

## microStar™ Motion Sensor

### DESCRIPTION

The microStar™ is a microwave motion sensor with Human Presence Radar™ (HPR™) for activating all types of automatic doors. The sensor is capable of wide or narrow detection patterns and provides a relay output for simple interfacing with a door controller or other type of device.



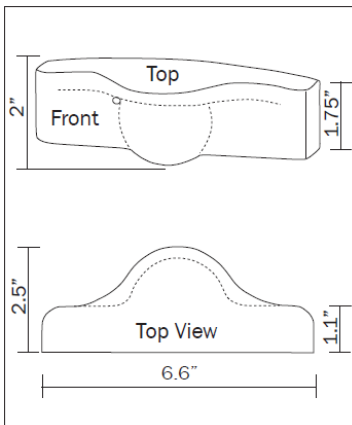
### INCLUDED IN THE BOX

(1) microStar™ Motion Sensor
(1) Wire Harness
(2) Mounting Screws
(1) Installation Instructions

### SPECIFICATIONS

Model	microStar™
Input Power	12-24V AC/DC +/- %
Power Consumption	3.5W Maximum
Output Contacts	Form C, Rated at 1 Amp
Output Hold Time	Max. 5 Seconds
Temperature Rating	-22°F to 158°F (-30°C to 70°C)
Weight	<1 lb.
Microwave Frequency	34.125 GHz +/- 50 MHz
Max. Mounting Height	15' (4.6M)
Color	Flat Black Cover
Material	ABS Plastic Cover & Base
Compliances	FCC Part 15

### DIMENSIONS



### MECHANICAL INSTALLATION

NOTE: Remember to follow these safety precautions:

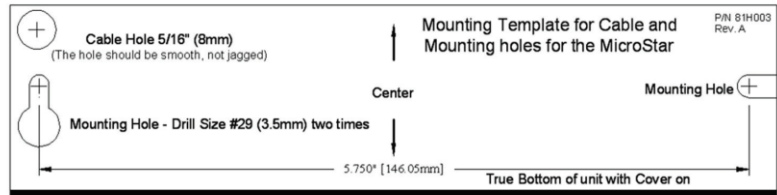
- ☐ Shut off power to the automatic door before wiring sensor.
- ☐ Always ensure wiring is located clear of any moving door parts to avoid damage.
- ☐ Always be aware of pedestrian traffic. Keep people clear of the work area when setting up or testing the door.
- ☐ Comply with all applicable building codes and safety standards (ANSI A156.10).

#### ① Remove the sensor cover:

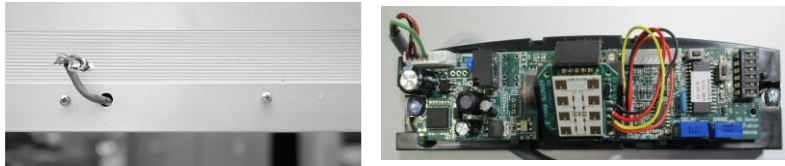
- ☐ Remove the cover of the microStar by placing the blade of a small screwdriver in the notch in the right side of the cover as shown at right. Once the sensor is attached to the header the cover can be removed in this same manner.



- ② Peel and attach the self-sticking mounting template (C) at the desired location. Drill 3 holes noted on template (1 wire passage hole, 2 screw pilot holes).

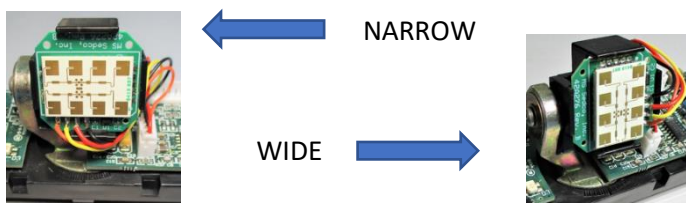


- ③ Insert mounting screws partially into holes. Route the wire harness through the wire passage hole as shown. Install the microStar onto the mounting screws and tighten.



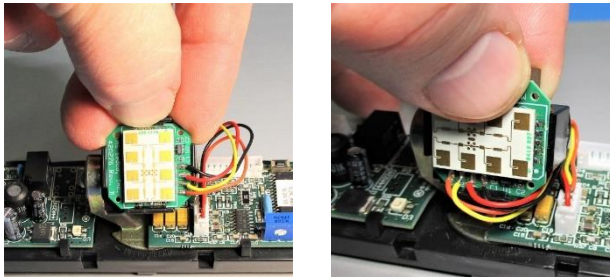
## **CONFIGURATION**

- ① Select the proper antenna orientation for the application:



- ② To change the orientation of the antenna, perform the following:

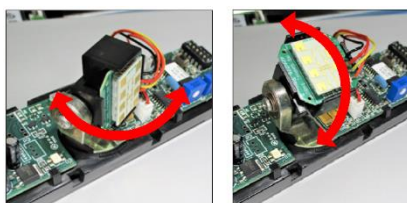
- ☐ To remove the antenna: position index and middle fingers on the back of the PCB, position thumb on the top edge of the sensor holder. Squeeze thumb toward fingers. Remove the sensor from holder.
- ☐ Rotate antenna 90° to change zone orientation and then re-install antenna into the holder.



- ☐ Important – When the antenna is in the narrow orientation and the wires exit at the bottom of the PCB, ensure wires are routed under the holder and remain clear of the front of the antenna.

