

Honeywell

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Wireless Alarm Bar™

Installation Guide



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Wireless Alarm Bar Installation Guide

Product Registration

Register your product online by visiting:

<http://www.raesystems.com/support/product-registration>

By registering your product, you can:

- Receive notification of product upgrades or enhancements
- Be alerted to Training classes in your area
- Take advantage of RAE Systems special offers and promotions

Wireless Alarm Bar Installation Guide

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Wireless Alarm Bar Installation Guide

IMPORTANT!

Read Before Installing

This Installation Guide is for wiring and installation of the Wireless Alarm Bar only. It must be used in conjunction with the RAEPPoint User's Guide for safe configuration and operation. The RAEPPoint User's Guide is available at www.raesystems.com.



This Manual must be carefully read by all individuals who have or will have the responsibility of using, maintaining, or servicing this product. The product will perform as designed only if it is used, maintained, and serviced in accordance with the manufacturer's instructions. The user should understand how to set the correct parameters and interpret the obtained results.

For safety reasons, this equipment must be operated and serviced by qualified personnel only. Read and understand the instruction manual completely before operating or servicing.

AVERTISSEMENT

Pour des raisons de sécurité, cet équipement doit être utilisé, entretenu et réparé uniquement par un personnel qualifié. Étudier le manuel d'instructions en entier avant d'utiliser, d'entretenir ou de réparer l'équipement.

Read Before Operating

This manual must be carefully read by all individuals who have or will have the responsibility of using, maintaining, or servicing this product. The product will perform as designed only if it is used, maintained, and serviced in accordance with the manufacturer's instructions. The user should understand how to set the correct parameters and interpret the obtained results.

CAUTION!

To reduce the risk of electric shock, turn the power off before opening this instrument or performing service. Never operate the instrument when the instrument is open. Service this product only in an area known to be non-hazardous.

Proper Product Disposal At End Of Life



EU Directive 2012/19/EU: Waste Electrical and Electronic Equipment (WEEE)

This symbol indicates that the product must not be disposed of as general industrial or domestic waste. This product should be disposed of through suitable WEEE disposal facilities. For more information about disposal of this product, contact your local authority, distributor, or the manufacturer.

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Caution

This device complies with Part 15 of the FCC Rules / Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

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1. General Information

As part of a wireless mesh network, the Wireless Alarm Bar communicates with wireless detectors and controllers and can direct any of its five internal relays to trigger audible and visible alarms. Remote alarm notifications are critical for many applications where local device alarms are simply not visible enough or loud enough to alert a wide area. RAEPPoint relay settings can be fully configured wirelessly via the system controller. The Wireless Alarm Bar is suitable for use in Class I, Division 2, Groups C & D hazardous locations (USA only).

Key Features

- Mounted and pre-wired with two 10J xenon lights and a 112dB horn.
- Five internal SPDT relays
- Wireless transmission distance of 1000 ft (300m) line-of-sight. Range can be extended by using wireless routers.
- Suitable for use in Class I, Division 2, Groups C & D hazardous locations (USA only)
- LEDs indicate status

Applications

- Oil and gas exploration
- Refineries and petrochemical plants
- Fenceline monitoring

2. Purpose Of This Guide

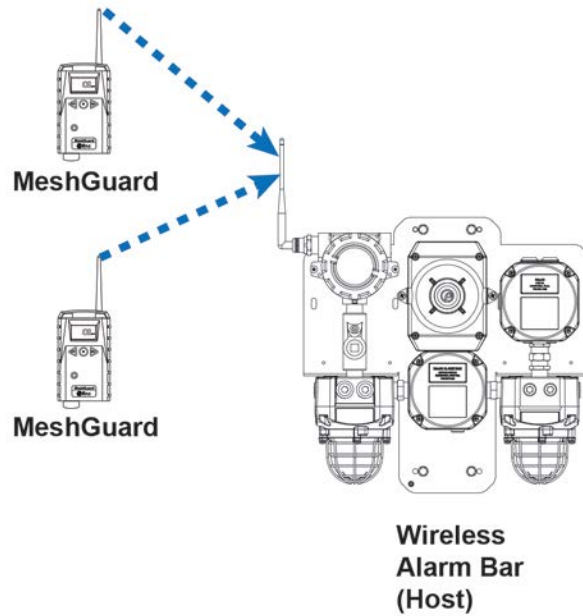
This guide is designed to provide information on installing and wiring the Wireless Alarm Bar. Refer to the RAEPPoint User's Guide for testing and operation information (all functions of the RAEPPoint Wireless Alarm Bar are controlled through the RAEPPoint that is integrated with the horn and strobe lights).

