DART

SENSORS

MW252

Ceiling Mount Passive Infrared Detector

SPECIFICATIONS & INSTRUCTIONS

The MW252, a state-of-the-art Ceiling Mount Passive Infrared Detector with a built-in supervised RF transmitter, delivers a wealth of features in a simple-to-use, attractive sensor package. Since the MW252 is wireless, installation is quick and simple. Designed for use with Aritech's Impact 300 wireless security system, the MW252 offers a choice of three detection patterns for the maximum installation flexibility in wireless technology. Advanced features ensure accuracy in both target area alignment and lens alignment to reduce false alarms without sacrificing detection accuracy.

FEATURES

❏ Dual antennae for reliable transmission
❏ Three interchangeable magnet-base lenses for a choice of three distinct detection patterns:
> Wide area pattern (80° area of detection)
> Round area pattern (full 360° area of detection)
> Long area pattern (98 feet)
❏ Swivel base for accurate target area alignment
❏ Zone locator LED to assist with lens alignment
❏ Settings for one- or two-pulse count
❏ Lens Masking
❏ Tamper Protection
❏ Walk Test LED (extinguished during normal operation)
❏ Fully supervised
❏ Battery saver
❏ Pre-programmed wireless address (no dip switches)

SPECIFICATIONS

❏ Color: Off-white
❏ Dimensions: 5.0" in diameter x 3.25" in height
❏ Operating voltage: 2.8 to 4.0 VDC
❏ Current consumption (at 3.6 VDC):
> Stand-by: 35 μA typical, 60 μA maximum
> Alarm: 22 mA typical, 25 mA maximum
❏ Battery: $^2/_3$A size 3.6 VDC lithium (Aritech Part Number MW501)
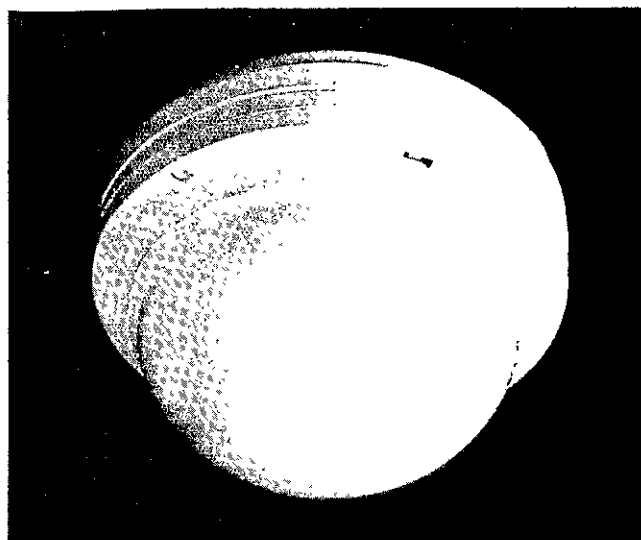
❏ Low battery detection: 2.9 to 3.1 VDC
❏ Detectable walking speed: 0.5 to 4.5 ft/sec
❏ Detection zones and coverage:
> MW252A Round Area: 33 zones, 32 ft, 360°
> MW252B Wide Area: 14 zones, 52 ft, 80°
> MW252C Long Area: 5 zones, 98 ft
❏ Pulse count operation:
> Alarm after two pulse activations (events) within 80 to 180 seconds
> Alarm upon single pulse activation. (Note: Long lens installation requires setting one-pulse count.)
❏ RF emission: Complies with FCC Rules, Part 15, FCC ID No. HHV26PECA249509N; Complies with DOC Rules TRC-51, Issue 2 and GL 17, Rev. 3, Certification No. TBD
❏ RF carrier used: 318.6 MHz
❏ RF oscillation: crystal controlled
❏ Operating temperature: 32°F to 120°F (0°C to 49°C)
❏ Storage temperature: -13°F to 149°F (-25°C to 65°C)

ARITECH®
CORP

INSTALLATION

1. Remove the sensor mounting bracket by inserting a flat-blade screwdriver into the snap fastening aperture on the side of the main body and pressing the top of the snap fastener firmly until the fastener clears the body. Gently pull the mounting bracket away from the main body.

