without prior notice.
All values measured in specific conditions.

MOUNTING OPTIONS



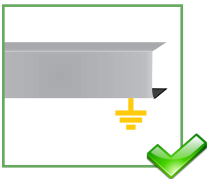
PRECAUTIONS



- ❑ Shut off all power going to header before attempting any wiring procedures.
- ❑ Maintain a clean and safe working environment when working in public areas.
- ❑ Constantly be aware of pedestrian traffic around the door area.
- ❑ Always stop pedestrian traffic through the doorway when performing tests that may result in unexpected reactions by the door.
- ❑ *ESD (electrostatic discharge):* Circuit boards are vulnerable to damage by electrostatic discharge. Before handling any board, ensure you dissipate your body's ESD charge.
- ❑ Always check placement of all wiring before powering up to ensure that moving door parts will not catch any wires and cause damage to equipment.
- ❑ DO NOT attempt any internal repair of the components. All repairs and/or component replacements must be performed by BEA, Inc. Unauthorized disassembly or repair:
 1. May jeopardize personal safety and may expose one to the risk of electrical shock.
 2. May adversely affect the safe and reliable performance of the product resulting in a voided warranty.

IMPORTANT:
This sensor is not intended for door activation - only for request-to-exit applications.

INSTALLATION & MAINTENANCE TIPS



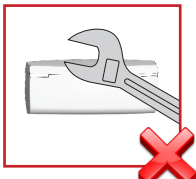
The door control system and the header cover profile must be correctly grounded.



Only trained and qualified personnel are recommended to install and set up the sensor.



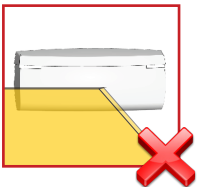
Always test the proper operation of the installation before leaving the premises.



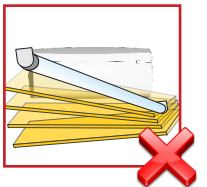
The warranty is invalid if unauthorized repairs are made or attempted by unauthorized personnel.



Avoid vibrations.



Do not cover the sensor.



Avoid proximity to neon lamps or moving objects.



Do not use harsh cleaning agents.

BEA, INC. INSTALLATION/SERVICE COMPLIANCE EXPECTATIONS

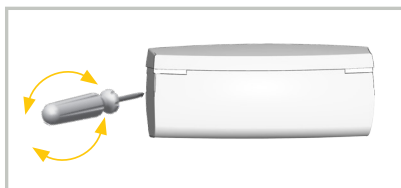
BEA Inc., the sensor manufacturer, cannot be held responsible for incorrect installations or incorrect adjustments of the sensor/device; therefore, BEA Inc. does not guarantee any use of the sensor/device outside its intended purpose.

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 system shall be performed and documented per the manufacturer's recommendations or industry guidelines. Examples of compliance may apply to ANSI 156.10, ANSI 156.19, ANSI/DASMA 102, ANSI/DASMA 107, UL294, UL325, and International Building Code.

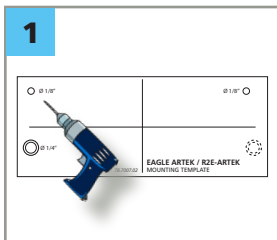
OPENING THE SENSOR



Insert the screwdriver on the left or right notch of the sensor and twist to remove the cover.

MOUNTING & WIRING

1

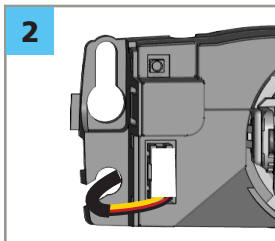


Using the mounting template, drill the cable pass-thru hole and 2 mounting holes.

Cable pass-thru: Ø 1/4"

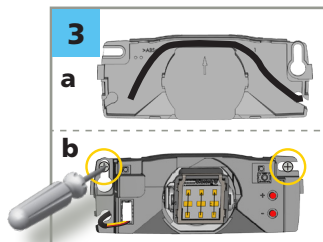
Mounting holes: Ø 1/8"

2



Pull the cable through the pass-thru hole, and plug in the connector accordingly.

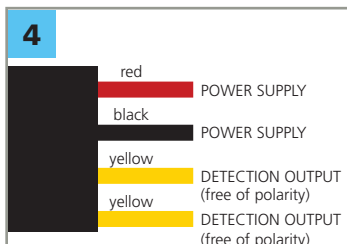
3



a) Route the cable relative to the pass-thru hole. To avoid damage, use the dedicated cable path on the sensor base.

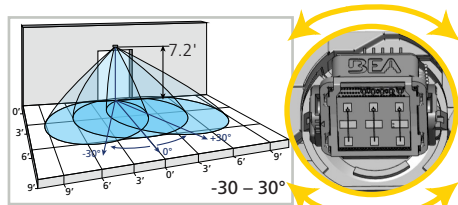
b) Secure the sensor by hand-tightening the mounting screws.

