59-3112-1 2309-21
UL 59-3112-0 2110-01

INSTALLATION INSTRUCTIONS

EN

Flexible Range Indoor Detector

FlipX series

ADVANCED MODELS

	Wide/Narrow area Flip lens	PIR	Anti-masking	Microwave
FLX-A-AM	✓	✓	✓	—
FLX-A-DAM-X5 *1	✓	✓	✓	✓ (10.525 GHz)
FLX-A-DAM-X8 *2	✓	✓	✓	✓ (10.587 GHz)
FLX-A-DAM-X9 *3	✓	✓	✓	✓ (9.425 GHz)

*1 Not certified to NF
*2 Not certified to UL and SBSC
*3 Not certified to EN 50131-2-4, NF, INCERT, SBSC and UL

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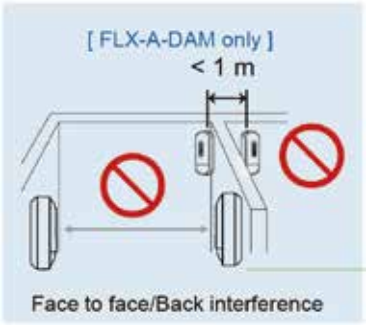
- Manufacturer's statement

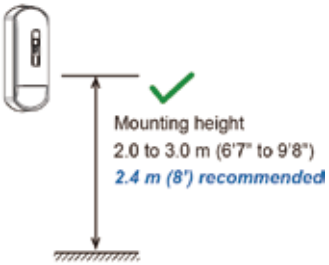
Symbol	Meaning
⚠ Warning	Failure to follow the instructions provided with this indication and improper handling may cause death or serious injury.
⚠ Caution	Failure to follow the instructions provided with this indication and improper handling may cause injury and/or property damage.

Symbol	Meaning
✓	Check mark indicates recommendation.
⊘	Nix sign indicates prohibition.
NOTE	Special attention is required to the section of this symbol.

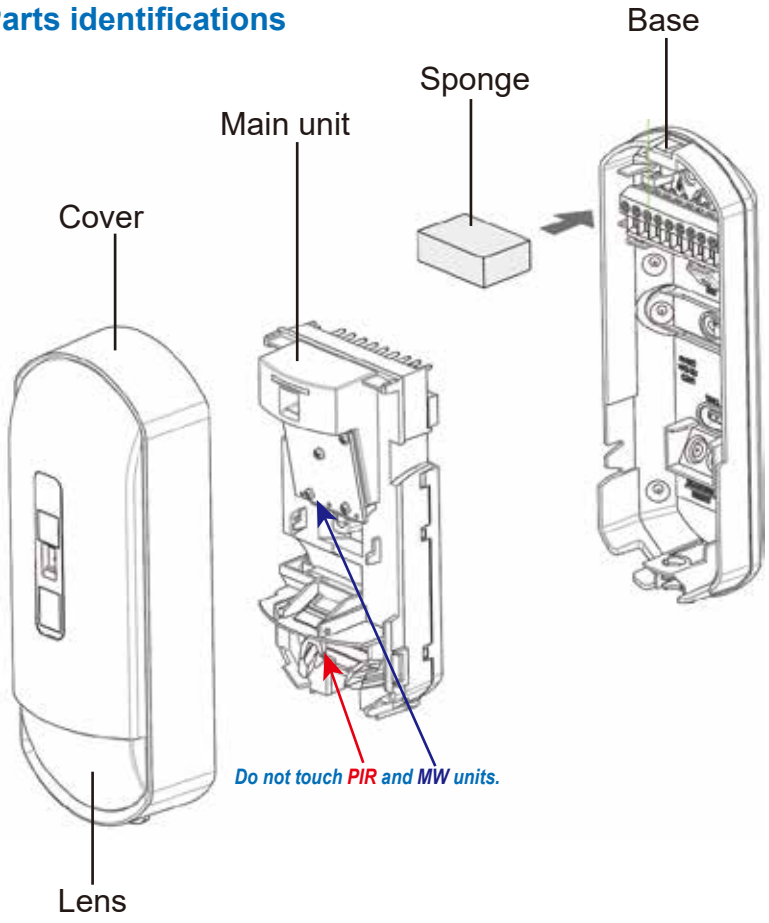
⚠ Warning



⚠ Caution



- Parts identifications



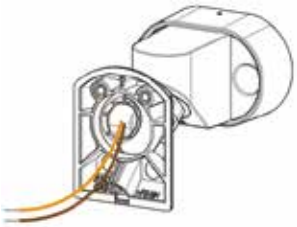
Accessories

Mounting screw x 2

Wall tamper screw x 1

Options

CW-G3 *: Bracket for wall/ceiling mount
with tamper switch



Mounting screw x 2
Joint screw x 3
Fixing screw x 2

PEU: Plug-in EOL Unit

* Not certified to SBSC.

- Anti-masking

Overview of anti-masking

If the front of the lens is covered with obstacles over 20 seconds, an alarm and trouble will be output.

Sensitivity setting

(Refer to “2-3 Dip switch/Volume settings” - “ ❹❺ Anti-masking sensitivity”)

Normally, use it in “Middle” .

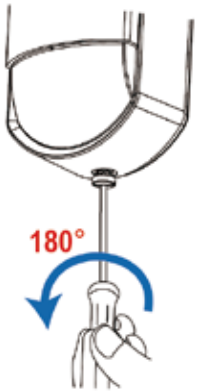
Select the “High” setting if required by any standards or sensitivity is insufficient.

If there are many false alarms, you can use “Low” , but please note that it may not be output depending on the materials and colors of the obstacles.

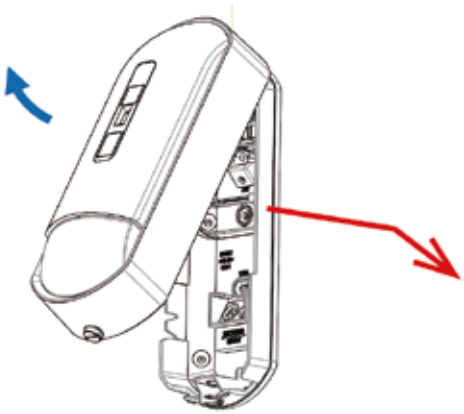
1 Installation

1-1. Disassemble

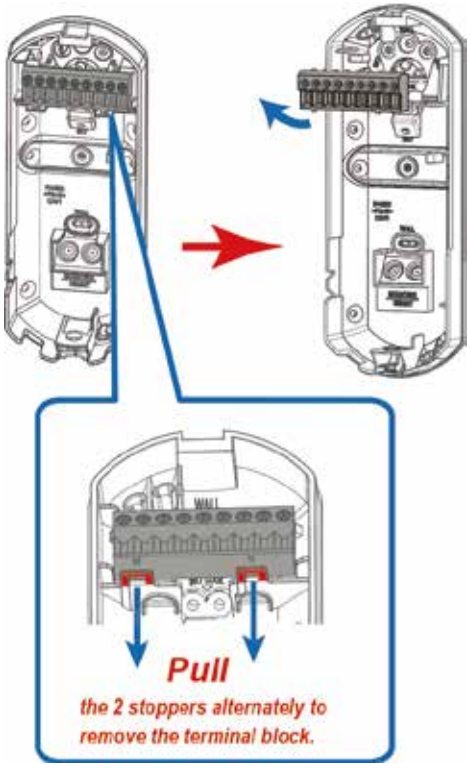
1 Unlock the cover



2 Open the cover



3 Remove the terminal block



NOTE You do not need to remove the terminal block if it does not interfere with the mounting of the base.

