Honeywell

THE POWER OF **CONNECTED**

# DT8360CM / DT8360ACM DUAL TEC® Ceiling Mount Motion Sensor

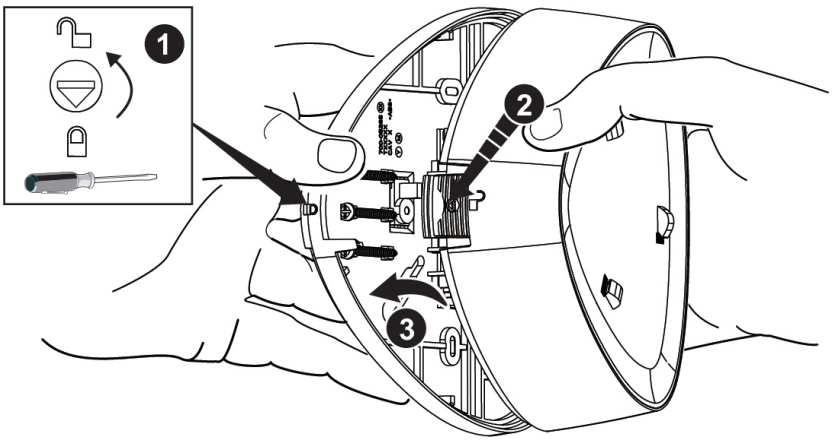
## Installation Instructions

## 1. Select the Mounting Location


Mounting location guidelines:

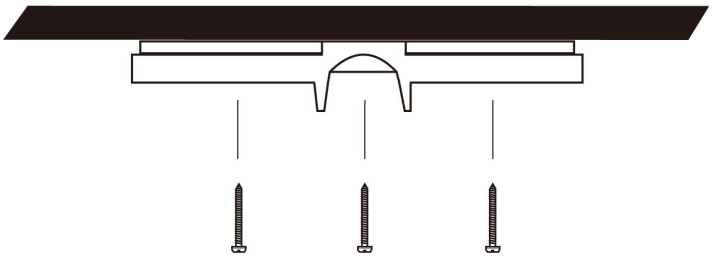
- The range is obtained at a mounting height of 2.4m (8') to 8m (26'). Max. detection range at 8m (26') is Ø 21m (70').
- Allow a clear line-of-sight to all areas to protect.
- Avoid mounting anything within 30cm (12") in front of the sensor.
- Do not directly face windows.
- Avoid close proximity to moving machinery, fluorescent lights, and heating/cooling sources. Avoid use in turbulent air.
- Not for use in applications with pets.

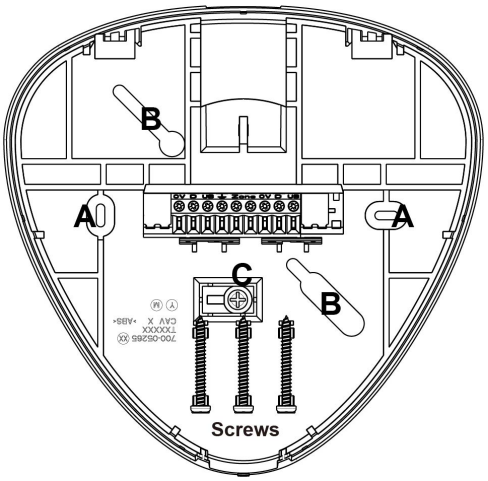
## 2. Open the Sensor




1. Turn the arrow to point to the Unlock symbol.
2. Press firmly on housing latch.
3. Gently separate the front and rear housing.

