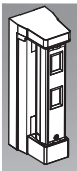
No.59-2184-1 1701-24

OPTEX

INSTALLATION INSTRUCTIONS



WIRELESS OUTDOOR DETECTOR

FTN-R-PT/ FTN-RAM-PT

FTN-R-PT	Battery operated model with 2 PIRs
FTN-RAM-PT	FTN-R-PT with anti-masking

FEATURES

- Narrow Angle Detection
- Detection Range Adjustability (2m / 5m)
- Intelligent AND logic
- Digital Anti-Masking (RAM model)
- Horizontal Adjustability
- Tamper Output
- Wall Tamper (option)

CONTENTS

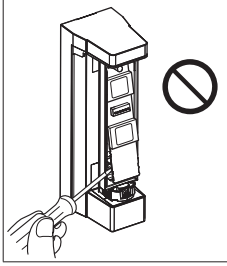
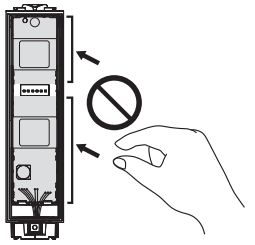
1 INTRODUCTION

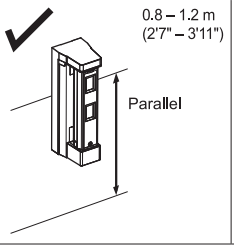
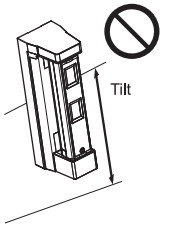
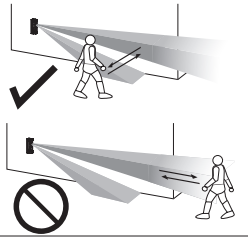
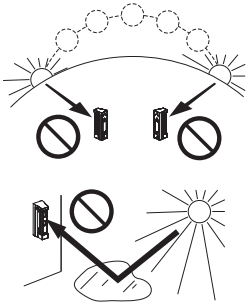
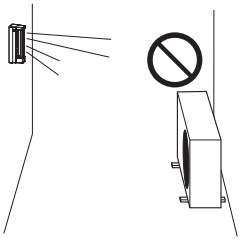
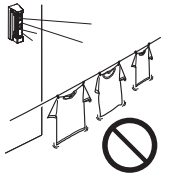
1-1 BEFORE INSTALLATION

⚠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.

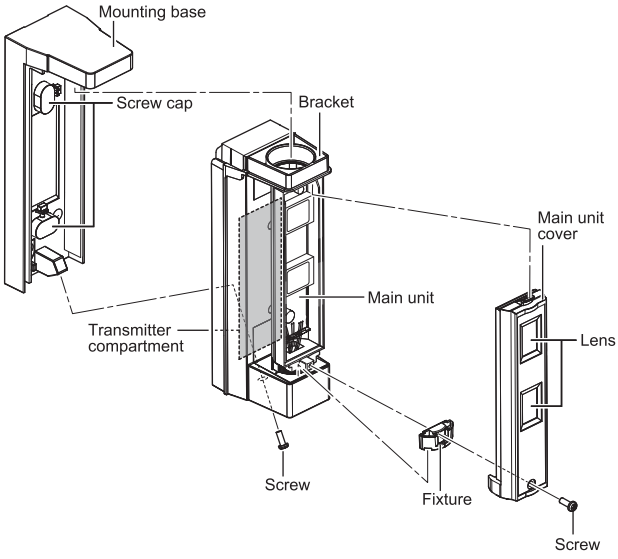
The check ✓ mark indicates recommendation.

The nix ⊘ sign indicates prohibition.

⚠Warning	⚠Caution
Do not remove the PCB. 	Do not touch the PCB except for the DIP switch. 

Mounting height. 	Keep the detector parallel to the ground. 	Consider the direction a person is approaching from, as well as 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



Accessories>>

Connector for POWER and ALARM

Connector for TROUBLE

Screw kit

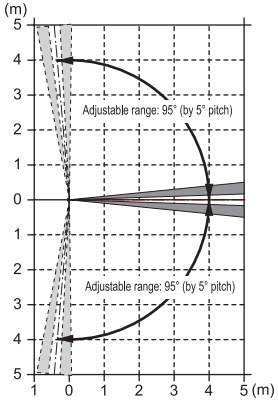
For wall mounting
Screw (3 × 20 mm)

Note>>

Transmitter and battery are not included.