- **The wires must never be in the front of the antenna or improper performance may occur.**

- ☐ Once completed, the antenna holder can be rotated and/or tilted to achieve proper position of the detection field per the requirements of the application.



③ Set the dipswitches per the application:

DIPSWITCH SETTINGS

□ Fail-Safe:

- When enabled, the fail-safe function causes the output relay to energize as soon as the sensor is powered on. The relay will then de-energize when the sensor is activated or when there is a power loss. In this manner, a power loss causes the relay output to perform the same as if there was a detection. If fail-safe is disabled, the relay remains de-energized when power is applied and will only energize upon an activation.

□ HPR:

- When the Human Presence Radar is enabled, the sensitivity of the radar is increased to allow detection of extremely slow movements within the field of detection.

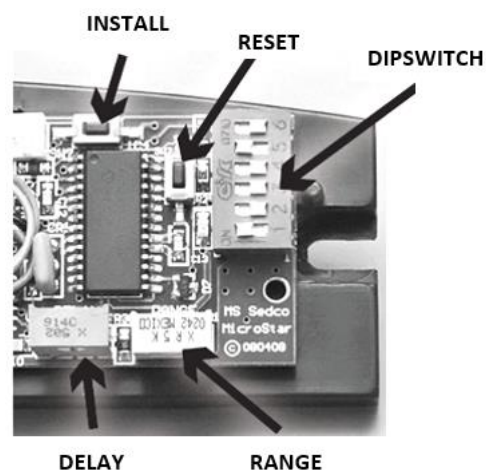
□ Depart/Approach:

- When configured for DEPART, the sensor will only detect activity that is moving away from the sensor. In APPROACH mode, the sensor will only see activity that is approaching the sensor.

□ Bi-Directional / Uni-Directional:

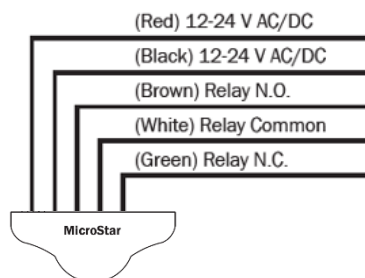
- The Bi-Directional function allows the sensor to see movements from all directions within its detection zone. In Uni-Directional mode, the sensor only detects movements that are towards the sensor.

← LEFT - ON	RIGHT - OFF →
6. NOT USED	6. NOT USED
5. FAIL-SAFE OFF	5. FAIL-SAFE ON
4. HPR OFF	4. HPR ON
3. NOT USED	3. NOT USED
2. DEPART	2. APPROACH
1. BI-DIRECTIONAL	1. UNI-DIRECTIONAL



**WIRING**

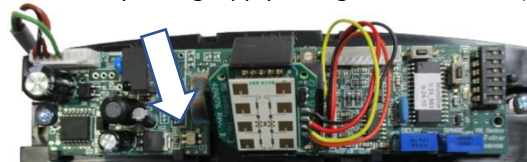
- ① Wire the sensor according to the application and plug the harness into the sensor upon completion. Wire connections are shown below.



**POWER-ON**

- ① Upon completion of the mechanical installation, configuring the sensor, and all necessary wiring, apply voltage to the sensor (12 to 24 volts AC or DC).

- The LED located at the lower left side of the antenna will illuminate green when the sensor is ready for use.



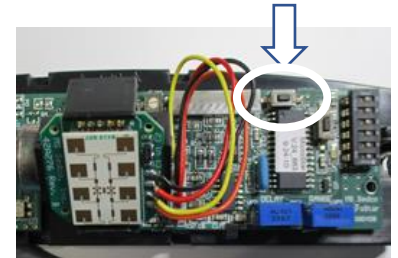
- Once the sensor is ready for use, one can begin walk-testing and adjusting the lateral angle and tilt angle as desired.

#### □ **HELPFUL HINT:**

To quickly adjust the pattern, press the Reset button and then press & hold the Install button 3 seconds (the LED will flash orange to confirm). This puts the microStar into the install mode allowing the installer to walk test the pattern from several different directions without activating the door. Simply watch the LED while approaching the pattern Green = No detection; Red = Detection. Once the desired pattern is achieved press the reset button and the microStar will reset to normal operating mode.

#### **RE-INSTALL COVER**

- ① Replace the cover by engaging the left side first and then gently snapping the cover into place.
- ② After re-installing the cover, be sure to walk-test the sensor again to ensure there has been change in the detection zone.



#### **RELATED PRODUCTS**



PN: MSRC: microStar Rain Cover



PN: MS-BDB microStar Mounting Bracket

#### **QUALIFIED INSTALLERS**

When applying this product to an automatic pedestrian door, MS Sedco recommends this product only be installed by technicians who are certified inspectors by the American Association of Automatic Door Manufacturers. All installations shall be compliant to applicable nationally recognized performance standards.

#### **RMA PROCEDURE**



Upon confirmation of a failed product, an RMA form must be filled out online prior to returning the product to MS Sedco.

Go To: <https://mssedco.com/return-repair-policy-form/>

Or scan the QR code with your smartphone to go directly to the online form.

#### **TERMS OF WARRANTY**

MS SEDCO, Inc. guarantees this product to be free from manufacturing defects for three years from the date of shipment from our factory.

#### **COMPANY CONTACT**

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