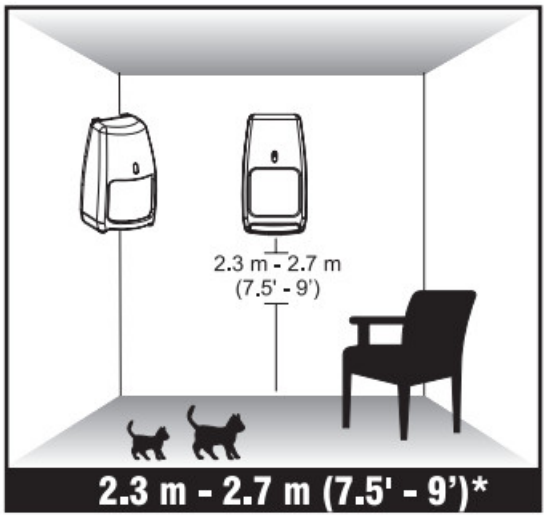
Honeywell IntelliSense IS2535 Passive Infrared Motion Sensor Instruction Manual

Honeywell

IntelliSense IS2535 Passive Infrared Motion Sensor
Instruction Manual

Contents

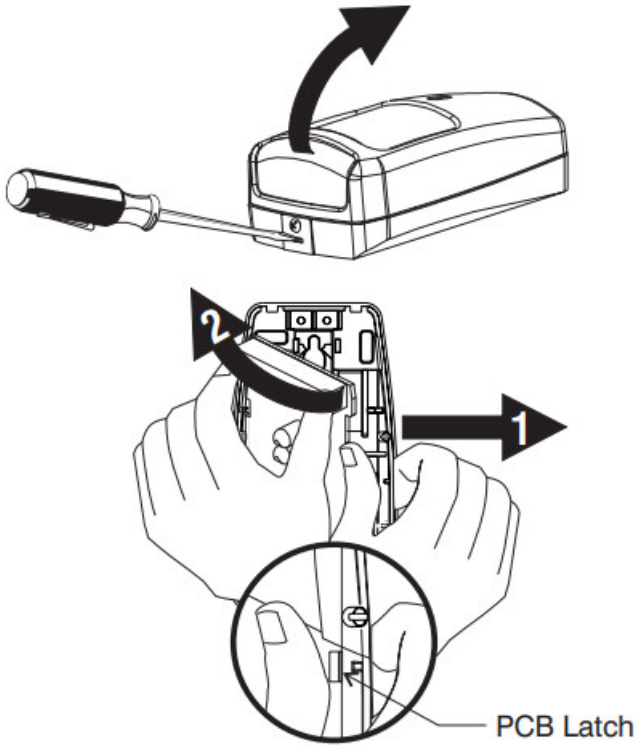
Select the mounting location



Mounting Location Guidelines

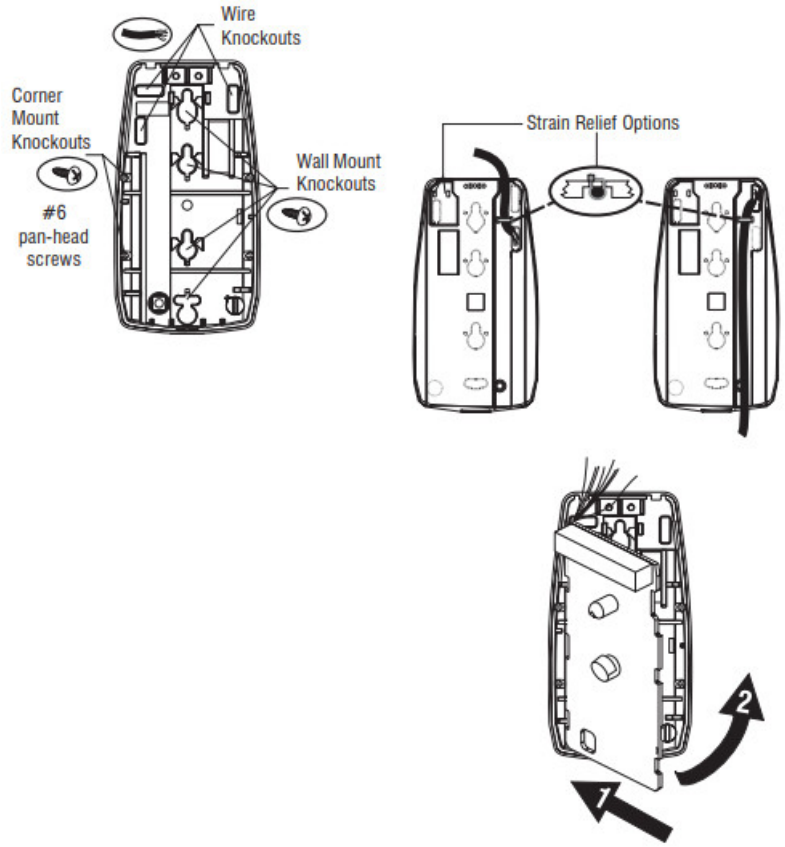
- 2.3 m – 2.7 m (7.5′ – 9′)* mounting height.
- Avoid direct or reflected sunlight.
- Aim the sensor away from windows or heating/cooling devices.
- The sensor must have a clear line of sight to the protected area.
- If using in a non-pet application, remove the Pet Immune lens and replace it with the High-Security lens (see Step 5). *See Special Instructions for pet applications.

