

INSTALLATION INSTRUCTIONS

EE966D

**ePIR DETECTOR
With**

Advanced Digital-SD Sensing Technology



**FCC, IC, CE, (UL Pending)
Worldwide Patents Pending
P/N 7102738 Rev. C**

PRODUCT FEATURES

EE966D Detector uses an innovatively designed optical lens with unique Quad (four elements) PIR Sensor and an exclusive advanced digital based electronics optimized to eliminate all types of false alarms including those caused by small animals and pets.

EE966D provides unprecedented levels of immunity against visible light (Auto-LED sensing method). The Detector offers an exceptional level of detection capability and stability for every security installation. **EE966D** is supplied with Wide Angle lens with PET immune function.

Main Features:

- Four element imaging technology "Quad".
- True digital based MCU processing.
- Immunity to animals up to 65 lbs (30Kg).
- 60 ft (18m) detection range with wide angle lens.
- 80 ft (24m) detection range with long range curtain lens (option; model: EE966LRCL).
- Auto temperature compensation.
- Auto pulse width adjustment.
- Auto sensitivity adjustment.
- Environmental immunity.
- Height installation calibration free (6~8ft).
- LED ON/AUTO Jumper with a unique setting method (up to 30mins. auto extendible testing period).
- Tamper switch.
- Compact design for all types of installations.

DETECTION PATTERNS

Fig. 1 - Wide Angle Lens

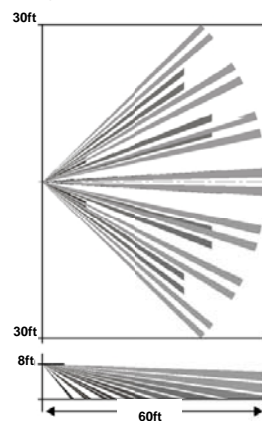
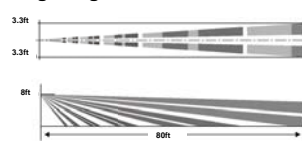


Fig. 2 - Long Range Curtain Lens - OPTION



MOUNTING LOCATION SELECTION

Choose a location most likely to intercept an intruder. See detection pattern **Fig. 1 and Fig. 2**. **EE966D** performs best when provided with a constant and stable environment and background. The quad-element high quality sensor detects motion crossing the beam; it is slightly less sensitive detecting motion toward the detector.

Long Range Curtain Lens - OPTION

When pet immunity is required, optional Long Range Curtain Lens cannot be used. Pet immunity can only be achieved with Wide Angle Lens.

AVOID THE FOLLOWING LOCATIONS:

- Facing direct sunlight.
- Facing areas that may change temperature rapidly.
- Areas where there are air ducts or substantial airflows.
- Avoid screen, curtain that may block detection area.
- Do not install outdoors.

PET IMMUNITY

Pet immunity is most effective on the following sized animals:
Rodents = 2 to 5 inch high.
Cats = 2 to 14 inch high at normal room temperature.
Small to medium sized dogs = 4 to 18 inch high at normal room temperature.
When a dog jumps up on desks, **EE966D** may detect it. Adjust detection area to avoid such places. Mount between 7ft and 8ft. (For better immunity, especially for medium sized dogs, mount as close to 8ft as possible).
Do not angle detector towards the ground or use the angle bracket.
Mount flat on the wall or in the corner.
For best pet immunity, limit the detectors field of view to 33ft~39ft maximum in any direction.
For rodents,
If any shelves within 15ft of the detector have a height that comes within 1.6ft~3.3ft below the mounting height of the detector and rodents can access these areas, pet immunity will be reduced. Please select mounting location of detectors carefully to avoid this situation.
For cats,
If there are cats, any shelves in the detection area will reduce pet immunity.

MOUNTING THE DETECTOR

The detector can either be wall or corner mounted. If ceiling or special wall mounting is required, use the optional bracket base. Refer to bracket description. (See fig. 8)

1. Unscrew the holding screw and gently raise the front cover (Fig. 3).
2. Carefully unscrew the PCB holding screw located on the PC board (Fig. 7).
3. Break out the desired knockout holes for proper installation (Fig. 4).
4. The circular and rectangular indentations at the bottom base are the knockout holes for wire entry. You may also use mounting holes that are not in use for running the wiring into the detector (Fig. 4).
5. For bracket mounting option - lead wire through the bracket.
6. Mount the detector base to the wall, corner or ceiling. (For option with bracket see Fig. 8 model: EE966MBK).
7. Reinstall the PC board by fully tightening the holding screw. Connect wire to terminal block.
8. Replace the cover by inserting it back in the appropriate closing pins and screw in the holding screw.

