

PASSIVE INFRARED **WONDEREX**
 DETECTOR

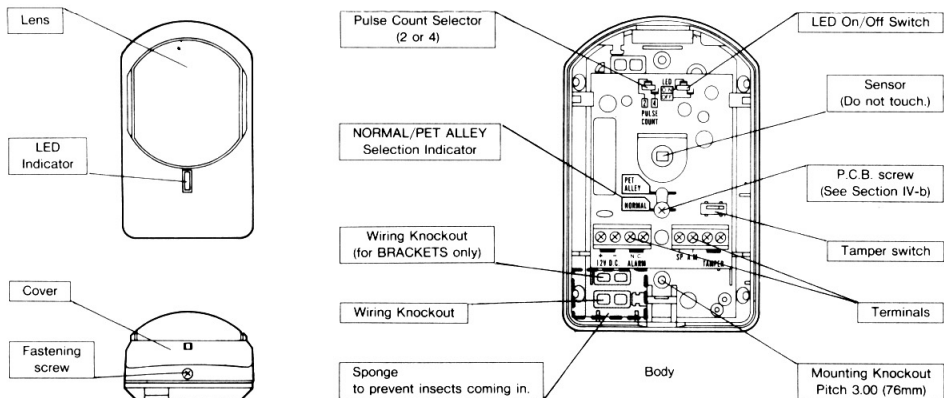
EX-35, EX-35T, EX-35V, EX-35V(P)

[STANDARD] [TAMPER] [TAMPER and ALARM MEMORY]

FEATURES

- Selectable "WIDE ANGLE" and "LONG RANGE" detection Patterns.
- Selectable "NORMAL" (Multi-Level) and "PET ALLEY" detection Patterns.
- Tall zone patterns eliminate the need for vertical adjustment.
- Selectable pulse count 2 or 4.
- Tamper switch (EX-35T, EX-35V, EX-35V(P) only).
- UL Listed only for models EX-35, EX-35T, EX-35V.
- LED ON/OFF Switch.
- Easy installation.
- Alarm Memory (EX-35V, EX-35V(P) only).

I. DESCRIPTION AND OPERATION

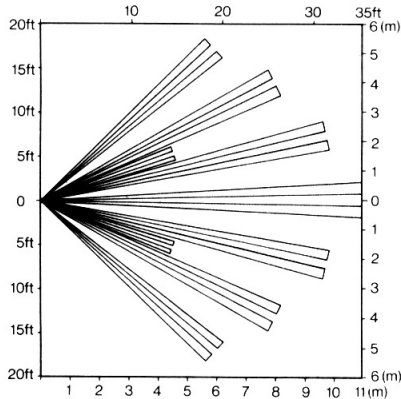


II. INSTALLATION METHOD

1. Loosen fastening screw and remove cover.
2. Mount the unit and wire according to Section V.
3. Replace the cover and supply power to unit.
[warm-up period is complete (Apx. 30 sec.)]
4. Conduct Walk Test.
5. Pulse count according to your coverage needs and environmental conditions.
Fasten cover with fastening screw.

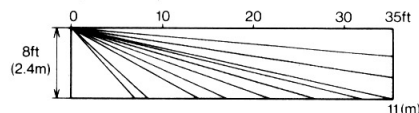
III. DETECTION AREA

WIDE ANGLE TOP VIEW

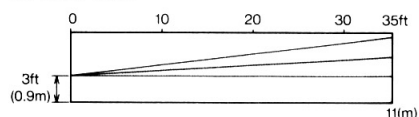


SIDE VIEW

NORMAL (Multi-Level) AREA



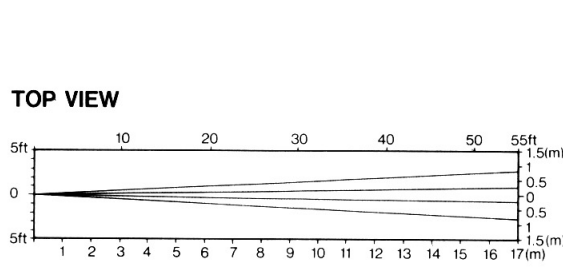
PET ALLEY AREA



MAX. Detection Distance/Height

Installation Height	2ft (0.6m)	3ft (0.9m)	4ft (1.2m)	5ft (1.5m)	6ft (1.8m)	7ft (2.1m)	8ft (2.4m)
NORMAL	15ft (4.5m)	23ft (7.0m)	30ft (9.0m)	35ft (11.0m)	35ft (11.0m)	35ft (11.0m)	35ft (11.0m)
PET ALLEY	35ft (11.0m)	35ft (11.0m)	30ft (9.0m)	—	—	—	—

