EAGLE SAP4100HM Unidirectional Activation Sensor

EAGLE SAP4100HM Unidirectional Activation Sensor User Manual

Contents

EAGLE

EAGLE SAP4100HM Unidirectional Activation Sensor

Product Using Instruction

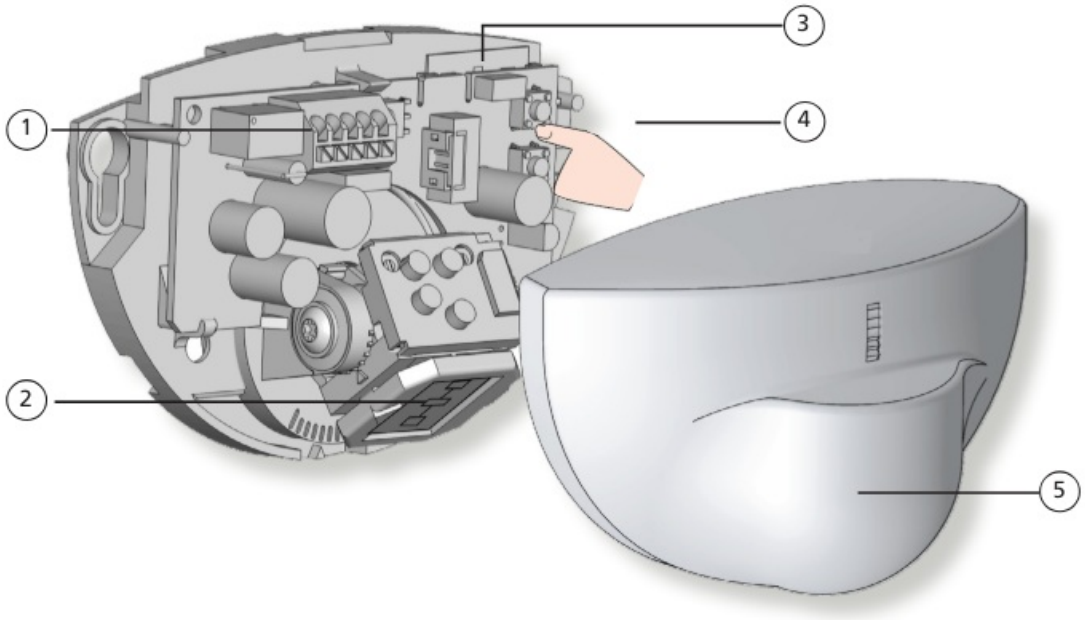
- **Installation Tips:**
  - If mounting horizontally, the sensor must be mounted in front of the door.
  - If mounting vertically, the sensor must be mounted above the door.
- **Mounting & Wiring:**
  - Apply the mounting template.
  - Drill 1 hole for the cable and pull it through. Drill 2 holes for the screws.
- **Connect the wires accordingly:**
  - **RED** – POWER SUPPLY (+)
  - **BLACK** – POWER SUPPLY (-)
  - **WHITE** – COM
  - **GREEN** – NO OR GREEN – NC
  - Position the cable as indicated and mount the sensor firmly.
- **Mechanical Adjustments:**
  - Choose the appropriate antenna (narrow or wide) for the correct zone size and immunity. Adjust the antenna angle laterally and/or vertically to position the detection field.
- **Settings:**
  - Program the sensor for the desired application using the remote control or push button options. Adjust settings like zone size, immunity filter, detection mode, output configuration, hold-open time, mounting height, door control, etc.

FAQs

- **How do I reset the sensor to factory settings?**
  - **To reset the sensor to factory settings, follow the steps below:**
    - Access the sensor menu using the remote control or push button options.
    - Select the “Factory Reset” option from the menu.
    - Confirm the reset action when prompted.

    - The sensor will reset to its original factory settings.
- **What should I do if I forget the access code for the sensor?**
    - If you forget the access code for the sensor, you can cycle the power to reset it.
    - For the first minute after power cycling, you can access the sensor without an access code.
    - However, it is recommended to set access codes (1 to 4 digits) to prevent unauthorized access.

