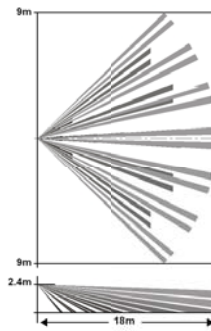# SIM
SECURITY IN MOTION

SIM-01

DIGITAL QUAD PIR DETECTOR WITH CAMERA OPTION

CE

INSTALLATION INSTRUCTIONS
P/N 7106785 Rev A

Wide Angle Lens

AVOID THE FOLLOWING LOCATIONS:
- Facing direct sunlight.
- Facing areas that may change temperature rapidly.
- Areas where there are air ducts or substantial airflows.
- Avoid screen, curtain that may block detection area.
- Do not install outdoors.

SPECIFICATION:

Camera Type	B&W: CCIR or EIA COLOR: PAL or NTSC
Picture Elements (NTSC;EIA)	290K (PAL; CCIR) 250K
Resolution	420 TV lines (PAL; NTSC) 380 TV lines (CCIR; EIA)
Sensitivity	0.5Lux - F2.0 (NTSC; PAL) 0.5Lux - F1.2 (EIA; CCIR)
S/N Ratio	Better than 48 dB
Electronic Shutter Time (NTSC; EIA)	1/60 – 1/100,000 sec
	1/50 – 1/100,000 sec (PAL; CCIR)
Video Output	1V p-p 75Ω
Detection Method	Quad (four) element PIR
Power Input	8.2 to 16 Vdc
Current Draw	Mono: 115 mA
Colour: 150 mA	
Temperature Compensation	YES
Alarm Period	2 +/- 1 sec
Alarm Output	N.C 28Vdc 0.1 A with 10Ohm series protection resistors
Tamper Switch	N.C 28Vdc 0.1A with 10 Ohm series protection resistor - open when cover is removed
Warm Up Period	1 min
LED Indicator	Red LED is ON during alarm
Dimensions	123mm x 61mm x 38mm
Weight	135 gr.

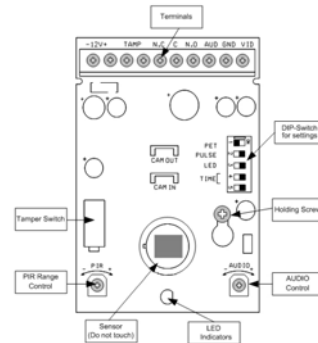## INSTALLING THE DETECTOR
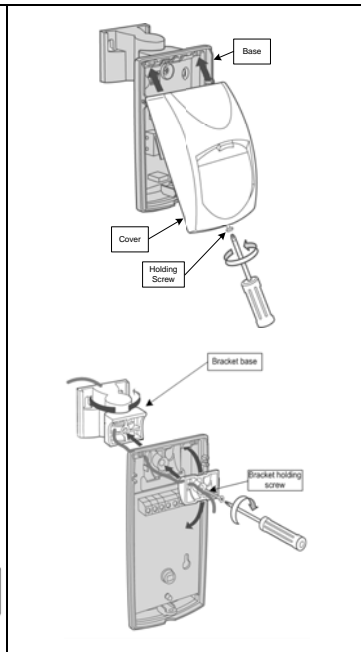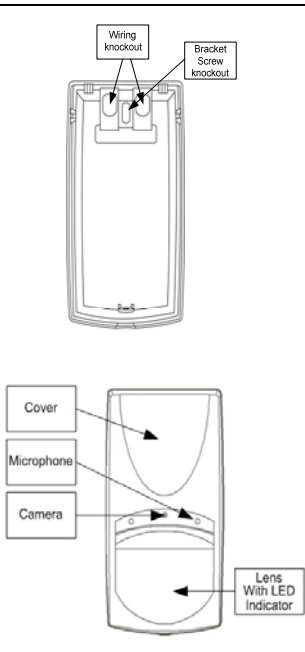
WIRE REQUIREMENTS

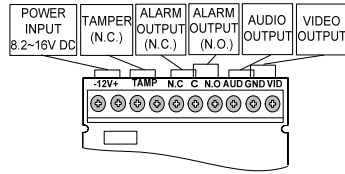Use #22 AWG (0.5mm) or wires with a larger diameter. Use the following table to determine required wire gauge (diameter) and length of wire between the detector and the control panel.

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

PCB LAYOUT

WIRE CONNECTIONS

| POWER INPUT 8.2~16V DC | TAMPER (N.C.) | ALARM OUTPUT (N.C.) | ALARM OUTPUT (N.O.) | AUDIO OUTPUT | VIDEO OUTPUT |

-12V+   TAMP   N.C   C   N.O   AUD GND VID

Terminal 1 - Marked - (GND)
Connect to ground of the control panel.

Terminal 2 - Marked + (+12V)
Connect to the positive Voltage output of 8.2 ~ 16Vdc source.

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

Terminals 5,6 & 7 - Marked " N.C, C & N.O "
These are the output relay contacts of the detector. Connect to a normally closed or normally opened zone in the control panel.

Terminals 8 & 9 - Marked " AUD "& "GND"

This is the audio signal output. These two terminals should be connected to an audio input.

Terminals 9 & 10 - Marked " GND "& "VID"
This is the video signal output. These two terminals should be connected to video input.

DETECTOR SETTINGS

Switch 1: PET Immune function - Up to 15Kg or 25Kg, depending on the pet weight.
Position Right - ON - Immunity to an animal up to 15 kg
Position Left - OFF - Immunity to an animal up to 25 kg

Switch 2: the PULSE count function for PIR sensitivity control.
Position Right – ON. High sensitivity - 1 PULSE - normal stable environment.
Position Left – OFF. Low sensitivity – 2 or 3 PULSES - harsh environments.

Switch 3: LED Control
Position Right – ON - LEDs ENABLE
The RED LED will activate when the detector is in alarm condition.
Position Left – OFF - LEDs DISABLE

Note: the state of the switch "LED" 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

Switches 4 & 5: Time delay of the N.O. Relay terminals 6 & 7.

There are four options:

Switch 4	Switch 5	N.O. RELAY TIME DELAY
ON	ON	2 Sec. Contact closed
ON	OFF	15 Sec. Contact closed
OFF	ON	60 Sec. Contact closed
OFF	OFF	240 Sec. Contact closed

The N.C. Relay (Terminals 5 & 6) opens for 1.8 – 2

ADJUSTING SENSITIVITY

The Use the Potentiometer marked "PIR" to adjust the detection sensitivity between 15% and 100%, according to walk test in the protected area.
(Factory setting is 57%)

Rotate the potentiometer clockwise to increase range, counter-clockwise to decrease range.

TESTING THE DETECTOR

Apply 12 Vdc power to the detector, wait 2 minutes to finish the detector warm up time. Conduct testing with the protected area cleared of all people.

Walk test

1. Remove front cover.
2. Make sure that *PIR* switch is in positions high sensitivity.
3. Make sure that *LED* switch is **ON**.
4. Replace the front cover.
5. Start walking slowly across the detection zone.
6. Observe that the detector's LED lights whenever motion is detected.
7. Allow 5 sec. between each test.
8. After the walk test is completed, the *LED and PIR* switches may be changed.

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

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