THE BAT

MOTION SENSOR

IMPORTANT

READ THIS SECTION BEFORE PROCEEDING WITH INSTALLATION

INSTALLATION PRECAUTIONS

PORTALP USA, Inc. (hereafter referred to as "PORTALP") recommends that all of its automated pedestrian door products be installed by a trained automatic door technician and that the resulting performance of the product be in full compliance with the most current version of the American National Standards Institute document A156.10 or A156.19 (whichever is applicable) as well as any applicable building codes and/or fire codes. PORTALP further recommends that a full inspection of the operating system be performed in accordance with the guidelines of the American Association of Automatic Door manufacturers (AAADM). **This inspection must be performed by a certified AAADM trained inspector**. PORTALP recommends this documented inspection be performed upon completion of the installation, as well as, following the completion of every service call thereafter. If service is not performed within one year of the previous service action, a routine AAADM inspection should be performed and documented. Under no circumstance should the product operate for more than one year without an AAADM inspection. PORTALP does NOT recommend installation or service, on any of their automated pedestrian door products, by any individual who is not certified as an AAADM inspector. Following the installation or service of any PORTALP automated pedestrian door product, if it is deemed unsafe, or is operating in an unsatisfactory manner according to national performance standards or recommended performance guidelines as defined by PORTALP, repairs should be made immediately. If an immediate repair cannot be made, the product should be disabled, and appropriate measures should be taken to secure the door in a safe position or to enable the door to safely be used manually. During this situation, every effort should be made to notify the owner (or person responsible) of the condition and to advise on corrective actions that must be taken to return the product to safe operation.

TECHNICAL SPECIFICATION

THE BAT Sensor is a motion sensor operating at 24 GHz K-Band microwave technology. It is used for primary activation on automatic pedestrian doors. It may be used for swinging, sliding, folding, and revolving doors.

DESCRIPTION	SPECIFICATION
Product Name	THE BAT
Document Number	IG-THE BAT-NOV302021-A
Technology	Microwave Frequency: 24.075…24.175 GHz
Transmitting Power	<20 dBm
Power Consumption	<50mA
Operating Voltage	12 to 36VDC / 12 to 28VAC
Function Indicator	red LED
Operating Elements	DIP-Switches (6) and potentiometer
Output	Dry contact normally open (N.O.) or normally closed (N.C.)
Relay	Change-over contact: 24VDC / 48VAC Max. 0.5A AC / 1A DC (resistive)
Relay Hold Time	Factory setting: 1 Second (Adjustable 0.2 Seconds to 5 Seconds).
Detection Speed	Standard 4" per Second (100 mm per Second)
Detection Area	Wide: 14.5 x 6.5ft [W x D] (4.5m x 2m) at install. height of 7ft (2.2m) and 30° angle Narrow: 6.5 x 14.5ft [W x D] (2m x 4.5m) at install. height of 7ft (2.2m) and 30° angle
Angle	Vertical 0° to +90° Horizontal -30° to +30°
Mounting Height	7' (2.1m) standard 13' (4m) maximum
Degree of Protection	IP54
Relative Humidity	Max. 90% not condensing
Temperature Range	-4°F to +131°F (-20°C to +55°C)
Dimensions	4 13/16" (W) x 2 1/2" (H) x 2 1/4" (D) (123mm x 64mm x 58mm)
Weight	4.6 ounces (130g)
Conformity	US: Compliant with FCC regulations, part 15. Canada: Contains IC approved component.
Material	Polycarbonate (PC), ABS
Housing Color	Black
Wire / Connection	Cable Length 6ft (2m) 5-pin JST connector

INSTALLATION INFORMATION

Protect the sensor from rain

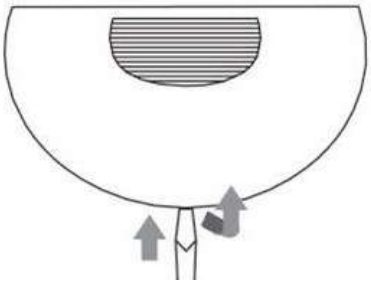
Avoid moving objects in the detection are (fans, plants, trees, flags).

Do not obstruct the sensor and mount it only behind suitable covers. Mechanically operated drive components can affect the sensor.

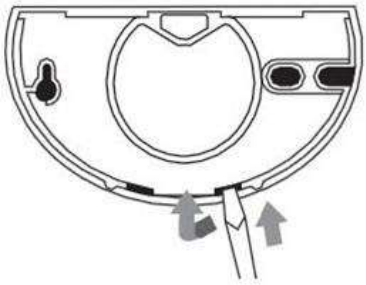
Avoid fluorescent lights in the detection area.