OPENING THE DETECTOR

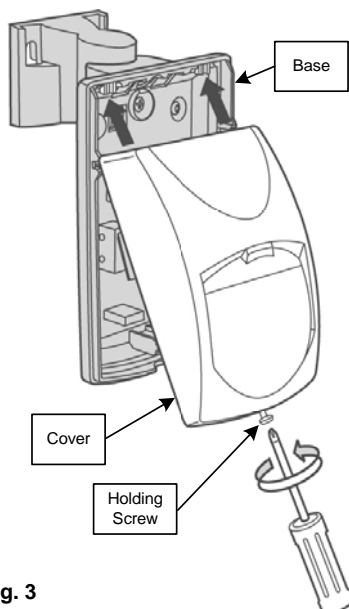


Fig. 3

MOUNTING DESCRIPTION

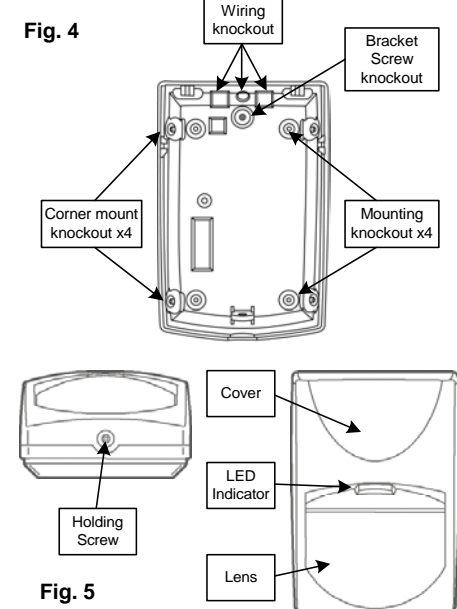


Fig. 5

TERMINAL BLOCK CONNECTIONS

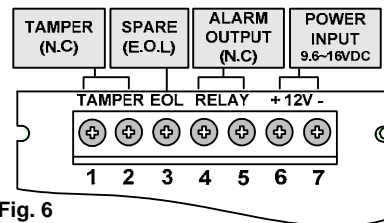


Fig. 6

Terminals 1 & 2 - Marked TAMPER
Connect these terminals to a 24-hour normally closed protective zone in the control unit. Once the front cover of the detector is opened, an immediate alarm signal will be sent to the control unit.

Terminal 3 - Marked EOL
End of line options.

Terminals 4 & 5 - Marked RELAY
These are the output relay contacts of the detector. Connect to a zone input in the control panel.

Terminal 6 - Marked + (+12V)
Connect to the positive Voltage output of 9.6 ~ 16Vdc source (usually from the alarm control unit).

Terminal 7 - Marked - (GND)
Connect to ground of the control panel.

SETTING UP THE DETECTOR JUMERS and TERMINAL LAYOUT TESTING THE DETECTOR

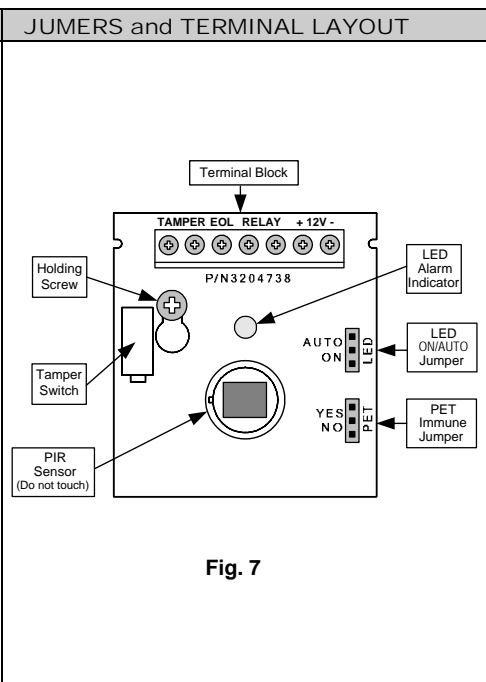
PET IMMUNITY JUMPER

- For immunity to an animal less than 30lbs (10Kg), set jumper at **NO**
- For immunity to an animal up to 65 lbs (30kg), set jumper at **YES**

LED ENABLE OR AUTO (DISABLE) JUMPER

- Set jumper at **ON** position to enable LED indication.
- Set jumper at **AUTO** position to disable LED indication automatically once all tests have been completed.