Wireless Alarm Bar Installation Guide

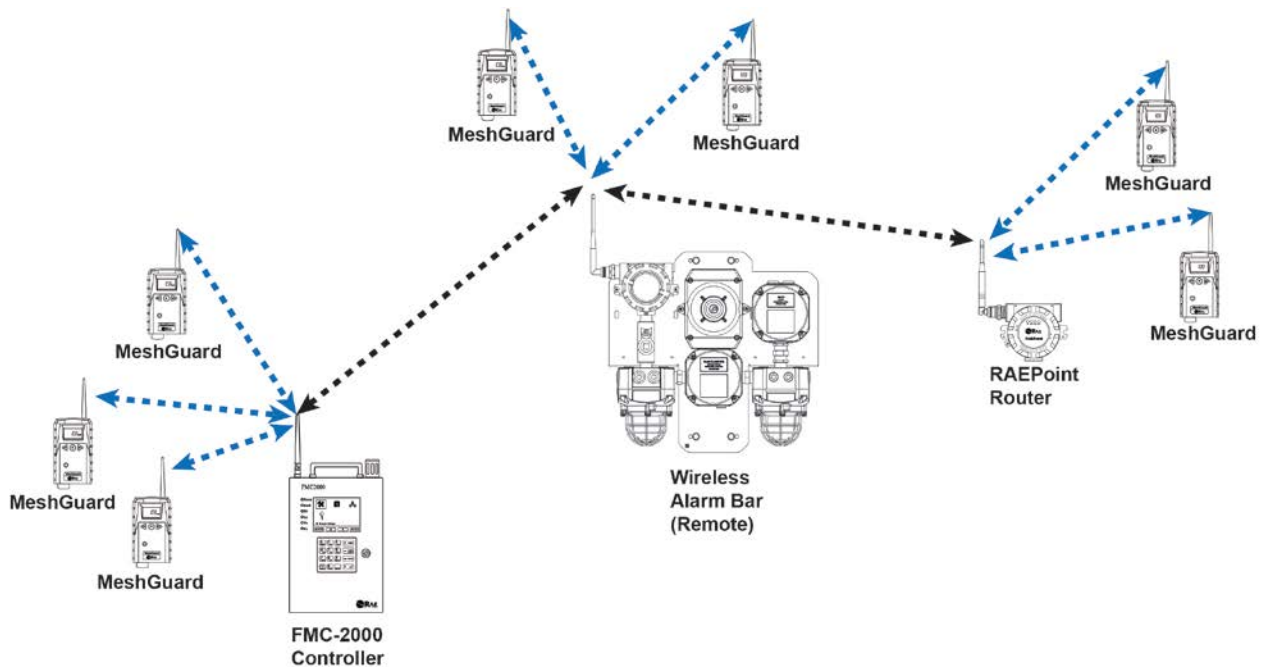
3. Flexible Configurations

The Wireless Alarm Bar can be configured for large or small systems, and the network can be expanded or units removed, depending on the facility or facilities being monitored.

Simple configuration that uses MeshGuard sensors and a Wireless Alarm Bar host:



Full network, including externally controlled devices:



