

SWAN QUAD

PIR MOTION DETECTOR With PET IMMUNITY up to 25 kg

PRODUCT FEATURES

The SWAN QUAD detector uses a special designed optical Lens with unique Quad (Four element) PIR Sensor and new ASIC based electronics optimized to eliminate false alarms, caused by small animals and Pets.

The SWAN QUAD provides unprecedented levels of immunity against visible light.

The Detector offers an exceptional level of detection capability and stability for every security installation.

The SWAN QUAD is supplied with a Wide Angle lens.

- Quad Linear Imaging Technology for sharp analysis of body dimensions and differentiation from background and animals.
- ASIC based electronics.
- Immunity to animals up to 25kg.
- 18m Detection Range with Wide Angle Lens.
- Temperature compensation.
- Compact Design for Residential Installation.
- Variable pulse width adjustment.
- Sensitivity adjustment.
- Environmental immunity.
- Height installation calibration free (1.8m – 2.4m).
- LED Remote function.

SELECT MOUNTING LOCATION

Choose a location most likely to intercept an intruder. (Our recommendation is a corner installation). See detection pattern fig.3. The quad-element high quality sensor detects motion crossing the beam; it is slightly less sensitive detecting motion toward the detector. The SWAN quad performs best when provided with a constant and stable environment and background. AVOID THE FOLLOWING LOCATIONS

- Facing direct sunlight.
- Facing areas that may change temperature rapidly.
- Areas where there are air ducts or substantial airflows.

WIRE SIZE REQUIREMENTS

Use #22 AWG (0.5 mm) or wires with a larger diameter. Use the following table to determine the required wire gauge (diameter) depending on the length of wire between the detector and the control panel.

Wire Length	m	200	300	400	800
Wire Diameter	mm	.5	.75	1.0	1.5
Wire Length	ft.	800	1200	2000	3400
Wire Gauge	#	22	20	18	16

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. 6).

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



Fig.1 Holding screw

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.

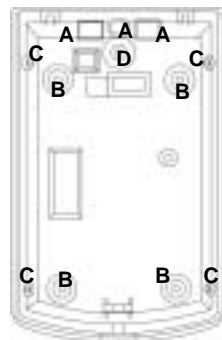
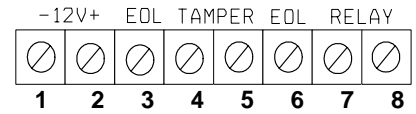


Fig.2

- 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

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 Bracket option - lead wire through the bracket)
5. Mount the detector base to the wall, corner or ceiling. (For bracket installation option see fig. 6).
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 Supply or ground of the control panel.

Terminal 2 - Marked " + " (+12V)

Connect to a positive Voltage Supply of 8.2 -16Vdc source (usually from the alarm control unit)

Terminals 3 & 6 - Marked " EOL " – End of line option.

Terminals 4 & 5 - Marked " TAMPER "

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 7 & 8 - 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 one minute after applying 12 Vdc power for warm up time. Conduct testing with the protected area cleared of all people.

Walk test

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

NOTE:

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

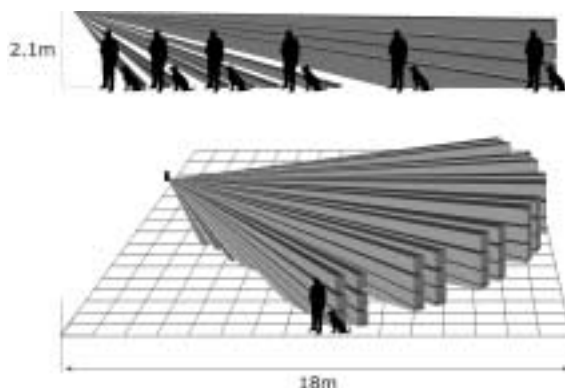


Fig.3



Fig.4

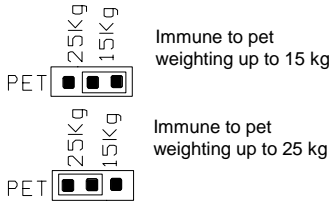
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SETTING UP THE DETECTOR