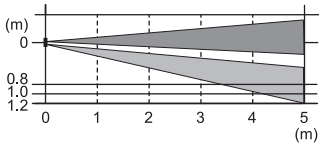
1-3 DETECTION AREA

Top view

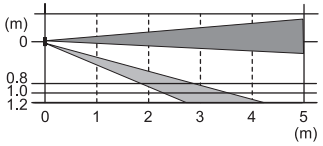


Side view

5 m detection length



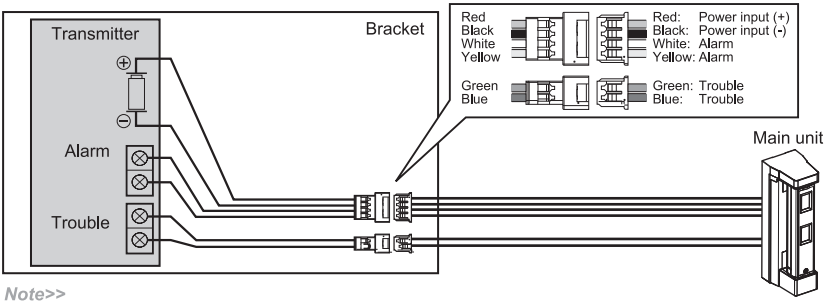
2 m detection length



2 INSTALLATION

2-1 WIRING DIAGRAM

- Overall wiring diagram

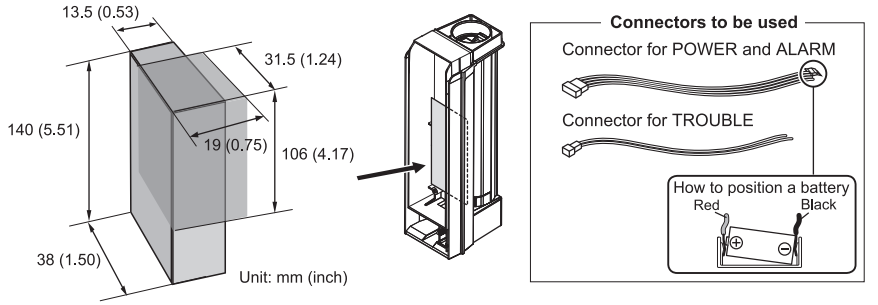


Note>>

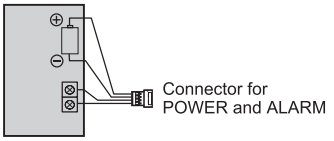
- The battery in the transmitter is shared with the detector.
- Connection for TROUBLE is used when monitoring for Tamper and Anti Mask.

2-2 TRANSMITTER PREPARATION

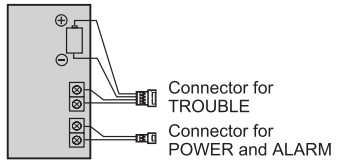
The transmitter used should have the internal dimensions of H 140 x W 38 x D 13.5 mm (H 5.51 x W 1.50 x D 0.53 inches) or H 106 x W 31.5 x D 19 mm (H 4.17 x W 1.24 x D 0.75 inches)



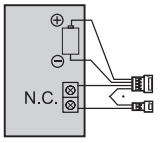
- To monitor only the ALARM using a transmitter with 1 external input



- To monitor the ALARM and TROUBLE using a transmitter with 2 external inputs

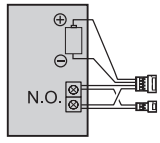


- When monitoring ALARM and TROUBLE using the transmitter with 1 external input



External input is N.C.

3 ... DIP switch 3: OFF (N.C.)

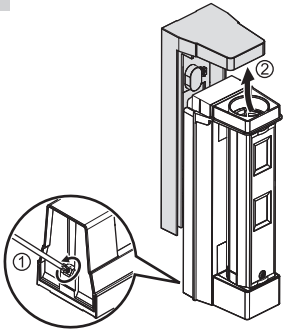


External input is N.O.