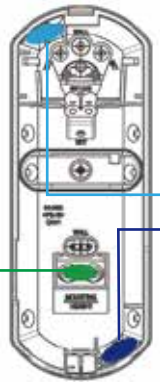
1-2. Wall mount without bracket

1 Wire through the base

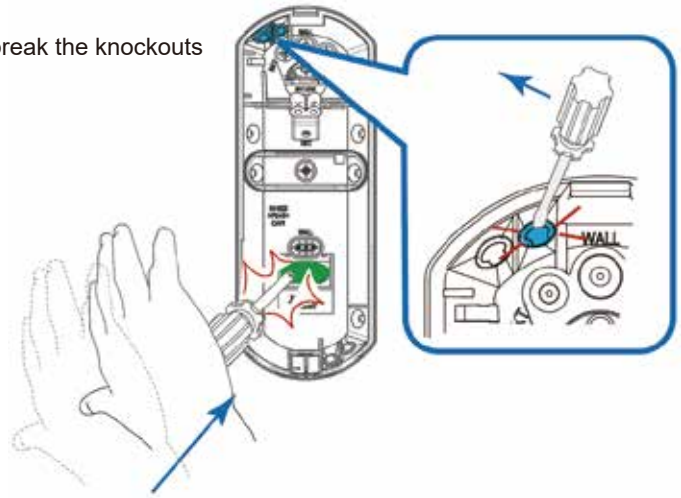
Wiring knockouts

For Wall/ Corner mount
Surface wiring
: Upper
: Lower

For Wall/ Corner mount
Hidden wiring:

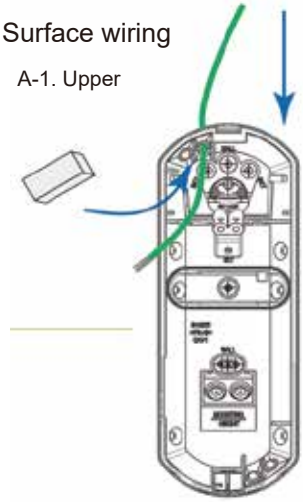


How to break the knockouts

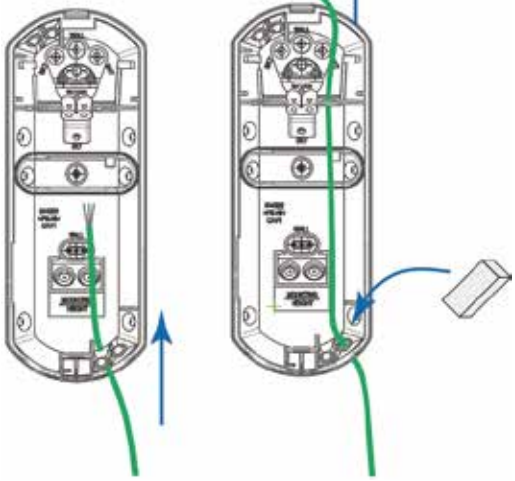


A. Surface wiring

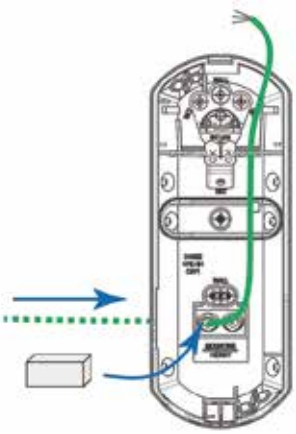
A-1. Upper



A-2. Lower

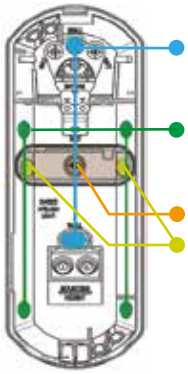


B. Hidden wiring



2 Mount the base

Mounting holes

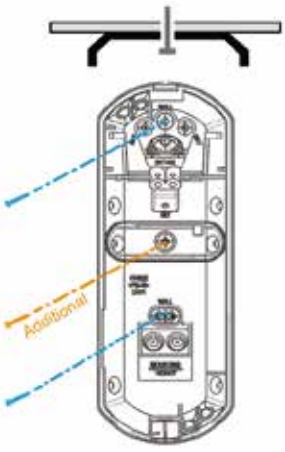


For Wall mount

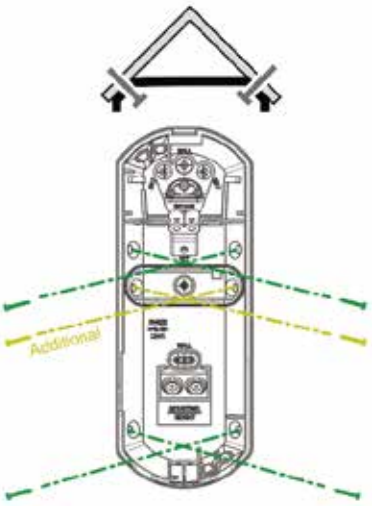
For Corner mount

Additional holes for tamper protect
for wall mount or
for corner mount
If the device is intentionally removed from the mounting position, the brown colored part will be cracked and remained on the wall.
The tamper switch will be operated.

a. Wall mount

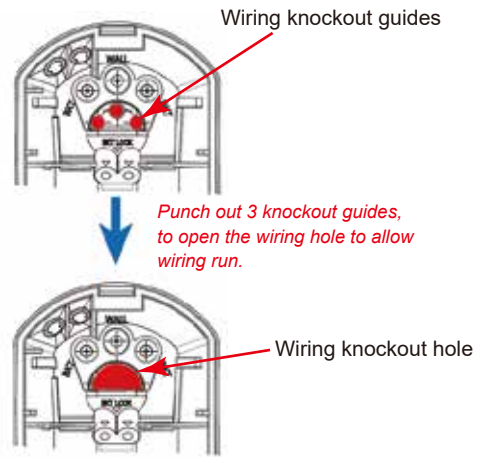


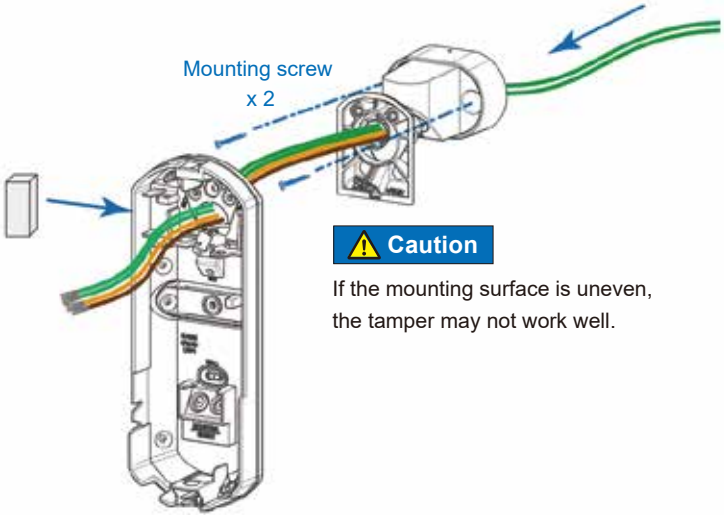
b. Corner mount



Go to Page 8

1 Wire and mount on the wall





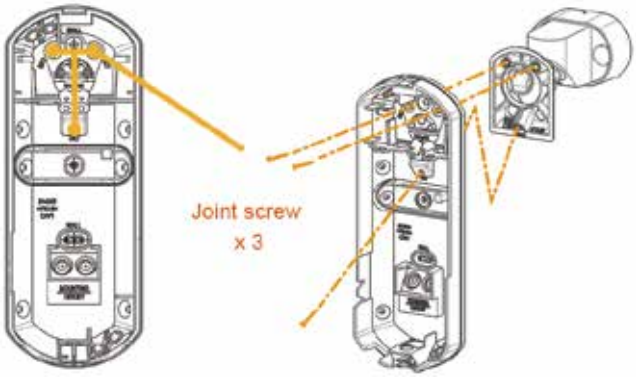
Caution

If the mounting surface is uneven, the tamper may not work well.

NOTE

See page 5 for how to break the knockouts.

2 Join the base on the bracket



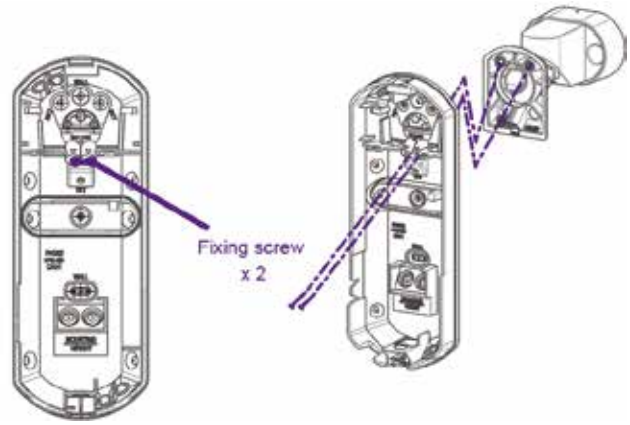
NOTE

Adjust the detection direction while jointing.

Confirming with a walk test is required.

--> Refer to “3-1. Walk test”

3 Fix the base with the fixing screws



The bracket is basically jointed using 3 holes and 3 joint screws.
Also use 2 additional fixing holes if a stronger fixation is required.

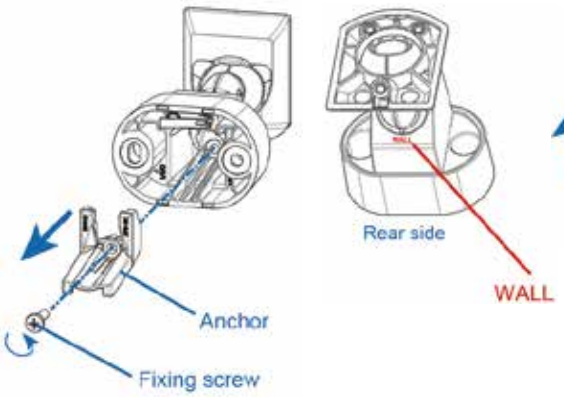
NOTE

2 fixing screws are required for the Grade 2 and higher grade installation.