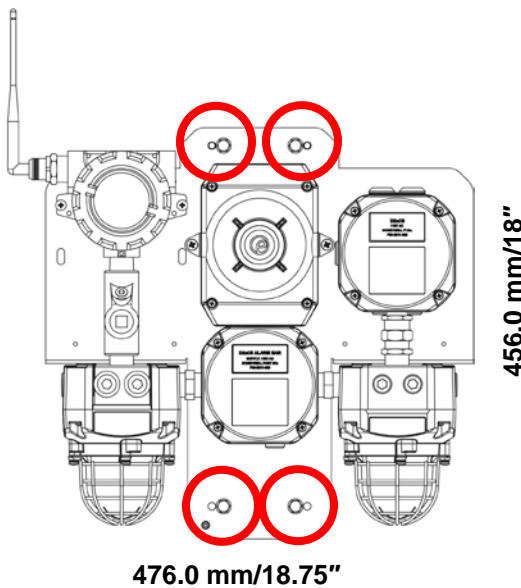
Wireless Alarm Bar Installation Guide

3.1. Wireless Alarm Bar Mounting

Make sure that there is approximately 12" (30 cm) of clearance on all sides of the Wireless Alarm Bar so that the horn's sound is not attenuated and to ensure clear view of the two visible alarm lights.

3.1.1. Mounting The Wireless Alarm Bar

When mounting the RAEPoint on a wall, use heavy-duty steel screws located as indicated below.



Follow these steps:

1. Locate the Wireless Alarm Bar on a wall or other flat surface. Make sure there is at least 12" (30 cm) of clearance around the unit. Mark the mounting holes' locations.
2. Remove the Wireless Alarm Bar.
3. Drill pilot holes in the wall or mounting surface.
4. Hold the Wireless Alarm Bar firmly against the wall or mounting surface and insert and tighten the screws.

The Wireless Alarm Bar is now ready for electrical wiring and testing.

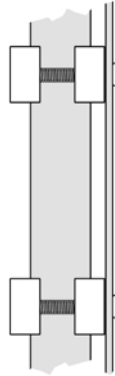
Wireless Alarm Bar Installation Guide

3.1.2. Optional Pole Mounting

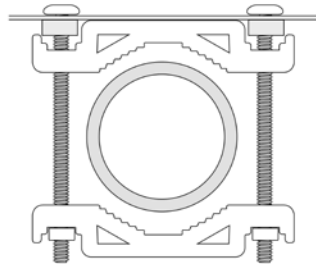
If it is not mounted on a wall or other flat surface, the Wireless Alarm Bar can be attached to a pole using optional brackets (Part Number 019-2052-000).

Note: The pole must be between 1" (25mm) and 2.5" (63mm) in diameter.

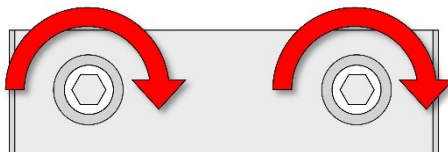
Slip the screws through the two holes that are side by side in order to mount the Wireless Alarm Bar's plate to a vertical pole.



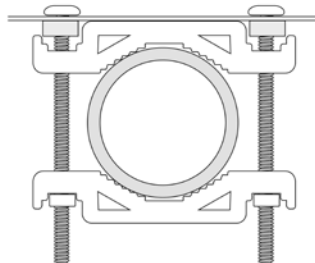
Loosely assemble the clamp parts around the pole. Note that the screws have nuts that fit into the clamp parts. The clamp parts are designed to hold the nut so that you do not need to use a wrench on this side. Hand-tighten the parts until snug.



Use a hex wrench to tighten the hex screws from the front of the enclosure:



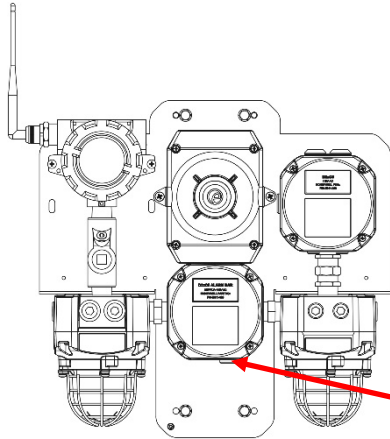
Once the clamp parts and the enclosure are securely held against the pole, stop tightening.



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3.2. Wireless Alarm Bar Wiring

The Wireless Alarm Bar already has most wiring done at the factory. It is only necessary to connect the power supply wires and grounding (according to local requirements). Power and internal grounding wires must be fed through a connector at the bottom of the unit.



Wires must be fed in through a 1/2" NPT insert (UL-certified). Conduit seals are required within 18" (45 cm) of conduit entrances for Group C hazardous locations.