Separate the sensor housings and remove the printed circuit board (PCB).



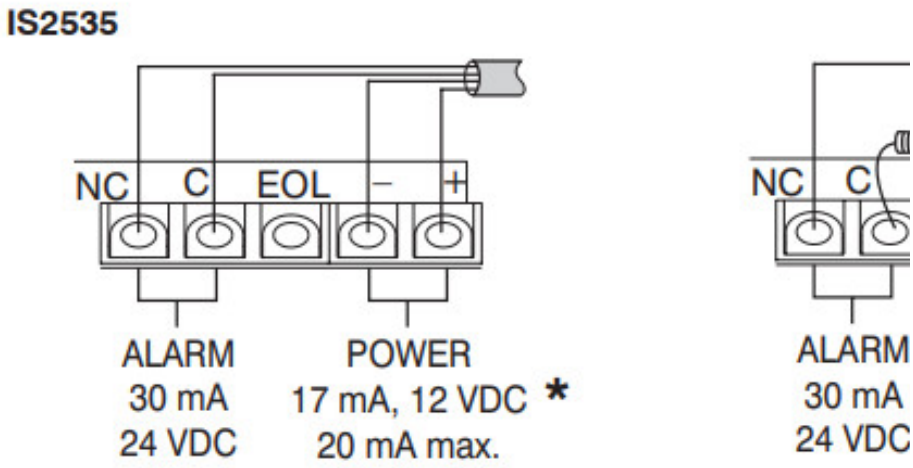
- Use a small screwdriver to remove the cover screw (if installed), then push in the housing latch at the bottom of the sensor, and gently pull apart the housings.
- Push outward on the PCB latch and lift the PCB out of the housing.

Mount the unit

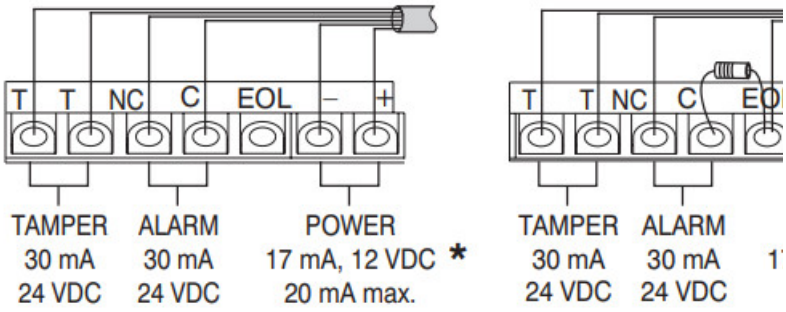


- Slide the wire through the wire knockouts in the back housing, attach the wire with a wire tie, and cut off the excess wire tie.
- Mount the back housing flat against a wall or in a corner using #6 screws supplied. [Note: If using a mounting bracket (see Accessories section), follow the installation instructions supplied with the bracket.]
- Replace the PCB.
- Seal any openings with the RTV compound.