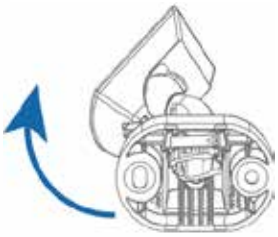
Go to Page 8

How to change the bracket to the ceiling mounting

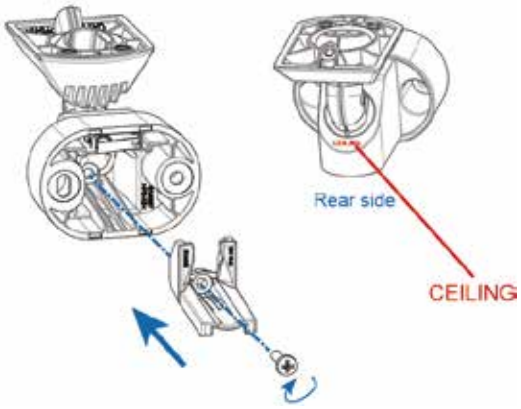
[1] Remove the fixing screw and the anchor.



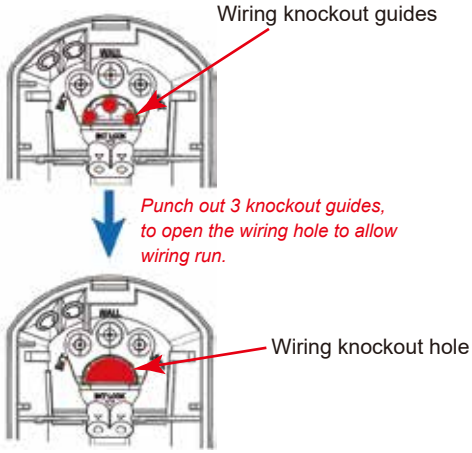
[2] Rotate the body.



[3] Insert the anchor and tighten the fixing screw.

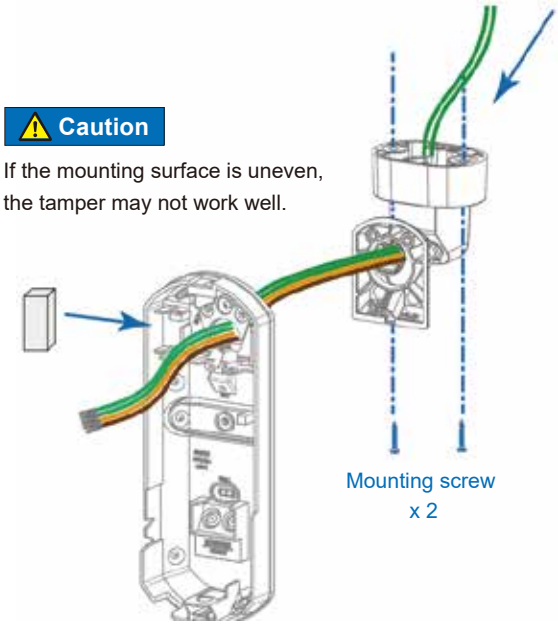


1 Wire and mount on the ceiling



Caution

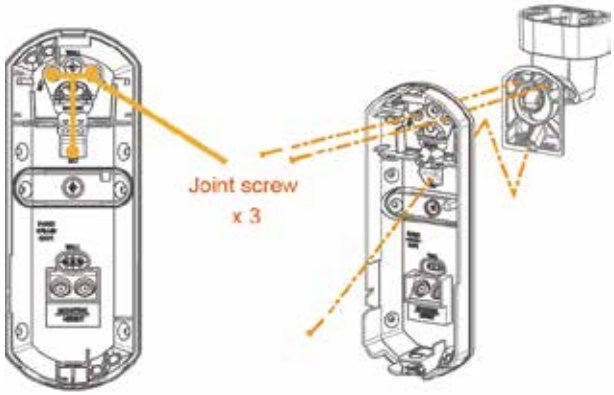
If the mounting surface is uneven, the tamper may not work well.



NOTE

See page 5 for how to break the knockouts.

2 Join the base on the bracket



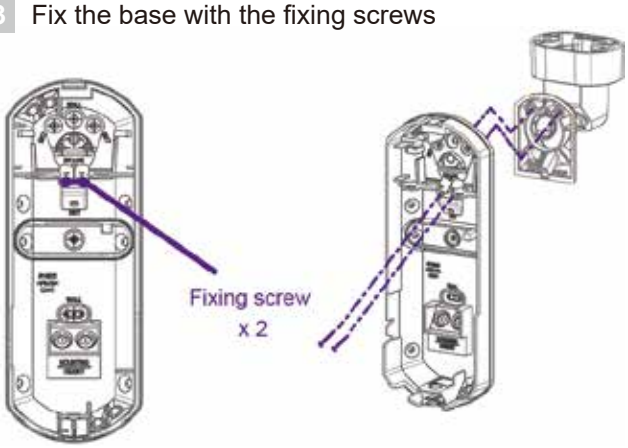
NOTE

Adjust the detection direction while jointing.

Confirming with a walk test is required.

--> Refer to “3-1. Walk test”

3 Fix the base with the fixing screws



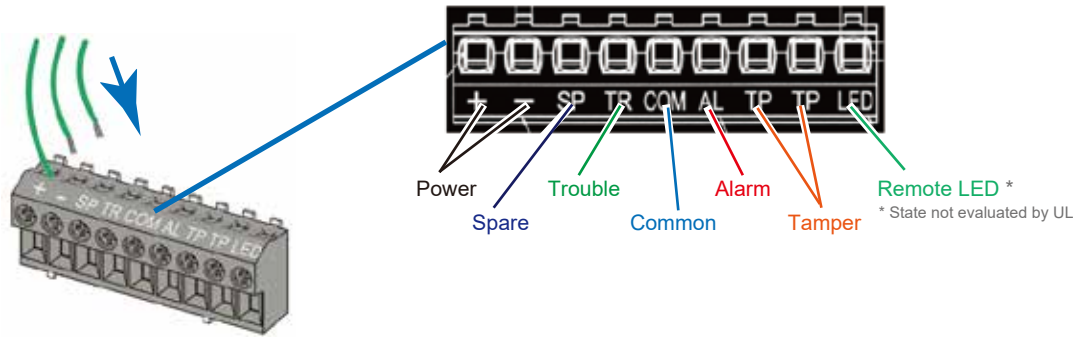
The bracket is basically jointed using 3 holes and 3 joint screws.
Also use 2 additional fixing holes if a stronger fixation is required.

NOTE

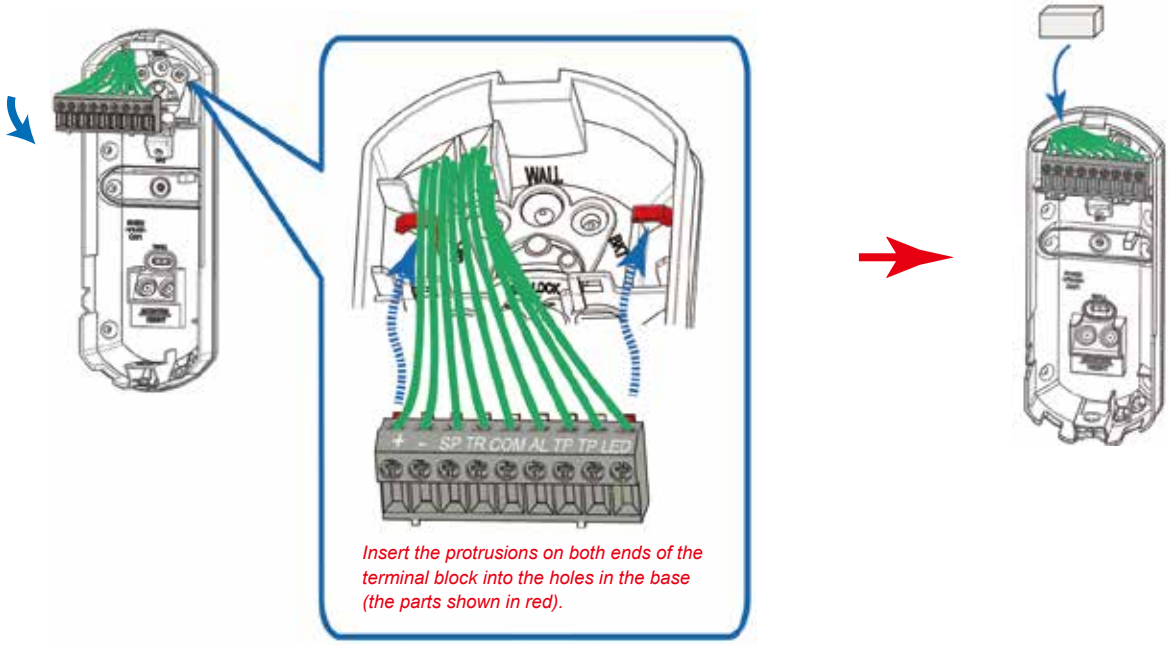
2 fixing screws are required for the Grade 2 and higher grade installation.