IMPORTANT!

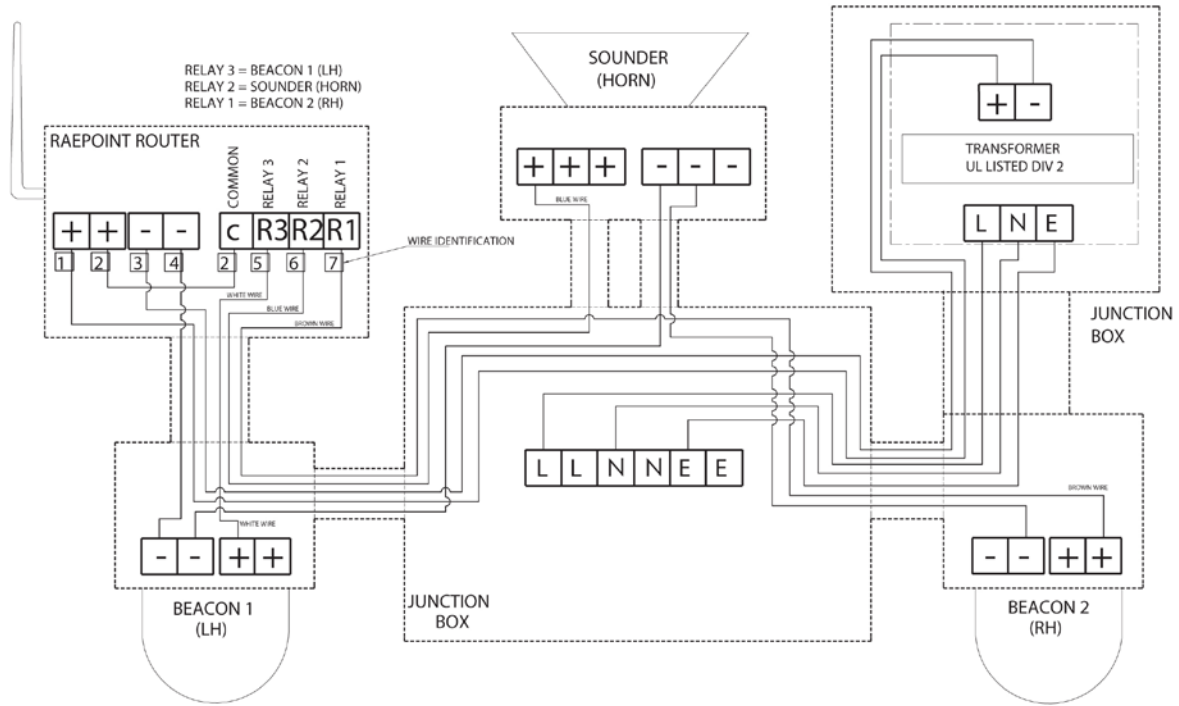
Prior to factory shipment, the RAEPoint is tested. However, the instrument should be tested after installation.

3.2.1. Complete Wireless Alarm Bar Wiring Diagram

The schematic diagram below shows internal wiring of the Wireless Alarm Bar. Refer to the diagram on page 13 for power connections.

Note: Thermistors are pre-installed in the Junction Box to protect the relays.

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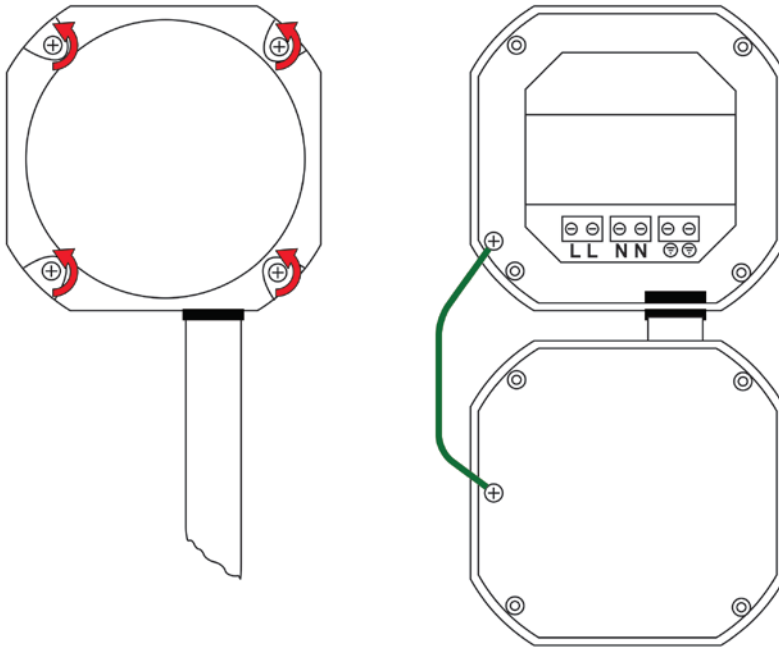