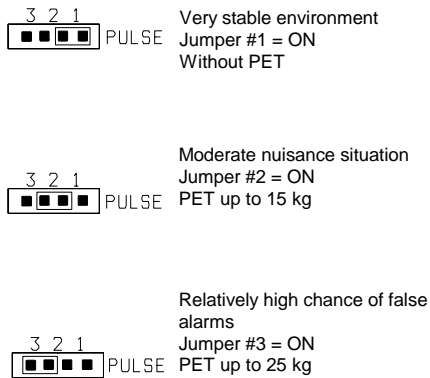
PET IMMUNITY JUMPER SETTING

This jumper is used for setting the PET Immune function - up to 15kg or 25kg, depending on the pet size.



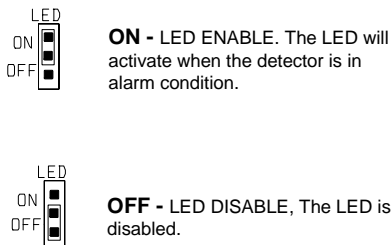
PULSE WIDTH JUMPER SETTING

This jumper is used for setting the PULSE count function in order to provide PIR sensitivity control according to the environment.



LED ENABLE JUMPER SETTING

This jumper is used for setting - LED Enable / Disable.



Note: The LED Switch does not affect the operation of the relay. When an intrusion is detected, the LED will activate and the alarm relay will switch into alarm condition for 2 sec.

PIR SENSITIVITY ADJUSTMENT

Use the Potentiometer marked "SENS" to adjust the detection sensitivity between 15% and 100%, according to walk test in the protected area. (Factory set to 57%)
Rotate the potentiometer clockwise to increase range, counter-clockwise to decrease range.

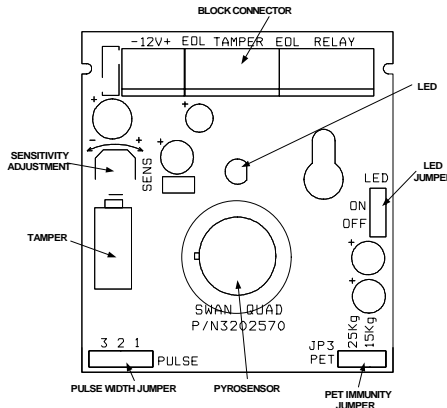


Fig.5

BRACKET INSTALLATION OPTION

Ceiling bracket base

Wall bracket base

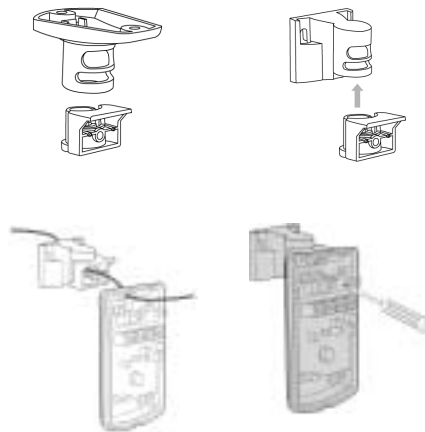


Fig. 6

TECHNICAL SPECIFICATION

MODEL	SWAN QUAD
Detection Method	Quad (Four element) PIR
Power Input	8.2 to 16 VDC
Current Draw	Standby: 8mA (± 5%) Active: 10mA (± 5%)
Temperature Compensation	YES
Pulse Width	Adjustable
Alarm Period	2 sec (± 0.5sec)
Alarm Output	N.C 28VDC 0.1 A with 270 Ohm series protection resistor
Tamper Switch	N.C 28VDC 0.1A with 10 Ohm series protection resistor - open when cover is removed
Warm Up Period	60sec (± 5sec)
LED Indicator	LED is ON during alarm
Operating Temperature	-20°C to +60°C
RFI Protection	30V/m 10 - 1000MHz
EMI Protection	50,000V of electrical interference from lightning or power through
Dimensions	92mm x 59mm x 37mm
Weight	40gr