1-5. Wiring

1 Wire to the terminal block



2 Attach the terminal block to the base



Insert the protrusions on both ends of the terminal block into the holes in the base (the parts shown in red).

Power cable length

The power cable should be limited to the following length.

FLX-A-AM

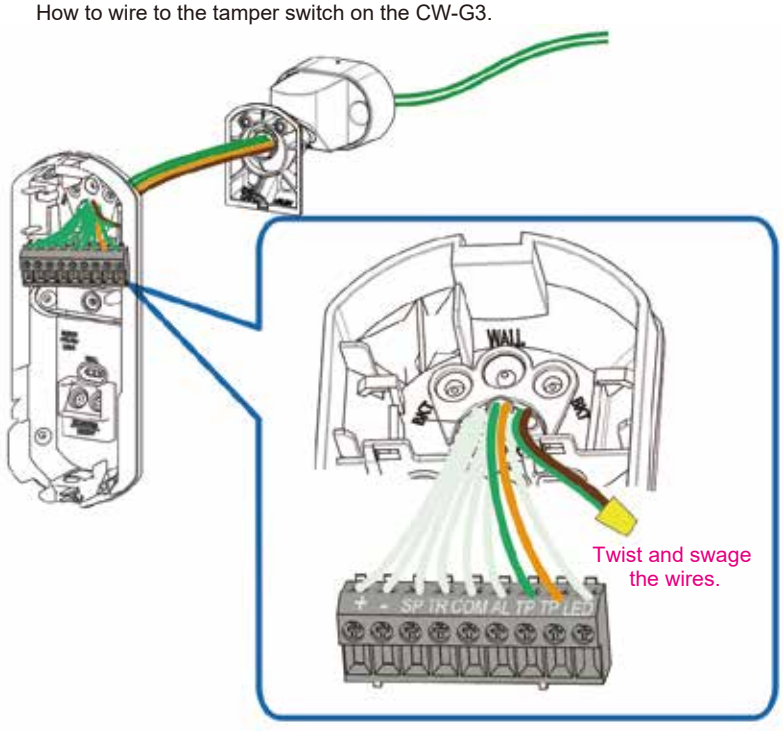
WIRE GAUGE	12 V DC	14 V DC
AWG 22 (0.33 mm^2)	360 m (1,180 ft.)	780 m (2,560 ft.)
AWG 20 (0.52 mm^2)	570 m (1,870 ft.)	1,230 m (4,040 ft.)
AWG 18 (0.83 mm^2)	900 m (2,950 ft.)	1,960 m (6,430 ft.)

FLX-A-DAM

WIRE GAUGE	12 V DC	14 V DC
AWG 22 (0.33 mm^2)	270 m (890 ft.)	590 m (1,940 ft.)
AWG 20 (0.52 mm^2)	430 m (1,410 ft.)	940 m (3,080 ft.)
AWG 18 (0.83 mm^2)	690 m (2,260 ft.)	1,490 m (4,890 ft.)

NOTE

How to wire to the tamper switch on the CW-G3.

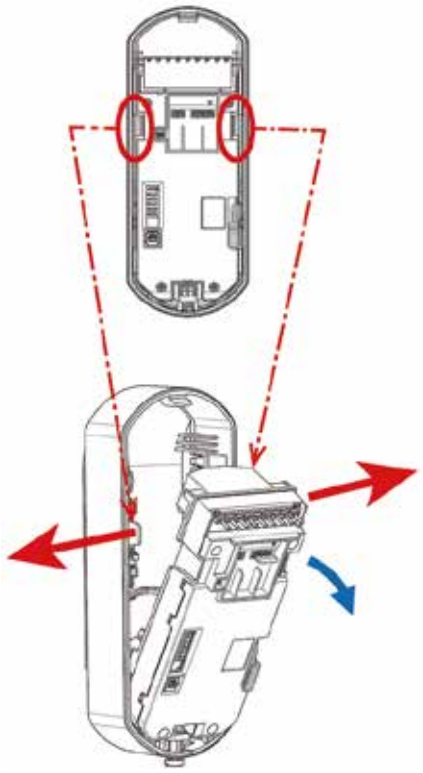


2 Settings

2-1. Wide/Narrow setting

Go to 2-2 on Page 11 to skip 2-1 when using the default "Wide" setting.

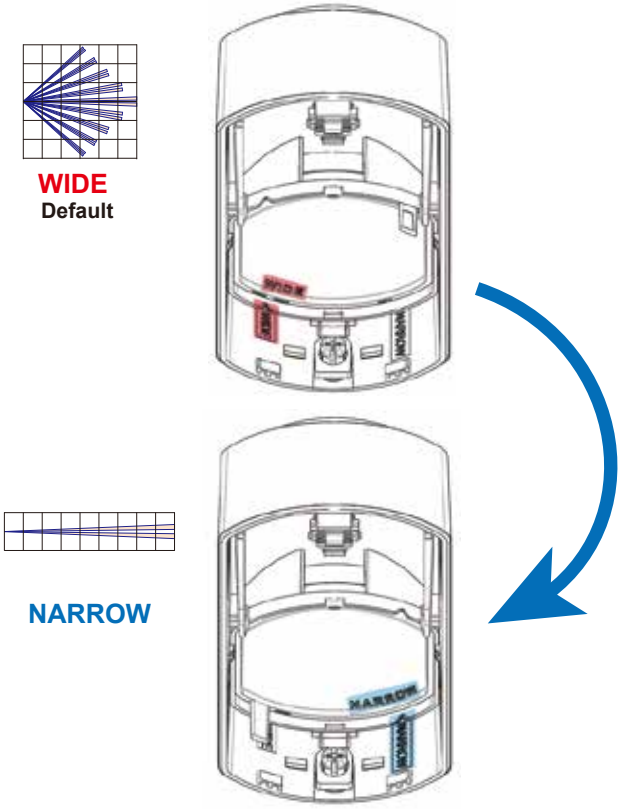
1 Remove the main unit



NOTE

- Opening the hooked part as the red arrows indicate makes it easy to take out the main unit.

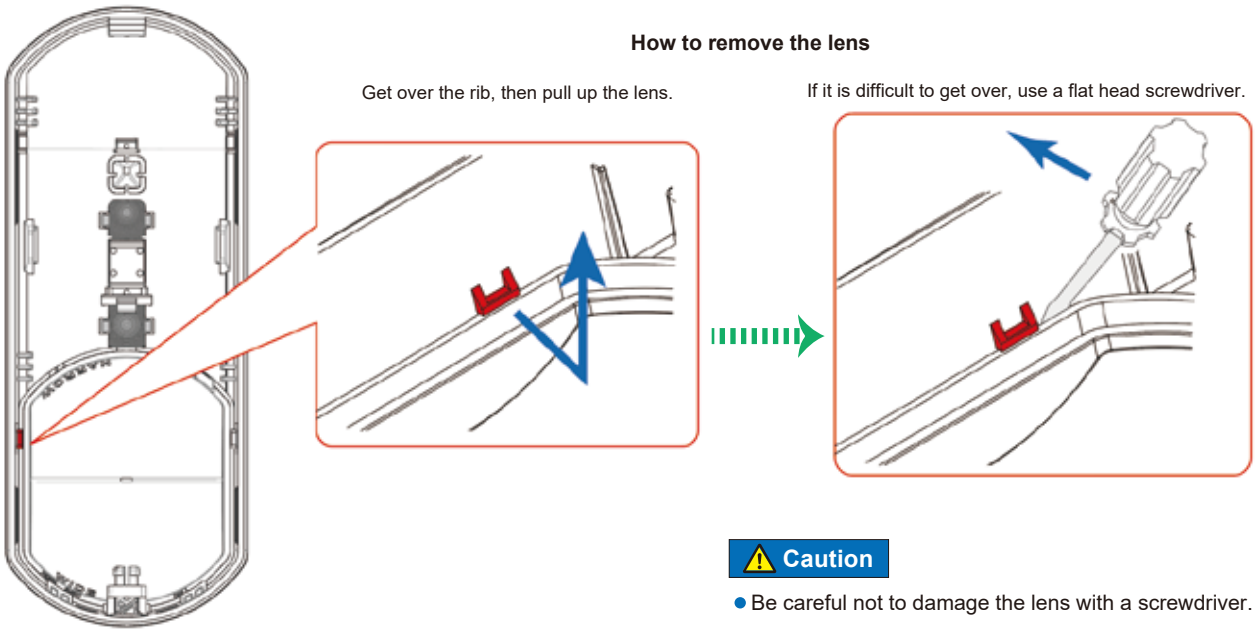
2 Change the Flip lens from "Wide" to "Narrow"



NOTE

- Install the lens so that the letters on the cover and on the lens match your intention.
- By changing the lens setting, the internal circuit automatically switches between Narrow and Wide.