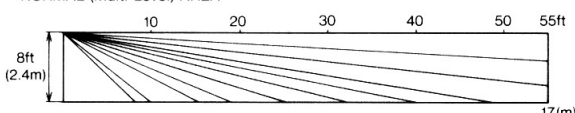
LONG RANGE TOP VIEW



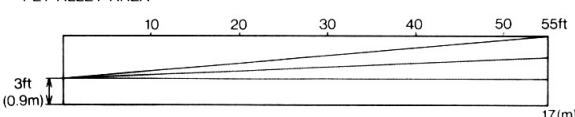
IMPORTANT
WHEN SELECTING THE LONG RANGE DETECTION PATTERN,
ALWAYS SET PULSE COUNT SELECTOR ON "2".

SIDE VIEW

NORMAL (Multi-Level) AREA



PET ALLEY AREA



MAX. Detection Distance/Height

Installation Height	2ft (0.6m)	3ft (0.9m)	4ft (1.2m)	5ft (1.5m)	6ft (1.8m)	7ft (2.1m)	8ft (2.4m)
NORMAL	17ft (5.0m)	30ft (9.0m)	42ft (12.5m)	55ft (17.0m)	55ft (17.0m)	55ft (17.0m)	55ft (17.0m)
PET ALLEY	55ft (17.0m)	55ft (17.0m)	42ft (12.5m)	—	—	—	—

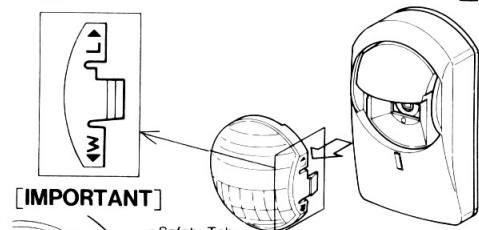
IV. AREA PATTERN SELECTION

a) SELECTING WIDE ANGLE OR LONG RANGE PATTERNS

NOTE: The detection pattern is preset to the "W" (Wide Angle) position.

1. Inverting the lens will select either the Wide Angle or Long Range detection patterns.
2. Please note markings "W" (Wide Angle) and "L" (Long Range), on each side of lens.

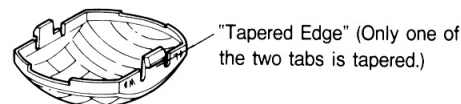
- For Wide Angle detection the "W" points downward.
- For Long Range detection the "L" points downward.



IMPORTANT

○ Safety Tab.
When the "L" (Long Range) pattern is used the "Safety Tab" MUST be removed (See illus.), and the Pulse Count Selector set at "2".

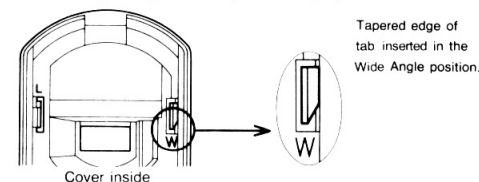
- Verify Pattern Selection / Lens Position, as follows.



— Example —

For Wide Angle patterns, the tapered edge on the Lens (See illus.) points to the "W" on the cover.

For Long Range, the tapered edge points at the "L".



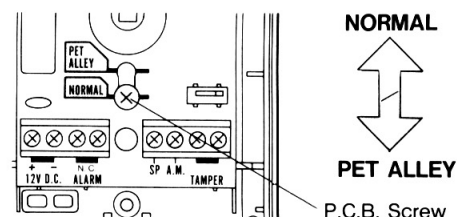
b) SELECTING NORMAL (Multi-Level) or PET ALLEY DETECTION PATTERNS.

{Detector is pre-set at the "NORMAL" position}.

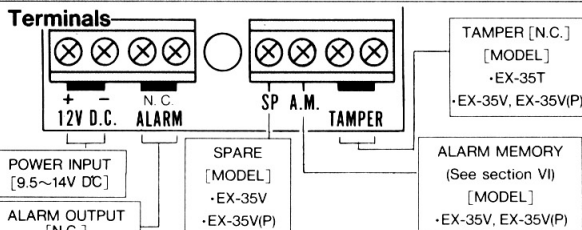
1. Loosen screw (see illus.), and slide the "P.C.B." (Printed Circuit Board) up or down to match the arrow with the desired pattern (see illus.).

— Carefully —

— Tighten screw when complete —



V. WIRING



Power wires should not exceed the following lengths.

WIRE GAUGE	EX-35, EX-35T		EX-35V, EX-35V(P)	
	12V DC	14V DC	12V DC	14V DC
AWG22 (0.33mm ²)	1070'(320m)	2140'(650m)	770'(230m)	1530'(460m)
AWG20 (0.52mm ²)	1700'(510m)	3400'(1020m)	1200'(360m)	2400'(730m)
AWG18 (0.83mm ²)	2700'(820m)	5300'(1600m)	1900'(570m)	3800'(1150m)

When using two or more units on one wire, the maximum length is obtained by dividing the maximum wire length listed above by the number of units used.