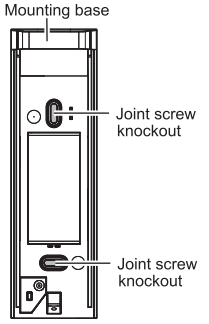
3 ... DIP switch 3: ON (N.O.)

2-3 MOUNTING

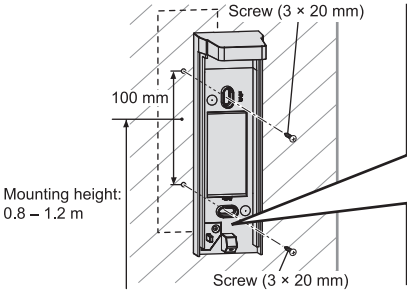
1 **Remove the mounting base.**

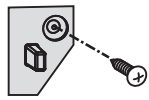


2 **Open the knockout.**



3 **Mount the mounting base on the wall.**

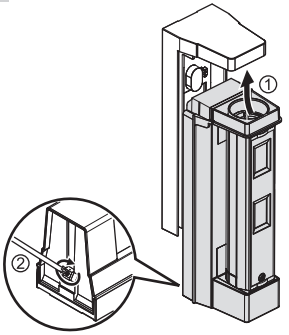




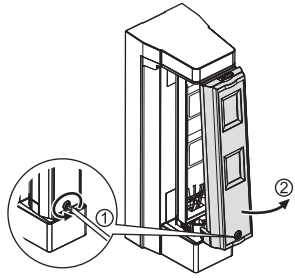
Use this knockout screw hole to mount the base, when making the wall tamper switch effective. If the main unit is peeled off from a wall, this plastic part will be cracked and remain on a wall, activating the tamper switch.

Note>>
- Transmitter needs to be enrolled to reciever before installing the detector.

4 **Attach the bracket and main section.**

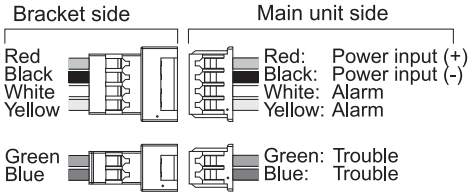


5 **Open the main unit cover**



Note>>
- Be sure to set the screw cap after installing the mounting base.

6 Plug the connectors.



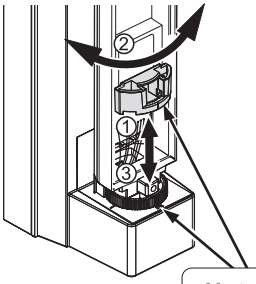
Note>>

- The tamper output is not exclusive. The anti-masking and tamper circuits share the trouble output.

7 Determine the horizontal detection angle and attach the fixture.

Note>>

- To make adjustments, remove the fixture.

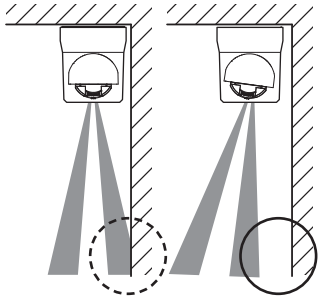


Note>>

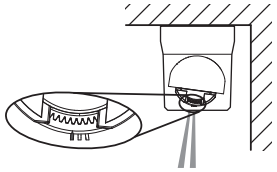
- Check that the fixture and bracket engage correctly.

Notes>>

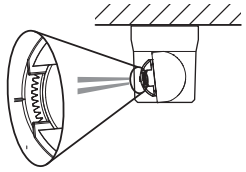
- Align the detection area parallel to the wall to reduce interference with the wall.



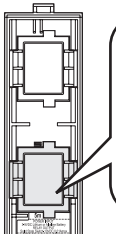
- When the unit is mounted on the corner to look ahead along the wall, choose the guide-mark located on the opposite side ofthe wall.

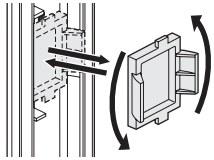


- When the unit is mounted on the wall to look transversely, choose the guide-mark engraved.



8 Determine the detection length. (2 m or 5 m)





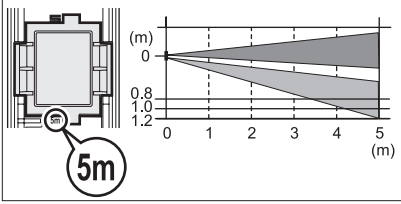
If 2 m is required, rotate the lower lens 180 degrees.