Product Overview



1. main connector
2. wide zone antenna
3. narrow zone antenna
4. push buttons
5. cover

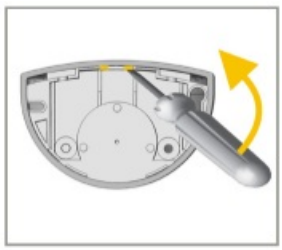
TECHNICAL SPECIFICATIONS

Technology:	microwave and microprocessor
Transmitter frequency:	24.150 GHz
Transmitter radiated power:	< 20 dBm EIRP
Transmitter power density:	< 5 mW/cm²
Detection mode:	motion
Min. detection speed:	2 in/s
Supply voltage:	12 – 24 VAC ±10%; 12 – 24 VDC +30% / -10%
Mains frequency:	50 – 60 Hz
Max power consumption:	< 2 W
Output: max. contact voltage: max. contact current: max. switching power:	relay (free of potential changeover contact) 42V AC/DC 1A (resistive) 30W (DC) / 60VA (AC)
Mounting height:	6' – 13'
Degree of protection:	IP54
Temperature range:	-4 – 131 °F
Dimensions:	4.7" (L) × 3.1" (H) × 2.0" (W)
Tilt angles:	0 – 90° vertical; -30 – 30° lateral
Material:	ABS
Weight:	7.6 oz
Cable length:	8'
Norm conformity:	R&TTE 1999/5/EC, LVD 2006/95/EC, RoHS 2 2011/65/EU

INSTALLATION TIPS

- Do not touch electrical parts.
- Avoid vibrations.
- Do not cover the sensor.
- Avoid proximity to neon lamps or moving objects.
- The sensor may be mounted horizontally or vertically (e.g. on a ceiling or on a wall, respectively).
    - If mounting horizontally, the sensor must be mounted in front of the door.
    - If mounting vertically, the sensor must be mounted above the door.

How to Open the Sensor:



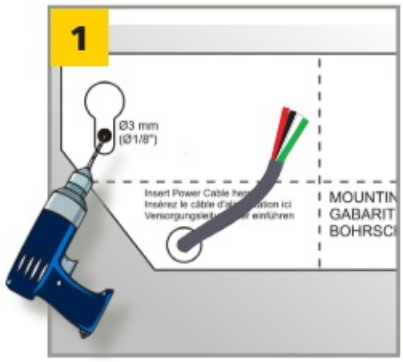
BEFORE MOUNTING

AFTER MOUNTING

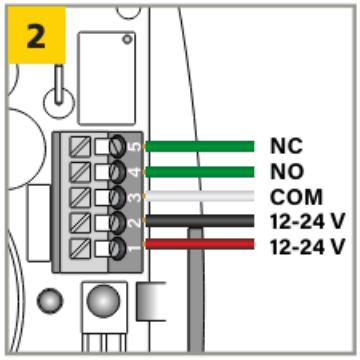
MOUNTING & WIRING

If using EAGLE SPACER or EAGLE SPACER V, please refer to User's Guide 75.5981 before beginning.

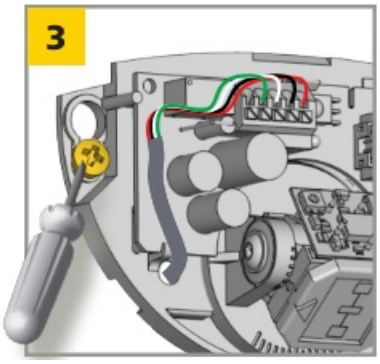
- **Apply the mounting template.**
  - **Drill 1** hole for the cable and pull it through.
  - **Drill 2** holes for the screws.



- **Connect the wires accordingly:**
  1. **RED** – POWER SUPPLY (+)
  2. **BLACK** – POWER SUPPLY (-)
  3. **WHITE** – COM
  4. **GREEN** – NO OR 5: GREEN – NC

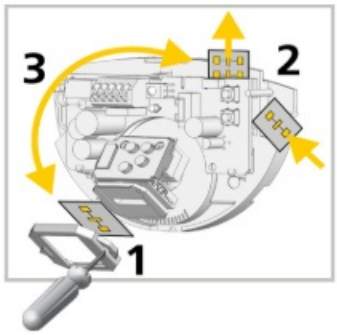


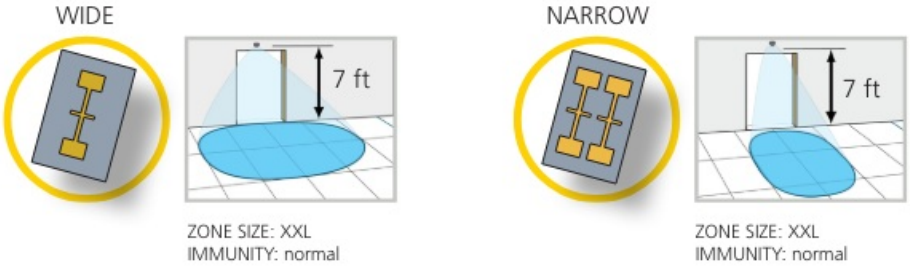
- **Position the cable as indicated.**
  - Mount the sensor firmly.