How to remove the lens

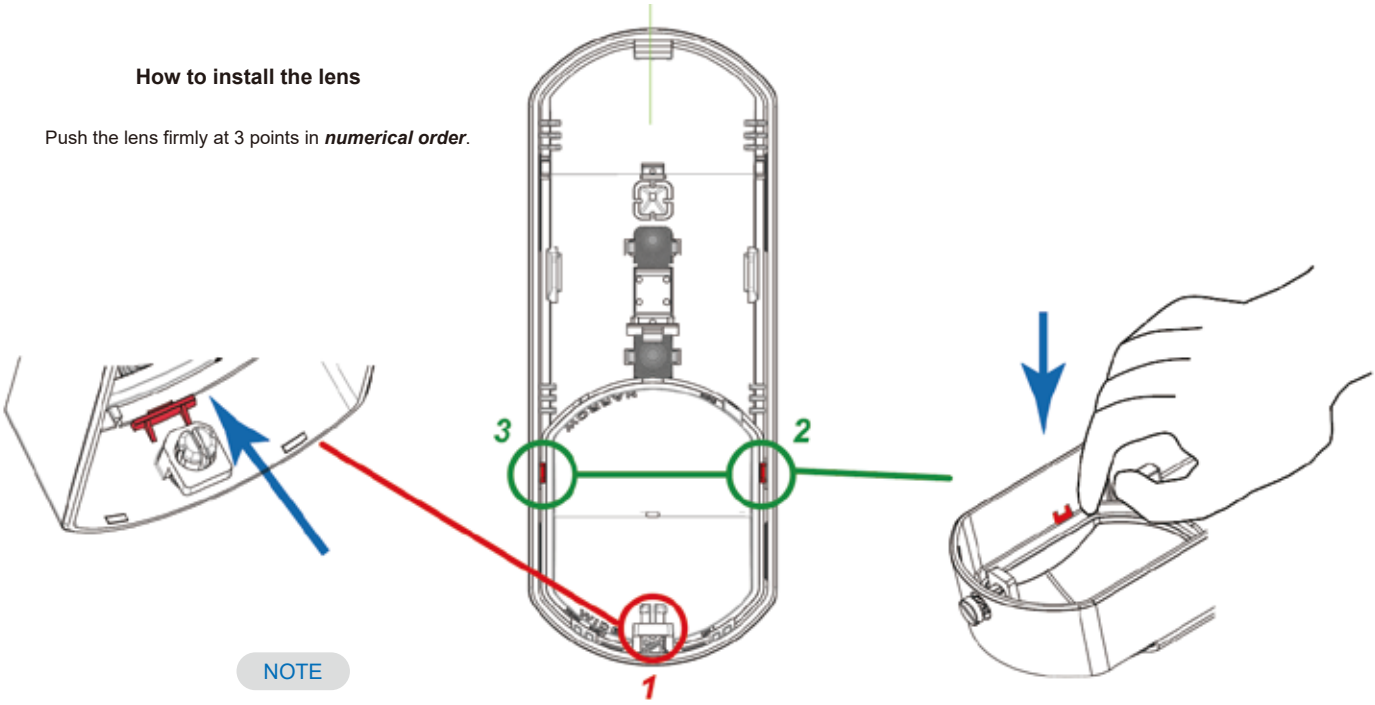


⚠ Caution

- Be careful not to damage the lens with a screwdriver.

How to install the lens

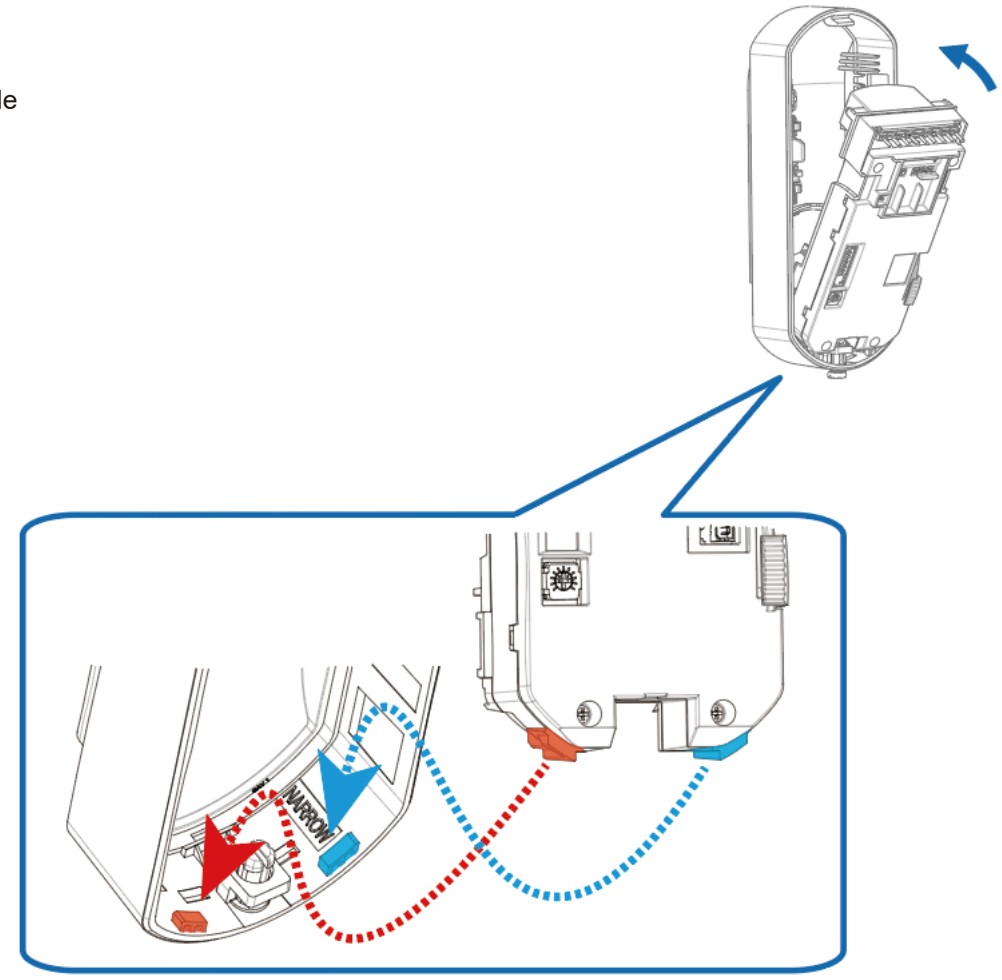
Push the lens firmly at 3 points in ***numerical order***.



NOTE

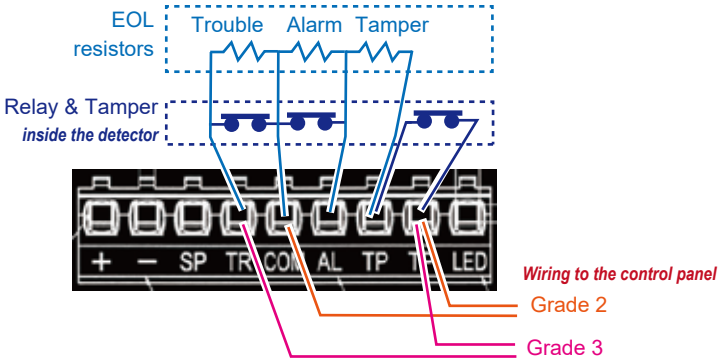
- By changing the lens, the internal settings of “Wide” and “Narrow” are automatically switched. It is not necessary to change the settings such as DIP switches.
- When the lens is set to the “Narrow” position, MW detection will be disabled automatically.