REMOVE COVER

1. Insert screwdriver in slot at bottom of sensor and slightly pry down.

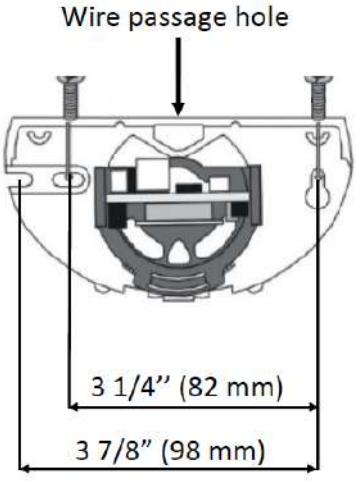


2. Pull cover away from the base.



MECHANICAL INSTALLATION

The RMS-NA-RC sensor is not limited to a specific mount location. It has the capability to be mounted at an angle and its microwave antenna may also be tilted up or down to various angles. The most common location is on the center of the automatic door header.



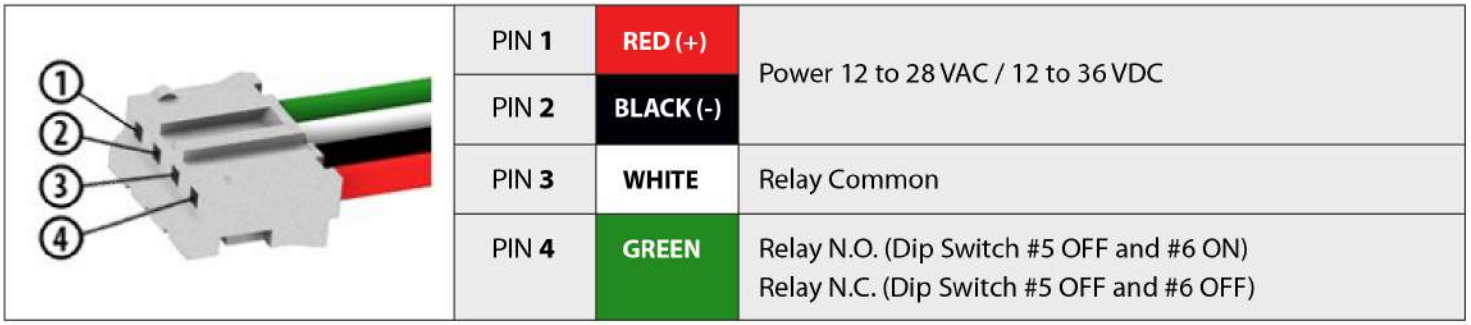
1. Apply the mount template at the desired location.
2. Drill pilot holes for the screw mounts and drill a clearance hole for the wire passage as instructed.
3. Attach sensor backing with the self-tapping screws.
4. Route the wire through the passage hole to the desired location.

Additional bracket (optional) required for ceiling mount.
The max. mounting height is 13ft (4m).

WIRE SENSOR

The RMS-NA-RC sensor provides a dry relay output and may be connected directly to the activation circuit of the automatic door control.

✓ TERMINAL BLOCK

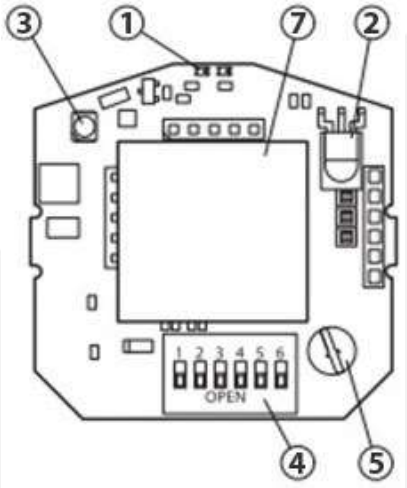


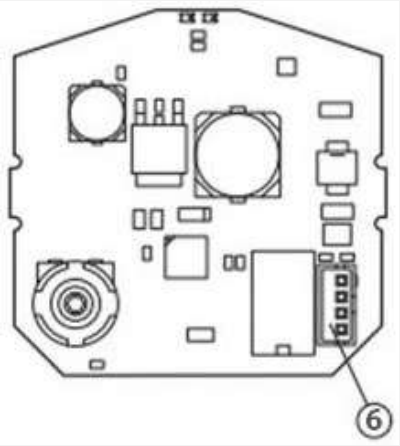
PIN **1**	**RED (+)**	Power 12 to 28 VAC / 12 to 36 VDC
PIN **2**	**BLACK (-)**	
PIN **3**	**WHITE**	Relay Common
PIN **4**	**GREEN**	Relay N.O. (Dip Switch #5 OFF and #6 ON) Relay N.C. (Dip Switch #5 OFF and #6 OFF)

