

AMB-500

Addressable PIR Detector



INSTALLATION INSTRUCTIONS

The AMB-500 is a ceiling mount detector designed to provide reliable motion detection for residential and commercial applications. The AMB-500 uses a special Fresnel lens made for 360° detection in conjunction with a quad element PIR sensor optimized for uniform detection all around its field of view. Special attention is given to false alarm immunity against RF, static, electrical transient to ensure trouble free operation for many years.

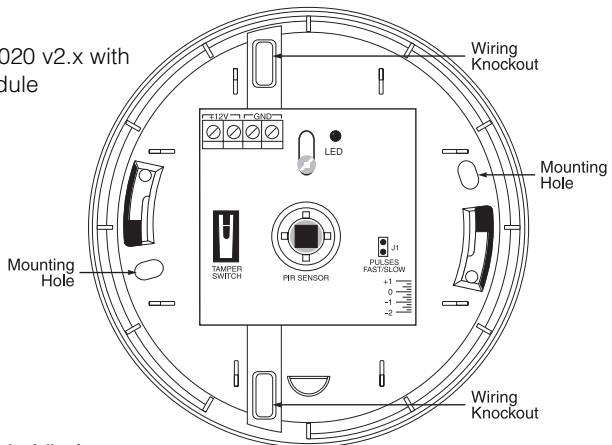
The AMB-500 uses a 2-wire connection for power and to communicate with the control panel. This simplifies wiring and reduces installation cost. The AMB-500's low current draw also maximizes the number of devices that can be attached to an addressable loop.

Specifications

- Current rating: 0.75 mA (standby); 3 mA (test mode)
- Operating environment: 32°F-120°F / 0°C-49°C; 5%-93% RH, non-condensing
- Radiated RF immunity: 10 V/m with 80% AM over range, 80MHz to 1.0GHz**
- Conducted RF immunity: 10V with 80% AM over range 150kHz to 100MHz**
- Static immunity: 15 kV
- Transient immunity: 2.4 kV @ 1.2 joules
- Maximum detection range (diameter)
 - Detector placed 8 ft./ 2.4 m from floor: 24 ft./ 7.3 m
 - Detector placed 10 ft./ 3.0 m from floor: 30 ft./ 9.2 m
 - Detector placed 12 ft./ 3.6 m from floor: 40 ft./ 12.2 m
- Walk detection speed: 0.5-10'/s (0.15-3m/s)
- Tamper switch contact rating: 0.1A @ 24Vdc

Control Panel Compatibility

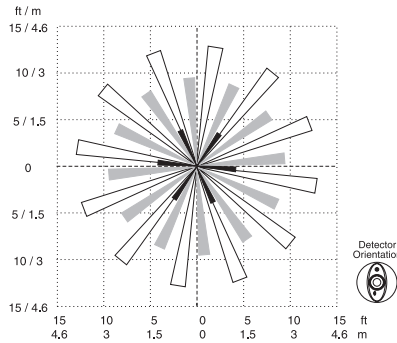
- PC4010/4020 v3.x
- PC5010/PC5015/PC5020 v2.x with PC5100 interface module



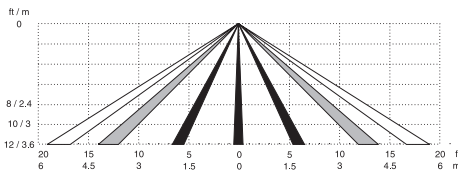
* Protected by one or more of the following patents:
Canada 2099971, US 5444432

** RF immunity and white light not verified by UL

Beam Patterns



Detector Pattern
Top View (at 8 ft/1.2 m height)



Detector Pattern
Side View

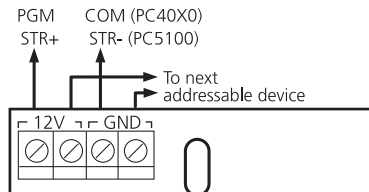
Locating the Detector

Select a detector location that will provide the coverage required keeping in mind the following potential problems.

- Do not aim the detector at **reflective surfaces** such as mirrors or windows as this may distort the coverage pattern or reflect sunlight directly onto the detector.
- Avoid locations that are subject to direct high **air flow** such as near an air duct outlet.
- Do not locate the detector near sources of **moisture** (steam or oil).
- Do not aim the detector such that it will receive direct or reflected (mirror) **sunlight**.
- Do not limit the coverage by large **obstructions** within the detection area such as plants or filing cabinets.

Device Wiring

To connect the AMB-500, consult the wiring diagram below:



Mounting

To open the case, remove screw and gently twist the top cover counter-clockwise and lift it up from the bottom cover. Use a small screwdriver to remove the appropriate knockouts for wiring. Mount the bottom cover.

