OPTEX

High Mount Outdoor Detector
HX-80NRAM
WIRELESS MODEL

HX-80NRAM	Battery operated with 2 PIRs and anti-masking

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FEATURES

3.0 m
24 m
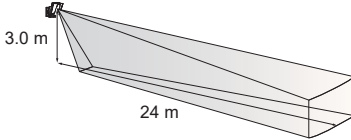
HX series with OPTEX's unique pyro-element provide; Highly reliable detection and performance against false or missed alarms. Stable and accurate detection in outdoor severe environment.

• Battery operated
• Battery saving logic
• Compatible with most wireless transmitter
• Long distance detection area (24 m)
• Flexible detection area setting with plates and flaps

• Unique pyro element
• Intelligent AND logic
• Dual signal processing logic
• Vegetation sway analysis logic
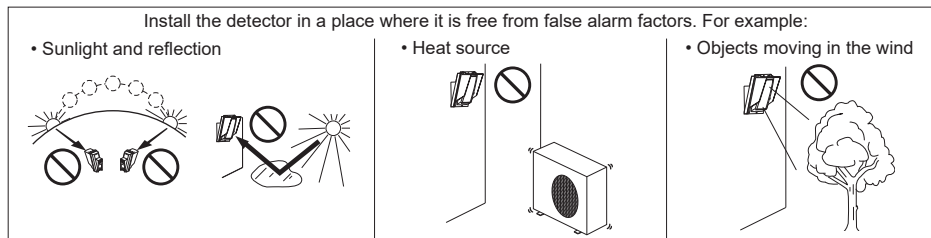• Digital anti-masking

CONTENTS

1   INTRODUCTION

1-1   BEFORE YOUR OPERATION

⚠Warning	Failure to follow the instructions provided with this indication and improper handling may cause death or serious injury.
⚠Caution	Failure to follow the instructions provided with this indication and improper handling may cause injury and/or property damage.

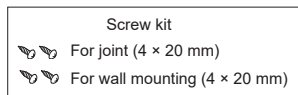The check ✔ mark indicates recommendation.   The nix 🚫 sign indicates prohibition.

⚠ Warning	⚠ Warning	⚠ Caution
Do not repair or modify product	Keep product away from water	Mount the unit scurely

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Mounting height

2.5 to 3.0 m
(8.2 to 10 ft.)

Keep the detector parallel to the ground.

Parallel

Tilt

Consider the direction of the intruder, for the setting of the detection area.

Install the detector in a place where it is free from false alarm factors. For example:

• Sunlight and reflection

• Heat source

• Objects moving in the wind
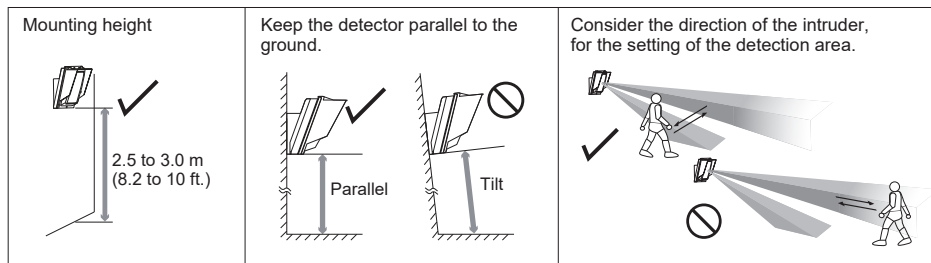
1-2 PARTS IDENTIFICATION

Bracket base

Base

Battery box

Terminals

Main unit

PIR1
(Do not touch)

Cover

Anti-masking infrared LED

PIR2
(Do not touch)

Bracket

Shaft cover

LED indicator

Lock screw* (M4 × 35 mm)

Screw (4 × 20 mm)

Lens

Lock screw

Accessories

Screw kit

For joint (4 × 20 mm)

For wall mounting (4 × 20 mm)
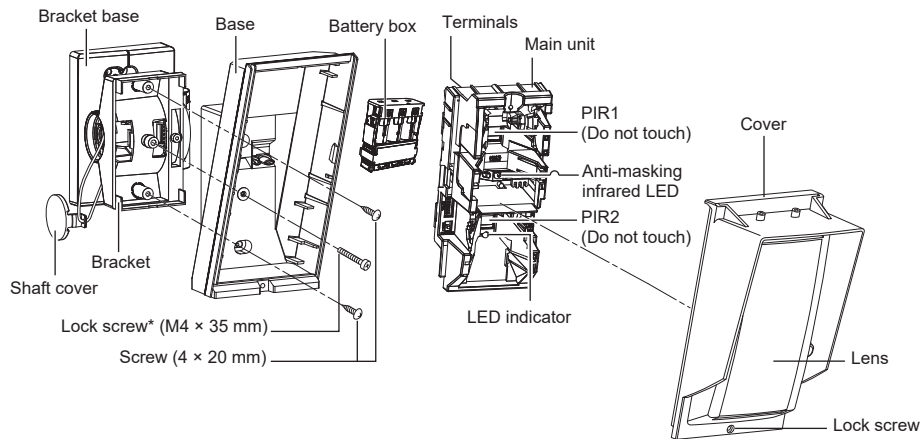
*Lock screw attached on bracket base.
Transmitter and battery are not included.

Alarm cable

Velcro tapes

Dummy battery

Battery lead (Black)

Battery lead (Red)

Additional battery parts
(for 1/2AA x2 only)

Push

Jacket

Minus

Plus

Minus

Plus
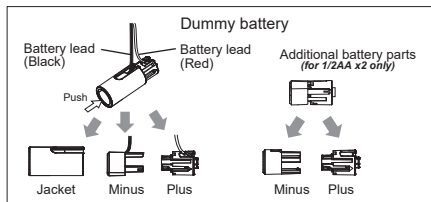
2 DETECTION AREA

2-1 OUTLINE OF DETECTION AREA

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Plate 2

Upper flap

Plate 1

Flap fix position
indicator

Plate fix position
indicator

Lower flap
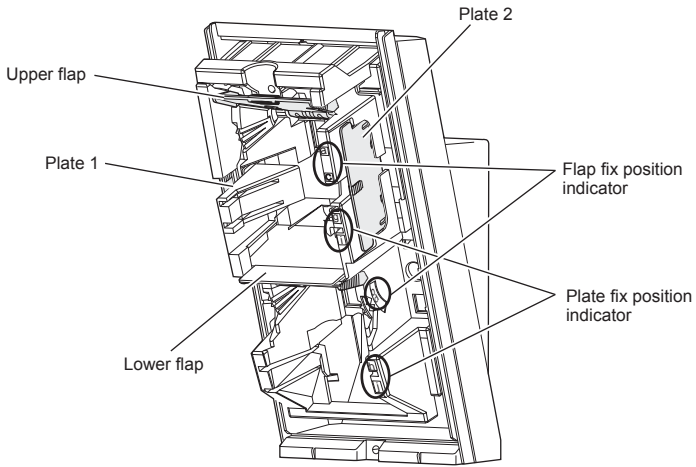
DETECTION AREA (factory default)