✓ APPLY POWER TO SENSORS

SIGNAL		MESSAGE
RED/GREEN FLASHING		Sensor is initializing. Wait approx. 10 seconds
GREEN STEADY		Ready for operation
RED STEADY		Fault
GREEN FLASHING		Command received for setup

1. LED (red/green)
2. IR receiver
3. IR transmitter
4. DIP Switches
5. Potentiometer
6. Connecting plug

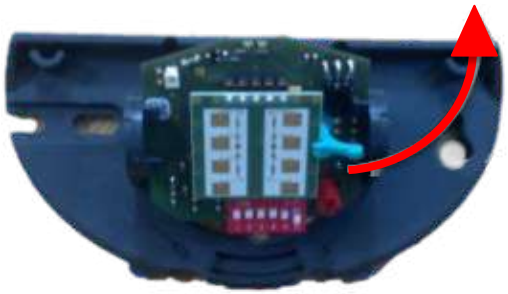




PATTERN SIZE CHANGE

1. Release the lever lock located at side of antenna as shown.
2. Pull antenna straight out from its socket.
3. Rotate to desired position (default=wide angle).
4. Re-insert antenna into its socket.
5. Ensure lever lock is clipped over the antenna as shown.

Push lever to release antenna



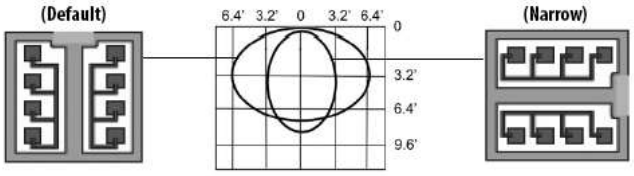
ANTENNA CHARACTERISTICS

The RMS-NA-RC sensor is capable of providing a narrow or wide detection pattern based upon the antenna selection.

✓ PATTERN OPTIONS

Wide: (Default)
Width: 15ft (4.5 m)
Depth: 7ft (2 m)
Installation height: 7" (2.2 m)
Detection area angle: 30°

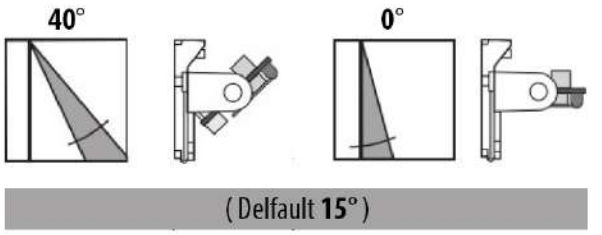
Narrow: (Optional)
Width: 7ft (2 m)
Depth: 15ft (4.5 m)
Installation height: 7" (2.2 m)
Detection area angle: 30°



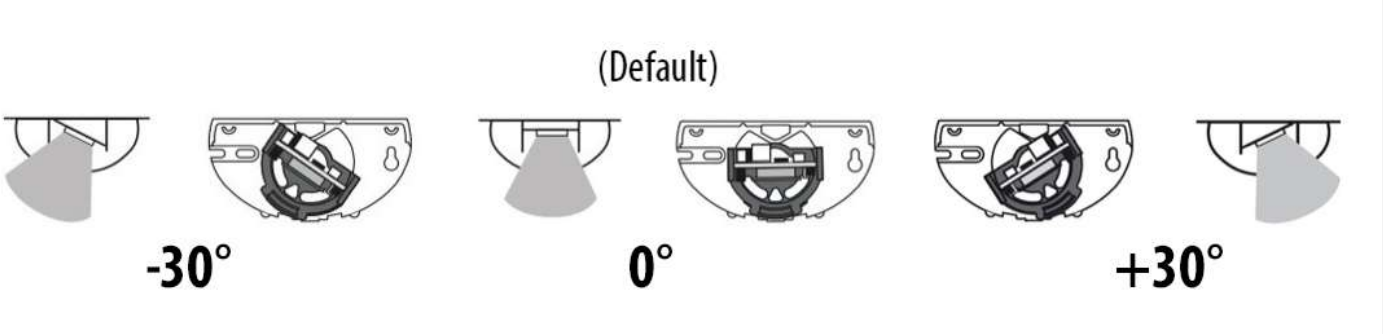
VERTICAL ADJUSTMENT

The RMS-NA-RC sensor is capable of an angle adjustment (up and down) as well as a horizontal adjustment (side to side).