# 3. Mount the Sensor

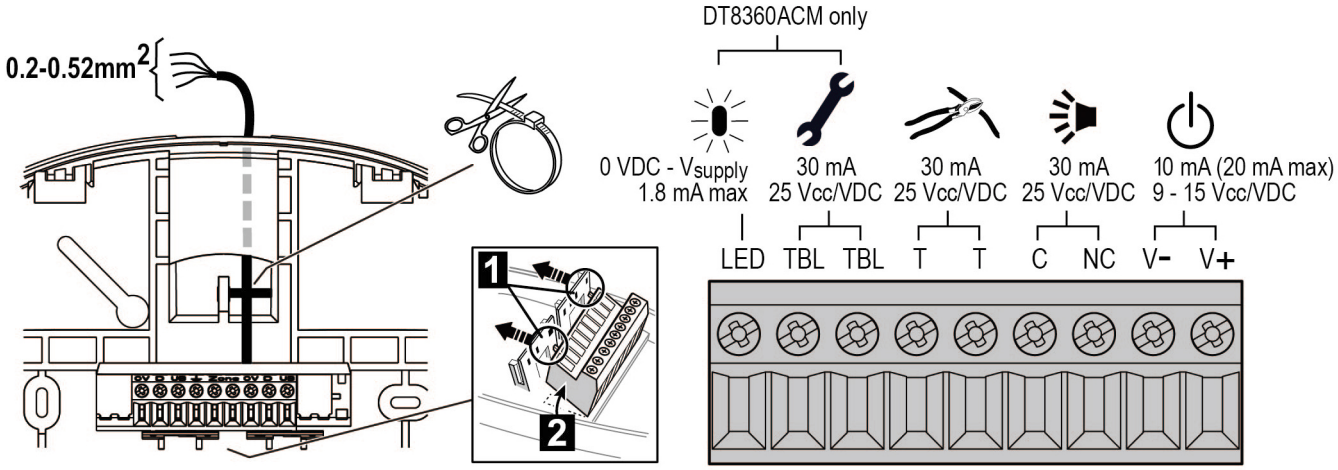



Flush Mounting Kit (DT8300-FMK) optionally available*

[A] = Fixed mounting holes
[B] = Adjustable mounting slots from 61mm-85mm (2.4"-3.3")
[C] = Tamper hole
*This accessory is not covered by the approval.