Side View
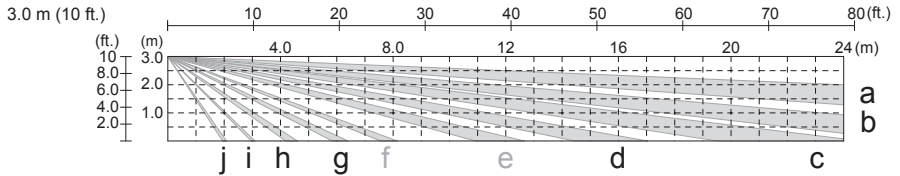
3.0 m (10 ft.)

| | | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 (ft.) |

(ft.) (m)
10   3.0
8.0
6.0   2.0
4.0   1.0
2.0

4.0   8.0   12   16   20   24 (m)

a
b

j i h   g   f   e   d   c

Caution>>
• Adjust 1 click (1.25° upward) for 3.0 m (10 ft.) height installation. (Refer to 5-2)

2.5 m (8.2 ft.)

| | | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 (ft.) |

(ft.) (m)
8.0   2.5
6.0   1.5
4.0
2.0   0.5

4   8   12   16   20   24 (m)

a
b

j i h g   f   e   d   c
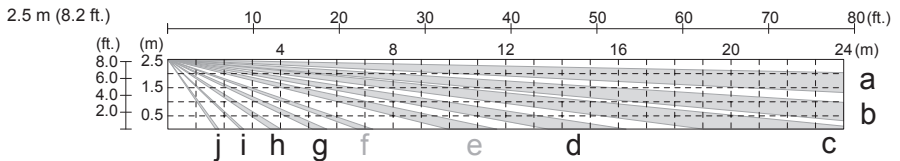
Caution>>
• Adjust 2 clicks (2.5° upward) for 2.5 m (8.2 ft.) height installation. (Refer to 5-2)

Top View

| | | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 (ft.) |

(ft.) (m)

4.0   8.0   12   16   20   24 (m)

3.0   1.0

0   0

3.0   1.0
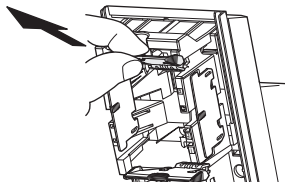
EN-3

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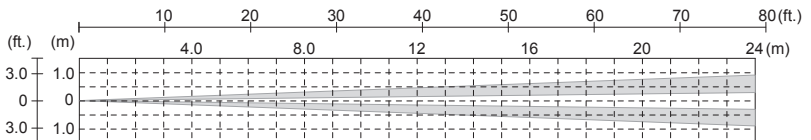
2-2 HOW TO REDUCE THE LONG RANGE DETECTION AREA

To adjust the LONG range of detection, set the upper and lower flaps as follows:

Upper flap
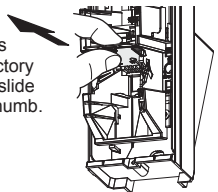
Lower flap

Flap fix position indicator
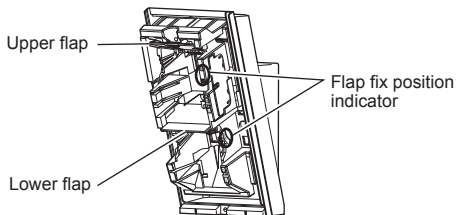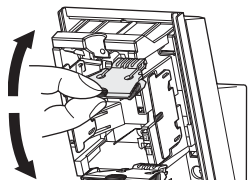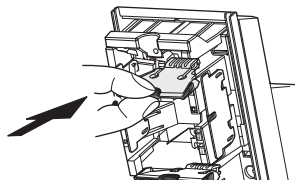
1 Pull out the flap.

Note>>
If the lower flap is located at the factory default position, slide it out with your thumb.

2 Move the flap to the position that corresponds with the desired detection distance.

3 Push the flap until it clicks into position.

PIR long range detection area reduction

The detection distance in the following table can be limited by combining the positions of the flap.Use the following table to determine the positions of the upper and lower flaps that set the required max. detection distance.
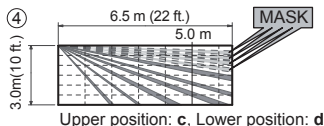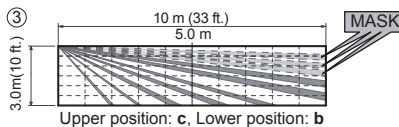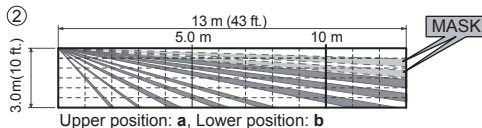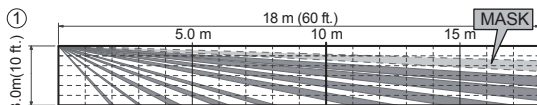
NOTES:
1. The distance may vary due to environmental conditions.
2. Always walk test the detector to confirm the detection distance.

Factory default
a
c
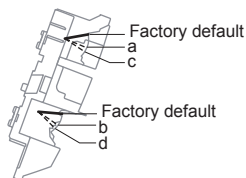
Factory default
b
d

NOTE: Use only the following combinations for the flap settings.

Upper \ Lower	Factory default	b	d
Factory default	24 m (80 ft.)	N.A.	N.A.
a	① 18 m (60 ft.)	② 13 m (43 ft.)	N.A.
c	N.A.	③ 10 m (33 ft.)	④ 6.5 m (22 ft.)

① 18 m (60 ft.)
3.0m(10 ft.) 5.0 m 10 m 15 m MASK
Upper position: **a**, Lower position: Factory default

② 13 m (43 ft.)
3.0m(10 ft.) 5.0 m 10 m MASK
Upper position: **a**, Lower position: **b**

③ 10 m (33 ft.)
3.0m(10 ft.) 5.0 m MASK
Upper position: **c**, Lower position: **b**

④ 6.5 m (22 ft.)
3.0m(10 ft.) 5.0 m MASK
Upper position: **c**, Lower position: **d**

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2-3 HOW TO DEACTIVATE THE SHORT RANGE DETECTION AREA

To adjust the SHORT range of detection,
set the upper and lower plates follows:

Plate 2

Plate 1

Plate fix position
indicator
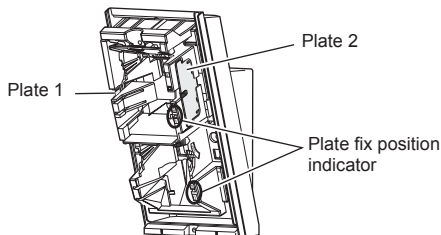
* Plate 1 and 2 are identical.