MECHANICAL ADJUSTMENTS

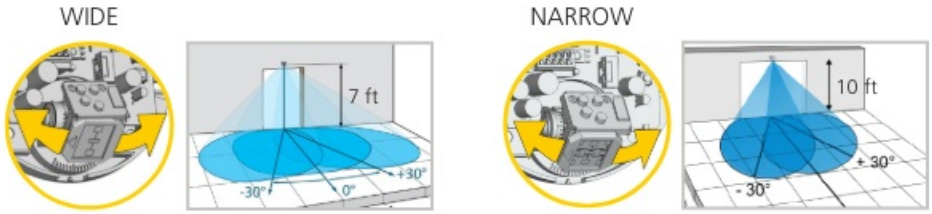
- Choose the appropriate antenna (narrow or wide) for the correct detection zone width.
  - **Narrow:** 6’ 6″ × 8’
  - **Wide:** 13’ × 6’ 6″
- See diagram (right) for how to change antennas.



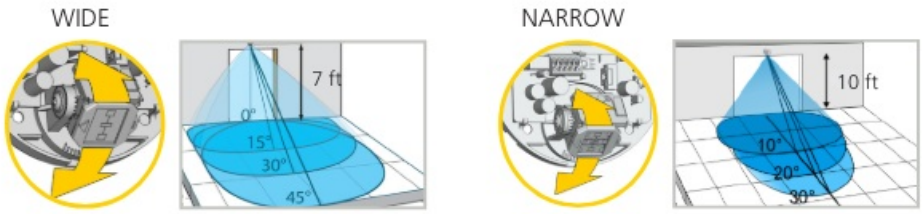


- If desired, adjust the antenna angle (laterally and/or vertically) to position the detection field.
- When mounting at the maximum height, the sensor manufacturer recommends a 15° tilt angle.
- Observe antenna type (narrow or wide) in the illustrations below.

LATERAL ADJUSTMENT



VERTICAL ADJUSTMENT



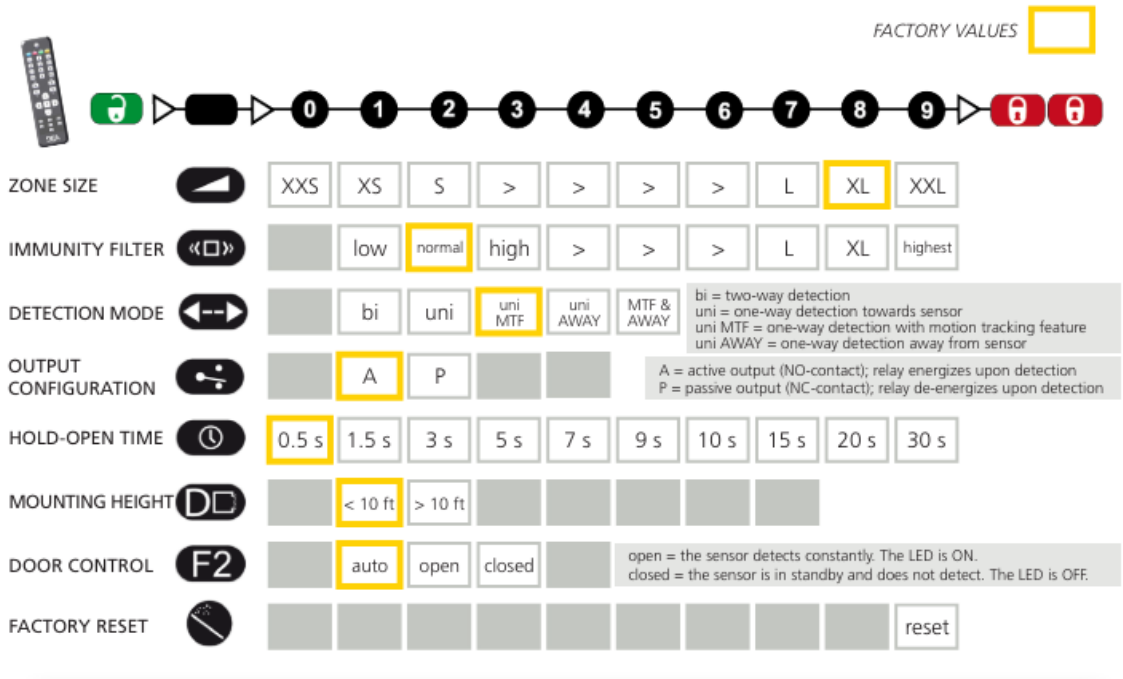
SETTINGS

Program the sensor for the desired application, using the remote control or push button options.