Window

Snap fastening apertures

Walk test button

Main body

Mounting bracket
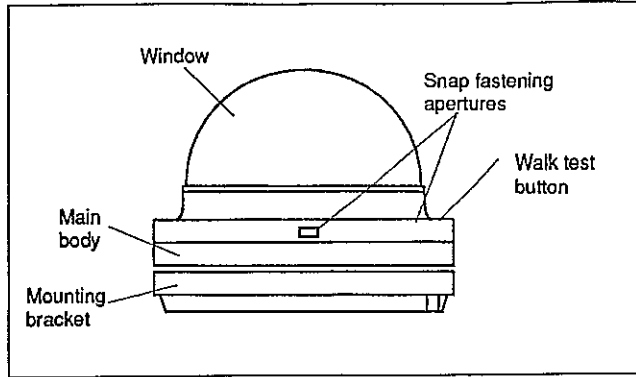
2. Insert the battery plug into the connector on the underside of the main body. Place the battery into the battery cavity, gently bending any excess wire to lie on top of the battery.

Battery cavity
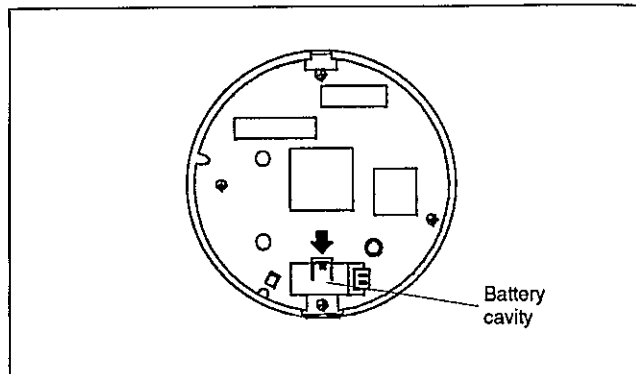
3. Remove the window from the main body by inserting a flat-blade screwdriver into the snap-fastening aperature on top of the main body and depressing the snap fastener while twisting the window counter-clockwise. (**Note:** The removal of the window automatically sets the zone locator and tamper switch to ON.)

Snap fastening aperture
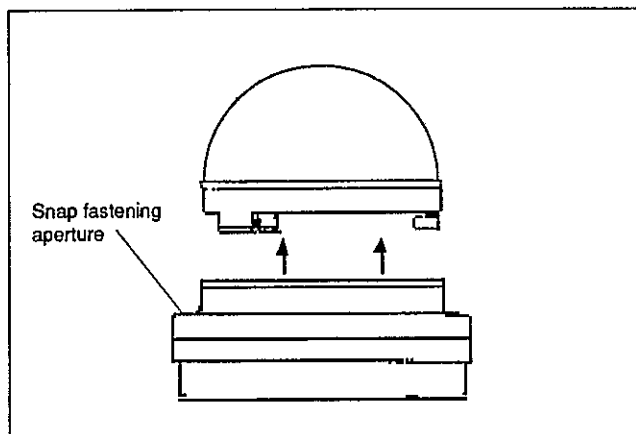
4. Select one- or two-pulse count with the pulse count selector switch on the main body of the sensor. If this switch is set for a single pulse ("1P"), the sensor will transmit an alarm to the control panel upon detection of a single event. If the switch is set for two events ("2P"), the sensor must detect at least two events within 80 to 180 seconds before transmitting and alarm. In either case, the sensor will ignore events for 80 to 180 seconds after transmitting an alarm. (**Note:** For installations utilizing the long detection area lens, the switch **must** be set to one-pulse count.)

Pulse count selector switch

Sensor mounting block (attach lens unit)

Zone locator LED

Walk test LED
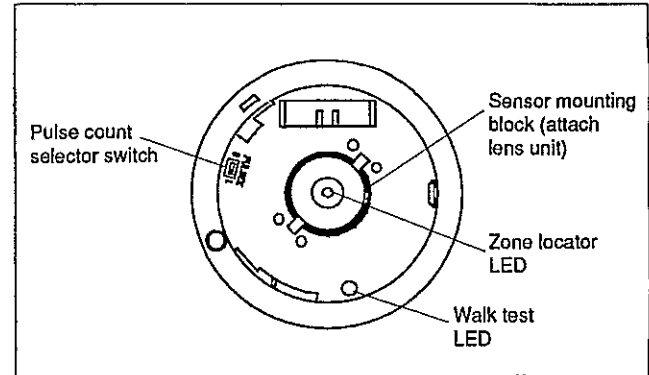
5. Select the appropriate lens and fit it to the circular sensor mounting block in the center of the main body. **See the following section for a full description of lenses.** The lens is held in place with a magnetic ring for easy attachment and removal. For the round lens, insert the pins of the lens into the holes of the sensor block. The long and wide lenses can be turned horizontally 360°.