1 Remove the plate.

2 Insert the plate into the position
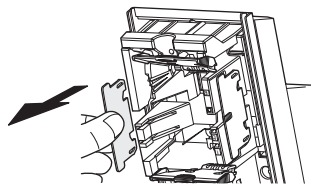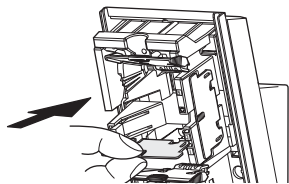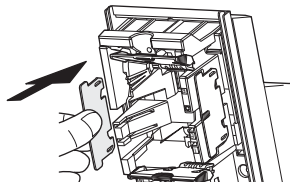determined by the required masking
distance until it clicks.

3 If any plate is not used, place
it in the storage position.

Note>>
Be careful not to lose the plates.

PIR short range detection area deactivation

Use the following table to determine the positions of the plates that set the required masked area.

g
i

h
j
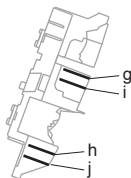
NOTE: Use only the following combinations for
the plate settings.

Lower / Upper	Not used	j	h
Not used	Factory default	①	N.A.
i	N.A.	②	③
g	N.A.	N.A.	④

① 24 m (80 ft.)
5.0 m   10 m   20 m
3.0m(10 ft.)
MASK Upper position: Factory default, Lower position: **j**

② 24 m (80 ft.)
5.0 m   10 m   20 m
3.0m(10 ft.)
MASK Upper position: **i**, Lower position: **j**

③ 24 m (80 ft.)
5.0 m   10 m   20 m
3.0m(10 ft.)
MASK Upper position: **i**, Lower position: **h**

④ 24 m (80 ft.)
5.0 m   10 m   20 m
3.0m(10 ft.)
MASK Upper position: **g**, Lower position: **h**

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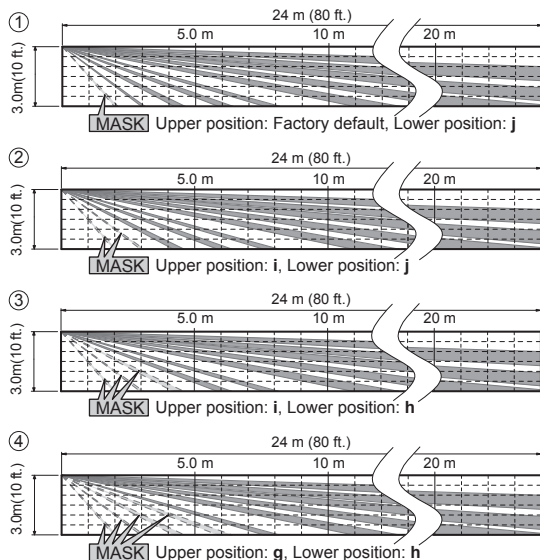
3 PREPARATIONS

To use the HX-80NRAM, first prepare transmitters and batteries. First check the following flowchart.

• Transmitter size	• Battery type	• Battery preparation	• Reference

Is it possible to accommodate the transmitter in the space between Base and Main unit (Refer to 3-1)?

Yes → Is the battery in the transmitter CR123, CR2, or 1/2AA?

Yes → It is possible to share the batteries of HX-80NRAM. Prepare the required batteries which are the same type as used in the transmitter.

→ Refer to "Battery Sharing" in 3-2.

No ↓

Change the transmitter.

No → It is not possible to share the batteries of HX-80NRAM. Prepare the required batteries for HX-80NRAM.
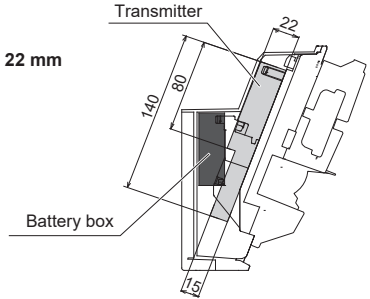
→ Refer to "Non Battery Sharing" in 3-2.

3-1 TRANSMITTER PREPARATION

Transmitters can be installed in one of two positions according to their size as follows.

Case 1)
122 × 50 × 33 mm

Battery box

Transmitter

122

33

Case 2)
80 × 50 × 22 mm

Transmitter

22

80

140

Battery box

15
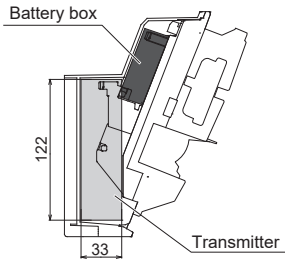
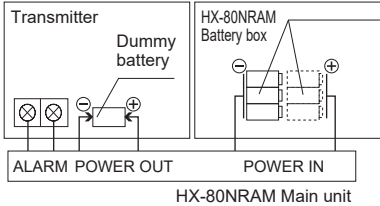## 3-2 BATTERY PREPARATION

-Battery Sharing   (Refer to 4-1.)

Power supplied is available from battery box to power HX-80NRAM and the transmitter.

Transmitter

Dummy battery

HX-80NRAM Battery box

ALARM POWER OUT   POWER IN

HX-80NRAM Main unit

Note that battery type should be the same as that used for the transmitter.

Type	CR123A	CR2	1/2AA	1/2AA(*1)
Voltage	3.0 VDC	3.0 VDC	3.6 VDC	7.2 VDC(*1)
Number of cells to use	3 cells	3 cells	3 cells	6 cells(*1)

*1: 3.6 VDC 1/2 AA battery in series.

-Non Battery Sharing   (Refer to 4-1.)

Separate batteries for HX-80NRAM and the transmitter.

Transmitter

HX-80NRAM Battery box

Not used

TROUBLE ALARM POWER OUT POWER IN

HX-80NRAM Main unit
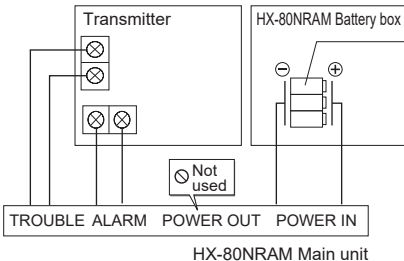
Type	CR123A
Voltage	3.0 VDC
Number of cells to use	3 cells

If CR123A battery cells are unavailable, three CR2 battery cells (3.0 VDC) can be substituted.
Do not use 1/2AA batteries.
* Do not use the attached dummy batteries or battery lead.

