

RAEPoint

DC-Powered Wireless Alarm Bar Installation Guide



RAEPoint DC-Powered Wireless Alarm Bar Installation Guide

Special Servicing Note

If the instrument needs to be serviced, contact either:
The RAE Systems distributor from whom the instrument was purchased; they will return the instrument on your behalf.

or

The RAE Systems Technical Service Department. Before returning the instrument for service or repair, obtain a Returned Material Authorization (RMA) number for proper tracking of your equipment. This number needs to be on all documentation and posted on the outside of the box in which the instrument is returned for service or upgrade. Packages without RMA Numbers will be refused at the factory.



© Copyright 2014 RAE Systems by Honeywell.

RAEPoint DC-Powered Wireless Alarm Bar Installation Guide

Contents

| | |
|---|-------------------------------------|
| WARNINGS | 2 |
| 1 General Information | 3 |
| 2 Purpose Of This Guide | 4 |
| 3 Proper Product Disposal At End Of Life..... | 4 |
| 4 FCC Part 15 Statement | 4 |
| 5 Flexible Configurations..... | 5 |
| 6 RAEPoint DC-Powered Wireless Alarm Bar Mounting | 6 |
| 6.1 Drilling Chart & Dimensions | 7 |
| 6.2 DC-Powered Wireless Alarm Bar Wiring | 8 |
| 6.2.1 Complete RAEPoint DC-Powered Wireless Alarm Bar Wiring Diagram..... | 9 |
| 6.2.2 Opening The Horn..... | 11 |
| 6.2.3 Connecting Power Wiring | 12 |
| 6.2.4 Internal Grounding | 13 |
| 6.2.5 Reassembly..... | 14 |
| 6.2.6 External Grounding | 14 |
| 7 Powering And Programming | 14 |
| 7.1 RAEPoint DC-Powered Wireless Alarm Bar Individual Component Specifications | 15 |
| 8 Replacement parts | 17 |
| 9 Technical Support..... | Error! Bookmark not defined. |
| 10 RAE Systems Contacts | 19 |

RAEPoint DC-Powered Wireless Alarm Bar Installation Guide

IMPORTANT! **Read Before Installing**

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

RAEPoint DC-Powered Wireless Alarm Bar Installation Guide

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. Use and service this product only in an area known to be non-hazardous.

WARNINGS

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

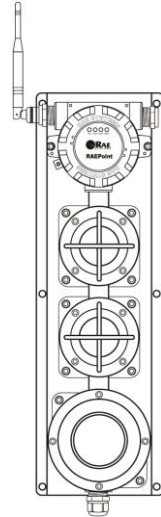
AVERTISSEMENT

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.

RAEPoint DC-Powered Wireless Alarm Bar Installation Guide

1 General Information

As part of a wireless mesh network, the RAEPoint DC-Powered 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. RAEPoint relay settings can be fully configured wirelessly via the system controller. RAEPoint can also be configured as a wireless host, and communicate directly with detectors, providing a localized alarm notification solution that does not require a controller. The RAEPoint DC-Powered Wireless Alarm Bar is suitable for use in ATEX Zone 1 hazardous area locations.



Key Features

- Mounted and pre-wired with two 5J xenon lights and a 110dB 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 ATEX Zone 1 hazardous locations
- Explosion-proof enclosure for hazardous environment applications
- LEDs indicate status

Applications

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

RAEPoint DC-Powered Wireless Alarm Bar Installation Guide

2 Purpose Of This Guide

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

3 Proper Product Disposal At End Of Life



The Waste Electrical and Electronic Equipment (WEEE) directive (2002/96/EC) is intended to promote recycling of electrical and electronic equipment and their components at end of life. This symbol (crossed-out wheeled bin) indicates separate collection of waste electrical and electronic equipment in the EU countries.

4 FCC Part 15 Statement

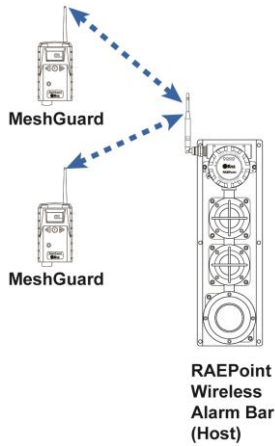
This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