# 4. Wire the Sensor



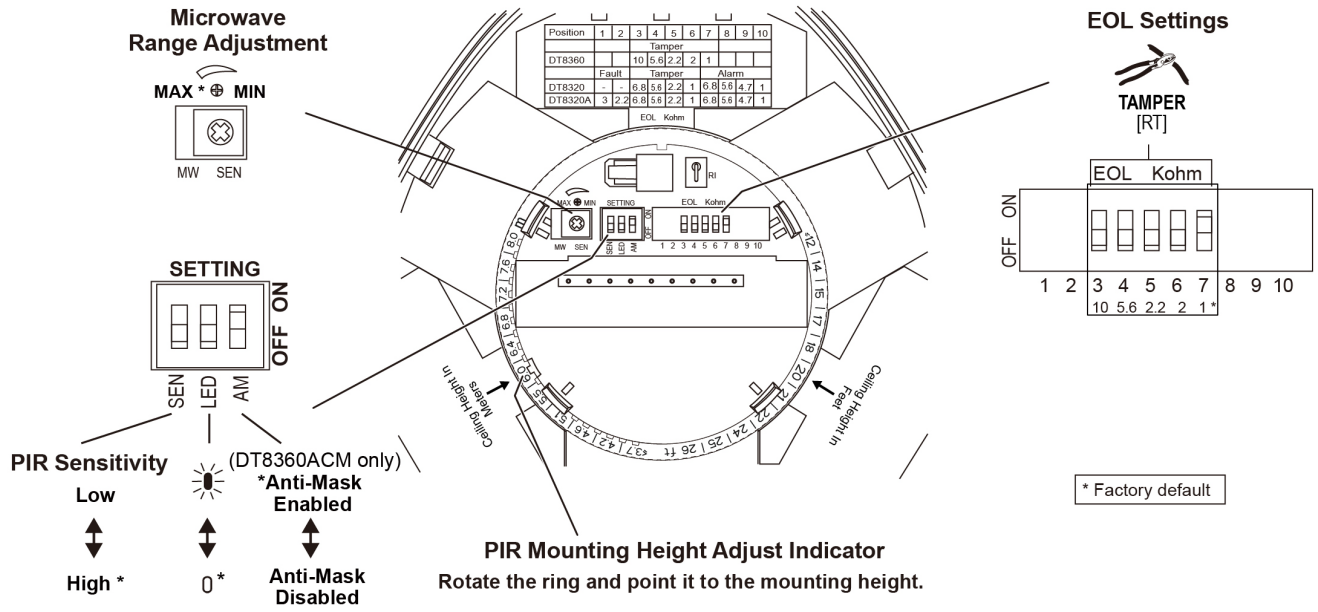

**Wiring Details**

- Observe proper polarity.
- If not using the integrated EOL resistors, set all switches to OFF.
- If using the integrated EOL resistors:
  1. Connect the sensor to the panel.
  2. Set the appropriate Alarm, Tamper and Trouble/Anti-mask EOL DIP switches to ON. (see Step 5 ).

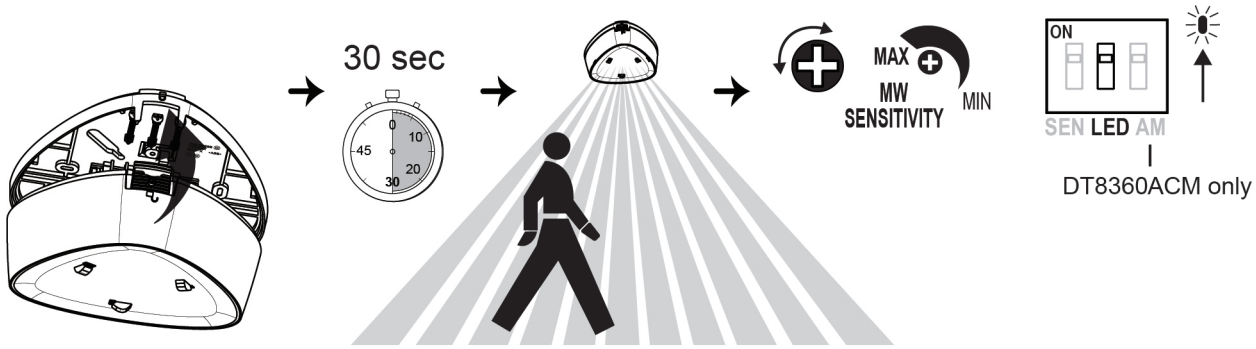
**Notes:**

- Consult the Control Panel manual to determine proper EOL selection.
- The Alarm, Tamper and Trouble/anti-mask EOL settings must each only have one switch ON.
- The EOL values should be set at the same time.

# 5. Sensor Components and Settings




# 6. Walk Test the Sensor and Adjust as Needed




1. Close the sensor and apply power to the sensor. Initialization is complete when the LED stops flashing slowly (about 30 seconds).
2. Walk through the detection area and observe the LED.
3. Adjust the microwave range as necessary to meet installation requirements.

Walk test mode is active for 15 minutes, then automatically exits test mode, disables the LED and enters normal operation mode. For an additional 15 minute walk test, enable walk test mode again with the flashlight feature.

**Notes:**

- During power up and walk test modes the LED is active regardless of the LED Enable/Disable DIP switch setting.
- When the microwave sensitivity is set to minimum, the sensor range is reduced to Ø 12m (40'). When the microwave sensitivity is set to maximum, the sensor range is Ø 21m (70').

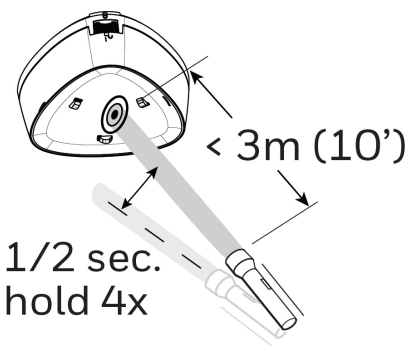
| LED | Power Up | Walk Test [15 min.] | Normal | Trouble | |
|---|---|---|---|---|---|
| | | | | Fault | Anti-Mask (DT8360ACM only) |
| Red | Slow Blink | ON Alarm | ON Alarm | Fast Blink | OFF |
| Yellow | OFF | ON Microwave | OFF | OFF | Fast Blink |
| Green | OFF | ON PIR | OFF | OFF | OFF |

### Flashlight Feature:

1. Use a flashlight with a bright light beam, and stand within 3m (10') of the sensor.
2. Swing the light beam past the sensor IR window 3-5 times consistently, holding the beam on the window for 0.5 second each pass.

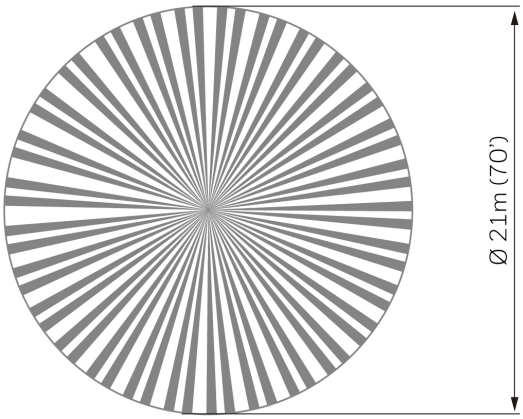
**Notes:**

- The flashlight feature is available for the first 24 hours after power up.
- The flashlight feature only works with incandescent bulb flashlights. It does not work with LED flashlights.

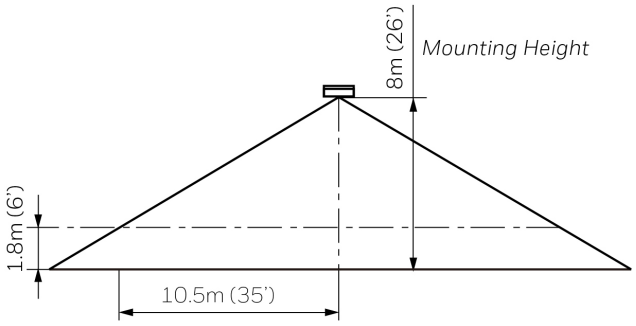


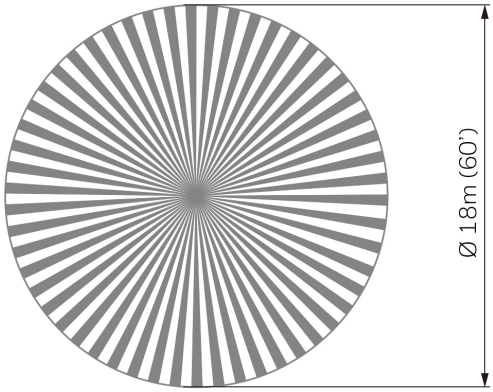
# 7. Detection Patterns

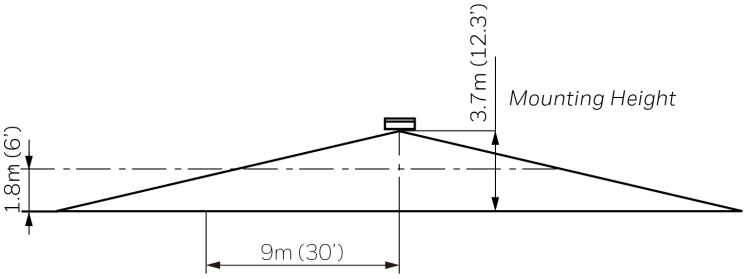
**Top View**

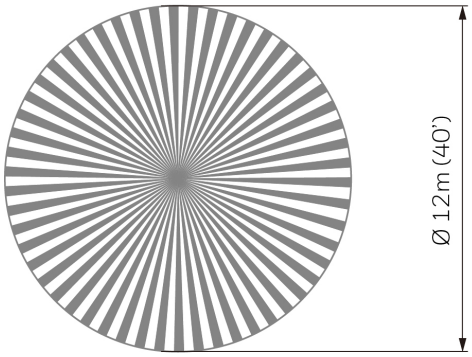


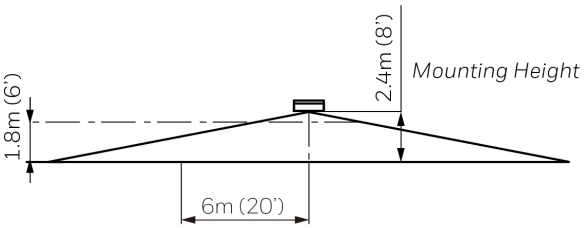

**Side View**



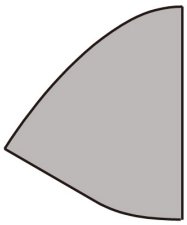



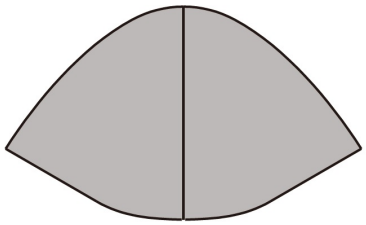

**Note: Attention detection beams go across access points such as windows, doors during sensor installation.**

# 8. Coverage Pattern Masking (DT8300-CPM)

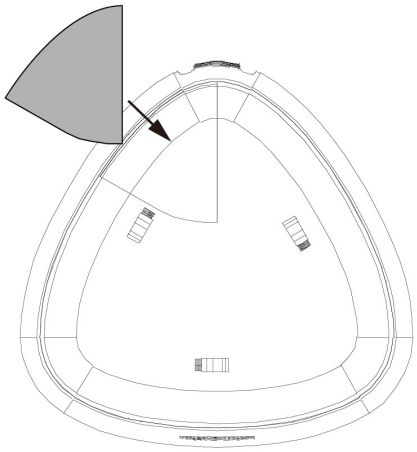
A set of 60° masks are provided for masking undesired areas. Attach the masks on the outside of the detector. With the supplied masks, you can mask 60°, 120°, 180° or 240°. Refer to the following examples:



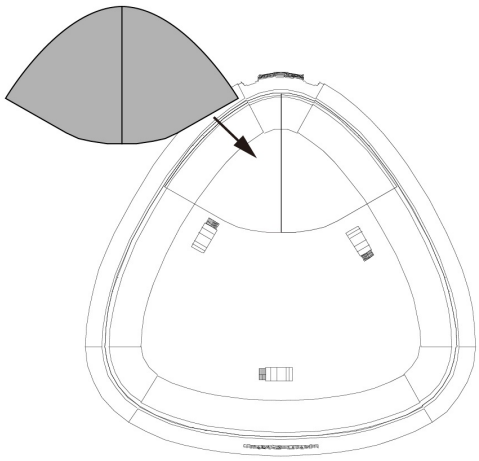
60° Mask



120° Mask

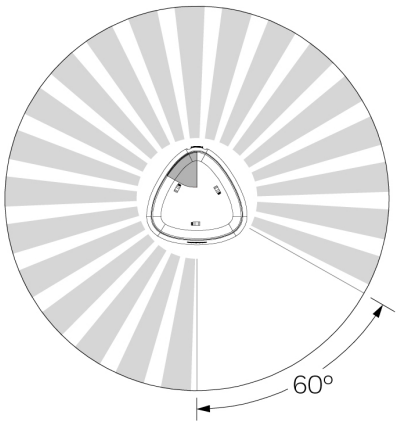


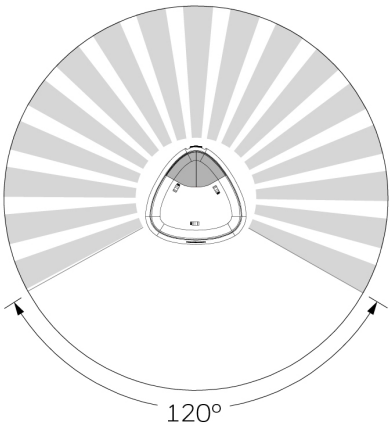
Masking 60°

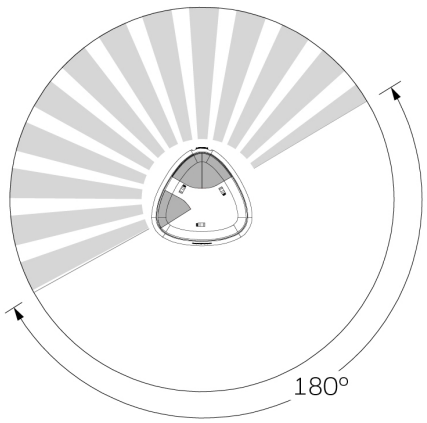


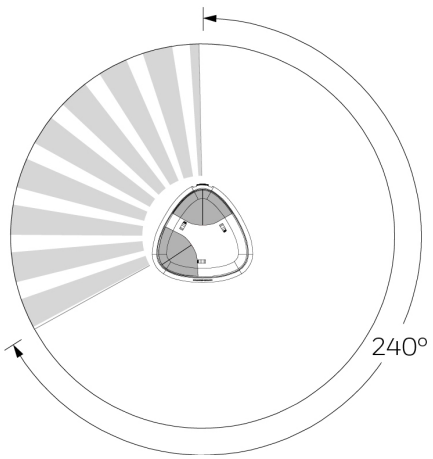
Masking 120°

**Note:** To mask a certain area, attach the mask on the opposite side of the sensor, referring to the following examples.



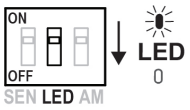



## REMOTE LED ENABLE (LED INPUT) (DT8360ACM only)

The LED input terminal allows the LED to be remotely enabled. To use this feature, the LED DIP switch (switch 2) must be OFF, allowing the LED to operate based on the voltage level connected to the LED Input (see Wiring Details).




| Switch 2 | LED Input | LED Operation |
|---|---|---|
| OFF | High ( +12 V) | Enabled |
| OFF | Low (0 V) | Disabled |
| ON | Low (0 V) or High (+12 V) | Enabled |

## RELAY OPERATION

| | SENSOR STATUS | | | |
|---|---|---|---|---|
| | **Normal** | **Intrusion** | **Trouble[1]** | **Mask[2]** |
| **Alarm Relay** | Closed | Open | Closed | Open |
| **Trouble Relay**[3] (DT8360ACM only) | Closed | Closed | Open | Open |

[1] For information on Trouble conditions, see the Troubleshooting section.

[2] In a Mask condition, the Alarm and Trouble relays will activate simultaneously, and remain open until the condition has been cleared.

[3] In a Trouble condition, the Trouble relay will latch open until the Trouble condition has been cleared.

## MASK CONDITION (DT8360ACM only)

### Normal Anti-Mask Condition

The sensor uses Active Infrared (AIR) technology to detect masking. The sensor signals a mask condition when a variety of materials and reflective objects are placed within 50mm (2 inches) in front of the sensor. To avoid false mask alarms, follow the mounting guidelines shown in Step 1.

### Clearing an Anti-Mask Condition

When most masking materials or objects are removed, the anti-mask condition will be cleared after several seconds. When the cause of the anti-mask condition is any type of spray or paint coating applied to the window, the window must be replaced before the anti-mask condition can be cleared. After replacing the window, perform a walk-test on the sensor.

## TROUBLESHOOTING

| | NORMAL | TROUBLE* | | |
|---|---|---|---|---|
| | | **Mask[1]** | **Low Voltage[2]** | **Self-Test Failure[3]** |
| **Alarm Relay** | Closed | Open | Closed | Closed |
| **Trouble Relay** | Closed | Open | Open | Open |
| **Red LED** | Off | Off | Off | Flashing |
| **Yellow LED** | Off | Flashing | Off | Off |

***TROUBLE CONDITIONS:**

1. Mask condition: Sensor IR window is blocked or masked.
2. Low Voltage: The sensor is disabled. **Note:** If voltage drops below 5V, both Alarm and Trouble relays open.
3. Self-Test Failure conditions:
   - Microwave supervision failure: The sensor is operating in PIR mode only.
   - PIR self-test failure: The sensor is disabled.
   - Temperature compensation failure: The temperature compensation is disabled.

Depending on the Trouble condition, take the following corrective actions:

- Verify the sensor is not blocked or masked.
- Verify the power supply is sufficient (at least 9V at the sensor).
- Cycle power to the sensor.
- Walk test the sensor.

If the Trouble condition does not clear, replace the sensor.

# SPECIFICATIONS

**Range:** Ø 21m max.

**Mounting Height:** 2.4m – 8m

**IP Rating:** IP30

**Power:** 9.0 - 15 VDC; 10 mA typical, 20 mA max, 12 VDC;

**AC Ripple:** 3 V peak-to-peak at nominal 12 VDC

**Alarm Relay:** Energized Form A; 30 mA, 25 VDC, 22 Ohms resistance max.

**Alarm Relay Duration:** 3 seconds

**Trouble Relay:** Energized Form B; (NC) 30 mA, 25 VDC; 22 Ohms resistance max.

**Tampers:** Cover & Wall; (NC with cover installed) Form A; 30 mA, 25 VDC; Magnetic field

**Microwave Frequencies Range:** 10.5 – 10.55GHz

**RFI Immunity:** 20V/m, 80MHz-1GHz

**PIR White Light Immunity:** 6,500 Lux typical

**Fluorescent light filter:** 50 Hz / 60 Hz

**Operating Temperature:** -10℃ - 55℃

**Relative Humidity:** 5 to 95%; non-condensing

**Temperature Compensation:** Advanced Dual Slope

**Dimensions:** 14.8 cm x 16.2 cm x 4.7 cm

# Notes

- Install the devices and system in the isolated and dedicated network system with physical security.
- Ensure only the authorized technician may access and operate the device.
- Ensure to have regular system maintenance and check the device functionalities work normally.
- Access https://www.honeywell.com/contact-us/vulnerability-reporting to report any vulnerability.

# APPROVAL/ LISTINGS

- FCC part 15, Class B verified
- IC ICES-003, Class B verified
- UL 639
- ULC S306-03
- SIA-PIR-01 Passive Infrared detector standard features for false alarm immunity.

Product must be tested at least once each year / Le fonctionnement du produit doit être vérifié au moins une fois par année / El producto debe ser probado al menos una vez al año / O produto deve ser testado pelo menos uma vez por ano

All wiring must be in accordance with: the National Electrical Code (ANSI/NFPA70); the Canadian Electrical Code, Part I (where applicable); UL681, Standard for Installation and Classification of Burglar and Holdup Alarm Systems; ULC-S302, Standard for Installation and Classification of Burglar Alarm Systems for Financial and Commercial Premises, Safes and Vaults; ULC-S310, Standard for Installation and Classification of Residential Burglar Alarm Systems; local codes and the authorities having jurisdiction.

The products are intended to be powered by a power-limited output of a UL/CUL Listed Burglar Alarm control unit, or via a Listed UL603/ULC-S318 power-limited power supply that provides 4 hours of standby power.

The sensor must be mounted indoors, within the protected premises, and on a wooden stud, solid wood or with a robust wall anchor.

**UL Note: All interconnecting devices must be UL Listed.**

FEDERAL COMMUNICATIONS COMMISSION STATEMENTS

The user shall not make any changes or modifications to the equipment unless authorized by the Installation Instructions or User's Manual. Unauthorized changes or modifications could void the user's authority to operate the equipment.

CLASS B DIGITAL DEVICE STATEMENT

This equipment has been tested to FCC requirements and has been found acceptable for use. The FCC requires the following statement for your information:

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

• Reorient the receiving antenna until interference is reduced or eliminated.
• Move the radio or television receiver away from the receiver/control.
• Move the antenna leads away from any wire runs to the receiver/control.
• Plug the receiver/control into a different outlet so that it and the radio or television receiver are on different branch circuits.
• Consult the dealer or an experienced radio/TV technician for help.

INDUSTRY CANADA CLASS B STATEMENT

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

FCC / IC STATEMENT

This device complies with Part 15 of the FCC Rules, and Industry Canada's license-exempt RSSs. 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.

Cet appareil est conforme à la partie 15 des règles de la FCC et exempt de licence RSS d'Industrie Canada. Son fonctionnement est soumis aux conditions suivantes: (1) Cet appareil ne doit pas causer d'interférences nuisibles. (2) Cet appareil doit accepter toute interférence reçue y compris les interférences causant une réception indésirable.

To protect the environment, a detailed installation guide is available on the Honeywell website – Please consider before printing the document!



Honeywell

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