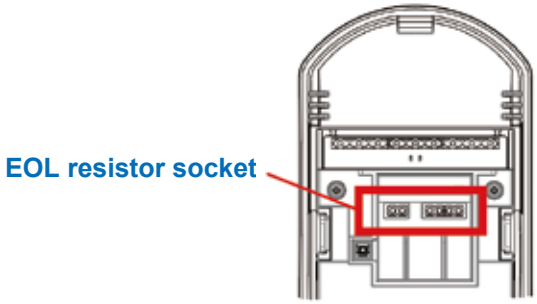
3 Assemble



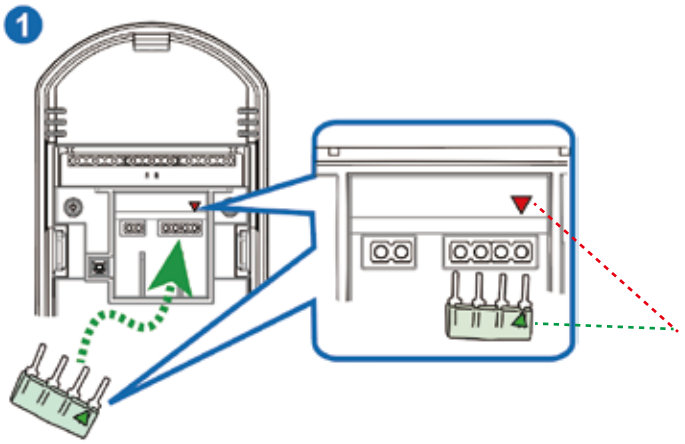
2-3. EOL settings

Select whether to use the **EOL resistor (End Of Line resistor) socket** for
[1] **PEU** (option sold separately), or
[2] Processing lead wires of the resistors (not included)

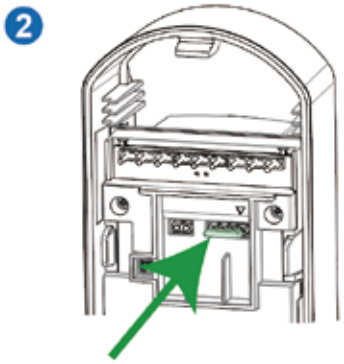




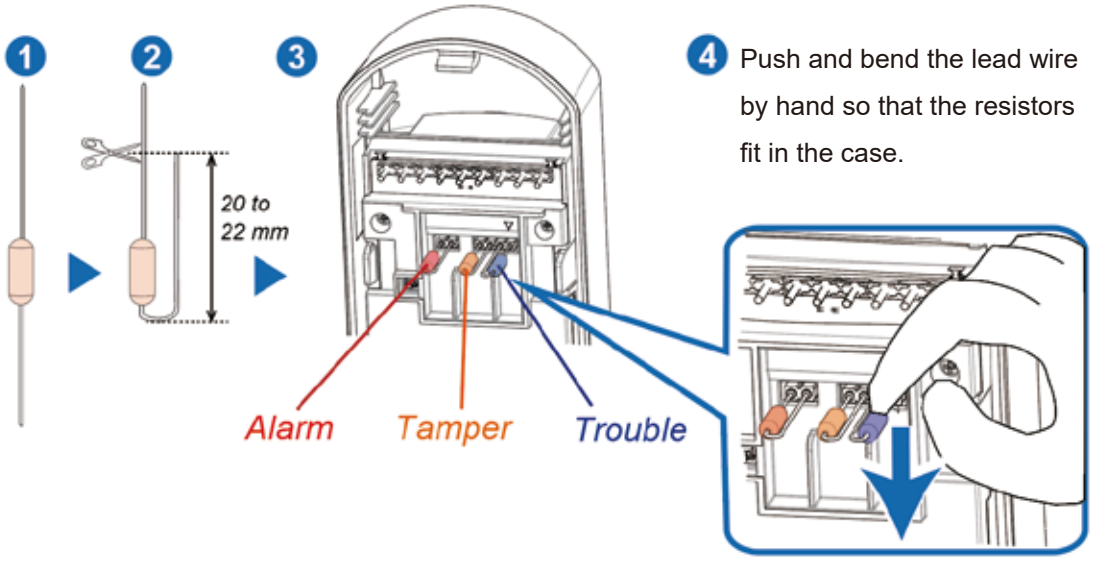
[1] PEU: Plug-in End of line resistor Unit



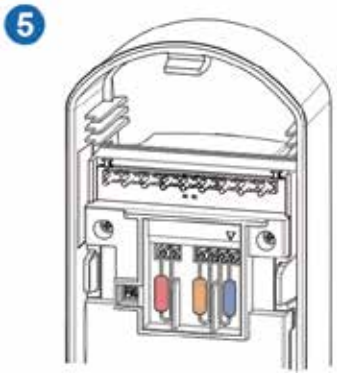
NOTE
Align both triangle marks.



[2] Processing lead wires of the resistors



4 Push and bend the lead wire by hand so that the resistors fit in the case.

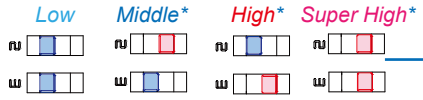


2-3. DIP switch settings

❶ LED

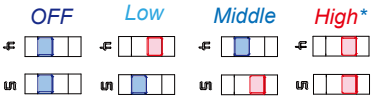
ON: LED is activated always.
OFF*: LED can be controlled through the Remote LED terminal.
[Open; OFF 0 V; ON]
* Certified to EN , SBSC and INCERT when set to "OFF"

❷ ❸ PIR sensitivity



* certified to EN, SBSC and INCERT

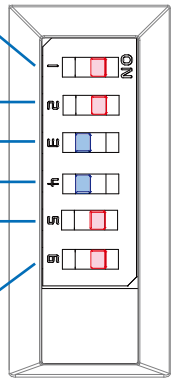
❹ ❺ Anti-masking sensitivity



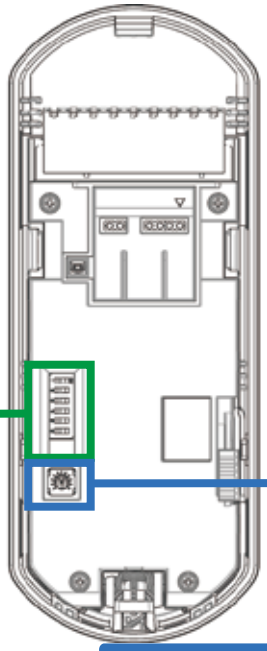
* certified to EN, SBSC and INCERT

❻ PIR MW LED*

* FLX-A-DAM only
** FLX-A-DAM complies EN50131-2-4 when set to "OFF"



NOTE
Above Illustration shows the **default** position.



2-4. Volume setting

[FLX-A-DAM only]
Microwave sensitivity

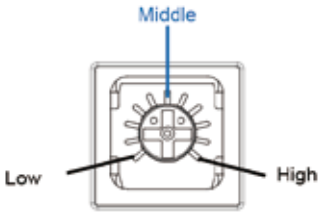
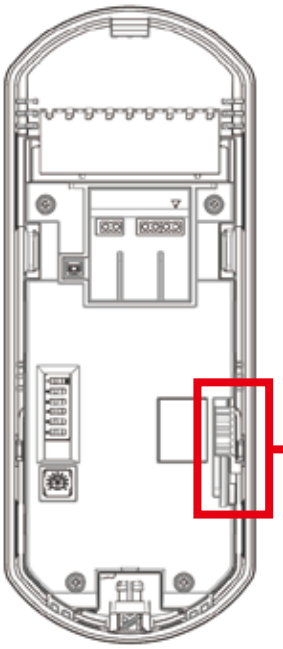
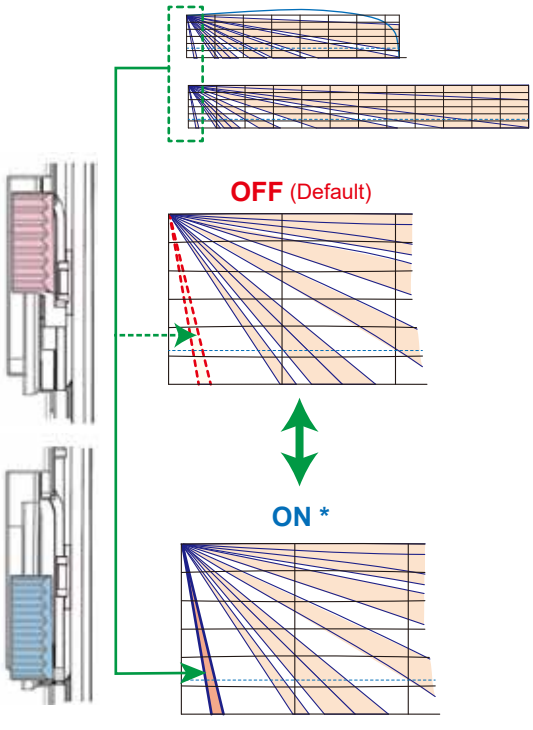


*Illustration shows the **default** position.*



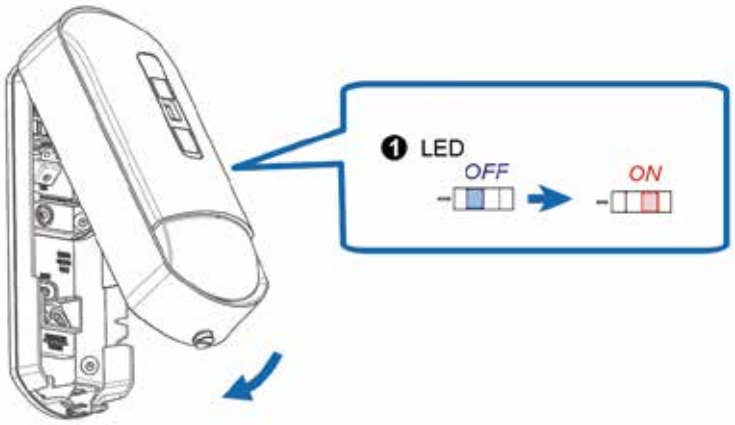
2-5. Down zone ON/OFF



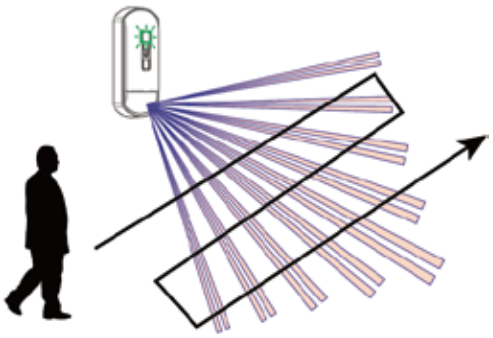
* It must be set ON for Grade 3.