RAEPoint DC-Powered Wireless Alarm Bar Installation Guide

5 Flexible Configurations

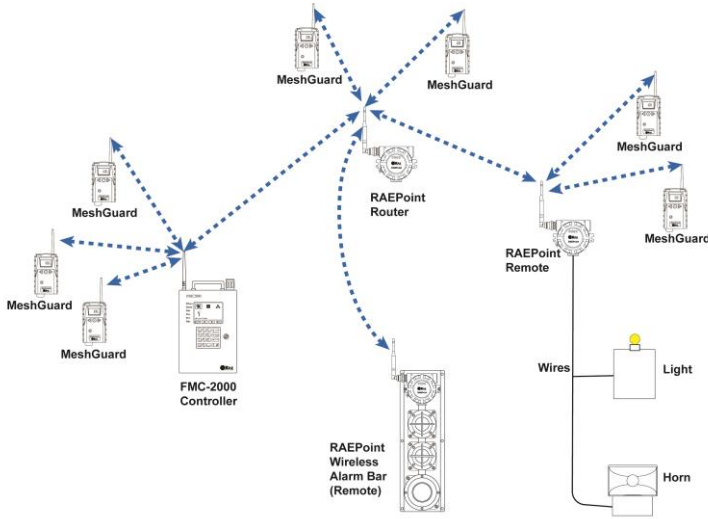
RAEPoint, including the RAEPoint DC-Powered Wireless Alarm Bar, can be configured for large or small systems, and the network can be expanded or units removed, depending on the facility or facilities being monitored.

Simple configuration that uses MeshGuard sensors and a RAEPoint DC-Powered Wireless Alarm Bar host



RAEPoint DC-Powered Wireless Alarm Bar Installation Guide

Large network, including externally controlled devices



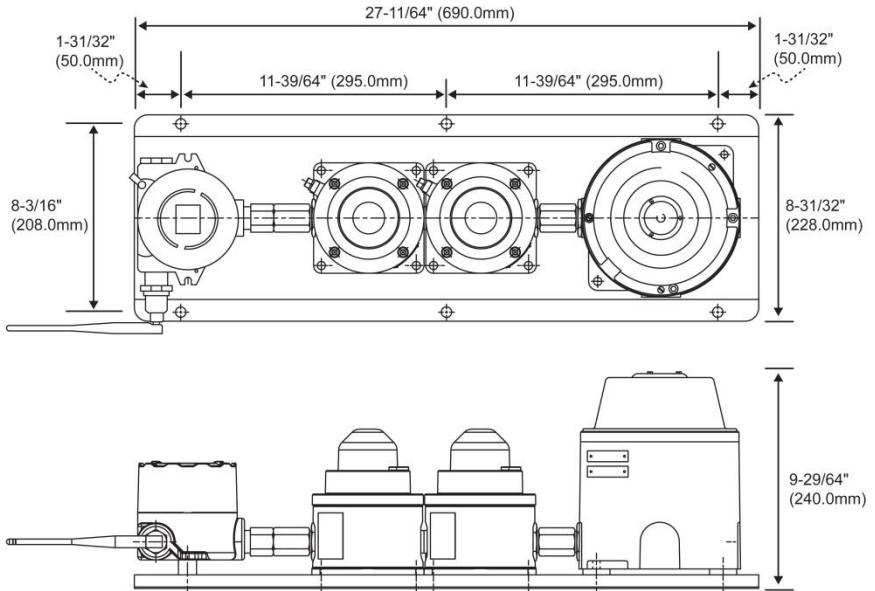
6 RAEPoint DC-Powered Wireless Alarm Bar Mounting

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

RAEPoint DC-Powered Wireless Alarm Bar Installation Guide

6.1 Drilling Chart & Dimensions

When mounting the RAEPoint on a wall, make sure to use heavy-duty steel screws spaced as indicated below.



Follow these steps:

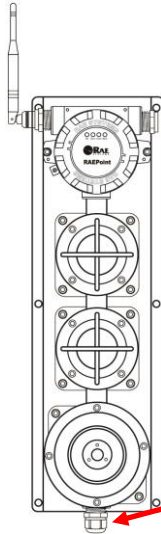
1. Locate the RAEPoint DC-Powered Wireless Alarm Bar on a wall or other flat surface and mark the six holes' locations.
2. Remove the RAEPoint DC-Powered Wireless Alarm Bar.
3. Drill the six holes.
4. Hold the RAEPoint DC-Powered Wireless Alarm Bar firmly against the wall and insert and tighten the screws.

The RAEPoint DC-Powered Wireless Alarm Bar is now ready for electrical wiring and testing.