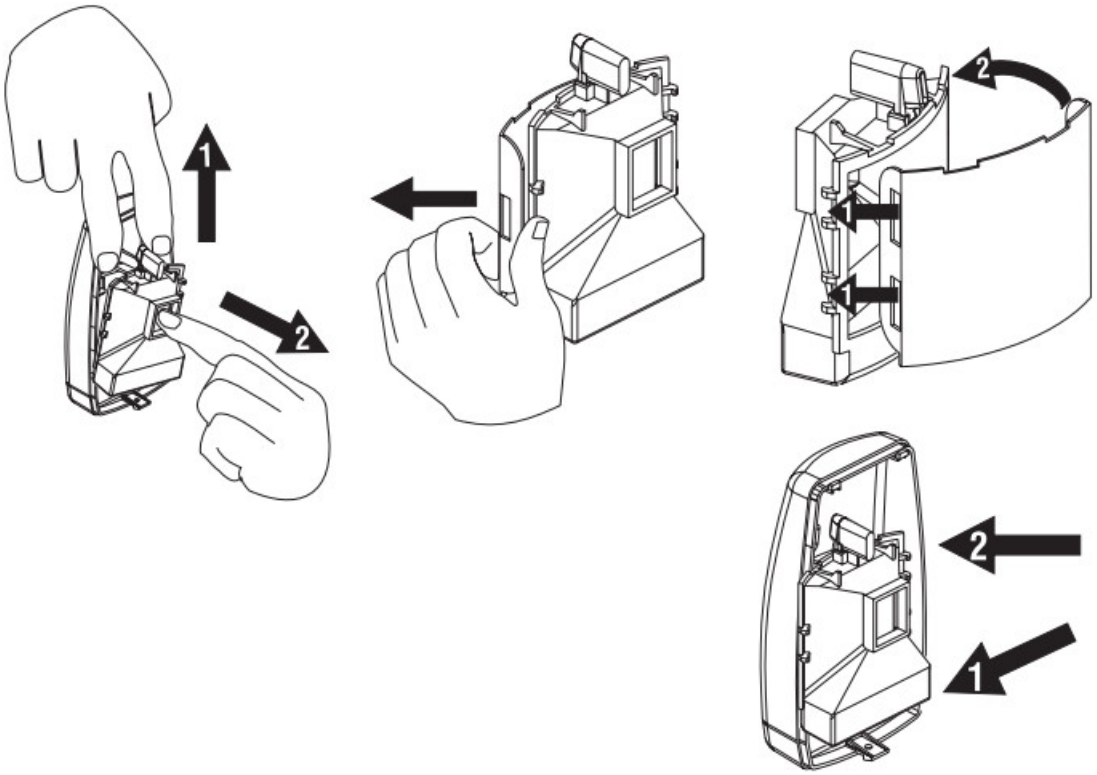
Wire the sensor: Connect wires to the terminal as shown using wire size 0.8 – 1.5 mm (22-16 AWG). Observe the proper polarity.

	
Normally Closed Loop, No EOL Resistor	Normally Closed Loop,

IS2535T

	
Normally Closed Loop, No EOL Resistor	Normally Closed Loop,

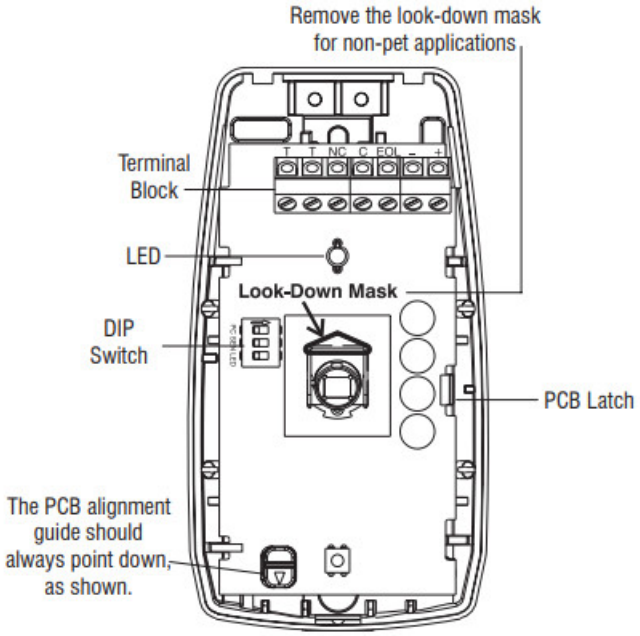
Note: EOL = End of Line supervised resistor / spare terminal block. *For UL voltage, see Specifications Section.
Select the appropriate lens* for the installation. If necessary, mask segments as required. (Refer to theMasking the Lens section.)
***Lens options:** Pet Immune [factory default] or High Security/Non-Pet Immune lens.