6. Mount the bracket using the hardware provided. When choosing a location, bear in mind that the MW252 is most sensitive to motion at right angles to the optical field. Plan the installation so that an intruder crosses as much of the 80° field of view as the installation will allow.

4 holes (for surface mounting)

4 holes (for box mounting)
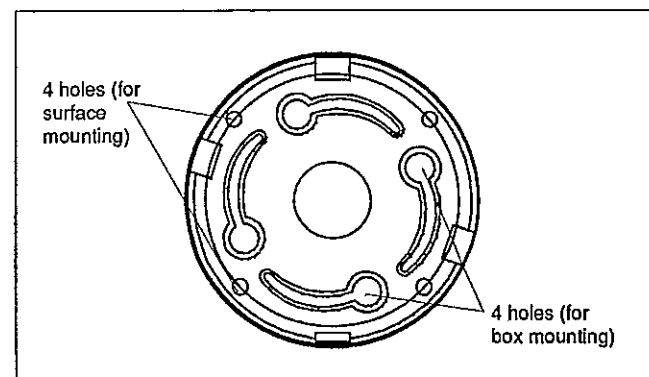
When installing the MW252, bear in mind that for optimum system performance, the control/receiver should be centrally located to all transmitters, including this sensor. Do not place the MW252 near large surfaces or appliances and avoid other sources of RF or EMI energy. See the following list.

Avoid the following environmental hazards:
- Sunlight, headlights shining directly on the unit.
- Heat sources and mobiles in the field of view.
- Strong air drafts blowing on the detector.
- Animals in the field of view.
- Insects in the housing or on the face of the unit.
- Objects or circumstances which may cause rapid temperature changes in the field of view.
- Very strong sources of RF energy and induction of electrical noise.

7. Carefully attach the main body to the mounting bracket by inserting the device into the double slots on the bracket and then snapping the tab on the other side of the bracket into the snap-fastening aperture on the main body. (**Note:** After installation is complete, the sensor transmits a tamper signal to the control panel when the main body is removed from the mounting bracket or the window is removed from the main body.)

Tamper switch
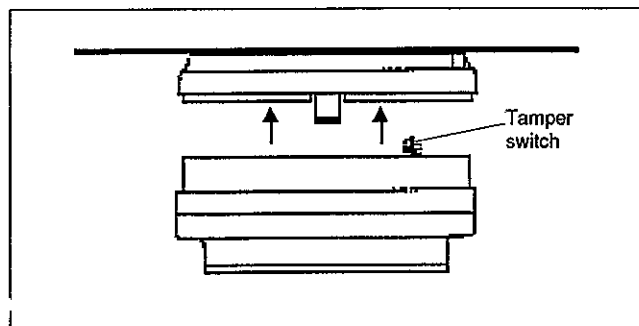
8. Adjust the lens to cover the detection area. The red LED zone locator can be viewed in the window of the lens itself. This zone locator indicates precisely where the lens is aimed. Use the locator as a tool in making final adjustments to the lens. The lens mount can be adjusted vertically approximately 25°, except when the round lens is installed. The round lens can be adjusted vertically approximately 5°. **See the following section a full description of lenses.**

9. Carefully attach the window to the main body by aligning the hash marks on the body and the window and twisting clockwise until the window is locked into place. (**Note:** When the window locks in place, the zone locator and tamper switch is turned off.)
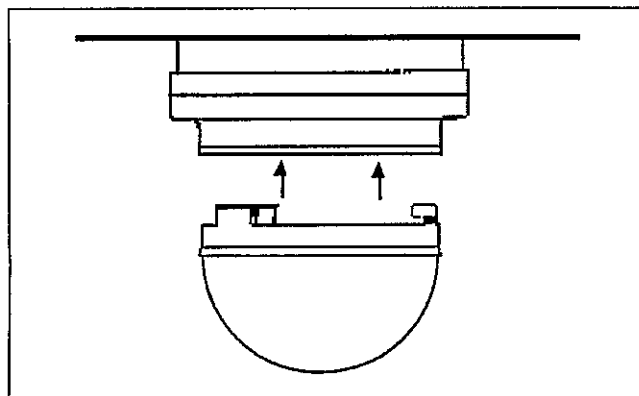