RAEPoint DC-Powered Wireless Alarm Bar Installation Guide

6.2 DC-Powered Wireless Alarm Bar Wiring

The RAEPoint DC-Powered Wireless Alarm Bar already has most wiring done at the factory. It is only necessary to connect the positive and negative DC 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 an M25 threaded insert (ATEX)

Note: Ensure that only the correct listed or certified cable glands (not included) are used and that the assembly is correctly grounded (earthed). All cable glands should be of an equivalent IP rating to that of the unit and integrated with the unit so that this rating is maintained.

IMPORTANT!

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

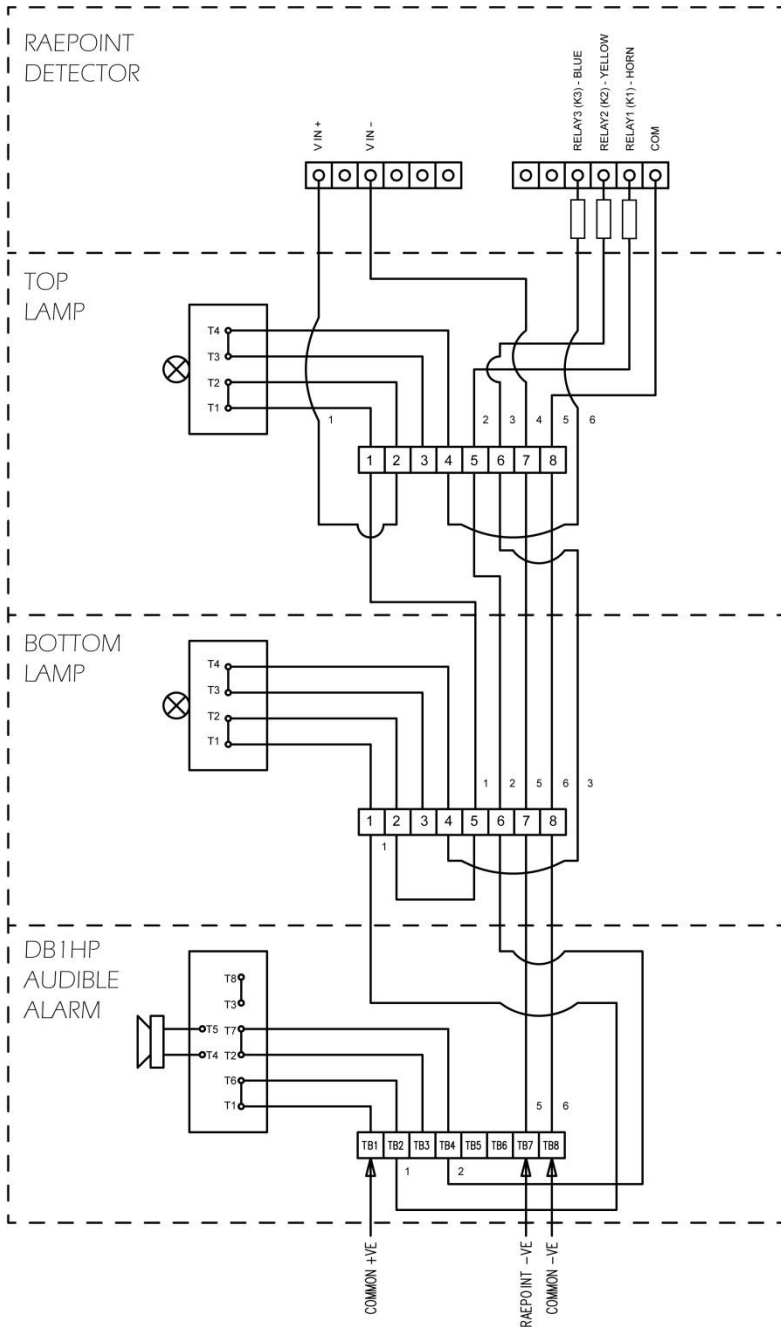
RAEPoint DC-Powered Wireless Alarm Bar Installation Guide

6.2.1 Complete RAEPoint DC-Powered Wireless Alarm Bar Wiring Diagram

The diagram on the next page shows how the RAEPoint DC-Powered Wireless Alarm Bar is wired.

Refer to the diagram on page 12 for power connections.