To change the lens:

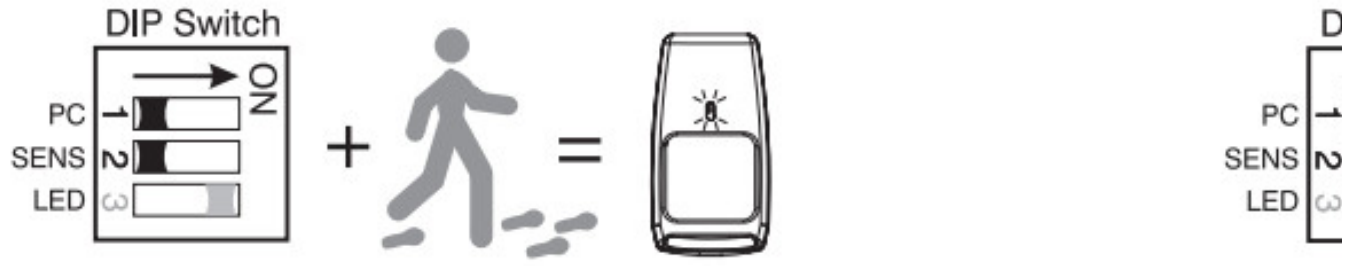
- Pull up on the bug guard latches with two fingers and remove the bug guard with the other hand.
- Pull outward on the lens flange (single-slotted) of the existing lens and remove the lens.
- Align the double-slotted lens flange to the bug guard, SMOOTH side facing outward, and snap the single-slotted lens flange in place.
- Place the bug guard into the look-down window and press it into place

Set the DIP switch settings

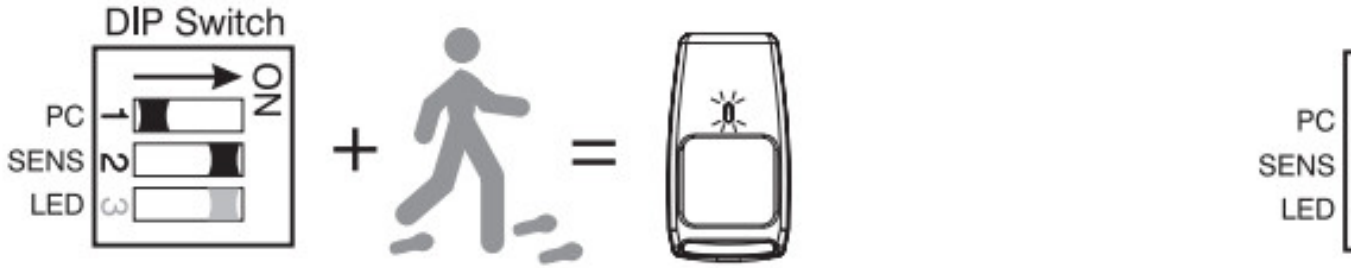


SWITCH	OFF
1 (PC)	Pulse Count 2
2 (SENS)	Low Sensitivity
3 (LED)	LED Disabled

(Note: Default switch settings are shown in grey.)
Configure the sensitivity and walk-test the sensor.
Set the sensitivity appropriate for the application (see options below), replace the front cover, and apply power to the sensor. Begin the walk-test after the LED stops flashing (see the LED Operation section). Walk through the detection zones, observing the sensors LED whenever motion is detected. The red LED shows the actual alarm relay operation. The absolute range of all PIR units is subject to variation because of different types of clothing, backgrounds, and ambient temperature. For this reason, ensure that the most likely intruder routes are well within the PIRs detection zones and that walk-testing is carried out along those routes.



Lowest Sensitivity: 3-5 Steps (Low Sensitivity and Pulse Count 2) Note: This is the recommended setting for applica to 36 kg (80 lb) when used with the Pet Immune Lens, or Harsh environments.



Low Sensitivity: 2-4 Steps (High Sensitivity and Pulse Count 2) Note: This is the recommended setting for applications with pets up to 18 kg (40 lb) w hen used with the Pet Immune Lens.