Note>>

• Do not remove the upper lens.

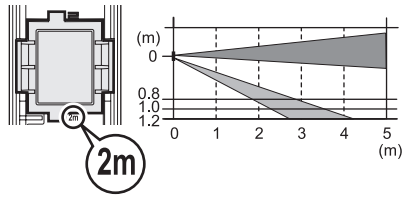
5 m detection length (Factory default)

Side view

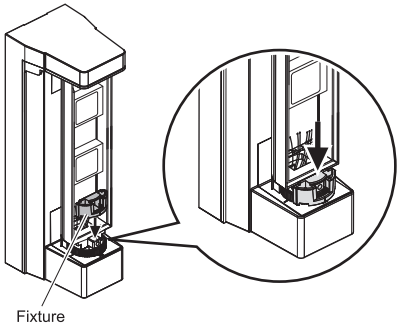


2 m detection length

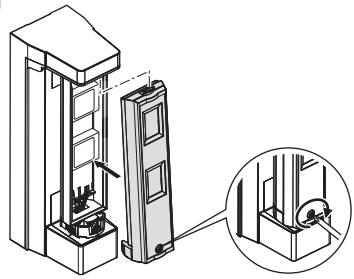
Side view



9 Attach the fixture.



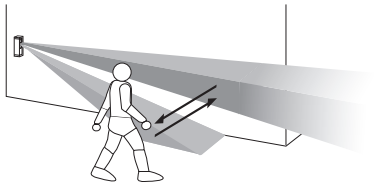
10 Attach the main unit cover.



Note>>

• To prepare for walk test, check that DIPswitch 1 (WALKTEST MODE) is set to “ON (TEST)” before attaching main unit cover.

11 Perform walk test. For details, refer to 3-1.



12 After walk test is complete, set DIP switch 1 (WALK TEST MODE) from “ON” to “OFF”.

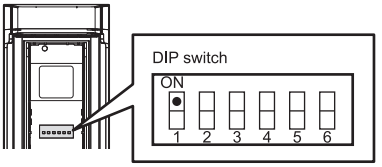
Note>>

• The battery life will be shortened unless the DIP switch 1 is set to “OFF”.

3 WALK TEST

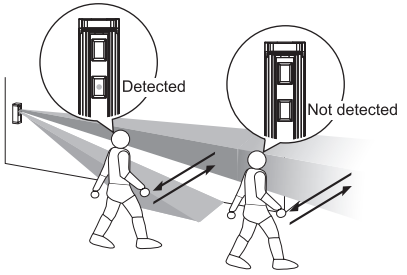
3-1 WALK TEST

1 Set the DIP switch 1 (WALK TEST MODE) to “ON (TEST)”.

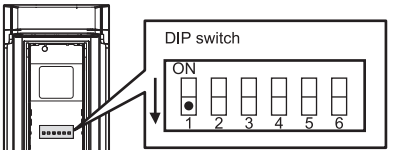


Note>>
- The switch is set to “ON (TEST)” by factory default.

2 Check that LED lights for 2 seconds when the intended object is detected.

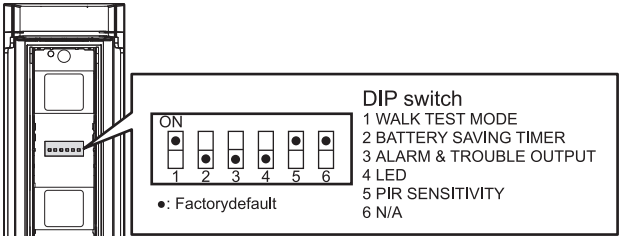


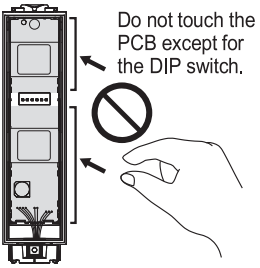
3 Set the DIP switch 1 (WALK TEST MODE) to “OFF (NORM)”.



Notes>>
- The battery life will be shortened unless the DIP switch 1 is set to “OFF”.
- To use the LED in normal operating condition, set the DIP switch 4 to “ON”.