LENS DESCRIPTIONS

Three interchangeable lenses are available to provide coverage for long area, wide area, or circular area applications.
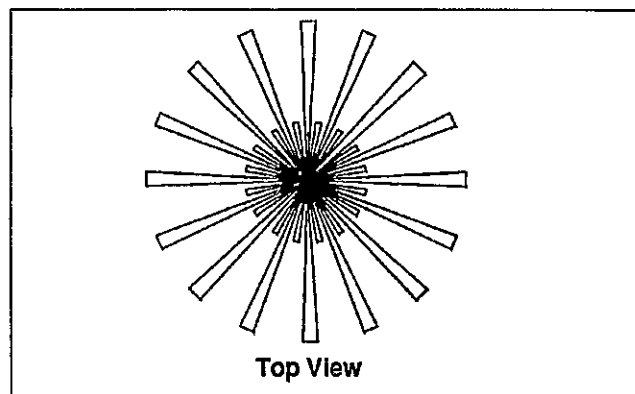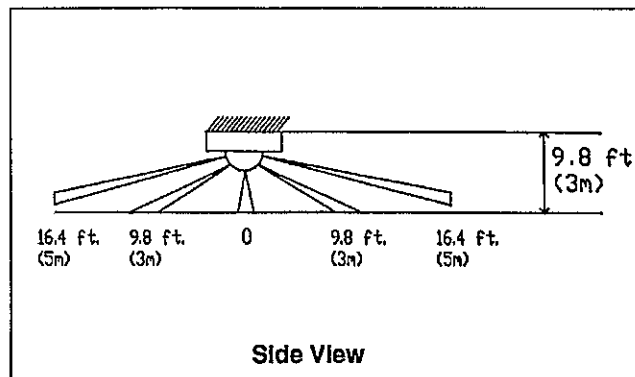
Round Area Lens (MW252A)

Insert the pins on the bottom of the lens into the corresponding holes around the sensor mounting block. This lens can be adjusted vertically approximately 5°. Either one- or two-pulse count may be selected.

Lens Diagram

Top View   Side View
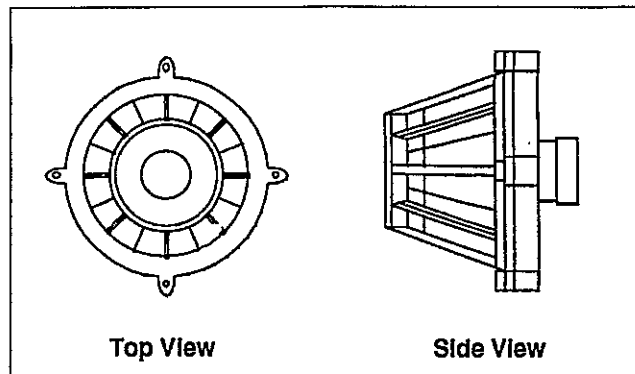
Detection Pattern

The round lens offers a full 32 ft., 360° area of detection and has 33 zones.

9.8 ft. (3m)

16.4 ft. (5m)   9.8 ft. (3m)   0   9.8 ft. (3m)   16.4 ft. (5m)

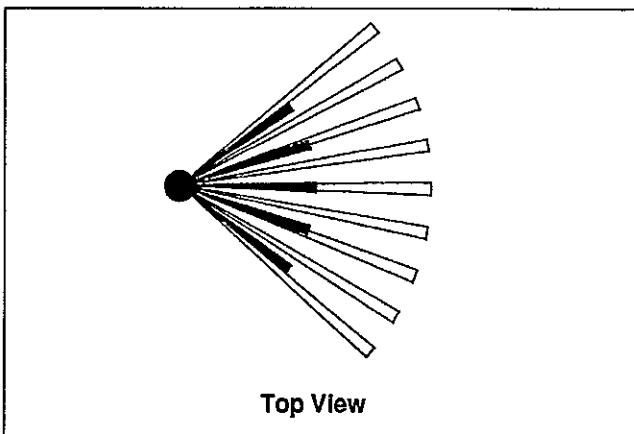Side View

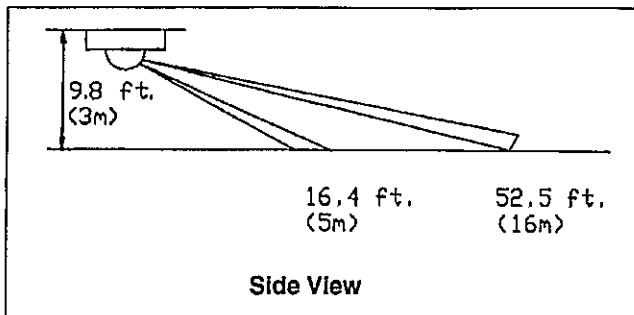Top View

Wide Area Lens (MW252B)