- UL requires EX-35, EX-35T, EX-35V to be connected to a UL listed power supply capable of providing a nominal input of 12VDC(9.5~14V DC) 18mA(max.) [EX-35, EX-35T], 12VDC(9.5~14V DC) 25mA (max.) [EX-35V] and battery standby time of 4 hours.

VI. ALARM MEMORY [EX-35V, EX-35V(P)]

1. Wiring

Connect control voltage signal terminal (System arming status voltage output terminal) of control panel to A. M. terminal.

MODEL : EX-35V [Must have common ground with sensor.]

	Control Voltage Signal
System armed	0~1 V DC (grounded)
System disarmed	OPEN or +5~14V DC

MODEL : EX-35V(P) [Must have common ground with sensor]

	Control Voltage Signal
System armed	OPEN or +5~14V DC
System disarmed	0~1 V DC (grounded)

2. Operation of Alarm Memory

If the unit is triggered during an armed period, when the system is disarmed, its LED will remain lit to confirm that it reported the alarm.

- Alarm Memory will operate whether LED is disabled or not.
- Alarm Memory will not latch while system is disarmed.
- LED operation and alarm output are not affected by alarm memory when system is armed.

3. Reset

Alarm memory resets automatically when system is re-armed.

Optional compatible control panel required.

VII. INSTALLATION HINTS

- Avoid direct sunlight.
- Avoid looking directly at air conditioning or heating vents.
- Avoid vapor or high humidity that can cause condensation.
- Do not install outdoors.

VIII. TROUBLE SHOOTING AND MAINTENANCE

PROBLEM	PROBABLE CAUSE	REMEDY
LED does not light.	Incorrect power supply voltage. (disconnection, low voltage)	Correct the voltage supply to 9.5~14V DC.
	Incorrect detection area.	See Section III
	Incorrect polarity to detector.	Switch positive and negative at terminal.
	LED switch is OFF	Turn on the Switch.
LED lights even though no person within area.	Moving object within area. (curtain, wall hanging, etc.)	Remove object from detection area.
	Rapid temperature changes within area. (heater., air-conditioner, etc.)	Remove the sources from detection area.
LED continues to light	Poor connection of alarm memory.	Reconnect wire.
	Wrong control voltage from panel.	Must be 0~1 V DC. (grounded) See Section VI
LED lights but signal is not sent.	Relay contact is stuck or damaged due to overloading.	Check load of output. The unit needs repair or replacement.
	Faulty Wiring	Wire correctly.

※ Conduct a walk test at least once per year.

IX. SPECIFICATIONS

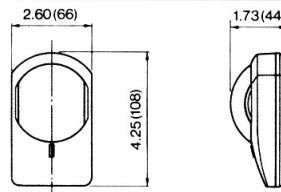
Model	EX-35	EX-35T
Detection method	Passive infrared	
Coverage	WIDE : 35ft × 35ft (11m × 11m) 85' wide	
	LONG : 55ft × 5.5ft (17m × 1.7m) Long Range	
Detection zones	WIDE : 64 zones/28 zones	
	LONG : 12 zones/4 zones	
Mounting Height	NORMAL 4~8ft (1.2~2.4m). PET ALLEY 2~4ft (0.6~1.2m)	
Sensitivity	3' F (1.6' C) at 2ft/sec. (0.6m/sec.)	
Detectable speed	1~5ft/sec. (0.3~1.5m/sec.)	
LED indicator	Alarm indicator optional	
Alarm period	Approx 2.5 sec.	
Alarm output	N. C., 28V DC 0.2A max	
Tamper switch	N. C., Opens when cover removed.	
Pulse Count	Approx 20sec. 2 or 4	
	IMPORTANT : WHEN SELECTING THE LONG RANGE DETECTION PATTERN, ALWAYS SET PULSE COUNT SELECTOR ON "2".	
Warm up period	Approx 30sec.	
Power input	9.5~14V DC	
Current draw	18mA (max)	

Weight	3.2 oz (90g)
Operating temperature	-4 F ~ +122 F (-20°C ~ +50°C)
Environment humidity	95% max
RF interference	No Alarm 20V/m

V Version (Alarm Memory)

Model	EX-35V	EX-35V(P)
Alarm Memory	armed : 0~1V DC(grounded)	armed ; OPEN or +5~14V DC
Current Draw	18mA (normal), 25mA (max)	

Dimensions



inches (mm)

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

NOTE

This unit is designed to detect movement of 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.



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