

SWAN 1000

PASSIVE INFRARED & MICROWAVE DETECTOR With PET IMMUNITY

PRODUCT FEATURES

A new generation of professional movement spread spectrum analyzing PIR & MW detectors with PET immune function.

The Swan 1000 is a combination of PIR & MW detectors, providing protection from intruders by PYRO sensor element and MW (based on Doppler concept). Using micro controller for PIR & MW signal analyzing, with special ASIC technology for PIR pulse processing, assures "false alarm free" operation.

- Quad (Four element) PYRO sensor and hard lens for outstanding detection performance and elimination of false alarms.
- Microwave detection based on Doppler concept.
- Unique Microwave Motion Sensor Module with microstrip patch antenna.
- VLSI based electronics with movement speed spectrum analysis.
- Height installation calibrations free.
- User-friendly installation with or w/o swivel bracket.
- 2-way Microwave sensitivity adjustment.
- 2-way PIR sensitivity adjustment.
- Bi directional temperature compensation.
- Environmental immunity.
- The Swan 1000 provides *pet immunity* up to 25Kg. Pet active bellow 1m.

SELECT MOUNTING LOCATION

Choose a location most likely to intercept an intruder. (Our recommendation is a corner installation). See detection pattern – fig.4. The quad-element high quality sensor detects motion crossing the beam; it is slightly less sensitive detecting motion toward the detector.
Recommended mounting height – 1.8m-2.4m.

AVOID THE FOLLOWING LOCATIONS

- Facing direct sunlight.
- Facing areas that may change temperature rapidly.
- Areas where there are air ducts or substantial airflows.
- Areas where the field of view of the detector is obstructed with furniture or other objects

The Swan 1000 performs better when provided with a constant and stable environment.

NOTE:

Walk tests should be conducted after installation and at least once a year, to confirm proper operation and coverage of the protected area.

DETECTOR INSTALLATION

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. 7).

1. To remove the front cover, unscrew the holding screw and gently raise the front cover.

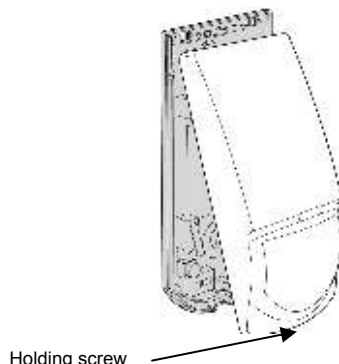
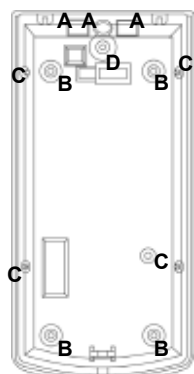


Fig.1

2. To remove the PC board, carefully unscrew the holding screw located on the PC board.
3. Break out the desired holes for proper installation.

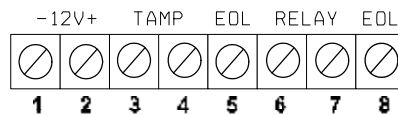


- A. Wire access holes
- B. Use for flat wall mounting
- C. Corner mounting - use all 4 holes. Sharp left or right angle mounting - use 2 holes (top and bottom)
- D. For bracket mounting

Fig. 2

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. (For option with bracket - lead wire through the bracket – fig.7)
5. Mount the detector base to the wall, corner or ceiling. (For option with bracket see fig.7).
6. Reinstall the PC board by fully tightening the holding screw. Connect wire to terminal block.
7. Replace the cover by inserting it back in the appropriate closing pins and screw in the holding screw.

DETECTOR CONNECTION



Terminal 1 - Marked " - " (GND)
Connect to the negative Voltage or ground of the control panel.

Terminal 2 - Marked " + " (+12V)
Connect to a positive Voltage of 9.6 -16Vdc source (usually from the alarm control unit)

Terminals 3 & 4 - Marked " TAMP "
If a Tamper function is required connect these terminals to a 24-hour normally closed protective zone in the control unit. If the front cover of the detector is opened, an immediate alarm signal will be sent to the control unit.

Terminals 5 & 8 - Marked " EOL " – End of line option.

Terminals 6 & 7 - Marked " RELAY "
These are the output relay contacts of the detector. Connect to a normally closed zone in the control panel.

TESTING THE DETECTOR

Wait for one minute warm up time after applying 12 Vdc power. Conduct testing with the protected area cleared of all people.

Walk test

1. Remove front cover. Set LED to ON position.
2. Reassemble the front cover.
3. Start walking slowly across the detection zone.
4. Observe that the red LED lights whenever motion is detected.
5. Allow 5 sec. between each test for the detector to stabilize.
6. After the walk test is completed, you can set the LED to OFF position.

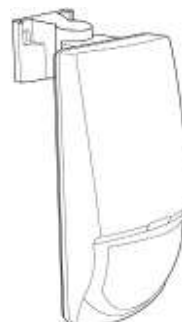


Fig.3

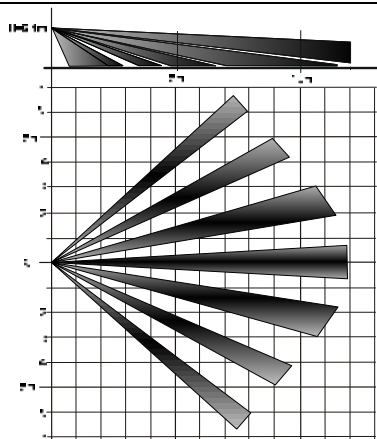


Fig.4

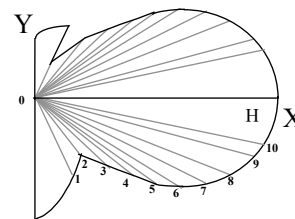


Table 1:

| ## | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|----|-----|------|------|------|------|-----|------|------|------|------|------|
| a | 180 | 130 | 100 | 84 | 75 | 70 | 60 | 52 | 40 | 30 | 20 |
| X | 0 | 3 | 6 | 9 | 12 | 15 | 18 | 21 | 24 | 27 | 285 |
| Y | 105 | 6.09 | 7.15 | 8.98 | 8.01 | 105 | 1039 | 1024 | 8.73 | 7.23 | 5.03 |

X,Y are corresponds (m) of pattern points when H=30m

Fig.5