Fit the lens onto the sensor mounting block. This lens can be adjusted vertically approximately 25°. Either one- or two-pulse count may be selected.
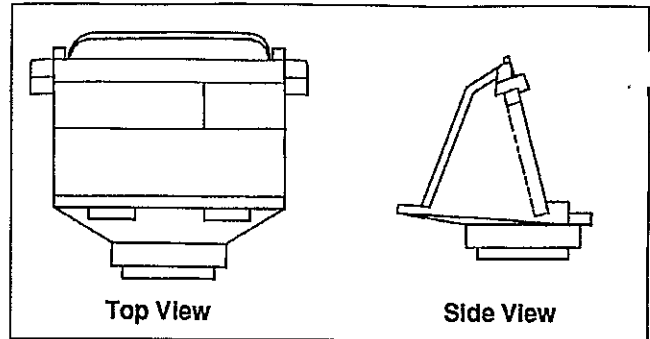
Lens Diagram

Top View   **Side View**
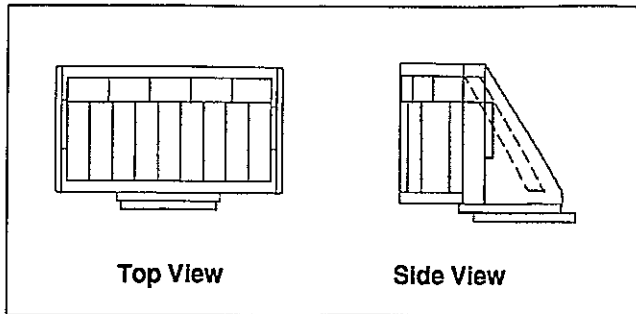
Detection Pattern

The wide lens offers a 52 ft., 80° area of detection and has 14 zones.

9.8 ft.
(3m)

16.4 ft.   52.5 ft.
(5m)   (16m)

Side View
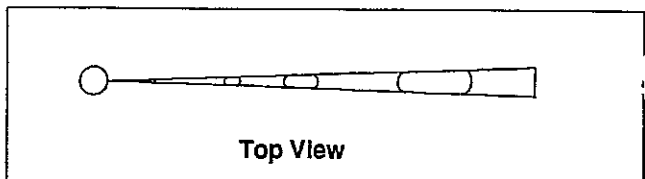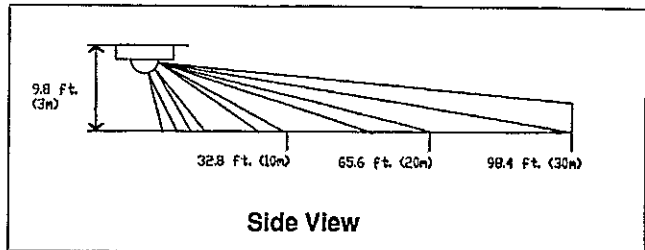

Top View

Long Area Lens (MW252C)

Fit the lens onto the sensor mounting block. This lens can be adjusted vertically approximately 25°. One-pulse count **must** be selected.

Lens Diagram

Top View   **Side View**

Detection Pattern

The long lens offers a 98 ft. area of detection and has 5 zones.

9.8 ft.
(3m)

32.8 ft. (10m)   65.6 ft. (20m)   98.4 ft. (30m)

Side View

Top View

WALK TEST

(Note: Allow at least two minutes "warm-up" time after connecting the battery before walk testing.)

Press the walk test button with a thin tipped tool, holding it down for at least one second. This puts the detector into the walk test mode for a period of approximately three minutes. At the end of three minutes, the walk test LED will cease to operate. If you have not completed the walk test by the end of the three minute period, simply press the walk test button again.

During the walk test period, the walk test LED will appear for approximately three seconds each time movement is detected. Walk through each of the detection zones to ensure that movement in the desired areas of detection cause the LED to activate. Allow the LED to extinguish before moving testing each zone. Adjust the position of the sensor or apply masking tape until the desired detection pattern is obtained.