4 INSTALLATION (BATTERY AND TRANSMITTER)

-Installation procedure

DETERMINING THE DETECTION LENGTH → INSTALLING THE BATTERY -Battery Sharing -Non Battery Sharing → INSTALLING THE TRANSMITTER AND BATTERY BOX

4-1 INSTALLING THE BATTERY
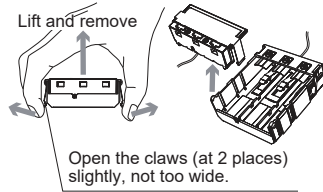
-Battery Sharing

⚠ Warning

Do not use batteries of different residual quantities (i.e.: mixing new and used batteries) or of different manufacturers and/or types together. Not observing the above may result in an explosion, leakage of electrolyte, emission of toxic gases or other outcomes that may be harmful to people and property.

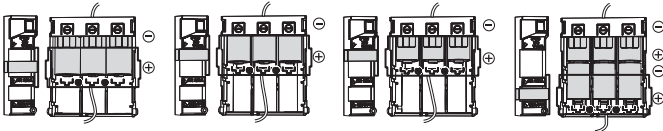1 Remove the battery box from the main unit.

Open the claws (at 2 places).

Pull

Disengage the bosses (at 2 places).
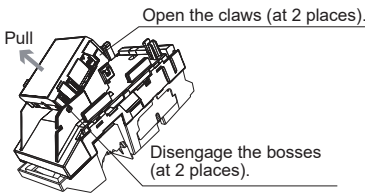
2 Remove the battery box cover.

Lift and remove

Open the claws (at 2 places) slightly, not too wide.

3 Mount batteries and place cover into correct position using indicator on side of battery box.

CR123A×3 (3.0 VDC)　CR2×3 (3.0 VDC)　1/2AA×3 (3.6 VDC)　1/2AA×6 (7.2 VDC×3) (*1)
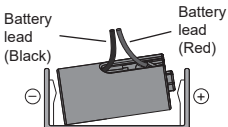
*1: 3.6 VDC 1/2 AA battery in series.

⚠ Caution

To avoid short circuit, do not connect ends of red and black wires together.

4 Open the transmitter cover and remove the battery.

5 Place the dummy battery in the battery case of transmitter.

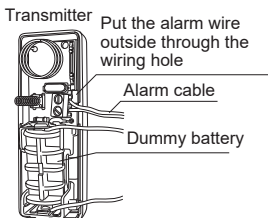Battery lead (Black)　　Battery lead (Red)

⚠ Caution

Do not pull the wire when taking out the dummy battery from the wireless transmitter.

Note>>
• When the dummy battery assemble, do not connect battery leads to power source.
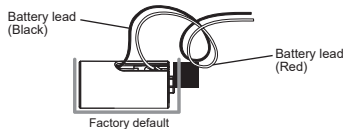• Make sure that the device is not energized when combining units.

* Refer to followings how to set the dummy battery unit adopting to each battery size.

6 Connect the alarm cable to the transmitter and close the cover.

Transmitter　Put the alarm wire outside through the wiring hole

Alarm cable

Dummy battery

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Dummy Battery unit

CR123A For CR123A, use the unit as the factory default setting.

Battery lead (Black)

Battery lead (Red)

Factory default

Once disassembled, see the steps below to reassemble the unit.

Pass through the black lead into the cutout.

Pass through the black lead into the cutout.

CR2
1/2AA
1/2AA x 2

Battery lead (Black)

Battery lead (Red)

Push

Jacket
(not used for this type of settings)

Minus parts

Plus parts
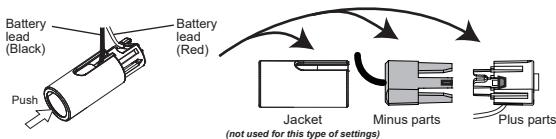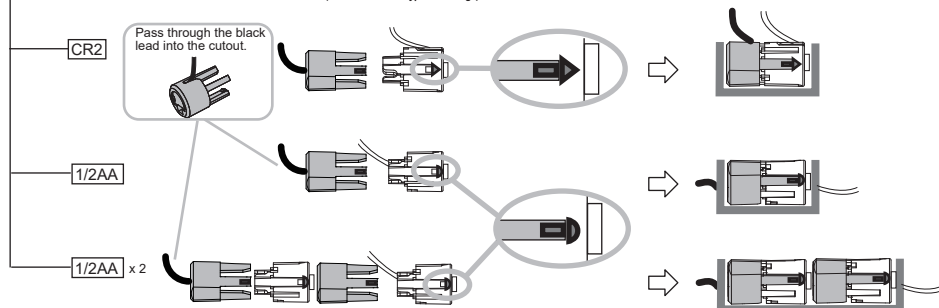
⚠ Warning
• Do not touch the ends of the red and black wires to avoid short-circuit.
• Do not pull the wire when taking out the parts from the jacket.

CR2

Pass through the black lead into the cutout.

1/2AA

1/2AA x 2

-Non Battery Sharing

Arrange 3 cells each of CR-123A (recommended) or CR2.

Follow the steps from 1 to 2 of "Battery Sharing" on the previous page.

3 After installing the batteries, check the guide on the side and install the cover.
Hook the cover firmly by the claws on the right and left sides.

CR123A   CR2

4 Connect the alarm cable to the transmitter and close the cover.

Transmitter

Alarm cable
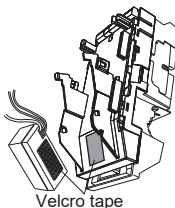
Put the alarm wire outside through the wiring hole
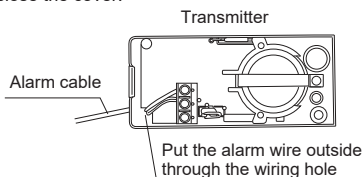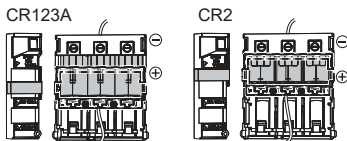
4-2 INSTALLING THE TRANSMITTER AND BATTERY BOX

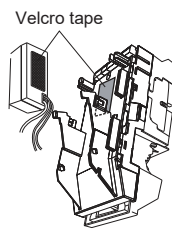1 Using Velcro tape (included in box), install transmitter to main unit.

