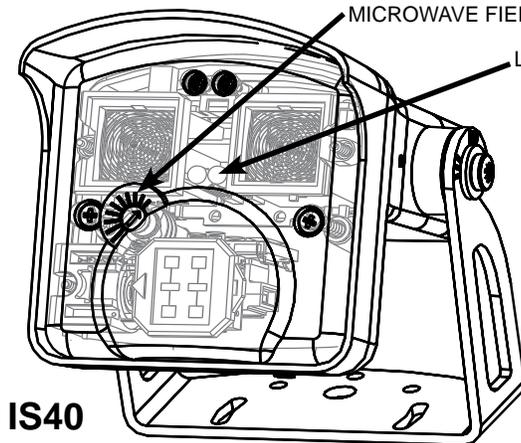


1 Description

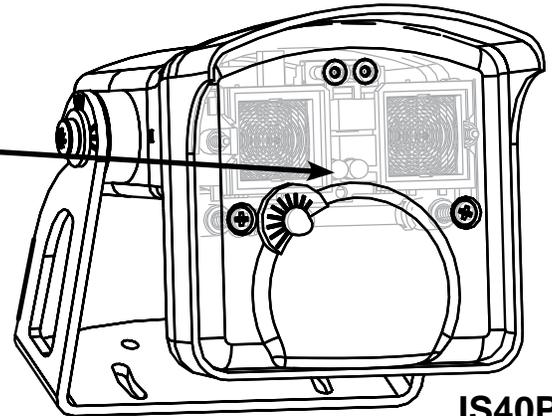


IS40

MICROWAVE FIELD ADJUSTMENT

LED INDICATORS

- The IS40 uses Microwave technology for activation and Active Infrared technology for presence detection.



IS40P

- The IS40P uses Active Infrared (IR) technology for presence detection only and the activation relay can be triggered by entering or exiting the IR field.

2 Specifications

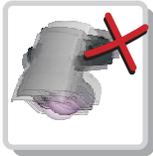
DESCRIPTION	SPECIFICATION	
TECHNOLOGY	MICROWAVE (IS40 Only)	INFRARED
RADIATED FREQUENCY	24.175 GHz	875nm
RADIATED POWER DENSITY	< 5 mW/cm ²	< 250mW/m ²
DETECTION MODE	Motion	Motion & Presence
MAXIMUM DETECTION FIELD	13' x 16' (4m x 5m)	(10' x 10') 3m x 3m
OUTPUT HOLD TIME	0.5 sec. to 9 sec.	0.5 sec.
REACTION TIME	100ms	250ms
MINIMUM TARGET SPEED	2 in/sec (5cm/sec) in sensor axis	0 in/sec (0cm/sec)
LED SIGNAL	Green	Red
ANTENNA TILT ANGLE	-8° to 22° (relative to sensor front face)	N/A
SENSOR TILT ANGLE	15° to 45°	
SUPPLY VOLTAGE	12 to 24VAC ± 10% 12 to 24VDC +30% / -5%	
MAIN FREQUENCY	50 to 60Hz	
POWER CONSUMPTION	< 2W	
RELAY OUTPUT	2 Relays with switch-over contact (voltage free)	
- Max. Voltage	60 VDC / 125 VAC	
- Max. Current	1A (resistive)	
- Max Switching Power	30W (DC) / 60VA (AC)	
INSTALLATION HEIGHT	8' to 16' (2.5m to 5m)	
TEMPERATURE RANGE	-22°F (-30°C) to + 140°F (60°C)	
PROTECTION DEGREE	NEMA-4	
NORM CONFORMITY	Electromagnetic compatibility (EMC) according to 2004/108/EEC, R&TTE: 1999/5/EC	
DIMENSIONS (D X W X H)	5 in. X 4 in. X 3.75 in. (127mm x 102mm x 96mm)	
MATERIAL	ABS Polycarbonate	
COLOR	Black Transparent Purple	
CABLE LENGTH	32 feet (10m)	

3 Precautions



- This device IS NOT intended for use as a safety sensor.
- Shut off all power before attempting any wiring procedures.
- Maintain a clean & safe environment when working in public areas.
- Constantly be aware of pedestrian/vehicle traffic around the 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 charge.
- Always check placement of all wiring before powering up to insure that moving parts will not catch any wires and cause damage to equipment.
- Ensure compliance with all applicable safety standards (i.e. ANSI A156.10 / 19) upon completion of installation.
- DO NOT attempt any internal repair of the sensor. 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 will result in a voided product warranty.

4 Installation Tips



The sensor must be firmly fastened to prevent vibration.



DO NOT cover the sensor.



