IS40P

Presence sensor for automatic, industrial doors

(US version)

DESCRIPTION

1. push buttons
2. LED's
3. infrared emitter
4. sensor angle indicator
5. bracket
6. cable
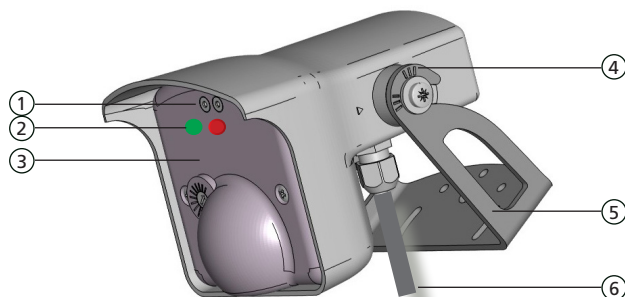
TECHNICAL SPECIFICATIONS

|	
Supply voltage	12 – 24 VAC ±10%; 12 – 24 VDC +10% / -3%
Power consumption	< 3.5 W
Mains frequency	50 – 60 Hz
Output max. contact voltage max. contact current max. switching power	2 relays (free of potential change-over contact) 42 VAC/VDC 1 A (resistive) 30 W (DC) / 48 VA (AC)
Output holdtime	0.5 s
Mounting height	8 – 16'
Temperature range	-22 – 140 °F
Humidity	0 – 95% non condensing
Degree of protection	IP65 / NEMA 4
Dimensions	3.8" (W) × 4" (H) × 5" (D)
Materials	ABS and polycarbonate
Weight	14 oz
Cable length	32' (105 m)
Norm conformity	Electromagnetic Compatibility (EMC) 2004/108/EC, R&TTE 1999/5/EC
Technology	active infrared (AIR)
Transmitter frequency/wavelength	875 nm
Transmitter power density	< 250 mW/m²
Detection mode	presence
Detection field	10' × 10' @ 16' max. mounting height (emitting spots**)
Min. detection speed	0 in/s to activate detection
Reaction time	250 ms
Tilt angle	15 – 45°

PRECAUTIONS

CAUTION

- ❑ This device IS NOT intended for use as a safety sensor.
- ❑ This device is not recommended for dynamic environments (snow, rain, fog, etc.).
- ❑ Shut off all power going to header before attempting any wiring procedures.
- ❑ Maintain a clean and safe environment when working in public areas.
- ❑ Constantly be aware of pedestrian/vehicle traffic around the door area.
- ❑ Always stop pedestrian/vehicle 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.
- ❑ Ensure compliance with all applicable safety standards (i.e. ANSI A156.10) upon completion of installation.
- ❑ 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.
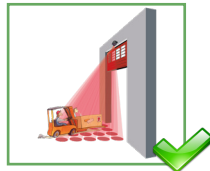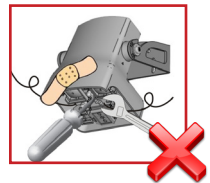
SAFETY INSTRUCTIONS

Only trained and qualified personnel are recommended to install and set up the sensor.
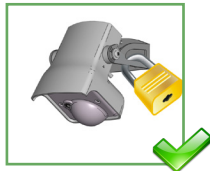
After installation, save an access code to lock the sensor.

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.

LED SIGNAL

🟢 Activation/Pulse detection

🔴 Presence detection

LED flashes
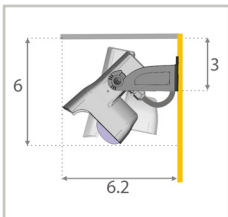Parameter indication for manual setup

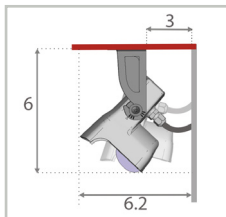LED flashes quickly
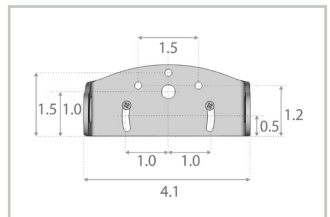
Setup

LED flashes
Value indication for manual setup

DIMENSIONS (inches)

Wall mounting

Ceiling mounting

Bracket dimensions

www.GateOpenerSafety.com | (888) 378 - 1043 | Sales@GateOpenerSafety.com
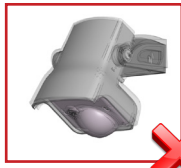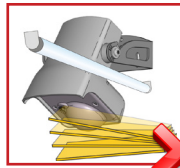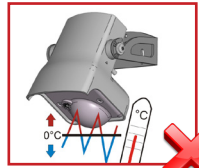
MOUNTING TIPS

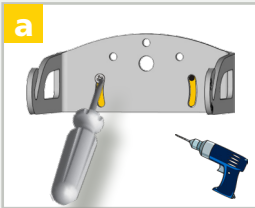Do not cover the sensor.