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3.2.2. Opening The Junction Box

You must remove the cover assembly from the front of the junction box in order to connect wires to the terminal block.

Unscrew the four screws on the front of the junction box.



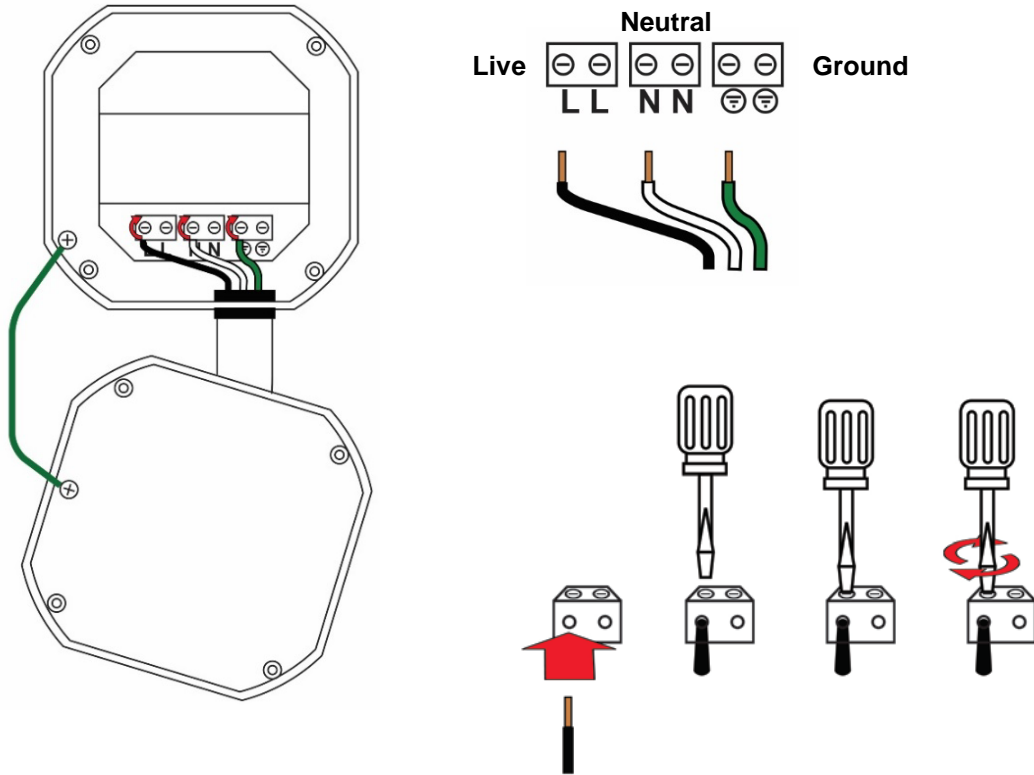
Before lifting the cover, gently rock it to break the seal.

Gently lift the cover away from the base of the enclosure to gain access to the interior. Note: A ground wire connects the cover and the base of the junction box. Be careful not to damage it.

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3.2.3. Connecting AC Power (Mains) Wiring

This diagram shows the wiring for external AC (Mains) power to the RAEPPoint Wireless Alarm Bar. Follow the local wire color code scheme for your region.