The sensor must not have any object likely to move or vibrate in its sensing field.

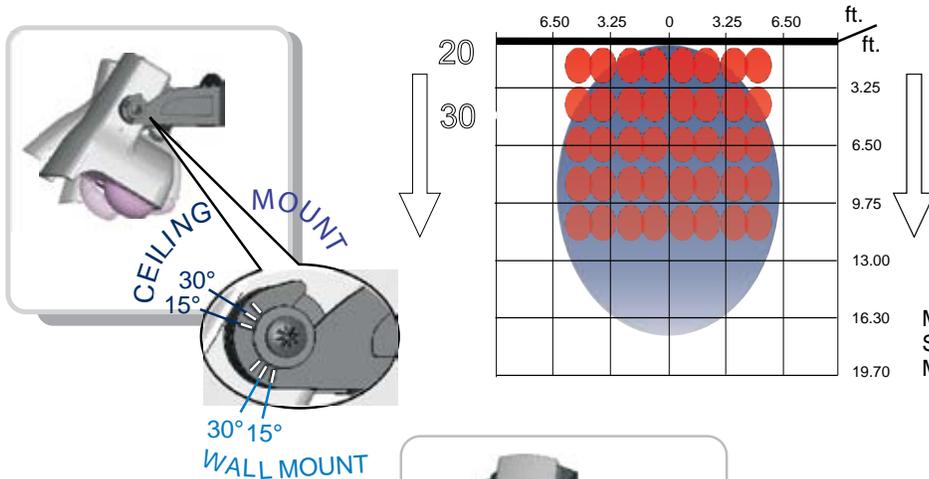
5 Wiring

LABEL	POWER (VAC / DC)		ACTIVATION RELAY			PRESENCE RELAY		
	12-24	12-24	COM	NO	NC	COM	NO	NC
COLOR	RED	BLACK	WHITE	GREEN	YELLOW	WHITE W/BLACK STRIPE	GREEN W/BLACK STRIPE	YELLOW W/BLACK STRIPE

6 Installation

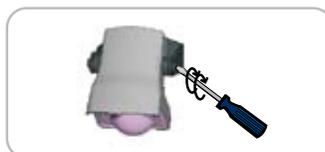
1 Sensor Tilt Angle

It is important to adjust sensor angle first to position IR field correctly. Then adapt angle of radar field by using tilt angle adjustment screw.



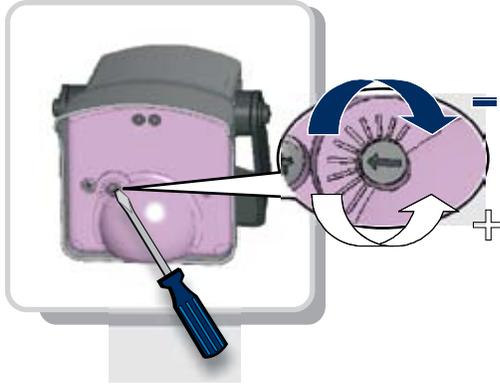
NOTE: To obtain an IR pattern that's straight down (closest to the door threshold); wall mounted sensors need to be set at 20°, while sensors that are extended out from the wall should be set at around 15°.

Mounting height: 16 ft.
Sensitivity: 9
Microwave field angle: 30°



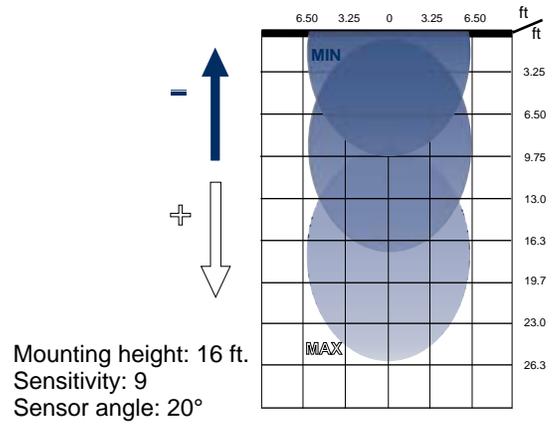
When the angle of the sensor is chosen, tighten the screws firmly.

2 Microwave Field Tilt Angle



By turning the tilt angle adjustment screw clockwise, the radar field angle is reduced.

By turning the tilt angle adjustment screw counter clockwise, the radar field angle is increased.