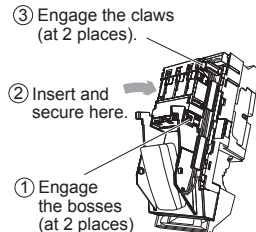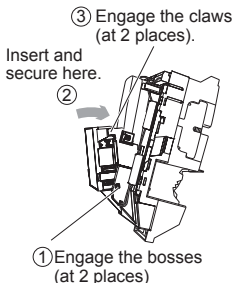**Example of Case 1**
(See 3-1)

Example of Case 2
(See 3-1)

Velcro tape

2 Connect the alarm cable to the terminal block of the main unit.

Velcro tape

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3 Install the battery box into the main unit and connect the necessary wires to the terminal block.
(Refer to 5-4 "WIRING".)

| **Example of Case 1** | **Example of Case 2** |

③ Engage the claws
(at 2 places).

② Insert and
secure here.

① Engage
the bosses
(at 2 places)

③ Engage the claws
(at 2 places).

Insert and
secure here.
②

① Engage the bosses
(at 2 places)
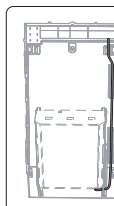
Caution>>

Install battery leads and alarm
cable through the grooves as
shown in diagram. Cut off
excess portion of wiring to
necessary length. Hanging
wires can be caught by base.

# 5 INSTALLATION (BRACKET AND MAIN UNIT)

Use the bracket for normal installation. The unit may be installed directly on the wall, without the bracket, only if
the following three conditions are met;
• The mounting height is less than 3.0 m (10 ft.).
• Horizontal adjustment is not necessary.
• The ground must be level.

5-1 MOUNTING WITH THE BRACKET

Using the bracket makes it possible to adjust the unit horizontally by ±90°.
In cases where the ground is uneven and therefore not parallel with the base of the unit, it is possible to adjust the
unit vertically by ±20°.

90°   90°
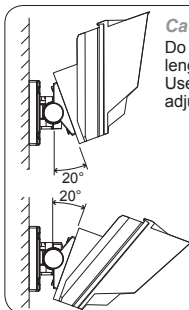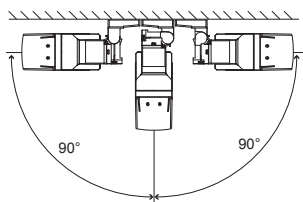
Caution>>
Do not change the detection
length with bracket.
Use the flaps and plates to
adjust the detection length.

20°
20°

1 Remove the Up-Down
lock screw.
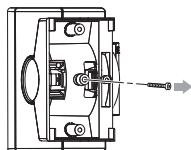
2 Push the shaft cover clip straightly to
remove the shaft cover.

Shaft cover

Push with
suitable tool.
e.g. small
screwdriver

Shaft cover clip
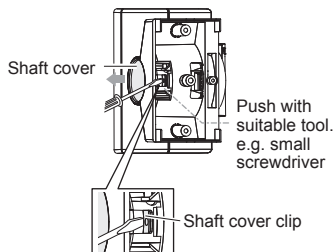
3 Loosen the adjustment screw
two turns.

Adjustment
screw
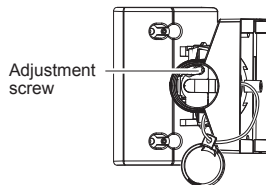
Caution>>
Do not loosen the screw
too much.
It may disassemble.

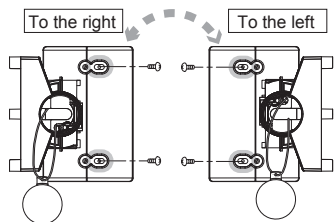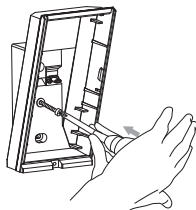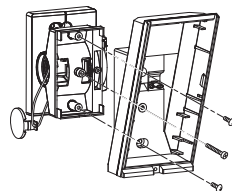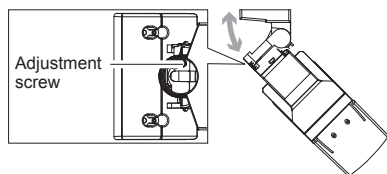4 Determine the horizontal direction (left or right) of the detector before installing the bracket on the wall.

| To the right | | To the left |

5 Open the wiring knockout and Up-Down lock screw knockout for the bracket.
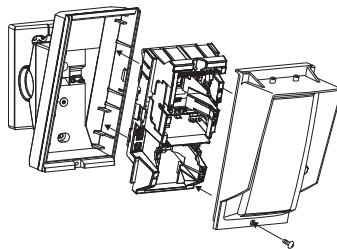

6 Pass wire through base knockout and install base to bracket.

7 Tighten the adjustment screw clockwise.

Adjustment screw

8 Wire to the terminal and install the main unit and lens on the base.

9 Complete the 5-2 "ADJUSTING THE VERTICAL ANGLE".

10 Remove the cover and the main unit to tighten the Up-Down lock screw, and install the main unit and cover on the base again.

11 Install shaft cover into place.

5-2 ADJUSTING THE VERTICAL ANGLE

For best performance, install detector parallel to the ground.
Decide the detection length. To change the detection length, adjust the flap and plate positions. Refer to the 2-2, 2-3 for the details.

Perform walk test to ensure detector is parallel to the ground.

24 m (80 ft.)

3.0 m (10 ft.)
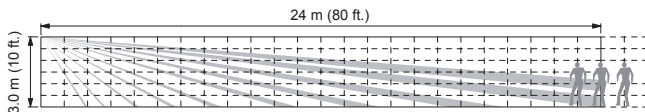
* This description assumes the detection length to be 0 m (0 ft.) to 24 m (80 ft.).

If the detection length is shorter than the intentional (refer to ②), change the detector angle upwards.

If the detection length is longer than the intentional (refer to ②), change the detector angle downwards.

If the detection length is enough to the intentional (refer to ②), the adjustment is complete.

Example >>

If the ground is level, no need to adjust. (0° is the origine.)

Adjust 2 clicks (2.5° upward) for 2.5 m (8.2 ft.) height installation.

Adjust 1 click (1.25° upward) for 3.0 m (10 ft.) height installation.