4

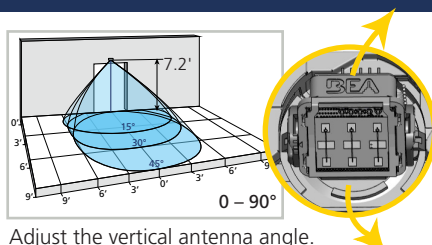


Wire to the access control panel.
Logic selectable via remote control
(see following page)

FIELD ANGLE ADJUSTMENTS



Adjust the lateral antenna angle.



Adjust the vertical antenna angle.

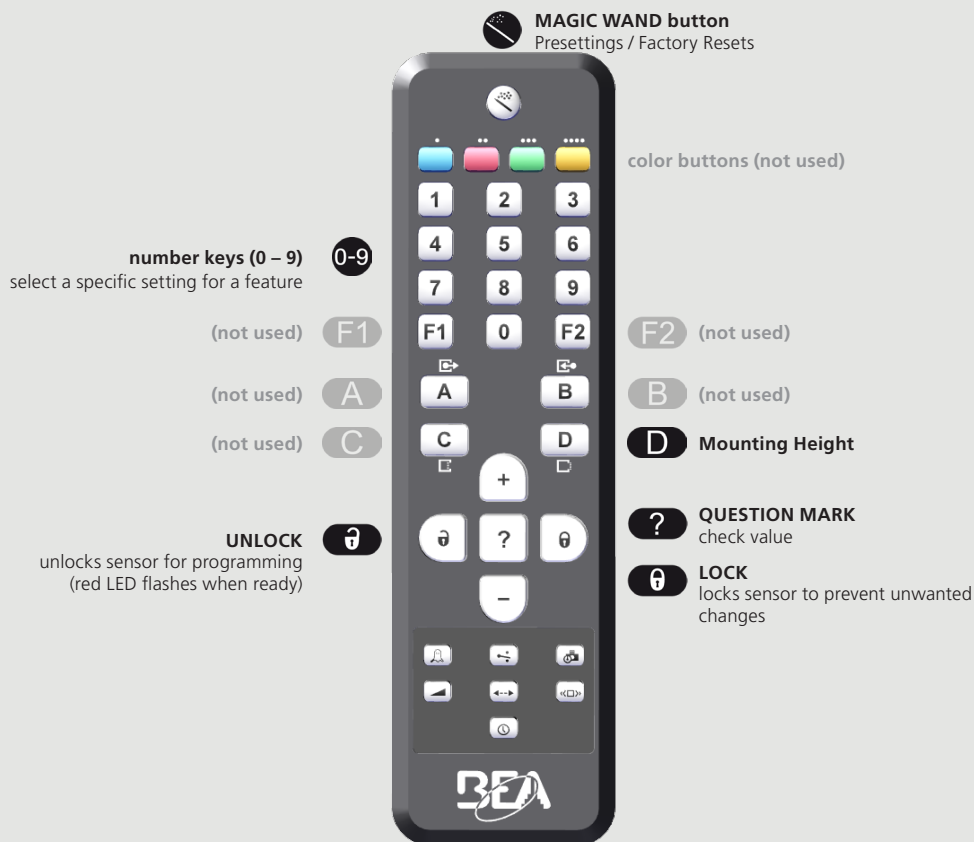
HOW TO USE THE REMOTE CONTROL



SOLD SEPARATELY

BEA's **Universal Remote Control** (10REMOTE) is sold separately and is required for installation and setup.

OVERVIEW DIAGRAM



FUNCTION KEYS

(see SETTINGS section for more information on each available function)

(not used)

Output Configuration

(not used)

Field Size
Field Shape

Detection Mode

Immunity Filter

Hold-Open Time

HOW TO USE THE REMOTE CONTROL



After unlocking, the red LED flashes and the sensor can be adjusted by remote control.



If the red LED flashes quickly after unlocking, you need to enter an access code from 1 to 4 digits.



To end an adjustment session, always lock the sensor.

ADJUSTING PARAMETERS



CHECKING A VALUE



X = number of flashes = value of the parameter

7x 1x 2x = wide field shape + field size 7

SENSOR RESET



Restore all settings to factory defaults.



Restore all settings except Output Configuration to factory defaults.

ACCESS CODES

SAVING A CODE



The access code is recommended for sensors installed close to each other.

DELETING A CODE



enter the existing code

DELETING AN UNKNOWN CODE

Cycle power to the sensor and then use the following sequence within the first minute of power:



The sensor will lock access to the remote control session after 30 minutes of idle time. To regain access, you must cycle the power.

SETTINGS

Listed in this section are all customizable R2E-ARTEK features and their available settings.

via REMOTE CONTROL

FACTORY VALUE

PRESETTINGS

Programmed configurations that combine a few settings at once for common applications

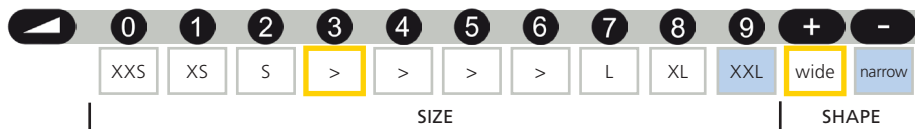


CTR

(cross-traffic rejection)

FIELD SIZE / FIELD SHAPE

These settings work together to create custom detection zones.