7 Remote Control Functions

Every programming session begins by unlocking the sensor. Thereafter a program setting may be altered by pressing the desired function key followed by the desired value for that function. When all programming is complete press the lock key twice to retain settings. Use the following as a guide:

Unlock the sensor to enter into adjustment session (if no access code has been entered)	 Press Unlock Key  RED LED Flashes Slowly
To change the value of a parameter (ex. Automatic Learn Time)	 Select Parameter to Change  RED LED Flashes Quickly  Enter New Value  RED LED Flashes Slowly
... to change any other parameters (ex. Relay Configuration)	 Select Parameter to Change  RED LED Flashes Quickly  Enter New Value  RED LED Flashes Slowly
To check the value of a parameter (ex. Automatic Learn Time)	 Select Parameter to Check  RED LED Flashes Quickly  Press Question Mark  The Number of Green Flashes Indicate the Value of This Parameter  RED LED Flashes Slowly
Lock the adjustment session and go back to normal function	 Press Lock Key Twice OR  + Lock Code

8 Setup & Startup

1 Setup Sequence

1. Power on the sensor. Sensor automatically performs a Setup on power up and Setup is complete when Red/Green flashing stops.
2. If the Detection Zone (Background) permanently changes and a new Setup is required, perform a new Setup by pressing



. Red & Green LEDs will blink rapidly until setup is complete.

NOTE: Avoid movement in the IR zone during setup.

2 Remote Control Parameters

FUNCTION	AFFECTS INFRARED OR MICROWAVE	REMOTE CONTROL BUTTON	FUNCTION DESCRIPTION
AUTOMATIC LEARN TIME	INFRARED		0: 30 seconds 1: 1 minute 2: 2 minutes 3: 5 minutes 4: 10 minutes 5: 20 minutes 6: 60 minutes 9: ∞ (Infinity)
IMMUNITY	INFRARED		1: Low (Normal) 2: Medium (Rain) 3: High (Snow)
PATTERN	INFRARED		
FREQUENCY	INFRARED		1: L - L' Pulse Frequency 2: H - H' Pulse Frequency
TARGET SIZE	INFRARED	F2	Define the Minimum Target Size 1: 1 x 1 2: 2 x 2 3: 3 x 3 4: 4 x 4 5: 1 x 2 6: 2 x 3 7: 3 x 2