Avoid extreme vibrations.

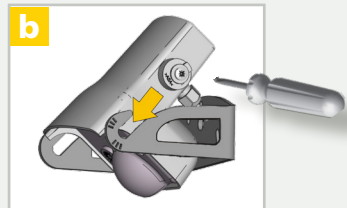Avoid proximity to neon lamps or moving objects.

Avoid exposing the sensor to sudden temperature changes.

1 MOUNTING

a

Remove the bracket from the sensor.
Drill 2 holes accordingly.
Mount the bracket firmly.
If necessary, drill an additional hole to facilitate wire routing.

b

Position the sensor on the bracket and tighten the screws.

2 WIRING

RED	12 – 24
BLACK	VAC/VDC

POWER SUPPLY

WHITE	COM
GREEN	NO
YELLOW	NC

AIR OUTPUT 1
Presence or pulse signal

WHITE/BLACK	COM
GREEN/BLACK	NO
YELLOW/BLACK	NC

AIR OUTPUT 2
Presence signal

RELAY CONFIGURATION

see Appendix for How To Use the Remote Control

	Motion Relay	Presence Relay
1	active	passive
2	passive	active
3	passive	passive
4	active	active

Description	Detection	No Detection
Active Relay	COM — NO / NC	COM — NO / NC
Passive Relay	COM — NO / NC	COM — NO / NC

3 | SENSOR ANGLE

a

CEILING
45°
30°
15°

45° 30° 15°
45° 30° 15°

45°
WALL   30° 15°
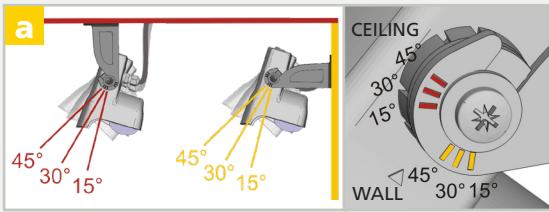
Adjust the angle of the sensor to position the detection fields.

b
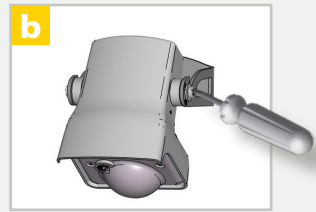
Tighten the screws firmly.

DOOR

15°

DOOR

30°

DOOR

45°
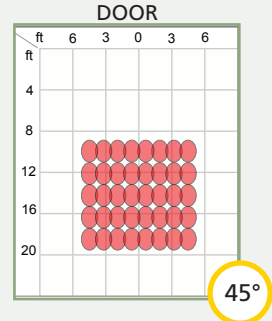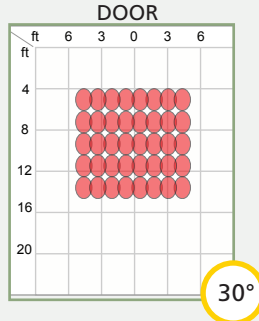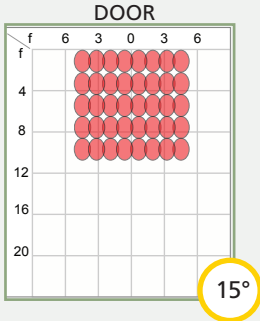
- The graphics above are not to scale and are for illustration purposes only. These graphics represent an approximate AIR detection field when mounted at 16 ft.

- Infrared field = emitting spots detectable by using the SPOTFINDER.
  The actual detection field is slightly smaller and influenced by external factors.

- It's important to adjust the sensor angle to position the AIR field correctly for your application. Utilizing a mounting bracket, sensor location, and reveal will dictate the sensor angle for your application.

AIR PATTERN SIZE AT 15° SENSOR ANGLE

Approximate default AIR pattern size using a 15° sensor tilt angle.

The higher the mounting height the larger the AIR pattern.

Dimensions are approximate

Mounting Height	Width*	Depth*
8 ft	5 ft	5 ft
10 ft	7 ft	7 ft
11.5 ft	7.5 ft	7.5 ft
13 ft	8.5 ft	8.5 ft
16 ft (max)	10 ft	10 ft

4 | SETUP

Launch a setup to make a reference picture.

**Step out of the detection field and do not leave any tools inside the detection field.**

15-20 s   3 s

Upon power-up, the sensor launches a short setup.