High Sensitivity: 1-2 Steps (High Sensi ting for any location where an intruder a. Recommended for High-Security ap

Note: For High-Security applications, use the High-Security lens, disable the LED (S3=OFF), and set the sensitivity to High (S1 and S2=ON).

MOUNTING LOCATION GUIDELINES

The IS2535 and IS2535T are designed for use indoors. The sensor can be a corner, wall, or bracket mounted (see Accessories section). Make sure that the sensor has a clear line of sight to the protected area: infrared light cannot penetrate solid objects, and the sensor must see an area in order to detect a moving person. The sensor should be pointed into the room interior, and away from windows and heating/cooling sources. Additionally, the

sensor should be installed on a surface where the temperature is similar to that of the area being protected and not pointed at direct or reflected sunlight.

SPECIAL INSTRUCTIONS FOR INSTALLATION WITH PETS

To take full advantage of the pet immunity in the IS2535/IS2535T, follow the guidelines below:

- Mount the center of the sensor at 2.3 m (7.5 feet) high.
- Set the sensor to the Low or Lowest sensitivity setting (see Step 7, on page 1), as required by the application.
- In the Lowest sensitivity setting, the total combined weight of animals may not exceed 36 kg (80 lb).
- In Low sensitivity setting, the total combined weight of animals may not exceed 18 kg (40 lb).
- The Look-down mask must be installed (see Step 6 – factory installed).
- The pet immune lens (P/N 5-532-719) must be installed (factory installed).
- Mount where pets cannot come within 1.8 m (6 feet) of the sensor by climbing on furniture, boxes or other objects.
- Do not aim the sensor at stairways or furniture/objects that can be climbed on by animals.
- Environmental differences and the amount of heat radiated by an animal will vary the animal immunity levels exhibited by the sensor. Each installation should be tested to determine the exact level of attainable animal immunity.

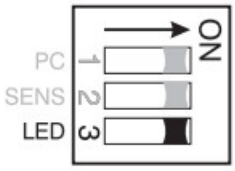
Note: Pet immunity characteristics for this sensor have not been verified by Underwriteres Laboratories, Inc.

TAMPER SWITCH

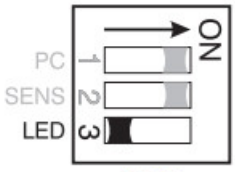
The IS2535T is equipped with a normally closed (NC) cover tamper. Each sensor is shipped with the cover tamper operational.

LED OPERATION To Enable the alarm LED, turn switch S3 ON. To Disable the alarm LED, turn switch S3 OFF. The LED will temporarily remain enabled for 10 to 12 minutes. This feature gives the installer time to walk-test the unit as explained below

Automatic Walk-Test Mode with alarm LED disabled (switch S3 OFF):



LED Enabled



LED Disabled

After applying power to the sensor, it will warm up for up to three minutes, and then the LED will temporarily remain enabled for a 10-minute walk-test period. After 10 minutes, the LED will automatically switch to disabled. To restart the 10-minute walk-test mode, switch S3 ON, and then OFF again

OPERATION			
Conditions	Alarm LED		Alarm Relay
	Enabled	Disabled	
Warm Up (up to 3 minutes)	Slow Blink	Slow Blink	Closed
Normal	OFF	OFF	Closed
Alarm	ON for 3 seconds	*See LED Operation	Opened for 3 seconds
Trouble	Fast Blink	Fast Blink	SeeTroubleshooting

TROUBLESHOOTING

- **Symptom:** The sensor is not operating. Corrective Action: Check to make sure the Power terminals are wired correctly. If the power terminals are wired correctly, and the sensor does not operate when power is applied, replace the sensor.
- Symptom: Fast Blinking LED — Trouble condition; two possible causes.

  1. Temperature Compensation failure: This sensor checks Temperature once every 100 ms. When a Temperature Compensation failure occurs, the sensor defaults to room temperature sensitivity and continues to operate normally while signaling trouble. The trouble is stored in memory, and when the next valid alarm condition is detected, the alarm relay latches open.