2 Remote Control Parameters (Continued)

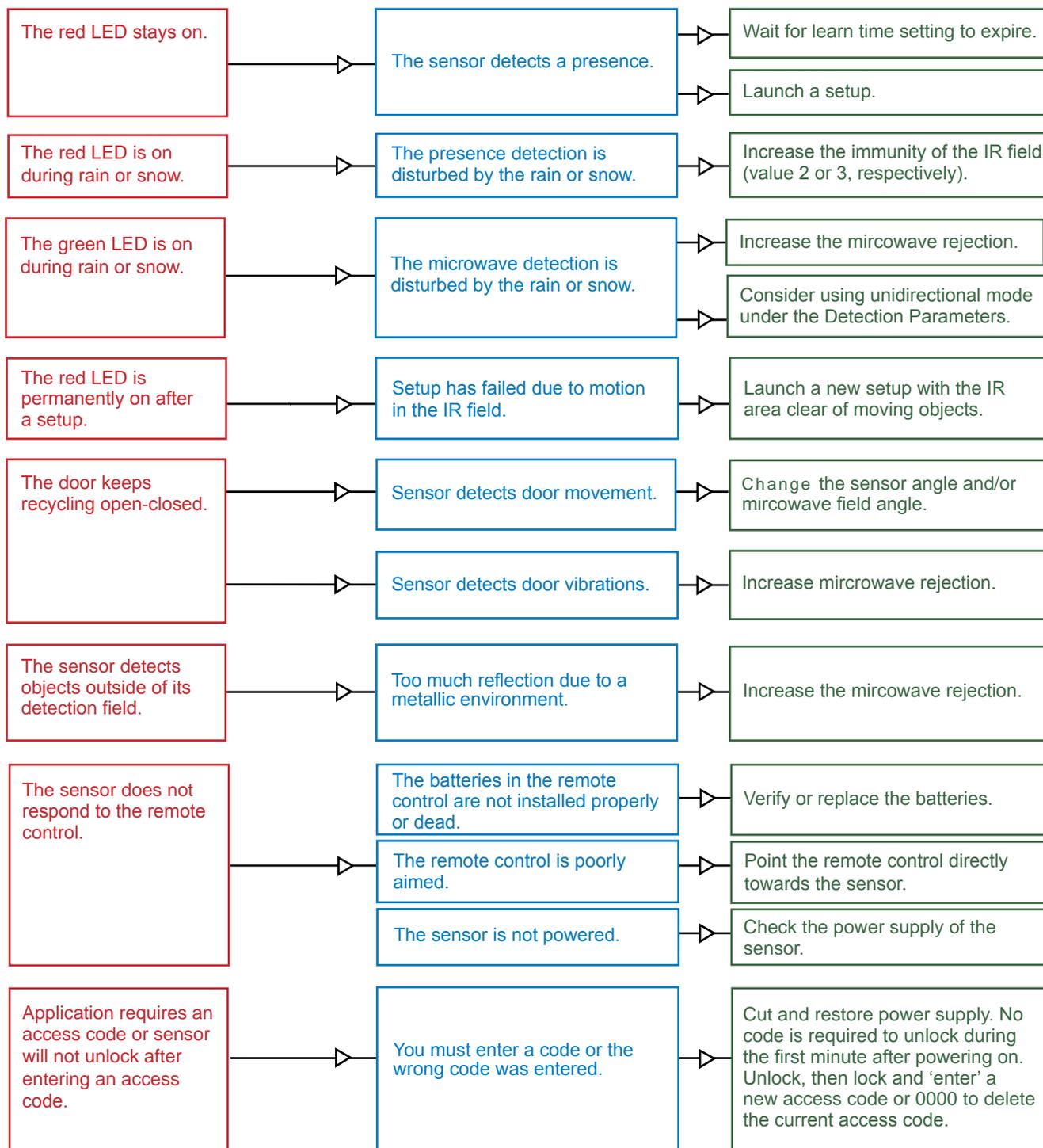
FUNCTION	AFFECTS INFRARED OR MICROWAVE	REMOTE CONTROL BUTTON	FUNCTION DESCRIPTION																																												
SENSITIVITY	MICROWAVE		0 - 9: (7 - Default) Height = 16 ft. Sensitivity 9, 6, 3 																																												
DETECTION MODE	MICROWAVE		1: Bidirectional (Towards or Away from Sensors) 2: Unidirectional Approach (Towards Sensor) 3: Unidirectional Depart (Away from Sensor)																																												
REJECTION MODE	MICROWAVE		1: Detection of all kind of Targets in Motion 2: Detection of all kind of Targets in Motion + Interference Immunity 3: Low 'Pedestrian/Parallel traffic' Rejection + Interference Immunity 4: Medium 'Pedestrian/Parallel traffic' Rejection + Interference Immunity 5: High 'Pedestrian/Parallel traffic' Rejection + Interference Immunity																																												
ACTIVATION RELAY HOLD TIME	MICROWAVE		0: 0.5 second 1: 1.0 second 2: 2.0 seconds 3: 3.0 seconds 4: 4.0 seconds 5: 5.0 seconds 6: 6.0 seconds 7: 7.0 seconds 8: 8.0 seconds 9: 9.0 seconds																																												
RELAY CONFIGURATION	INFRARED MICROWAVE		<table border="1"> <thead> <tr> <th></th> <th>Activation Relay</th> <th>Presence Relay</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Active</td> <td>Passive</td> </tr> <tr> <td>2</td> <td>Passive</td> <td>Active</td> </tr> <tr> <td>3</td> <td>Passive</td> <td>Passive</td> </tr> <tr> <td>4</td> <td>Active</td> <td>Active</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>Description</th> <th>Active</th> <th>Passive</th> </tr> </thead> <tbody> <tr> <td>Detection</td> <td>COM ● NO ● NC</td> <td>COM ● NO ● NC</td> </tr> <tr> <td>No Detection</td> <td>COM ● NO ● NC</td> <td>COM ● NO ● NC</td> </tr> </tbody> </table>		Activation Relay	Presence Relay	1	Active	Passive	2	Passive	Active	3	Passive	Passive	4	Active	Active	Description	Active	Passive	Detection	COM ● NO ● NC	COM ● NO ● NC	No Detection	COM ● NO ● NC	COM ● NO ● NC																				
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DEFAULT VALUES	INFRARED MICROWAVE		To set Factory Defaults, press																																												

9 Troubleshooting

SYMPTOMS

POSSIBLE CAUSES

CORRECTIVE ACTION



10 Company Contact



Do not leave problems unresolved. If a satisfactory solution cannot be achieved after troubleshooting a problem, please call BEA, Inc. If you must wait for the following workday to call BEA., leave the door inoperable until satisfactory repairs can be made. Never sacrifice the safe operation of the automatic door or gate for an incomplete solution. The following numbers can be called 24 hours a day, 7 days a week. For more information, visit www.beasensors.com.

US and Canada: 1-866-249-7937
Canada: 1-866-836-1863
Northeast: 1-866-836-1863

Southeast: 1-800-407-4545
Midwest: 1-888-308-8843
West: 1-888-419-2564