RAEPoint DC-Powered Wireless Alarm Bar Installation Guide

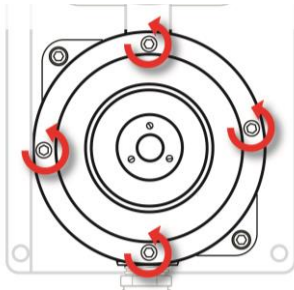


RAEPoint DC-Powered Wireless Alarm Bar Installation Guide

6.2.2 Opening The Horn

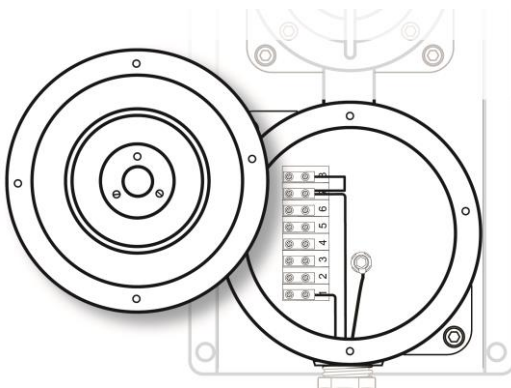
You must remove the cover assembly from the front of the horn in order to connect wires to the terminal block.

Unscrew the four M6 screws (5.0mm hex key) holding the cover assembly to the base. Keep these screws in a safe, accessible place; they are not retained in the cover.



Before lifting the cover, gently twist the cover assembly clockwise and then counterclockwise to break the seal.

Continue to gently twist the cover clockwise and counterclockwise while gently lifting the cover assembly away from the base of the enclosure to gain access to the interior.

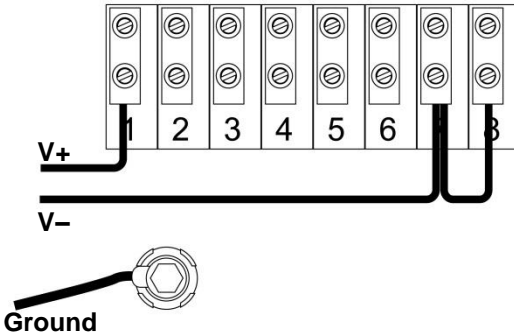


Note: The cover assembly is connected to the cover by a nylon restraining strap.

RAEPoint DC-Powered Wireless Alarm Bar Installation Guide

6.2.3 Connecting Power Wiring

This diagram shows the factory wiring for DC power to the RAEPoint DC-Powered Wireless Alarm Bar. The internal ground point is also shown:



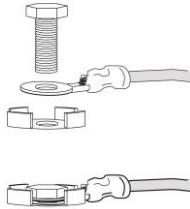
Note: This diagram only shows the connection points for external power and ground. For clarity, other wires for the RAEPoint DC-Powered Wireless Alarm Bar are not shown. Refer to the schematic drawing on page 6.2.19 for comprehensive wiring.

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

RAEPoint DC-Powered Wireless Alarm Bar Installation Guide

6.2.4 Internal Grounding

If internal grounding is required, connect the ground wire's connector to the location shown in the wiring diagram, and tighten it down using the nut and washer:



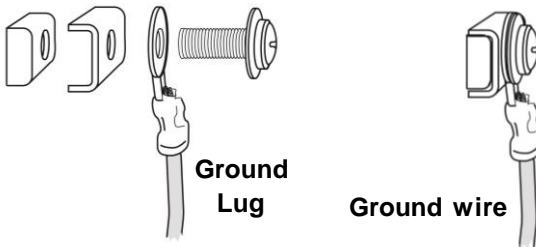
RAEPoint DC-Powered Wireless Alarm Bar Installation Guide

6.2.5 Reassembly

Once wiring is completed, ensure that the mating surfaces of both the cover and body are well covered with a suitable anti-seize compound. Carefully lower the cover assembly back onto the base, avoiding damage to the mating surfaces, ensuring the O-ring is correctly seated in its groove during reassembly. Replace the four M6 screws into the holes in the cover assembly and tighten evenly. Ensure the required gap (0.2mm maximum) is maintained between the cover and the base.

6.2.6 External Grounding

If external or redundant grounding is required, a lug is located on each light and the horn. There are also two points on the exterior of the RAEPoint. Screw the ground wire's connector onto the lug and run it to the appropriate grounding location.



7 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 are prewired, so all operations are controlled by the RAEPoint.