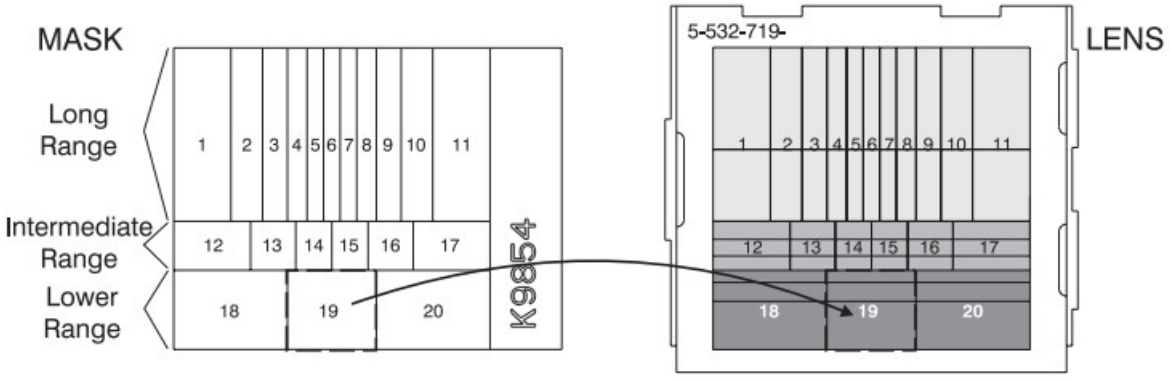
  2. PIR self-test failure: In the absence of PIR signals, the sensor internally checks its PIR circuit once every ten minutes. If six consecutive self-tests fail, the sensor signals trouble with its LED, and the relay latches closed. Subsequent detection of a valid PIR Signal will clear the trouble, and the relay will return to normal operation.

  Corrective Action: Replace the sensor

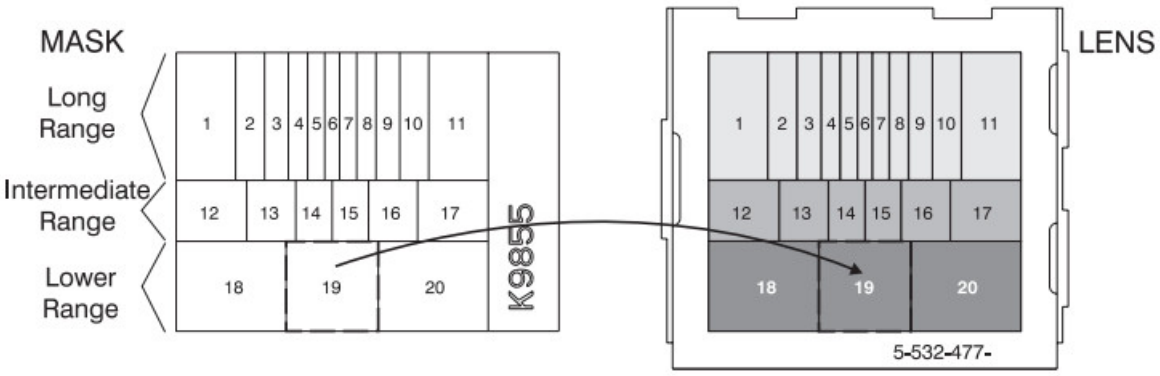
MASKING THE LENS

If the installation requires some segments of the detection pattern to be blocked off, you can mask part of the lens pattern with the lens masking label material (included). To mask segments of the detection pattern:

- Open the sensor housing and remove the lens (see Step 5).
- Select the appropriate segments to be masked, and place the lens mask label over the inside of the lens.
- Use Lens Mask K9854 to mask Long, Intermediate, and Lower Range segments on the Pet Immune Lens (P/N 5-532-719, installed).