When mounting at the maximum height, the sensor manufacturer recommends the following:

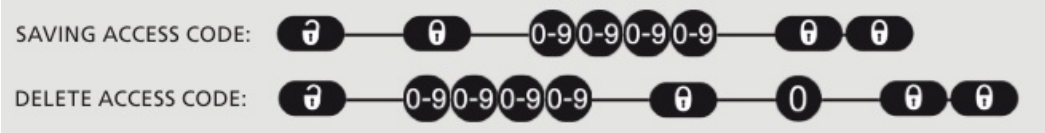
- **Immunity** = low
- **Zone Size** = XXL

REMOTE CONTROL



ACCESS CODE

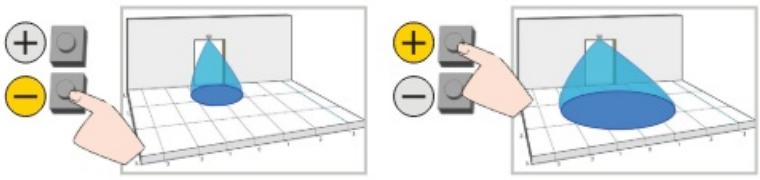
Access codes (1 to 4 digits) are recommended to set sensors installed close to each other.



Once you have saved an access code, you always need to enter this code to unlock the sensor. If you forget the access code, cycle the power. For the first minute, you can access the sensor without an access code.

PUSH BUTTONS

- **ZONE SIZE**



- **FACTORY RESET**

TROUBLESHOOTING

	The door remains closed. LED is off.	Sensor power is off.	Check wiring and power supply.
		Door control setting (F2) is set to 3 (closed).	Change door control setting (F2) to 1 (automatic).
	Door does not react as expected	Improper output configuration on sensor.	Change the output configuration setting on each sensor connected to the door operator.
	Door opens and closes constantly	Sensor is disturbed by door motion or vibrations from door motion.	Ensure sensor is fixed properly.
			Ensure detection mode is unidirectional.
			Increase antenna angle.
			Increase immunity filter.
			Reduce zone size.
	Door opens for no discernable reason	It rains and the sensor detects the motion of the rain drops.	Ensure detection mode is unidirectional.
			Increase immunity filter.
			Install rain accessory.
		In highly reflective environments, the sensor detects objects outside of its detection zone.	Change the antenna angle.
			Reduce zone size.
			Increase immunity filter.
		In airlock vestibules, the sensor detects the movement of the opposite door.	Change the antenna angle.
			Change antenna.
			Increase immunity filter.
	LED flashes quickly after unlocking	Sensor needs access code to unlock.	Enter correct access code.
			If you forgot the code, cycle the power to access the sensor without access code. Change or delete the access code.
	Sensor does not respond to the remote control	Batteries in the remote control are weak or installed improperly.	Check batteries and change if necessary.
		Remote control not pointed correctly.	Point remote control at sensor.

COMPLIANCE EXPECTATIONS

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 the installation or service work is complete, a safety inspection of the door/gate shall be performed per

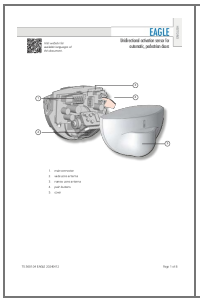
the door/gate manufacturer's recommendations and/or per ADM/ANSI/DASMA guidelines (where applicable) for best industry practices.

- Safety inspections must be performed during each service call – examples of these safety inspections can be found on an ADM 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.

CONTACT

- **Tech Support:** 1-800-407-4545
- **Customer Service:** 1-800-523-2462
- **General Tech Questions:**
  - techservices-us@BEAsensors.com.
  - www.BEAsensors.com.

Documents / Resources

	EAGLE SAP4100HM Unidirectional Activation Sensor [pdf] User Manual 75.5601.04, 20240412, SAP4100HM Unidirectional Activation Sensor, SAP4100HM, Unidirectional Activation Sensor, Activation Sensor, Sensor

References

- User Manual