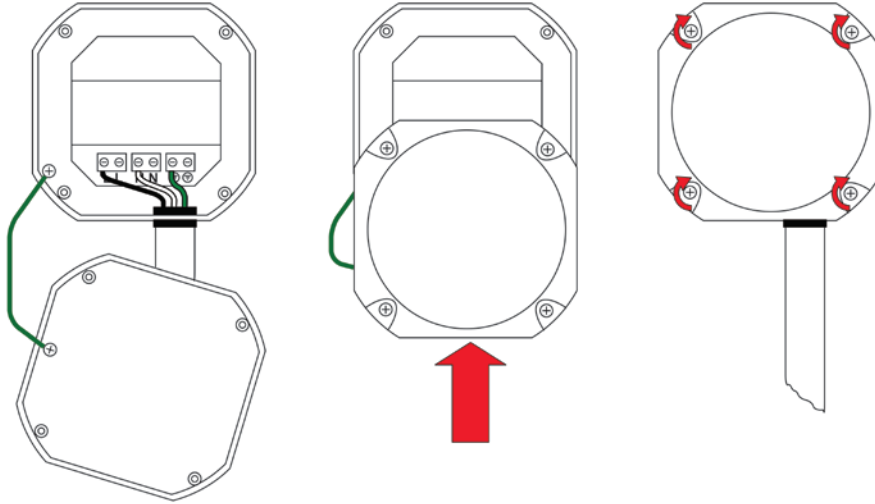
Note: This diagram only shows the connection points for external power and ground. For clarity, no other wires for the Wireless Alarm Bar are shown.

Other wires are already connected to the RAEPPoint and the rest of the Wireless Alarm Bar. Do not alter them or their connections.

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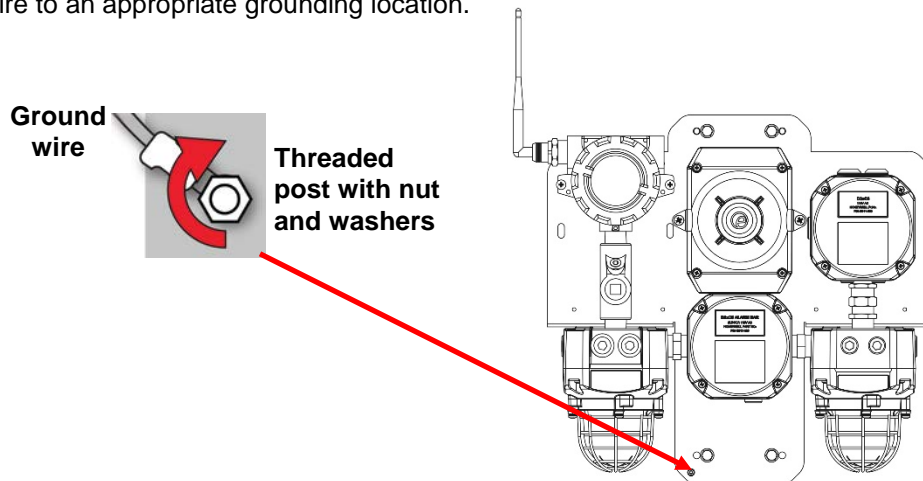
3.2.4. Reassembly

Once wiring is completed, carefully place the cover back onto the base, avoiding damage to the mating surfaces. Make sure it is perfectly aligned with the base and then slowly tighten the four screws.



3.2.5. External Grounding

If external or redundant grounding (earth connection) is required, a threaded post is located on plate for wiring to ground (earth). Place the round lug from the ground wire over the threaded post and then the split washer, flat washer, and nut. Tighten the nut and then connect the other end of the ground wire to an appropriate grounding location.



IMPORTANT!

Prior to factory shipment, the Wireless Alarm Bar is tested. However, the instrument should be tested after installation.

Wireless Alarm Bar Installation Guide

4. Powering And Programming

Refer to the RAEPoint User's Guide for information on how to power, test, and program the RAEPoint. The horn and lights of the Wireless Alarm Bar are prewired, so all operations are controlled by the RAEPoint.