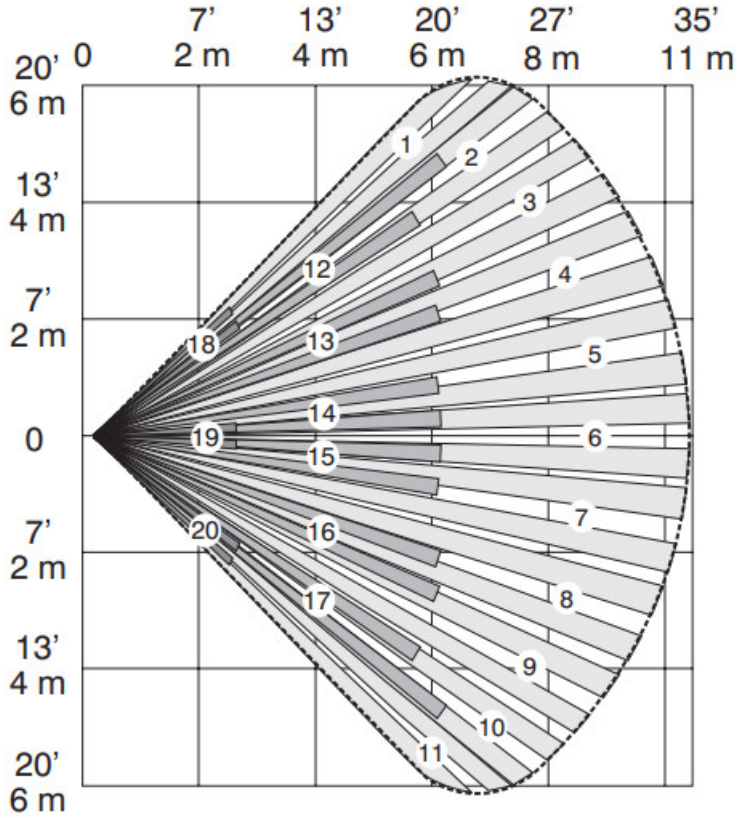


Use Lens Mask K9855 to mask Long, Intermediate and Lower Range segments on the High Security/Non-Pet Immune Lens (P/N 5-532-477, included).

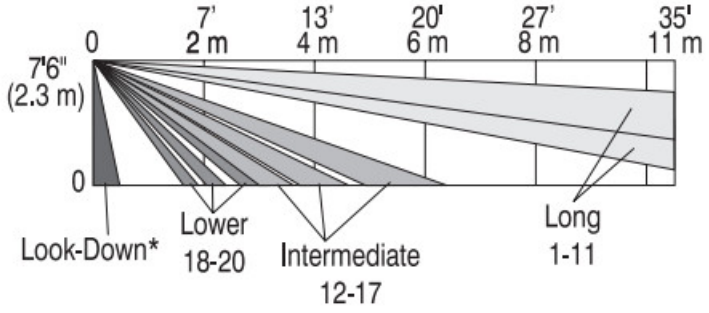


DETECTION PATTERNS

Top View
Wide Angle Pet Immune Lens (installed) and Wide Angle High Security/Non-Pet Immune Lens (included)



Note: Detection may occur beyond the distance ide ViewHigh Security/Non-Pet illustrated. A walk test is required after mounting to ensure proper detection.
Side View

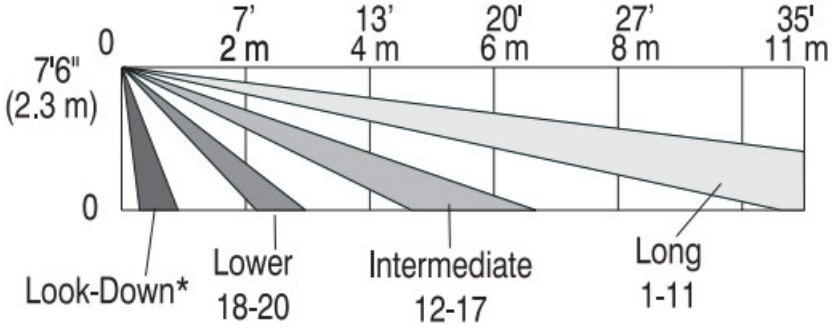


Pet Immune Lens (installed)

OPTIONAL LENS DETECTION PATTERN

Side View

High Security/Non-Pet Immune Lens (included)



* Look-down fingers are enabled only when the look-down mask is removed (see Step 6). [Note: Enabling the look-down fingers is not recommended in pet immune installations.