5-3 MOUNTING WITHOUT THE BRACKET

1 Fasten the base to the wall.

2 Fit the main unit to the base.

5-4 WIRING

- TAMPER OUTPUT (N.O.) *1
- TAMPER OUTPUT (COM) *1
- TAMPER OUTPUT (N.C.) *1
- TROUBLE OUTPUT
- TROUBLE OUTPUT
- SPARE (Non short)
- ALARM OUTPUT (N.O.)
- ALARM OUTPUT (COM)
- ALARM OUTPUT (N.C.)
- POWER OUTPUT (-) (3 to 7.2 VDC)
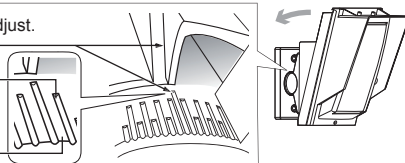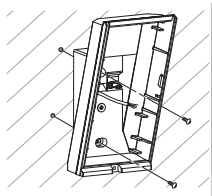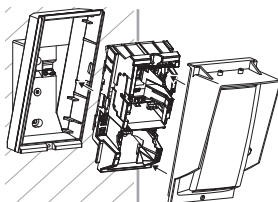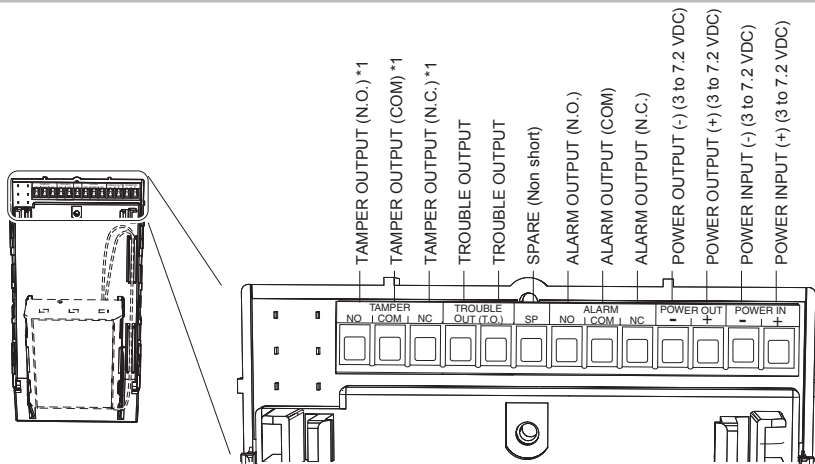- POWER OUTPUT (+) (3 to 7.2 VDC)
- POWER INPUT (-) (3 to 7.2 VDC)
- POWER INPUT (+) (3 to 7.2 VDC)

| TAMPER | | | TROUBLE OUT (T.O.) | | SP | ALARM | | | POWER OUT | | POWER IN | |
| NO | COM | NC | | | | NO | COM | NC | - | + | - | + |

*1: TAMPER terminals to be connected to a 24 hour supervisory loop.

-Battery Sharing

Transmitter   HX-80NRAM Battery box

Dummy battery

POWER POWER
ALARM OUTPUT INPUT

| TAMPER | | | TROUBLE OUT (T.O.) | | SP | ALARM | | | POWER OUT | | POWER IN | |
| NO | COM | NC | | | | NO | COM | NC | - | + | - | + |

HX-80NRAM Main unit
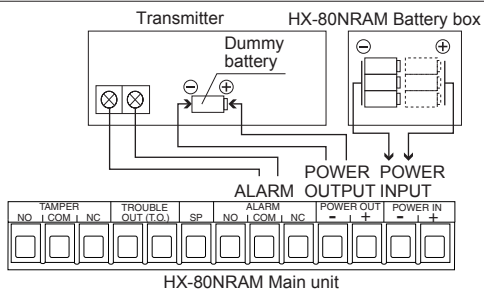
-Non Battery Sharing

- Use a transmitter with 2 inputs and connect one input to the Alarm wiring and the other to the Trouble wiring of the HX-80NRAM.

Note>>
If the transmitter has a "low battery input" connect it to the Trouble wiring.

- Use 2 small transmitter units and connect one unit to the alarm wiring and the other to the trouble wiring (the size of such transmitters should be small enough to be accommodated in the HX-80NRAM internal spaces (Case1/Case2)).

Transmitter   HX-80NRAM Battery box

Not used

TROUBLE OUTPUT   ALARM

POWER POWER
OUTPUT INPUT

| TAMPER | | | TROUBLE OUT (T.O.) | | SP | ALARM | | | POWER OUT | | POWER IN | |
| NO | COM | NC | | | | NO | COM | NC | - | + | - | + |

HX-80NRAM Main unit

EN-11

ENGLISH

FRANÇAIS

DEUTSCH

ITALIANO

ESPAÑOL

PORTUGUÊS
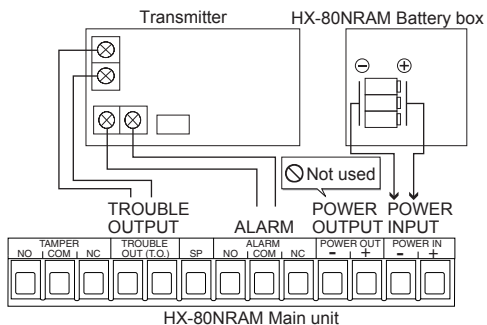
5-5 WALL TAMPER (OPTION)

Commercial magnet switch may be mounted as a wall tamper.
Magnet switch installation space is provided on the back of the main unit and the bracket.
Maximum size of an applicable magnet switch: D 9 x W 40 x H 9 mm (D 0.35 x W 1.57 x H 0.35 inches)
Magnet switch is not included.

Main unit

Bracket
Wiring Hole

Magnet switch
(Base side)
installation position

Magnet switch
(Wall side)
installation position

Magnet switch
(Wall side)
installation position

Magnet switch
(Bracket side)
installation
position

-WIRING DIAGRAM

Transmitter

Magnet
switch

TAMPER
NO   COM   NC
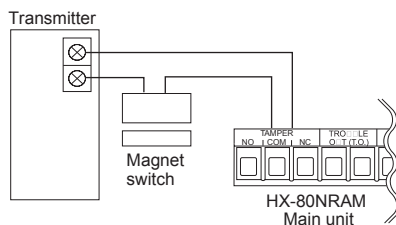
TROUBLE
O   T (T.O.)