5. AC-Powered Wireless Alarm Bar Specifications

The AC-Powered Wireless Alarm Bar includes the RAEPoint, as specified in the RAEPoint User's Guide, plus two strobe lights and a horn, as detailed below:

Input Power	110 VAC 60 Hz, 35W maximum
Wireless	2.4GHz ISM-band, IEEE 802.15.4/Mesh Radio
Transmission Range	1,000 ft (300m) typical
IP Rating	IP-65
Mechanical Interface	3/4" NPT Male
Installation	2" pipe holding or wall mounting
Temperature	-4° F to 104° F (-20° C to +40° C) (Certified)
Humidity	0 to 95% relative humidity, non-condensing
Pressure	90 to 110kPa
Status Indicators	4 LEDs (Network, Alarm, Communication, Mode)
Dimensions	17.95" L x 18.75" W x 6.9" H (456 x 476 x 173 mm)
Housing Material	Aluminum
Weight	26.5 lbs (12 kg)
Safety Compliance	UL: Class I, Division 2 Group A,B,C,D
Wireless Certification	FCC Part 15 R&TTE directive (1999/5/EC) (Contact RAE Systems for other countries)
Strobes	Two 10 Joule xenon strobes (yellow & red) Peak Intensity: 19103 Cd (yellow), 3332 Cd (red) Material: Marine-grade LM6 aluminum alloy
Sounder (Horn)	112dBA at 3 ft (1m) Material: Marine-grade aluminium Al Si12 Cu

Specifications subject to change

Wireless Alarm Bar Installation Guide

6. DC-Powered Wireless Alarm Bar Specifications

The DC-Powered Wireless Alarm Bar includes the RAEPoint, as specified in the RAEPoint User's Guide, plus two strobe lights and a horn, as detailed below:

Input Power	24 to 28VDC, 35W maximum
Wireless	2.4GHz ISM-band, IEEE 802.15.4/Mesh Radio
Transmission Range	1,000 ft (300m) typical
IP Rating	IP-65
Mechanical Interface	3/4" NPT Male
Installation	Wall mounting
Temperature	-4° F to 120° F (-20° C to +50° C) (Certified)
Humidity	0 to 95% relative humidity, non-condensing
Pressure	90 to 110kPa
Status Indicators	4 LEDs (Network, Alarm, Communication, Mode)
Dimensions	17.95" L x 18.75" W x 6.9" H (456 x 476 x 173 mm)
Housing Material	Aluminum
Weight	26.5 lbs (12 kg)
Safety Compliance	ATEX: II 3G Ex T2 G c (Zone 2) UL: Class I, Division 2 Group A,B,C,D
Wireless Certification	FCC Part 15 R&TTE directive (1999/5/EC) (Contact RAE Systems for other countries)
Strobes	Two 10 Joule xenon strobes (yellow & red) Peak Intensity: 19103 Cd (yellow), 3332 Cd (red) Material: Marine-grade LM6 aluminum alloy
Sounder (Horn)	112dBA at 3 ft (1m) Material: Marine-grade aluminum Al Si12 Cu

Specifications subject to change

Brazil Radio Specifications

Radio model: RM900A

Frequency range: Within 902 to 907.5 MHz and 915 to 928 MHz, use IEEE 802.15.4 channel 1, 6, 7, 8, 9 and 10

Modulation: 802.15.4 DSSS BPSK

RF power(Tx): 20dBm

Data rate: 40kbps

Radio model: RM2400A

Frequency range: 2.400 to 2.4835GHz

Modulation: 802.15.4 DSSS BPSK

RF power(Tx): 20dBm

Data rate: 250kbps

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Wireless Approval For QATAR In Middle East

ictQATAR

Type Approval Reg. No.: R-4697

Type Approval Reg. No.: R-4465

Wireless Approval For UAE In Middle East

TRA REGISTERED No: ER36636/15

DEALER No: HONEYWELL INTERNATIONAL MIDDLE EAST - LTD - DUBAI BR

TRA REGISTERED No: ER36063/14

DEALER No: HONEYWELL INTERNATIONAL MIDDLE EAST - LTD - DUBAI BR

Hazardous Location Application

The Wireless Alarm Bar includes multiple components (RAEPoint, junction box, two strobe lights, and one horn). The table below shows suitable application based on the components for the combined system.

US
Cl. I Div 2, Group C, D



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