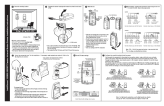
SPECIFICATIONS

Range: 11 m x 12 m (35 x 40)
Pet/Animal Immunity: 36.3 kg, 18.1 kg, 0 kg (80 lb, 40 lb and 0 lb)
Mounting Height: 2.3 m – 2.7 m (7.5 – 9) [Note: 2.3 m (7.5) is the optimum mounting height.]
Power requirements: 8.5 – 15.4 VDC (UL:10-14VDC); 17 mA nominal 12 VDC, 20 mA max;
AC Ripple: 50 to 120
Hz, 3 V peak-to-peak at nominal 12 VDC
Alarm relay: Form A (normally closed)
30 mA, 24 VDC; 40 Ohms resistance max
Tamper switch (IS2535T): Form A (normally closed with the cover installed)30 mA, 24 VDC
RFI immunity: 30 V/m, 10 MHz-1000 MHz
PIR white light immunity: 6,500 Lux (min.)
Sensitivity: Switch selectable (Lowest, Low, Medium and High)
Operating temperature: -10o to 55o C (14o to 131o F) (Indoor use environment)
Relative Humidity: 5% to 95%; non-condensing
Temperature Compensation: Advanced dual slope
PIR fields-of-view: Dual element
Pet Immune Lens: 44 long-range 36 intermediate 18 lower 4 look-down
High Security/Non-Pet Immune Lens: 22 long-range 12 intermediate 6 lower 4 look-down
Dimensions: 11.2 cm x 6.0 cm x 4.0 cm 4-3/8″ x 2-1/4 x 1-1/2
Weight: 89 g (3.14 oz)Packaged Product: Approx. 155 g (5.47 oz)
Accessories Included: Mounting hardware Pet Immune Lens Mask Label (P/N K9854) High Security/Non-Pet Immune Lens MaskLabel (P/N K9855) High-Security Non-Pet Immune Lens (P/N 5-532-477)
Accessories Available: SMB-10 Swivel Mount Bracket (P/N 0-000-110-01) SMB-10C Swivel Mount Ceiling Bracket (P/N 0-000-111-01) SMB-10T Swivel Mount Bracket w amper (P/N 0-000-155-01) Note: The High Security/Non-Pet Immune Lens Option and Swivel Mount Brackets should not be used in pet applications.

EN 50131-1 Compliant Accessories: SMB-10T Swivel Mount Bracket w/ Tamper (P/N 0-000-155-01)
Approvals/listings: FCC part 15, Class B verified IC, ICES-003, Class B verified CE C-Tick cULus listed PIR-01 Passive Infrared detector standard features for false alarm immunityFinland-IS2535T FCF: No. RL05145
Enclosure rating: IP30 IK04
IS2535T ONLY: Tested and certified to EN 50131-1 and TS 50131-2-2 Security Grade 2; Environmental Class II by Telefication B.V. PD6662
Note: In TS 50131-2-2
compliant installations: mount the sensor at 2.3 m, select the high sensitivity setting, and install a cover screw (included). Suitable for connection to an EN 60950 Class II Limited Power Source in European installations. To obtain applicable EU compliance Declaration of Conformities for this product, please refer to our
Website: http://www.security.honeywell.com/hsce/international/index.html. For any additional information regarding the compliance of this product to any EU-specific requirements, please
contact Quality Assurance Department, Honeywell Security & Custom Electronics,
Newhouse Industrial Estate Motherwell, Lanarkshire ML1 5SB, Scotland,
The United Kingdom.
Tel: +44(0)1698 738200
Email: UK64Sales@Honeywell.com
IMPORTANT: The IS2535/IS2535T should be tested at least once each year. For proper wiring methods, refer to the National Electrical Code NFPA 70.
FCC NOTICE: This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. The user is cautioned that changes or modifications not expressly approved by Honeywell could void the user's authority to operate this equipment.
NOTE: This equipment as been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed nd used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in an articular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user s encouraged to try to correct the interference by one or more of the following measures: 1) Reorient or relocate the receiving antenna; 2) increase the separation between the equipment and receiver; 3) connect the equipment into an outlet on a circuit different from that to which the receiver is connected; 4) consult the dealer or an experienced radio/television technician for help.
IC Notice: This Class B digital apparatus complies with the Canadian ICES-003. Cet appareil numérique de la Classe B est conforme à la norme NMB-003 du Canada.

Honeywell

Documents / Resources

	Honeywell IntelliSense IS2535 Passive Infrared Motion Sensor [pdf] Instruction Manual IntelliSense IS2535 Passive Infrared Motion Sensor, IntelliSense IS2535T Passive Infrared Motion Sensor, IntelliSense IS2535, Passive Infrared Motion Sensor, Infrared Motion Sensor, Motion Sensor, Sensor