POSSIBLE REMOTE CONTROL SETTINGS

🔒	⬛	0	1	2	3	4	5	6	7	8	9	🔒 🔒
OUTPUT REDIRECTION	🟢 R1 **F1**	presence	air entry pulse	air exit pulse	first or last line air entry pulse	first or last line air exit pulse	presence	presence		DOOR EXAMPLE First Line / Last Line		
	🔴 R2	presence	presence	presence	presence	presence	presence	presence				
FREQUENCY	**DD**		A	B								
MAX. PRES. DETECTION TIME	📷	30 s	1 min	2 min	5 min	10 min	20 min	1 h	1 h 30	2 h	no learn*	
IR CURTAIN IMMUNITY	🔔		low	normal	high							
TARGET SIZE**	**F2**		●●	●●●	●●●●●	●●●	●●●●●	●●●●●				
AIR DETECTION FIELD	**B⊡**		●●●●	●●●●	●●●●	●●●●	●●●●	●●●●	●●●●	●●●●	●●●	
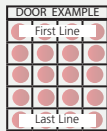
* not guaranteed
** The position of the target in the field is random.

THE TARGET POSITION WITHIN THE "AIR" FIELD IS RANDOM

AIR PATTERN SIZE **B⊡**	AVAILABLE TARGET SIZE **F2**	AIR PATTERN SIZE **B⊡**	AVAILABLE TARGET SIZE **F2**
1	1 2 3 4 5 6 7	6	1 2 5 7
2	1 2 3 4 5 6 7	7	1 2 5 7
3	1 2 3 5 6 7	8	1 2 5 7
4	1 2 5 6	9	1 2 5
5	1 5		

NOTE: TARGET SIZE MUST BE CAPABLE TO FIT INSIDE THE CHOSEN AIR PATTERN SIZE

IMPORTANT: Always finish an adjustment session by launching a setup *(see page 4)* and test the proper operation of the installation before leaving the premises.

🔒 🔧 0

⬜ FACTORY VALUES   RESETTING TO FACTORY VALUES: 🔒 🔧 9 🔒 🔒

TROUBLESHOOTING

⬤	The door never closes and the LED is ON.	Object in the AIR detection area.	Move objects or reduce automatic learn time.
			Wait for learn time to expire and/or Launch a setup or cycle power.
⬤	The door remains closed and the LED is OFF.	The sensor power is off.	Check the wiring and the power supply.
⬤	The infrared sensor does not react.	The infrared power emission is too low according to the mounting height.	Launch a new setup. Step out of the detection field!
		Improper Target Size.	Ensure the target size is not to large or larger than the pattern size.
⬤ ⬤	The door opens and closes constantly.	The sensor is disturbed by the door motion or vibrations caused by the door motion.	Make sure the sensor is anchored properly.
			Increase the sensor angle.
			Reduce the AIR detection zone.
⬤	Sporadic presence detections for no reason.	The presence detection is disturbed by rain or lamps.	Set the AIR-curtain immunity to value 3.
		The sensor is not installed properly.	Fasten the sensor firmly.
⬤	The red LED is permanently ON after a setup.	The sensor has failed the AIR-setup.	Launch a new setup and step out of the detection field.
✴	The setup lasts more than 30 seconds.	The setup is disturbed.	Make sure the detection field is clear and launch a new setup.
		Another sensor causes interference.	Select a different frequency for each sensor.
✴	The sensor does not unlock and the red LED flashes quickly.	The sensor needs an access code to unlock.	Enter the right access code.
			If you do not know the access code, delete an unknown code (see page 7).
	The sensor does not respond to the remote control.	The remote control batteries are weak or improperly installed.	Check the batteries and change them if necessary.
		The remote control is poorly aimed.	Point the remote control towards the sensor.
		The sensor is not powered.	Check the power supply of the sensor.

HOW TO USE THE REMOTE CONTROL

After unlocking, the red LED flashes and the sensor can be adjusted by remote control.
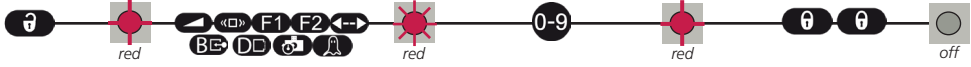
If the red LED flashes quickly after unlocking, you need to enter an access code from 1 to 4 digits.

To end an adjustment session, always lock the sensor.

ADJUSTING ONE OR MORE PARAMETERS

CHECKING A VALUE

= field width: 4.2 m   = field width is defined by Learn

X = NUMBER OF FLASHES = VALUE OF THE PARAMETER

RESTORING TO FACTORY VALUES

SAVING AN ACCESS CODE

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

DELETING AN ACCESS CODE

Enter the existing code

DELETING AN UNKNOWN ACCESS CODE

If you do not know the access code, **cut and restore the power supply** and, within the first minute, you can access the sensor without introducing any access code. Additionally, within this minute an unknown access code may be deleted using the following key sequence: