



Compact outdoor
detector

ft series

NO.59-1645-0 091201

INSTALLATION INSTRUCTIONS



N219

FTN-ST	Standard model with 2 PIRs
FTN-AM	FTN-ST with anti-masking

- Compact design
- 190° adjustable bracket
- Intelligent AND logic
- Digital anti-masking (AM model)
- Wall tamper (option)

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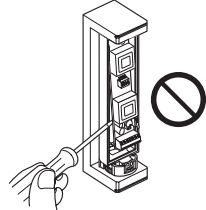
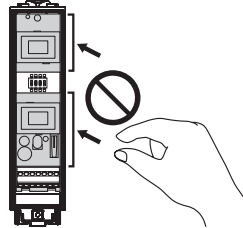
1 INTRODUCTION

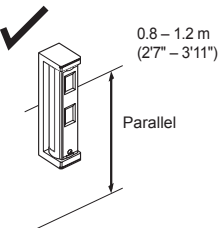
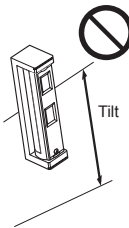
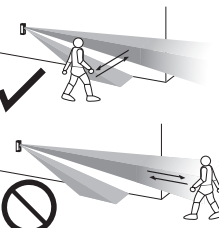
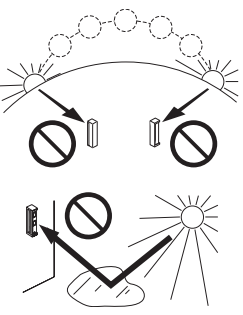
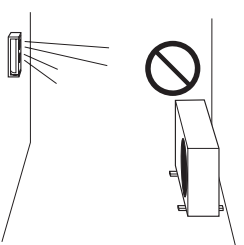
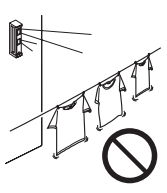
1-1 BEFORE INSTALLATION

 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.

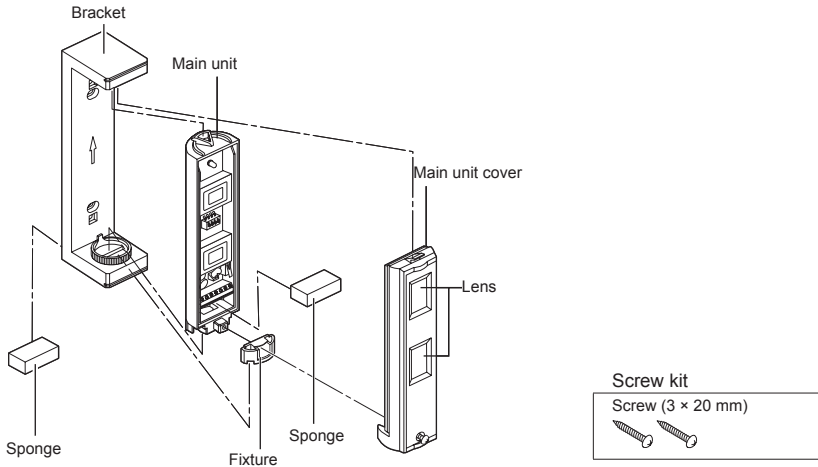
The check  mark indicates recommendation.

The nix  sign indicates prohibition.

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

Mounting height.  0.8 – 1.2 m (2'7" – 3'11") Parallel	Keep the detector parallel to the ground.  Tilt	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

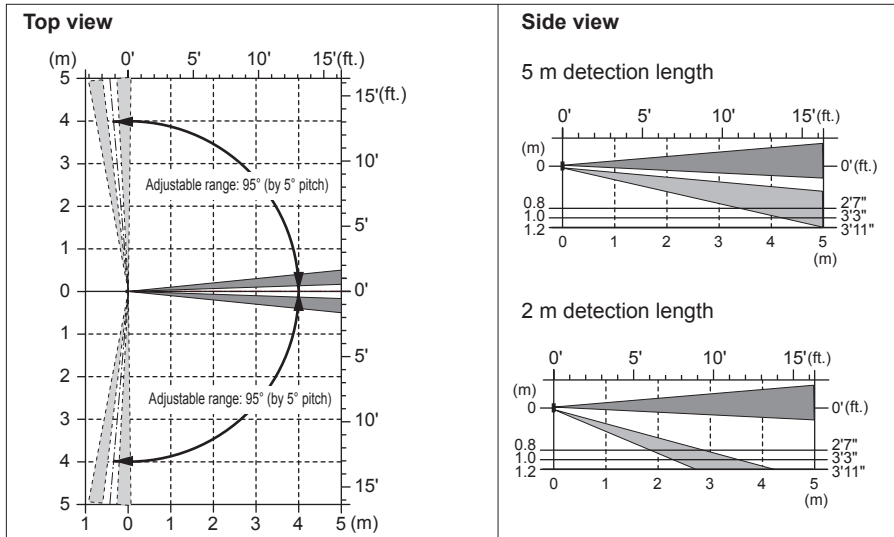


-Optional accessories

Wall tamper (WRS-02)



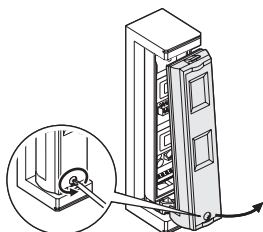
1-3 DETECTION AREA



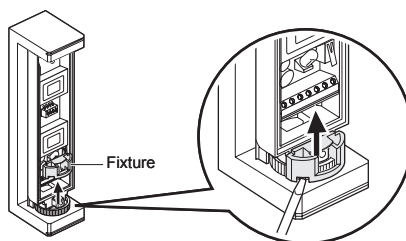
2 INSTALLATION

2-1 INSTALLATION

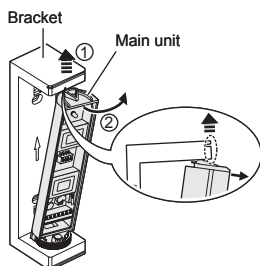
- 1 Open the main unit cover.



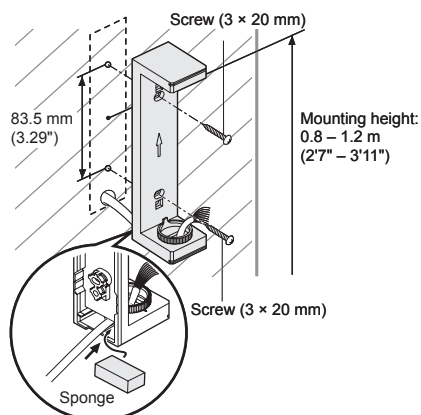
- 2 Remove the fixture.



- 3 Hold the top of the bracket lifted and remove the main unit.



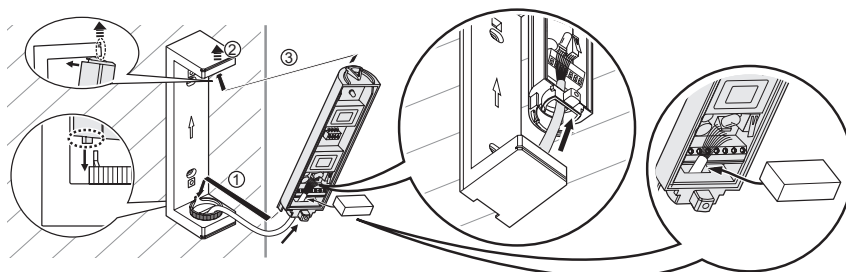
- 4 Put the wire extending from the wall through the wiring hole in the bottom of the bracket, and mount the bracket on the wall.



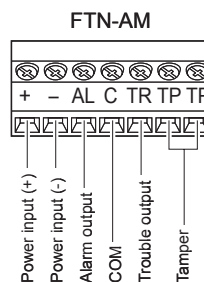
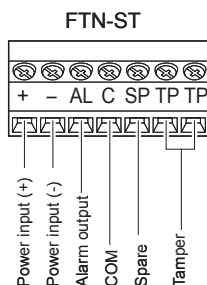
Note>>

- For wall tamper wiring (option), refer to page 9.

- 5 Pull the wire through the main unit. Lift the top of the bracket slightly and mount the main unit to the bracket.



6 Wire terminal connections.



Notes>>

- Anti-masking output is recognized as TROUBLE.
- For EOL, refer to page 10.

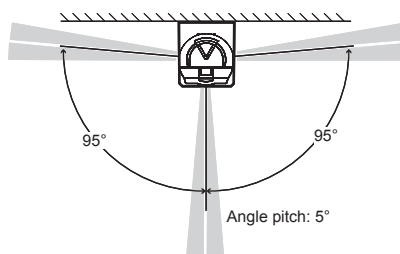
-Power cable length

The power cable should be limited to the following length.

Unit: m (ft.)

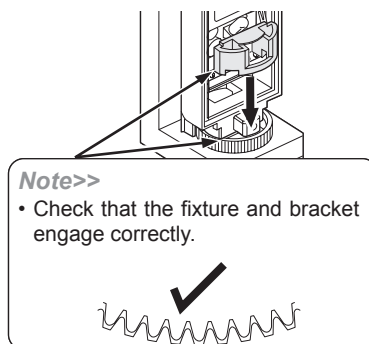
Cable diameter	FTN-ST		FTN-AM	
	12 V	14 V	12 V	14 V
AWG22 (0.33 mm ²)	340 (1,120')	730 (2,400')	290 (950')	620 (2,030')
AWG20 (0.52 mm ²)	530 (1,740')	1,160 (3,810')	450 (1,480')	980 (3,220')
AWG18 (0.83 mm ²)	850 (2,790')	1,850 (6,070')	720 (2,360')	1,570 (5,150')

7 Determine the horizontal detection angle and attach the fixture.



Note>>

- To make adjustments, remove the fixture.



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

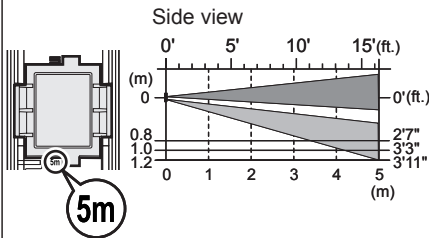


If 2 m is required, rotate the lower lens 180 degrees.

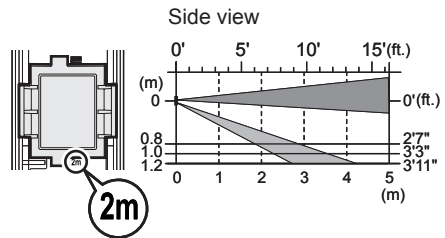
Note>>

- Do not remove the upper lens.

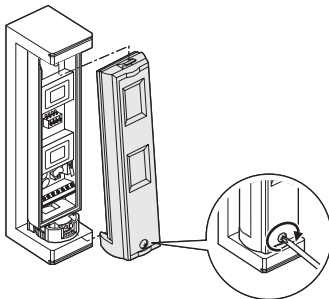
5 m detection length (Factory default)



2 m detection length



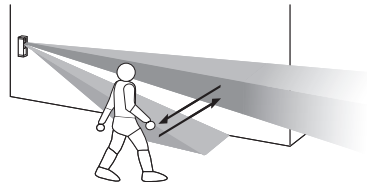
9 Attach the main unit cover.



Note>>

- To prepare for walk test, check that DIP switch 1 (LED) is set to "ON" before attaching the main unit cover.

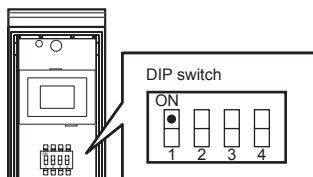
10 Perform walk test. For details, refer to page 7.



3 WALK TEST

3-1 WALK TEST

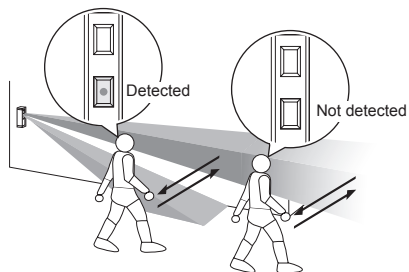
- 1 Set DIP switch 1 (LED) to "ON".



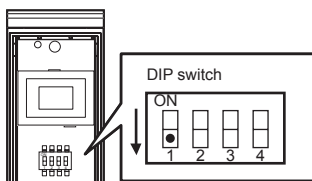
Note>>

- The switch is set to "ON" by factory default.

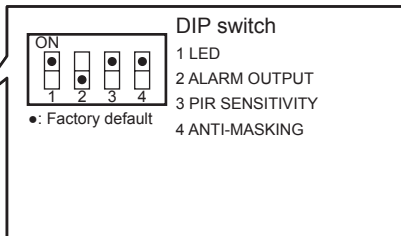
- 2 Check that LED lights for 2 seconds when the intended object is detected.



- 3 If the LED does not need to be turned on at all times, set the DIP switch 1 (LED) to "OFF".



4 DIP SWITCH SETTING

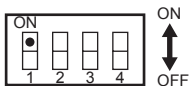


Do not touch the PCB except for the DIP switch and the terminal.

4-1 LED

DIP switch 1

FTN-ST
FTN-AM

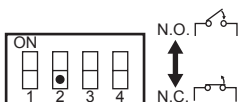


Position	Function
ON (Factory default)	LED ON
OFF	LED OFF

4-2 ALARM OUTPUT

DIP switch 2

FTN-ST
FTN-AM

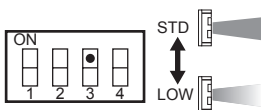


Position	Function
N.O.	N.O. output
N.C. (Factory default)	N.C. output

4-3 PIR SENSITIVITY

DIP switch 3

FTN-ST
FTN-AM

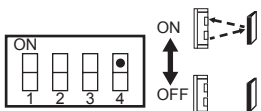


Position	Function
STD (Factory default)	Normal sensitivity
LOW	Low sensitivity

4-4 ANTI-MASKING

DIP switch 4

FTN-ST
FTN-AM

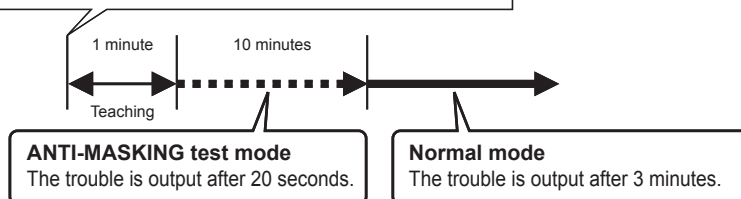


Position	Function
ON (Factory default)	ANTI-MASKING ON
OFF	ANTI-MASKING OFF

-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 the main unit cover are attached.
Please be careful not to leave any object within 1 m from the unit.



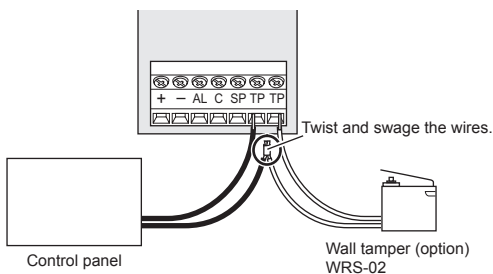
Note>>

- If a trouble is output (mal-detection of anti-masking) immediately after the operation has started, set the DIP switch 4 (ANTI-MASKING) to "OFF" and then to "ON", and close the cover.

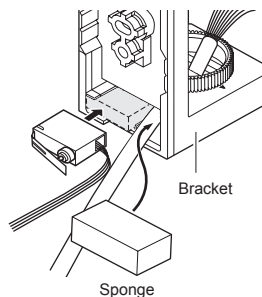
5 OTHERS

5-1 WALL TAMPER (OPTION) CONNECTION

Connect the tamper lead as shown below when connecting a wall tamper (option).



-Mounting position



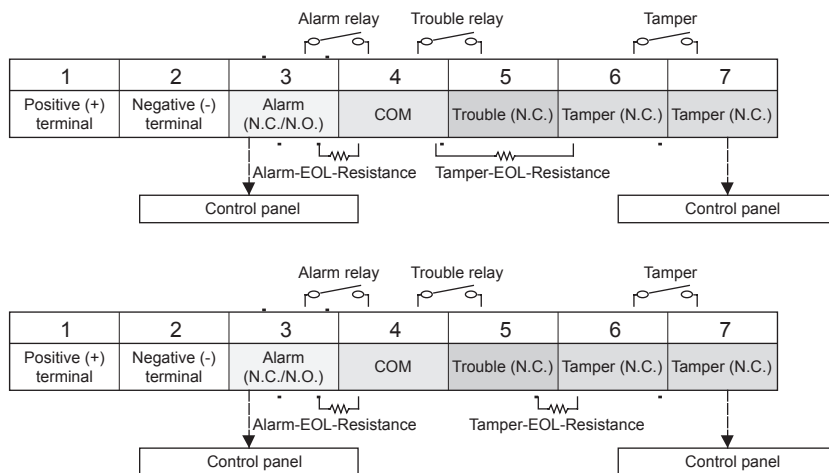
Note>>

- Pull the wire through the bracket before installing the wall tamper (option).

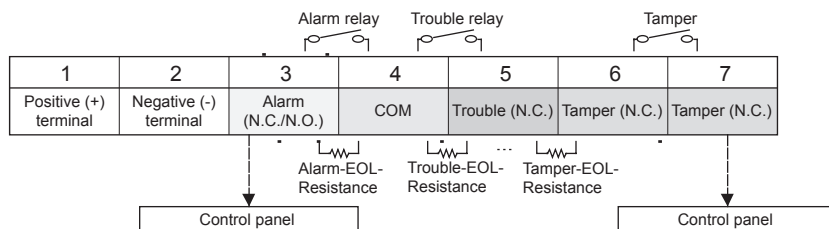
5-2 EXAMPLE OF EOL WIRING

Since the alarm and trouble outputs share the COM terminal, the wire connection should be made for the fit series detector according to the following diagram.

-Double EOL



-Triple EOL



5-3 LED LIGHT PATTERN

The following explains the LED light pattern.



LED



Blink



Light



OFF

Detector condition	LED indicator
Warm-up Note>> The LED blinks even if the DIP switch 4 (LED) is set to "OFF".	 Blinks for approx. 60 seconds.
Alarm	 Lights for 2 seconds.
Masking detection (FTN-RAM only) Note>> The LED blinks even if the DIP switch 4 (LED) is set to "OFF".	 Blinks 3 times and then repeats.

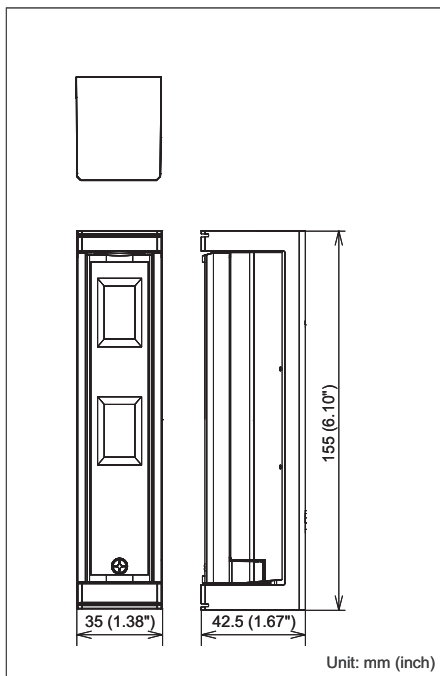
6 SPECIFICATIONS

6-1 SPECIFICATIONS

Model	FTN-ST	FTN-AM
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))	
Operating voltage	9.5 – 18 V DC	
Current draw	17 mA (max.) (at 12 V DC)	20 mA (max.) (at 12 V DC)
Alarm period	2.0 ±1.0 sec.	
Warm-up period	Approx. 60 sec. (LED blinks)	
Alarm output	N.C./N.O. Selectable 28 V DC 0.1 A (max.)	
Trouble output	N.C. 28 V DC 0.1 A (max.), open when the cover is removed.	
LED indicator	Light/Blink: Warm-up, alarm, masking detection (FTN-AM only)	
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	100 g (3.5 oz.)	
Accessories	Screw (3 × 20 mm) × 2	

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

6-2 DIMENSIONS



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. These products confirm to the EMC Directive 2004/108/EC.



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