3-1. Walk test

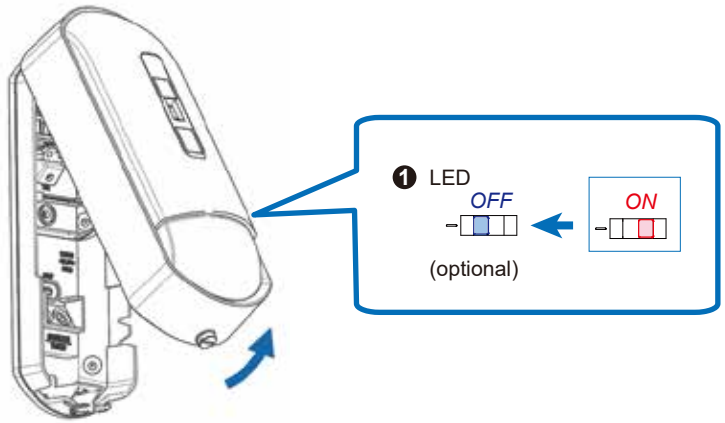
1 Confirm that the LED switch is “ON” , then close the cover.



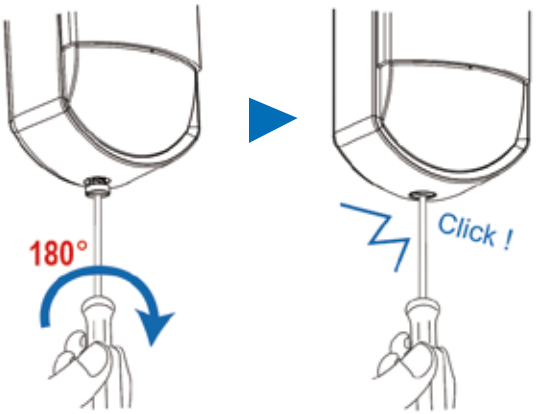
2 Walk in the detection area to check the detecting performance via LED indication.



3 Return the LED switch to “OFF” after the walk test, if necessary.



4 Lock the cover



NOTE

Conduct a walk test at least once a year.

- Specifications

Models		FLX-A-AM	FLX-A-DAM-X5/-X8/-X9
Installation			
Detection method		Passive infrared	Passive infrared and Microwave UL***
Coverage		Wide：15 m (50 ft.) 85°, Narrow：24 m (80 ft.) 5° *(No MW detection at "Narrow" setting)*	
Detection zones		Wide: 80 zones/ Narrow: 20 zones	
Mounting height		2.0 to 3.0 m (6'7" to 9'8")	
Alarm period		2.0 ± 0.5 s	
Warm-up period		Approx. 60 s (LED blinks)	
LED indicator UL **		***Switchable ON/OFF*** Multiple: Warm-up Green: Alarm and Masking detection Yellow: Self test error Red: Low voltage	***Switchable ON/OFF*** Multiple: Warm-up Green: Alarm and Masking detection Purple: PIR detection Yellow: Microwave detection and self test error Red: Low voltage
Electrical			
Power input		9.5 to 16 V DC UL*	
Current draw		12 mA (normal) 16 mA (max.) at 12 V DC	16 mA (normal) 21 mA (max.) at 12 V DC
Relay output	Trouble	N.C. 24 V DC 0.1 A max. (Resistive load)	
	Alarm	N.C. 24 V DC 0.1 A max. (Resistive load)	
	Tamper	N.C. 24 V DC 0.1 A max. (Resistive load) (Open when the cover is removed.)	
Remote LED		Terminal: open = OFF 0 V = ON	
Environmental			
Operation temperature		-20℃ to +50℃(-4°F to +122°F)	-20℃ to +45℃(-4°F to +113°F)
Temperature compensation		Digital (SMDA)	
Environmental humidity		95% max.	
RF interference		No alarm 10 V/m	
Mechanical			
Dimension		H: 159.1 x W: 62.2 x D: 55.7 mm (H: 6.26" x W: 2.45" x D: 2.19")	
Weight		Approx. 180 g (6.35 oz)	Approx. 200 g (7.05 oz)
Mounting		Wall, Corner (Indoor) (with Bracket : Wall, Corner, Ceiling)	

- Specifications and designs are subject to change without prior notice.
- These units are designed to detect an intruder and activate an alarm control panel. Being only a part of a complete system, we cannot accept responsibility for any damages or other consequences resulting from an intrusion.

UL * Shall be powered via a UL listed burglar alarm class 2 output power limited power supply that has a minimum standby power of 4 hrs.

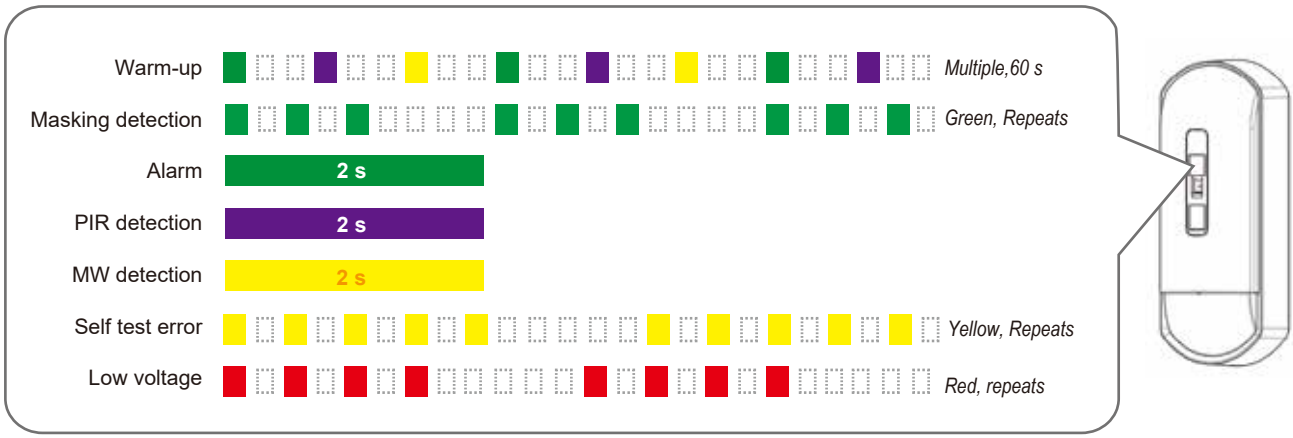
** When DIP Switch 1 is turned off, all LED indications except Warm-up period are turned off. When DIP Switch 6 is turned off, LED indications for PIR and MW detections are turned off (Others, includes Self test error, stay ON).

*** When Microwave is enabled for UL compliance, it shall be set to high sensitivity. Setting to a lower sensitivity may impact and lessen range of the unit.