4 DIP SWITCH SETTING

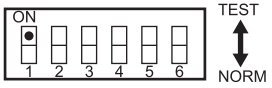




4-1 WALK TEST MODE

DIP switch 1

FTN-R-PT
FTN-RAM-PT

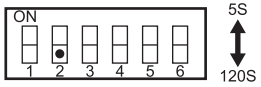


Position	Function
TEST (Factory default)	• The LED lights irrespective of the DIP switch 4 (LED) setting. • The DIP switch 2 (BATTERY SAVING TIMER) setting is inactive.
NORM	• The LED lights depending on the DIP switch 4 (LED) setting. • The DIP switch 2 (BATTERY SAVING TIMER) setting is active.

4-2 BATTERY SAVING TIMER

DIP switch 2

FTN-R-PT
FTN-RAM-PT



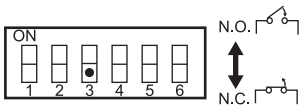
Position	Function
5S	5 sec.
120S (Factory default)	120 sec.

Note>>
- The detector will not generate alarms at intervals shorter than the specified time.

4-3 ALARM & TROUBLE OUTPUT

DIP switch 3

FTN-R-PT
FTN-RAM-PT

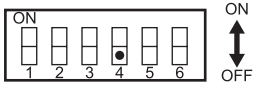


Position	Function
N.O.	N.O. output
N.C. (Factory default)	N.C. output

4-4 LED

DIP switch 4

FTN-R-PT
FTN-RAM-PT

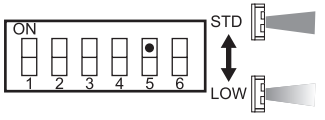


Position	Function
ON	LED ON
OFF (Factory default)	LED OFF *Note>>* • If the LED lights, check the DIP switch 1 (WALKTEST MODE) setting.

4-5 PIR SENSITIVITY

DIP switch 5

FTN-R-PT
FTN-RAM-PT

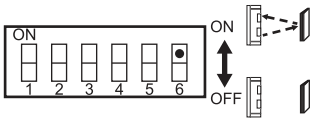


Position	Function
STD (Factory default)	Normal sensitivity
LOW	Low sensitivity

4-6 ANTI-MASKING

DIP switch 6

FTN-R-PT
FTN-RAM-PT



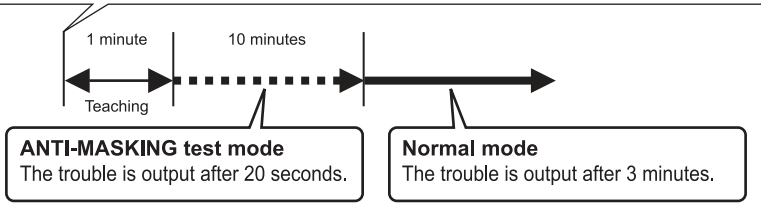
Position	Function
ON (Factory default)	ANTI-MASKING ON
OFF	ANTI-MASKING OFF

-ANTI-MASKING function

When masking condition continues more than 3 minutes, TROUBLE will be generated.

TROUBLE is generated after 20 seconds under the anti-masking test mode.

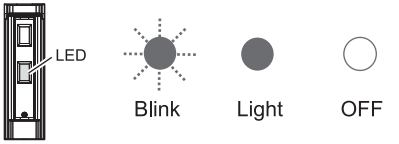
Teaching mode starts when both the separate box cover and the main unit cover are attached.
Please be careful not to leave any object within 1 m from the unit.



5 OTHERS

5-1 LED LIGHT PATTERN

The following explains the LED light pattern.



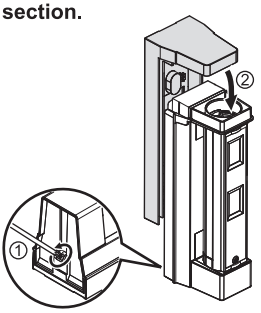
Detector condition	LED indicator
Warm-up *Note>>* • The LED blinks even if the DIP switch 4 (LED) is set to "OFF".	Blinks for approx. 120 seconds.
Alarm	Lights for 2 seconds.
Masking detection (FTN-RAM-PT only)	Blinks 3 times and then repeats.