RAEPoint DC-Powered Wireless Alarm Bar Installation Guide

7.1 RAEPoint DC-Powered Wireless Alarm Bar Individual Component Specifications

The RAEPoint 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:

| | |
|-------------------------------------|--|
| Alarm Bar | |
| Input Voltage | 24 VDC |
| Peak Current Consumption | 1.5A @ 24 VDC |
| IP Rating | IP-65 |
| Back Plate Material | 316 stainless steel |
| Dimensions | 27-11/64" (690 mm) x 9" (229 mm) x 9.5" (241 mm) |
| Weight | 31 lbs (14 kg) |
| 5-Joule Xenon Strobes (Each) | |
| Peak Intensity | Yellow: 19,103 Cd 2,665 Cd (Blue) |
| Material | LM25 TF Marine-Grade Alloy |
| Horn | |
| Peak Decibels | 110 dBA at 10 feet (3.05m) |
| Material | LM25 TF Marine-Grade Alloy with ABS Flare |

Specifications subject to change

RAEPoint DC-Powered Wireless Alarm Bar Installation Guide

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

RAEPoint Alarm Bar Hazardous Location Classification

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

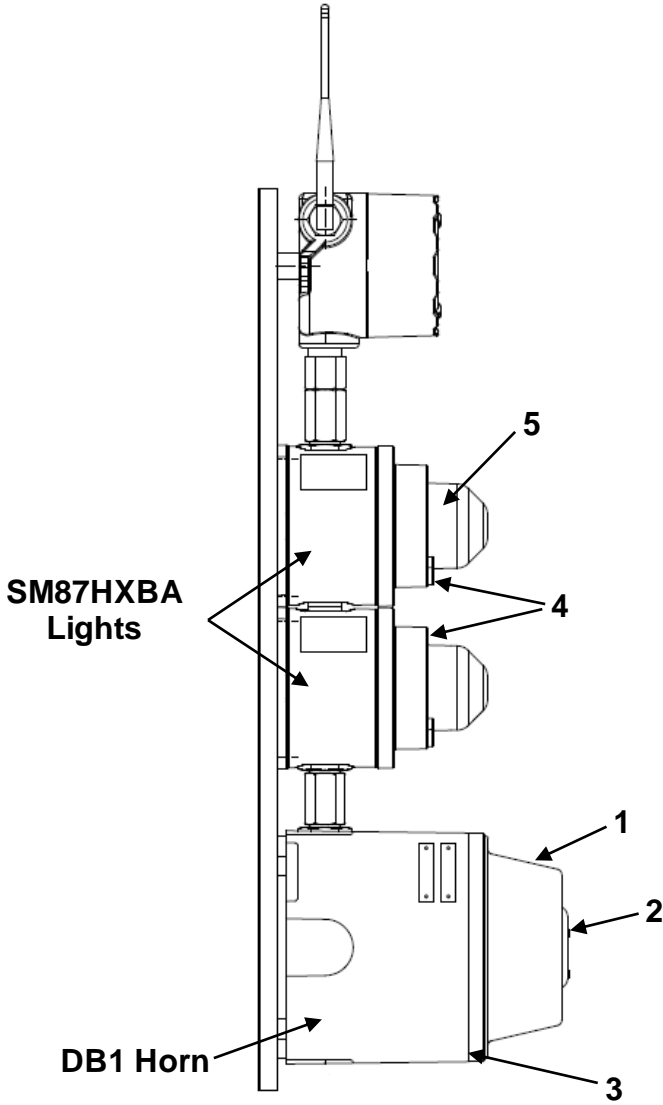
| |
|--------------------|
| ATEX |
| Ex II 2G IIB T5 Gb |

Temperature range: $-20^{\circ}\text{C} < T_{\text{amb}} < 55^{\circ}\text{C}$

RAEPoint DC-Powered Wireless Alarm Bar Installation Guide

8 Replacement parts

Refer to next page for part numbers and descriptions.