To query the specific width, press .

The sensor will blink the number of times that it is set to, and then the green LED will blink either 1 time (narrow shape) or 2 times (wide shape).

EXAMPLE: If **FIELD SIZE** = large and **FIELD SHAPE** = narrow, the LED will blink 7 times, and then 1 time.

MOUNTING HEIGHT

This selection tells the sensor how high you have mounted the sensor so that it can adjust its sensitivity settings to ensure reliable motion detection..



IMMUNITY FILTER

This feature regulates detection performance by considering external factors like rain or lights that could otherwise interfere. When the immunity is higher, the sensor is more protected against external disturbances.



continued...

SETTINGS (cont.)

DETECTION MODE

This feature allows the ability to only trigger detection upon specific traffic patterns. See definitions of each below.

◀--▶

0

1

2

3

4

5

6

7

8

9

bi

uni

uni MTF

uni AWAY

MTF & AWAY

bi	two-way detection (toward and away from the sensor)
uni	one-way detection towards sensor
uni MTF	(default) one-way detection with motion-tracking feature (ideal for pedestrians with disabilities) MTF = one-way detection switches to two-way detection and then reverts back to one-way after ~2 seconds of no detection
uni AWAY	one-way detection away from sensor
MTF & AWAY	one-way direction away from sensor, with motion-tracking feature

OUTPUT CONFIGURATION

Selectable relay type.

⚡

0

1

2

3

4

5

6

7

8

9

N.O.

N.C.

N.O.	open when powered or upon power loss, closes on activation
N.C.	closed when powered, opens on activation or upon power loss

HOLD-OPEN TIME

The sensor remains in detection for an additional length of time, during which the relay is activated after motion has stopped.

🕒

0

1

2

3

4

5

6

7

8

9

0.5 s

1.5 s

2.5 s

3 s

5 s

7.5 s

10 s

20 s

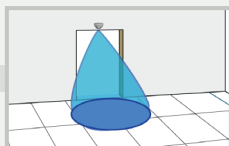
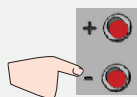
30 s

60 s

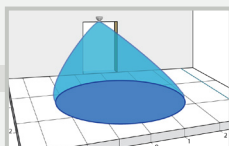
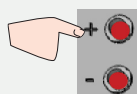
SETTINGS (cont.)

via PUSH BUTTONS

FIELD SIZE



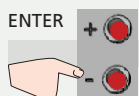
... S, XS, xxs



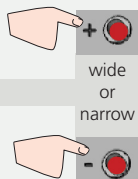
... L, XL, XXL

FIELD SHAPE

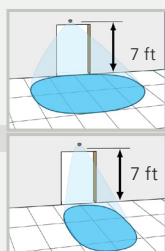
ENTER



long push (2 sec)



wide
or
narrow



OK



X 1

EXIT

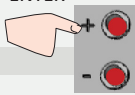


long push (2 sec)

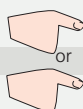


IMMUNITY

ENTER



long push (2 sec)



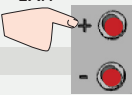
increase
or
decrease

OK



X 1

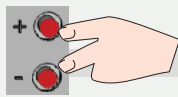
EXIT



long push (2 sec)



FACTORY RESET



long push (4 sec)



NOTE: This push button setting is for a factory reset only. See HOW TO USE THE REMOTE CONTROL for guidance on partial reset.

TROUBLESHOOTING

	Sensor inactive, LED off	Sensor power is off	Check the wiring and the power supply.
	Door not unlocking when approaching from different angles	Sensor Immunity too high	Lower Immunity settings.
		Field Size may be too small and Field Shape may not be set correctly	Increase Field Size and Shape to ensure proper motion detection when approaching from the sides.
		Radar tilt angle is set incorrectly or tilted away from door	Adjust to ensure the radar antenna is angled directly in front of the door to detect pedestrians.
		Wire to the antenna is disconnected or damaged	Check wire to the antenna. If damaged, replace sensor.
	Door locks and unlocks repeatedly	Sensor is disturbed by the door motion or vibrations caused by the door motion or small moving objects near the door	Ensure the sensor is secured to the door frame or ceiling.
			Ensure the Detection Mode is unidirectional.
			Increase antenna angle.
			Increase Immunity Filter.
			Reduce Field Size.
	Door opens for no apparent reason	Sensor detects rain	Ensure Detection Mode is unidirectional.
			Increase Immunity Filter.
			Install the Rain Accessory (10EARA).
		Sensor detects objects outside of its detection field (in highly reflective environment)	Change antenna angle.
			Decrease Field Size.
			Increase Immunity Filter.
		Sensor detects movement of the opposite door (in an airlock vestibule)	Change antenna angle.
			Decrease Field Size.
Increase Immunity Filter.			
	LED flashes quickly after unlocking	Sensor requires access code to unlock	Enter the correct access code. If you forgot the code, cut and restore the power supply to access the sensor without access code.
			Change or delete the access code.
	Sensor does not respond to remote control	Weak or incorrectly installed batteries	Check batteries and change if necessary.
		Remote control not aimed at sensor	Point the remote control towards the sensor.



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