1. This function is preset with 30 minutes cut-off window time period for the testing and can be unlimited extended by walk test with continuous body movement as required.
2. To enable the LED indication for all retests or during a system annual inspection in next time, either reset/disconnect the control panel power/AUX momentarily via the power reset mode on keypad for all installed ePIRs or directly shine to LED indicator on individual ePIR within 6 inch by any type flashlight.
3. This setting method is highly recommended for high secure purposes of anti-disclosing the detection profile: coverage, sensitivity and pattern's angle etc. during the normal operation.



TEST PROCEDURES

Apply 12 Vdc power to the detector, wait 1 minute to finish the detector warm up time (30-45 minutes with LED fast flashing). Conduct testing with the protected area cleared of all people.

Walk test

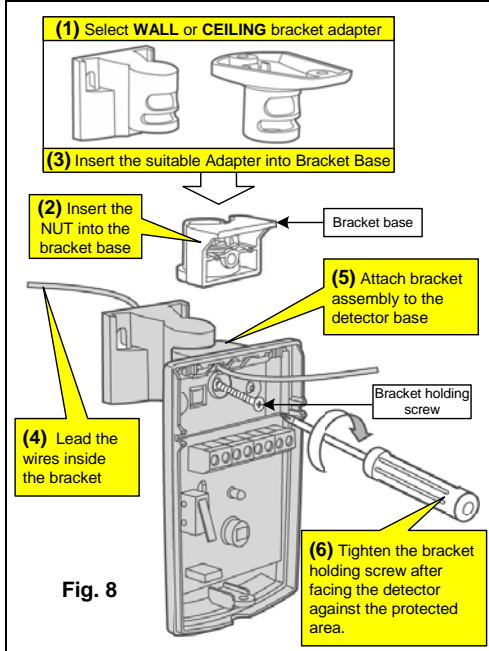
1. Make sure that LED jumper is at **ON** or **AUTO**.
2. Start walking slowly across the detection zone.
3. Observe the detector's LED lights whenever motion is detected.
4. Allow 5 seconds. between each test.
5. If the jumper is at **AUTO**, after the walk test is completed, the LED will be disabled for indication only if there is no any movement within next 30 minutes. **NOTE: Walk tests should be conducted, at least once a year, to confirm proper operation and coverage of the detector.**

WIRE SIZE REQUIREMENTS

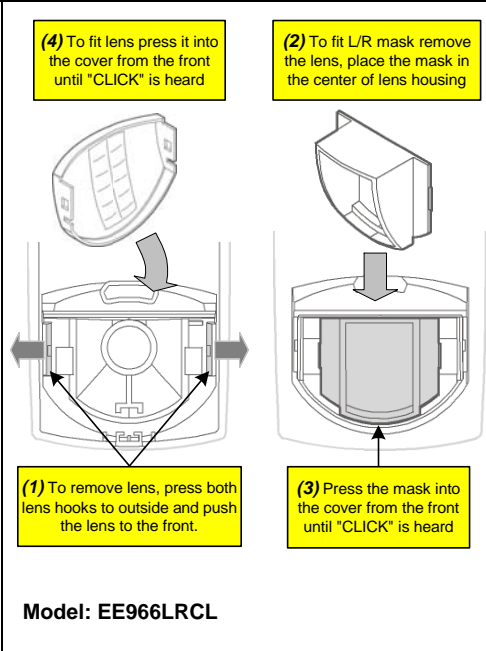
Use #22 AWG (0.5mm) or wires with a larger diameter. Use the following table to determine required wire gauge (diameter) and length of wire between the detector and the control panel.