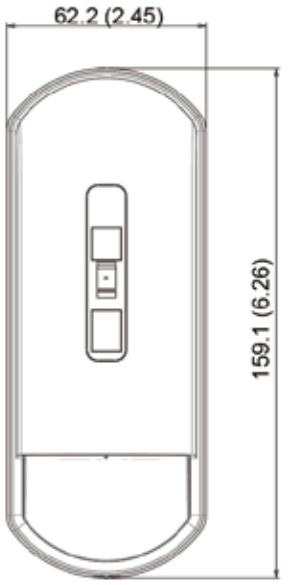
- Events and responses

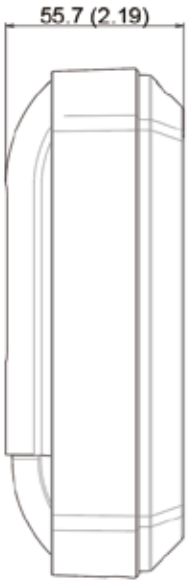
Events	Triggered by	Output & Remarks
Anti-masking detection	Objects close to the lens surface over 20 sec.	Alarm and Trouble signals.
Local self test	Controlled by detector' s circuit periodically. (PIR and Microwave are tested at the same time.)	Fail; Trouble signal. (Detector doesn't work for about 10 seconds during local self test.)
Walk test	Conduct a walk test at least once a year.	Keep at least 1 meter from the detector and clear of any objects.
Low voltage detection	Voltage drop.	Trouble signal

- LED indications

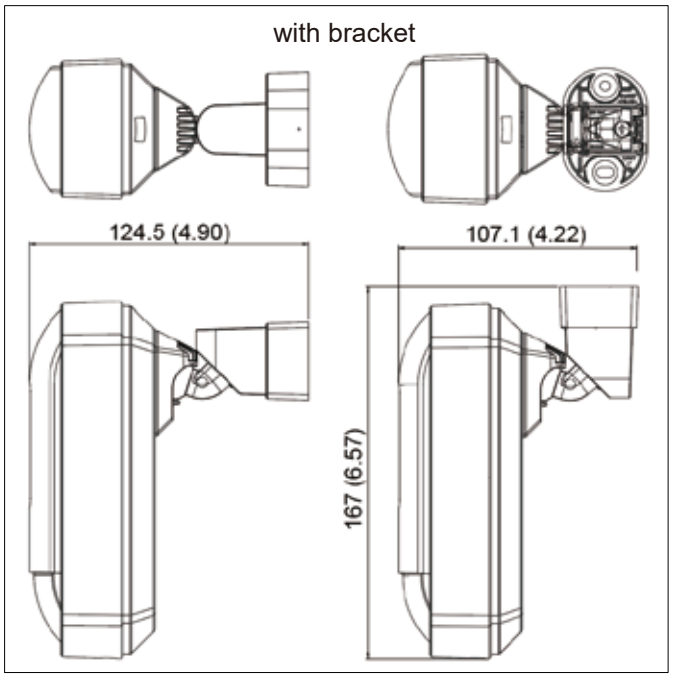


- Dimensions



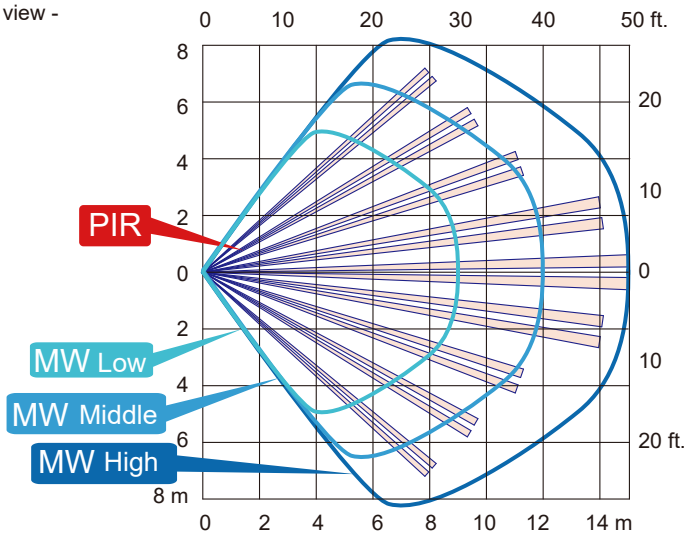


Unit: mm (inch)

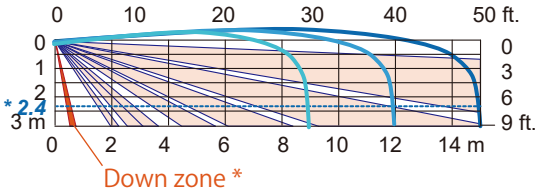


- Detection area

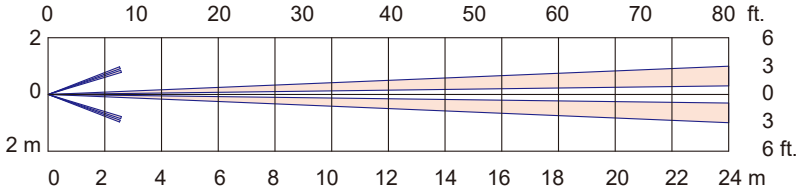
Wide - Top view -



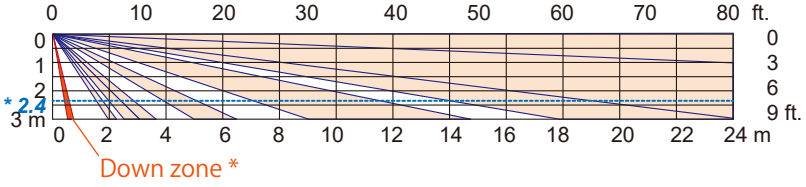
Wide - Side view -



Narrow - Top view -



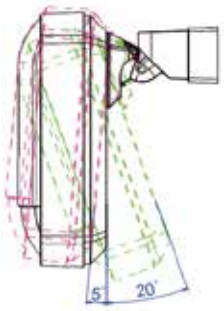
Narrow - Side view -

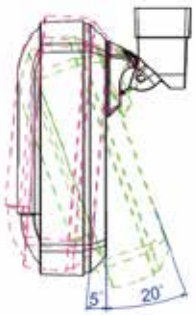


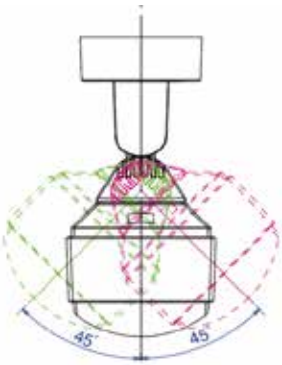
NOTE

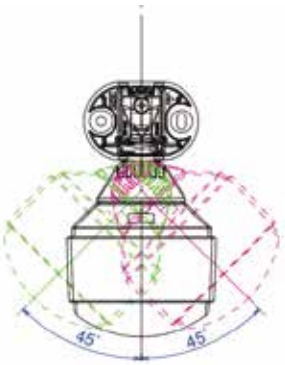
- The above detection ranges are for guidance only.
  The range and sensitivity settings for each detector must be set accordingly for installation conditions.
- For EN and INCERT compliance, refer to “2-3 Dip switch setting.
- The * 2.4 dotted line indicates the recommended mounting height.
- When “Narrow” is selected in the lens setting, MW detection will be stopped.
- Down zone * can be switched off by Down zone ON/OFF *(See 2-5)*.

- Angle adjustment with bracket



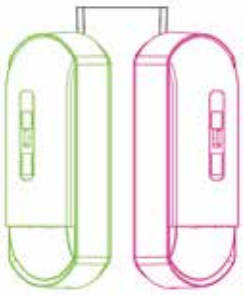






NOTE

* If the detector cover does not reach the ceiling, it can be swung up to +5°.



- Compliance

RE Directive 2014/53/EU

- Hereby, OPTEX declares that the radio equipment type FLX-A-DAM-X5, FLX-A-DAM-X8 and FLX-A-DAM-X9 are in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: **www.optex.net**
- Microwave emission Frequency and Power
  FLX-A-DAM-X5: 10.525 GHz 15.78 mW e.i.r.p
  FLX-A-DAM-X8: 10.587 GHz 8.93 mW e.i.r.p
  FLX-A-DAM-X9: 9.425 GHz 14.50 mW e.i.r.p
- The following list indicates the areas of intended use of the equipment and any known restrictions.
  For countries not included in this list, please consult the responsible Spectrum Management Agency.
  10.525 GHz: Belgium, Denmark, Finland, Germany, Greece, Italy, Luxembourg, The Netherlands, Spain, Sweden, Iceland, Norway, Switzerland
  10.587 GHz: Belgium, France, Germany, Ireland, Luxembourg, The Netherlands, United Kingdom
  9.425 GHz: Austria, Czechia, Estonia, Germany, Slovakia, Turkey, Russia
- FLX-A-DAM-X5, FLX-A-DAM-X8 and FLX-A-DAM-X9 also comply with EU radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator & your body.

UK Radio Equipment Regulations 2017

- FLX-A-DAM-X8 also comply with UK radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator & your body.
- Hereby, OPTEX declares that the radio equipment type FLX-A-DAM-X8 is in compliance with Radio Equipment Regulations 2017. The full text of the UK declaration of conformity is available at the following internet address: **www.optex.net**

- EN 50131-1 Grades and Environmental Class; Security Grade 3, Environmental Class II
  Applied Standards; EN 50131-2-2 (FLX-A-AM), EN 50131-2-4 (FLX-A-DAM-X5 and FLX-A-DAM-X8)
  Tested and certified by Telefication
- larm klass 3, miljö klass II, SSF 1014
- PD6662: 2017
- UL/c-UL listed (FLX-A-AM and FLX-A-DAM-X5)

■ **EU & UK contact information**

https://navi.optex.net/cert/contact/

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