HX-80NRAM
Main unit
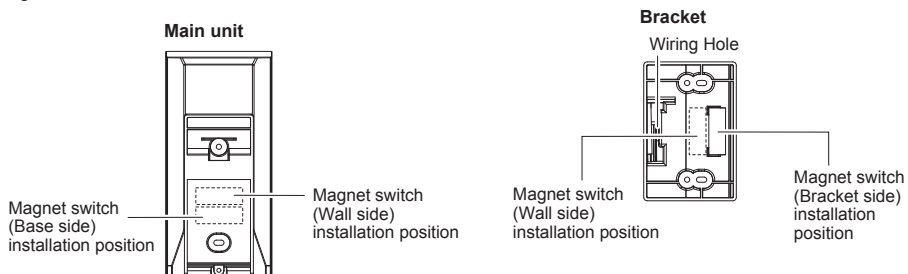
-Installation

1 Install the magnet switch (wall side) to the wall. To determine the installation position, use the "Installation position template" provided on the inside cover of the product package.

2 Open the wiring knockout with suitable tool e.g. screwdriver.
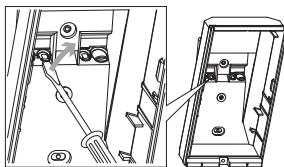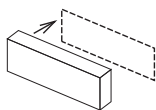
3 Install the other portion of the magnet switch to the back of the main unit or the bracket. Pull the wiring through the knockouts.

When not using the bracket

① Fix
② In
③ Out
④ Wiring sponge pad

When using the bracket

① Fix
② In
In
Tilt the bracket about 45° and pass through the wire.
③ Out
④ Out
Magnet switch

EN-12
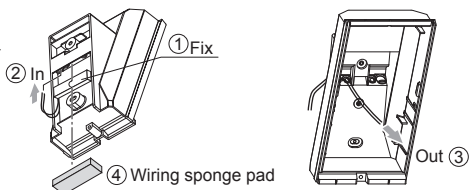
4 Install the bracket and the main unit to the walls surface.

5 Connect the magnet switch wiring to the tamper terminal of the main unit and the transmitter terminal.

6 WALK TEST

1 Set the DIP switch 1 to "ON" (default).

2 Check if detector reacts in intended detection area. Successful installation shows, LED light for two seconds after a person walks into detection area.

Detected   Not detected
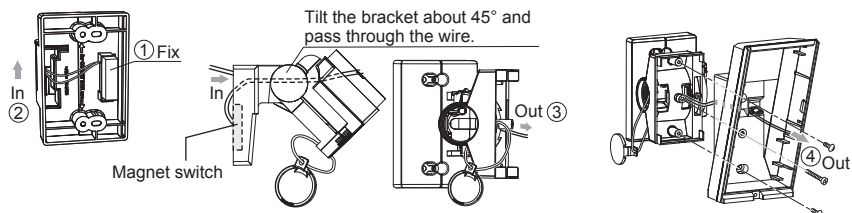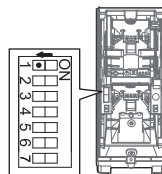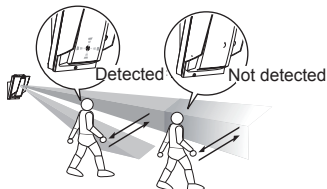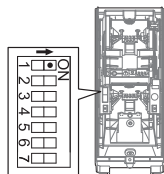
3 Set the DIP switch 1 to "NORM" and switch 6 to "OFF".

Note>>
• For the walk test, move more than 1.0 m (3.3 ft.) away from the detector.

Caution>>
After completing a walk test, always set the unit to NORM position for operation.
Using the unit in TEST mode will shorten the battery life.

7 SETTING

PIR 1
(Do not touch)

DIP switch
1. WALK TEST MODE
2. BATTERY SAVING TIMER
3. IMMUNITY
4. TROUBLE OUTPUT TYPE
5. LOW BATTERY OUTPUT
6. LED ON/OFF
7. PIR AND/OR

PIR SENSITIVITY

SHORT

LONG

MW SENS.

STD
OFF
AM SENS.

ANTI-MASKING
SENSITIVITY

PIR 2
(Do not touch)
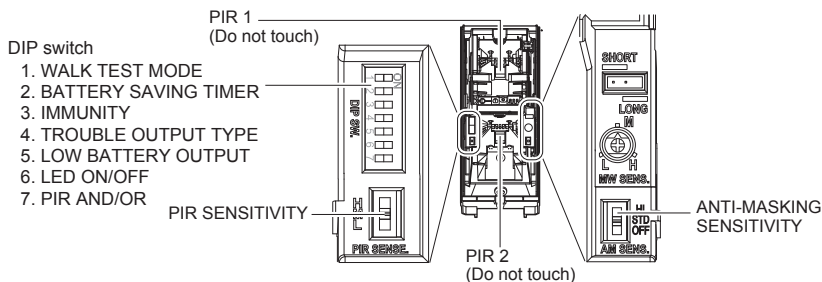
-WALK TEST MODE   DIP switch 1
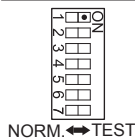
NORM.↔TEST

POSITION	FUNCTION
TEST (Factory default)	• LED will lights when someone detected regardless DIP-SW 6. (Lights up irrespective of the LED ON/OFF (DIPSW 6, refer to page 14) setting) • Alarm will be generated when someone detected regardless DIP-SW 2.
NORM.	• Normal operation. (Battery saving mode.) • LED is off. (When LED ON/OFF is OFF.)

-BATTERY SAVING TIMER   DIP switch 2

120s↔5s

Even if there are continuous alarm events, the alarm is generated only once in the timer period to save the battery life.

POSITION	FUNCTION
120s (Factory default)	120 sec.
5s	5 sec.

-IMMUNITY SWITCH
DIP switch 3

STD◄►IMMUNITY

POSITION	FUNCTION
STD (Factory default)	IMMUNITY logic is not activated.
IMMUNITY	IMMUNITY logic is activated. Use this under harsh environment (e.g. vegetation sway).

-TROUBLE OUTPUT TYPE
DIP switch 4

N.C.◄►N.O.

Select the contact point output form with the TROUBLE OUTPUT TERMINAL.

POSITION	FUNCTION
N.C. (Factory default)	N.C. signal is output to the TROUBLE OUTPUT TERMINAL.
N.O.	N.O. signal is output to the TROUBLE OUTPUT TERMINAL.

Trouble signal output>>

Trouble signal at regular intervals is output after trouble condition continues for a certain period.

• ANTI MASKING OUTPUT

When an object is placed close to the lens surface, for a period of more than 180 seconds, the IR Anti-Masking circuit will activate and generate a trouble signal. Anti-Masking output will be automatically reset within about one minute after a masking object is removed.

• LOW BATTERY OUTPUT (when the LOW BATTERY OUTPUT (DIP switch 5) is ON)

When the battery capacity becomes low, the unit automatically outputs fixed time transmission to call attention. When LOW BATTERY signal is output, Anti-Masking function will be canceled in order to extend the battery life. When LOW BATTERY signal is output, replace all the batteries with new ones.