RAEPoint DC-Powered Wireless Alarm Bar Installation Guide

Part Numbers and Descriptions

| Item Number | RAE Systems Part Number | RAE Systems Description | Component Quantity | Component unit of measure |
|-------------|-------------------------|--|--------------------|---------------------------|
| 1 | F08-2101-000 | TOP HORN FLARE, DB1 HORN, AC/DC WIRELESS ALARM BAR | 1 | Ea. |
| 2 | F08-2102-000 | FLARE SCREW (RED), DB1 HORN (PACK OF 3), AC/DC WIRELESS ALARM BAR | 3 | Pack |
| 3 | F08-2103-000 | O-RING, DB1 HORN, AC/DC WIRELESS ALARM BAR | 1 | Ea. |
| | F08-2104-000 | PC BOARD, DB1 HORN, AC/DC WIRELESS ALARM BAR | 1 | Ea. |
| 4 | F08-2114-000 | YELLOW LENS AND LENS GUARD W/O-RING, SM87HXBA, DC WIRELESS ALARM BAR | 1 | Ea. |
| 4 | F08-2115-000 | BLUE LENS AND LENS GUARD W/O-RING, SM87HXBA, DC WIRELESS ALARM BAR | 1 | Ea. |
| 4 | F08-2116-000 | RED LENS AND LENS GUARD W/O-RING, SM87HXBA, DC WIRELESS ALARM BAR | 1 | Ea. |
| 4 | F08-2117-000 | GREEN LENS AND LENS GUARD W/O-RING, SM87HXBA, DC WIRELESS ALARM BAR | 1 | Ea. |
| 5 | F08-2118-000 | XENON STROBE BULB, SM87HXB, DC WIRELESS ALARM BAR | 1 | Ea. |

RAEPoint DC-Powered Wireless Alarm Bar Installation Guide

9 Technical Support

To contact RAE Systems Technical Support:

Monday through Friday, 7:00AM to 5:00PM Pacific (US)
Time

Phone (toll-free): +1 888-723-4800

Phone: +1 408-952-8461

Email: tech@raesystems.com

10 RAE Systems Contacts

RAE Systems by Honeywell

World Headquarters

3775 N. First St.

San Jose, CA 95134-1708 USA

Phone: +1 408.952.8200

Fax: +1 408.952.8480

E-mail: customerserv@raesystems.com

Web: www.raesystems.com

RAE Systems Technical Support

Monday through Friday, 7:00AM to 5:00PM Pacific Time

Phone: +1.408.952.8461

Email: tech@raesystems.com

RAEPoint DC-Powered Wireless Alarm Bar Installation Guide

EMEAI Headquarters

Life Safety Distribution AG
Javastrasse 2
8604 Hegnau, Switzerland
Phone: +41 (0)44 943 4300
Fax: +41 (0)44 943 4398
Email: haexpert@honeywell.com

RAE Systems France

ZI des Ayats
679390 MILLERY
France
Phone: +33 4 78 46 16 65
Fax: +33 4 78 46 25 98
Phone: +33 4 78 46 16 65
Fax: +33 4 78 46 25 98
Email: info-france@raeurope.com
Web: www.raesystems.fr

RAE BeNeLux BV

Rijndal 20
2904 DC Capelle a/d IJssel
Netherlands
Phone: +31 10 4426149
Fax: +31 10 4426148
Email: info@rae.nl
Web: www.rae.nl

RAE Systems Spain, s.l.

Av. Remolar, 31
08820 El Prat de Llobregat
Spain
Phone: +34 933 788 352
Fax: +34 933 788 353
Email: info@raespain.com
Web: www.raespain.com

RAEPoint DC-Powered Wireless Alarm Bar Installation Guide

RAE Systems (Hong Kong) Ltd.

Room 8, 6/F, Hong Leong Plaza

33 Lok Yip Road

Fanling, N.T, Hong Kong

Phone: +852.2669.0828

Fax: +852.2669.0803

Email: hksales@raesystems.com

RAE Systems Japan

Marunouchi Nakadori Bldg 6F-617-B,

2-3, Marunouchi 2-Chome, Chiyoda-ku,

Tokyo, 100-0005 Japan

Phone: +81-3-6269-9646

Fax: +81-3-6269-9647

Email: jpsales@raesystems.com

RAE Systems Korea

#1010, DaeMyungAnsVill First,

Sang-Dong 412-2, Wonmi-Gu, Bucheon,

Kyungki-Do, Korea

Phone: 82-32-328-7123

Fax: 82-32-328-7127

Email: krsales@raesystems.com



CORPORATE HEADQUARTERS

RAE Systems by Honeywell

3775 North First Street

San Jose, CA 95134 USA

Phone: 408.952.8200

Fax: 408.952.8480

customerserv@raesystems.com

WORLDWIDE SALES OFFICES

USA/Canada 1.877.723.2878

EMEA +41.044.943.4300

China +86.10.5885.8788-3000

Asia Pacific +852.2669.0828



DETECTION | **S**AFETY | **P**ROTECTION

For Pricing or Further
Information Please Contact Us.



+441158390495



www.manonglobal.com



sales@manonglobal.com

**Leading UK Suppliers In
Gas Detection, Safety & Protection
Products
Brand New & Genuine OEM Parts
UK & Worldwide Deliveries Available**



Worldwide Delivery



1000+ Genuine Parts & Equipment