6 BATTERY

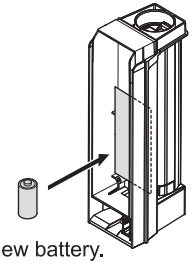
The detector shares the battery with the transmitter. Check that the 2.5 to 10.0 V power battery is used for the transmitter.

6-1 HOW TO REPLACE BATTERY

1 Remove the bracket and main section.

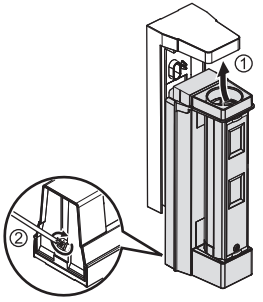


2 Replace the battery.



Install a new battery.

3 Attach the bracket and main section.



6-2 BATTERY LIFE

The values indicated are only for reference on condition that the detector is exceptionally operated by the sole battery. It is impossible to indicate the battery life under the normal operation as the battery in the transmitter is shared with the detector.

	Interval 120 sec	Interval 5 sec
CR123A (3 V, 1300 mAh)	Approx. 6 years	Approx. 5 years
CR2 (3 V, 750 mAh)	Approx. 4 years	Approx. 3 years
1/2AA (3.6 V, 1000 mAh)	Approx. 5 years	Approx. 4 years

Notes>>

- Data shown here is when the LED is off, AM is on. Battery life becomes shorter when the LED is on.

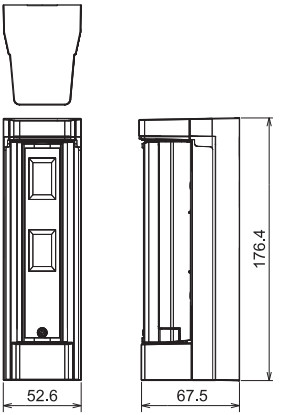
7 SPECIFICATIONS

7-1 SPECIFICATIONS

Model	FTN-R-PT	FTN-RAM-PT
Detection method	Passive infrared	
PIR coverage	5 × 1 m (16'5" × 3'3")	
Detection length limit	2 m, 5 m (6'7", 16'5")	
Detectable speed	0.3 – 1.5 m/s (1' – 4'11"/s)	
Sensitivity	2.0°C (at 0.6 m/s) (3.6°F (at 2'/s))	
Operation voltage	2.5 – 10 V DC	
Power input	3 – 9 V DC (Lithium or Alkaline Battery)	
Current draw	9 µA standby / 3 mA max. at 3 V DC	10 µA standby / 3 mA max. at 3 V DC
Alarm period	2.0 ±1.0 sec.	
Warm-up period	Approx. 120 sec. (LED blinks)	
Alarm output	N.C./N.O. Selectable-Solid State Switch 10 V DC 0.01 A (max.)	
Trouble output	N.C./N.O. Selectable-Solid State Switch 10 V DC 0.01 A (max.)	
LED indicator	Enable: During DIP switch 1 (WALK TEST MODE) or DIP switch 4 (LED) ON Disable: During normal operation Light/Blink: Warm-up, alarm, masking detection (FTN-RAM-PT only)	
RF Interference	No alarm 10 V/m	
Operation temperature	-20 – +60°C (-4 – +140°F)	
Environment humidity	95% max.	
Weatherproof	IP55	
Mounting	Wall (Outdoor, Indoor)	
Mounting height	0.8 – 1.2 m (2'7" – 3'11")	
Weight	180 g (6.4 oz.) without wireless transmitter and battery	
Accessories	①Connector for POWER and ALARM ②Connector for TROUBLE ③screw (3 × 20 mm) × 2	

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

7-2 DEMENSIONS



Unit: mm

■ **EU contact information**

Manufacturer:

OPTEX CO., LTD.
5-8-12 Ogoto, Otsu, Shiga, 520-0101 JAPAN

Authorised representative in Europe:

OPTEX (EUROPE) LTD. / EMEA HEADQUARTERS
Marandaz House 1 Cordwallis Park, Clivemont Road,
Maidenhead, Berkshire, SL6 7BU U.K.

NOTE

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.

OPTEX CO., LTD.(JAPAN)
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OPTEX SECURITY SAS (France)
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OPTEX PINNACLE INDIA, PVT., LTD. (India)
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