Wire Length	m	200	300	400	800
Wire Diameter	mm	.5	.75	1.0	1.5
Wire Length	ft	800	1200	2000	3400
Wire Gauge	#	22	20	18	16

BRACKET SETUP OPTION (EE966MBK)



LONGRANGE CURTAIN SETUP OPTION



BENEFITS OF LED IS AT AUTO

This unique setting method is based on the LED exclusive digitize processing:

1. Reduce installer working load, minimize human error.
2. Increase security/safety levels.
3. Keep friendly environment.
4. Especially apply for:
 - UL Standard Installation
 - The Institution Facilities/Bank
 - Jewelry, Computer, Electronic Appliance Store
 - Gun Shop
 - Pharmacy Store
 - Warehouse and Rolling Door Area
 - Bedroom of Family House
 - And any protection of more concern area

TECHNICAL SPECIFICATIONS

Detection Method	Quad (Four element) ePIR
Power Input	9.6 - 16 Vdc
Current Consumption	Standby: 16mA (± 5%) Active with LED: 16mA (± 5%) Active w/o LED: 13mA (± 5%)
Detection Range (24m)w/LRCL	60ft. (18m); 80ft.
LED Auto Disable	30 minutes; extendible window as required
Alarm Period	2 sec.
Alarm Output Relay	N.C 28Vdc 0.1A with 10 Ohm in line resistor
Tamper Switch	N.C 28Vdc 0.1A with 10 Ohm in line resistor
Warm Up Period	35sec (± 5sec)
Operating Temperature	14°F to 122°F
Operating Humidity Range	95% max relative humidity non condensing
Storage Temperature	-22°F to 158°F
RFI Protection	20V/m 80KHz - 2GHz
EMI Protection	50,000V electrical Interference from lightning
White Light Immunity	up to 10,000 LUX
PET Immunity	up to 65Lbs. (30Kg.)
Dimensions	3.6" x 2.3" x 1.5"

EESGI reserves the rights to change specifications without prior notice

WARRANTY

EESGI - WARRANTY POLICY CERTIFICATE

This Warranty Certificate is given in favor of the purchaser (hereunder the "Purchaser") purchasing the products directly from EESGI or from its authorized distributor. EESGI warrants these products to be free from defects in materials and workmanship under normal use and service for a period of 60 months from the last day of the week and year whose numbers are printed on the printed circuit board inside these products (hereunder the "Warranty Period"). Subject to the provisions of this Warranty Certificate, during the Warranty Period, EESGI undertakes, at its sole discretion and subject to EESGI's procedures, as such procedures are from time to time, to repair or replace, free of charge for materials and/or labor, products proved to be defective in materials or workmanship under normal use and service. Repaired products shall be warranted for the remainder of the original Warranty Period. All transportation costs and in-transit risk of loss or damage related, directly or indirectly, to products returned to EESGI for repair or replacement shall be borne solely by the Purchaser. EESGI's warranty under this Warranty Certificate does not cover products that is defective (or shall become defective) due to: (a) alteration of the products (or any part thereof) by anyone other than EESGI; (b) accident, abuse, negligence, or improper maintenance; (c) failure caused by a product which EESGI did not provide; (d) failure caused by software or hardware which EESGI did not provide; (e) use or storage other than in accordance with EESGI's specified operating and storage instructions. There are no warranties, expressed or implied, of merchantability or fitness of the products for a particular purpose or otherwise, which extend beyond the description on the face hereof. This limited Warranty Certificate is the Purchaser's sole and exclusive remedy against EESGI and EESGI's sole and exclusive liability toward the Purchaser in connection with the products, including without limitation - for defects or malfunctions of the products. This Warranty Certificate replaces all other warranties and liabilities, whether oral, written, (non-mandatory) statutory, contractual, in tort or otherwise. In no case shall EESGI be liable to anyone for any consequential or incidental damages (inclusive of loss of profit, and whether occasioned by negligence of the EESGI or any third party on its behalf) for breach of this or any other warranty, expressed or implied, or upon any other basis of liability whatsoever. EESGI does not represent that these products can not be compromised or circumvented; that these products will prevent any person injury or property loss or damage by burglary, robbery, fire or otherwise; or that these products will in all cases provide adequate warning or protection. Purchaser understands that a properly installed and maintained product may in some cases reduce the risk of burglary, fire, robbery or other events occurring without providing an alarm, but it is not insurance or a guarantee that such will not occur or that there will be no personal injury or property loss or damage as a result. Consequently, EESGI shall have no liability for any personal injury, property damage or any other loss based on claim that these products failed to give any warning. If EESGI is held liable, whether directly or indirectly, for any loss or damage with regards to these products, regardless of cause or origin, EESGI's maximum liability shall not in any case exceed the purchase price of these products, which shall be the complete and exclusive remedy against EESGI.

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