⚠ Warning

Do not use batteries of different residual quantities (i.e.: mixing new and used batteries) or of different manufacturers and/or types together. Not observing the above may result in an explosion, leakage of electrolyte, emission of toxic gases or other outcomes that may be harmful to people and property.

-LOW BATTERY OUTPUT
DIP switch 5

OFF◄►ON

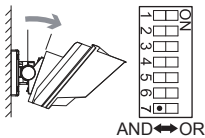| POSITION	FUNCTION
OFF (Factory default)	Low battery output is not operational.
ON	Low battery signal is output from the TROUBLE OUTPUT.

-LED ON/OFF
DIP switch 6

OFF◄►ON

POSITION	FUNCTION
OFF (Factory default)	The LED does not light even if someone detected.
ON	The LED lights when someone is detected.

-PIR AND/OR
DIP switch 7

AND◄►OR

POSITION	FUNCTION
AND (Factory default)	An alarm is output when both PIR1 and PIR2 detect an object.
OR	An alarm is output when either PIR1 or PIR2 detects an object. Selecting "OR" mode makes detection range longer than "AND" mode. Walk test to readjust the detection range is required when "OR" is selected. Actual adjustment should be conducted by adjusting the bracket angle. ⟵ OR mode only

Note>>

"OR" mode is appropriate for the sites that require more detectability rather than false alarm tolerance such as lighting control and camera activation.
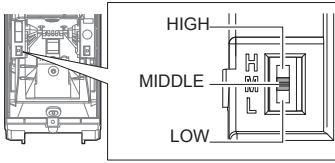
-PIR SENSITIVITY
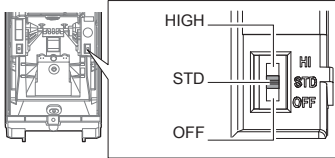
POSITION	FUNCTION
HIGH	High sensitivity
MIDDLE (Factory default)	Middle sensitivity
LOW	Low sensitivity

-ANTI-MASKING SENSITIVITY

ANTI-MASKING SENSITIVITY SELECTOR

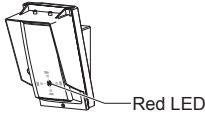| POSITION	FUNCTION
HIGH	High sensitivity
STD (Factory default)	Normal sensitivity
OFF	Disabled

Caution>>
After closing the cover, do not leave any objects closer than 1 meter from the unit.

8 LED INDICATION

Red LED

Blink   Light   OFF

DETECTOR CONDITION		LED INDICATOR (RED ONLY)
Warm-up		Blinks for approx. 90 sec.
Alarm		Lights for 2 sec.
Trouble output	Anti-Masking booting (Anti-Masking start up)	Blinks 2 times and goes off for 5 sec. and then repeats for 180 sec.
	Masking detection	Blinks 3 times and goes off for 3 sec. and then repeats.
	Low Battery Output	Blinks 4 times and goes off for 3 sec. and then repeats.

Note>>
To distinguish a trouble output caused by low battery power, the low battery power LED display will light up when the cover is opened even if the LED ON/OFF (DIP-SW 6, refer to 7) is set to OFF.

ENGLISH
FRANÇAIS
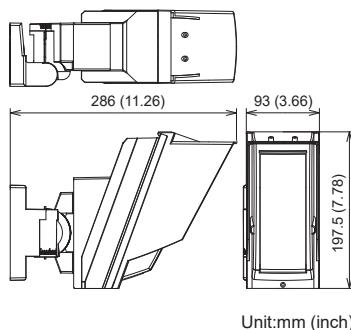DEUTSCH
ITALIANO
ESPAÑOL
PORTUGUÊS

ENGLISH

FRANÇAIS

DEUTSCH

ITALIANO

ESPAÑOL

PORTUGUÊS

9 SPECIFICATIONS

9-1 SPECIFICATIONS

Model	HX-80NRAM
Detection method	Passive infrared
PIR Coverage	24 m × 2.0 m (80 ft. × 6.6 ft.) narrow / 20 zones
PIR distance limit	6.5 m, 10 m, 13 m, 18 m (22 ft., 33 ft., 43 ft., 60 ft.)
Detectable speed	0.3 to 1.5 m/s (1 to 5 ft./s)
Sensitivity	2.0°C (3.6°F) at 0.6 m/s
Power input	3 to 7.2 VDC Lithium Battery (CR123A × 3, CR2 × 3, 1/2AA × 3, 1/2AA × 6)
Operating Voltage	2.5 to 9 VDC
Current draw	30 µA (standby) / 4 mA (max.) at 3 VDC
Alarm period	2.0 ±1 sec.
Warm-up period	Approx. 90 sec. (LED blinks)
Alarm output	Form C -Solid State Switch- 10 VDC 0.01 A max.
Trouble output	N.C./N.O. Selectable -Solid State Switch- 10 VDC 0.01 A max.
Tamper output	Form C. 28 VDC, 0.1 A max. changes when cover removed.
LED indicator	Disable: During normal operation. Enable: During WALK TEST or LED SW on. Red: Warm-up, Alarm, Trouble, Low battery
Operating temperature	-20°C to +60°C (-4°F to +140°F)
Environment humidity	95% max.
Weatherproof	IP55
Mounting	Wall
Mounting height	2.5 to 3.0 m (8.2 to 10 ft.)
Bracket adjust angle	Vertical: ±20° Horizontal: ±95°
Weight	780 g (27.5 oz.)
Accessories	Bracket, Screw (4 × 20 mm) × 4, Velcro tape × 2, Alarm cable, Dummy battery (with/without lead)

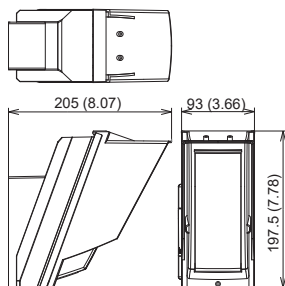* Specifications and designs are subject to change without prior notice.

The HX-80N series is only a part of a complete system, therefore we cannot accept complete responsibility for any damages or other consequences resulting from an intrusion.

As a rough indication of battery change timing, enter the battery type and the date it was first used.

Battery type _____   Date (Year/Month) _____

9-2 DIMENSIONS

Using bracket

286 (11.26)   93 (3.66)   197.5 (7.78)

Unit:mm (inch)

Without bracket

205 (8.07)   93 (3.66)   197.5 (7.78)

Unit:mm (inch)

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OPTEX INC./AMERICAS HQ (U.S.)
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URL: www.optex.net/th/th