To change the angle, simply rotate the entire antenna PCB module to the desired position

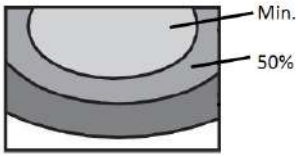


HORIZONTAL ADJUSTMENT



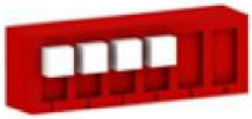
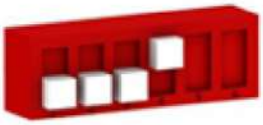
DETECTION AREA & SENSITIVITY

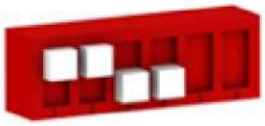
Change the size of the detection area using the potentiometer.



DIP SWITCH FUNCTIONS

DIP SWITCH COMBINATION (BINARY CODE)

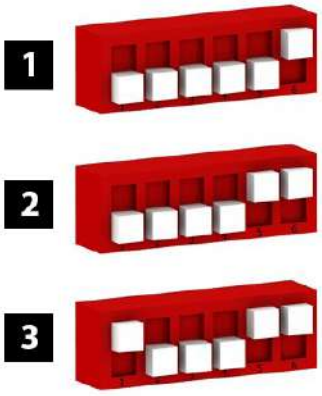
Dip Switch (DEFAULT **ON**) 1 2 3 4 5 6 = ON = OFF	**Directional Detection**	**Slow Motion Detection** Allows detection of extremely slow movement.
	**Output Relay: N.O. Contact (Default): Contact will close upon detection. Contact remains open upon power loss.**	
	**Output Relay: N.C. Contact: Contact will open upon detection. Contact will open upon power loss.**	
	**One Way - Unidirectional - Stereo - Towards Door**	**OFF**
	**One Way - Unidirectional - Stereo - Towards Door**	**ON**
	**One Way - Unidirectional - Stereo - Away From Door**	**OFF**

	**Two-Way - Bidirectional - Mono**	**OFF**
		**ON**

ADDITIONAL FUNCTION SETTINGS

These additional settings can be adjusted by enabling the potentiometer to affect different functions through the dip switch arrangements. The adjustable settings are for hold time and default setting restoration. Every adjustment with the potentiometer starts the same way, dip switch 5 ON, and ends the same way, dip switch 5 OFF.

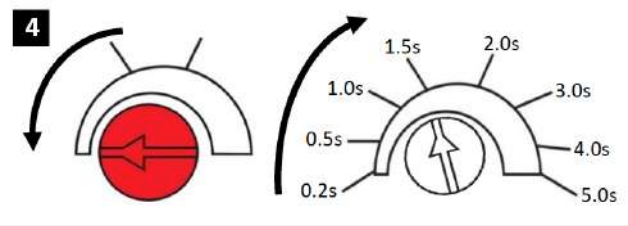
The additional functions must be accessed during the first 10 seconds of powering ON and is signified by a flashing / green LED pattern.



MANUAL RELAY HOLD TIME ADJUSTMENT

1. Turn dip switch number 6 to ON.
2. Turn dip switch number 5 to ON (Right LED will flash).
3. Turn dip switch number 1 to ON (Red and green LED will flash simultaneously).
4. Turn potentiometer to the far left, then to desired position.
5. Turn DIP switch 1 back to OFF to store change (Green LED flashes).
6. Turn DIP switch 5 back to OFF.
7. Now that hold time is stored, turn potentiometer back to desired detection sensitivity.

NOTE: *LEDs will flash and click according to time increments.*



RESTORE DEFAULTS & **CLEAR MEMORY**

1. Turn dip switch #5 ON and verify green LED is flashing.
2. Then turn dip switch #4 ON and verify red LED flashes.
3. Then turn dip switch #4 OFF. Sensor is re-started.
4. Turn dip switch #5 OFF after sensor reinitializes.

WALK-TEST SENSOR

The final step for any sensor installation is a walk-test. This will help to ensure the unit is functioning correctly and is capable of detecting pedestrian traffic as intended. Refer to the current ANSI A156.10 or A156.19 Standard, Section 8, for proper performance guidelines.

1. Increase or decrease the sensitivity potentiometer as necessary to achieve the desired detection field. The potentiometer, under normal operation, directly adjusts the sensitivity of the detection field.
2. The red LED (2) will illuminate when detection occurs. If the LED comes on as the door is closing, the detection field may be too close to the door and/or sensitivity may be too high. Adjust as necessary, and walk-test again.

CONTACT INFORMATION

PORTALP USA, Inc.

11075 Parker Drive
Irwin, PA 15642

Toll Free: 1-855-888-2537
Tel: 412-823-2537 | Fax: 412-816-1862

Email: sales@portalp.com
WEB: www.portalp.com