To close the case, use the locating line on the bottom cover to align the tab on the top cover. Once the top cover is engaged, twist the top cover clockwise to lock it in place. Use screw to attach top cover to the bottom cover.

NOTE: Since no adjustment is necessary for the circuit board, it is not recommended that the installer remove the circuit board from the case.

Device Enrollment

The serial number located on the back of the device must be enrolled into the alarm control panel via Installer's Programming ([*] [8] [Installer's Code]). This procedure is outlined for the PC4010/4020 in the control panel Installation Manual and for the Power panels in the PC5100 Installation Manual.

WARNING: *Connect only DSC Addressable Series devices to the addressable loop connections. Connection of ANY other type of device will impair operation. Any devices other than Addressable Series devices which require power to operate must be powered separately.*

Walk Testing

Once the detector has been set up, walk test the entire area where coverage is desired. Should the coverage be incomplete, readjust or relocate the detector to obtain full coverage.

IMPORTANT NOTE: *Upon installation, the unit should be thoroughly tested to verify proper operation. The end user should be instructed on how to perform walk tests, and should walk test the detector weekly.*

Changing the Sensitivity

AMB-500 features Fast and Slow detection modes, which are set on jumper J1. Jumper J1 is set at the factory for the Fast detection mode. In a normal operating environment, this setting provides the best detection.

In certain environments where rapid air movement, heaters and other variables present problems, use Slow detection mode to stabilize the detection.

To change the setting from Fast to Slow, take the jumper off the header.

FCC COMPLIANCE STATEMENT

CAUTION: Changes or modifications not expressly approved by Digital Security Controls Ltd. could void your authority to use this equipment.

This equipment generates and uses radio frequency energy and if not installed and used properly, 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 Class B device in accordance with the specifications in Subpart "B" of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in any residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to television or radio 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:

- Re-orient the receiving antenna
- Relocate the alarm control with respect to the receiver
- Move the alarm control away from the receiver
- Connect the alarm control into a different outlet so that alarm control and receiver are on different circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the FCC helpful: "How to Identify and Resolve Radio/Television Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington, D.C. 20402, Stock # 004-000-00345-4.

LIMITED WARRANTY

Digital Security Controls Ltd. warrants that for a period of twelve months from the date of purchase, the product shall be free of defects in materials and workmanship under normal use and that in fulfillment of any breach of such warranty, Digital Security Controls Ltd. shall, at its option, repair or replace the defective equipment upon return of the equipment to its repair depot. This warranty applies only to defects in parts and workmanship and not to damage incurred in shipping or handling, or damage due to causes beyond the control of Digital Security Controls Ltd. such as lightning, excessive voltage, mechanical shock, water damage, or damage arising out of abuse, alteration or improper application of the equipment.

The foregoing warranty shall apply only to the original buyer, and is and shall be in lieu of any and all other warranties, whether expressed or implied and of all other obligations or liabilities on the part of Digital Security Controls Ltd. Digital Security Controls Ltd. neither assumes, nor authorizes any other person purporting to act on its behalf to modify or to change this warranty, nor to assume for it any other warranty or liability concerning this product.

In no event shall Digital Security Controls Ltd. be liable for any direct, indirect or consequential damages, loss of anticipated profits, loss of time or any other losses incurred by the buyer in connection with the purchase, installation or operation or failure of this product.

Motion detectors can only detect motion within the designated areas as shown in their respective installation instructions. They cannot discriminate between intruders and intended occupants. Motion detectors do not provide volumetric area protection. They have multiple beams of detection and motion can only be detected in unobstructed areas covered by these beams. They cannot detect motion which occurs behind walls, ceilings, floor, closed doors, glass partitions, glass doors or windows. Any type of tampering whether intentional or unintentional such as masking, painting, or spraying of any material on the lenses, mirrors, windows or any other part of the detection system will impair its proper operation.

Passive infrared motion detectors operate by sensing changes in temperature. However their effectiveness can be reduced when the ambient temperature rises near or above body temperature or if there are intentional or unintentional sources of heat in or near the detection area. Some of these heat sources could be heaters, radiators, stoves, barbeques, fireplaces, sunlight, steam vents, lighting and so on.

Warning: Digital Security Controls Ltd. recommends that the entire system be completely tested on a regular basis. However, despite frequent testing, and due to, but not limited to, criminal tampering or electrical disruption, it is possible for this product to fail to perform as expected.

Important Information: Changes or modifications not expressly approved by Digital Security Controls Ltd. could void the user's authority to operate this equipment.



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