SIM

SECURITY IN MOTION

SIM-02

DIGITAL QUAD PIR AND GLASS BREAK DETECTOR

CE

INSTALLATION INSTRUCTIONS
P/N 7106791 Rev A

Wide Angle Lens
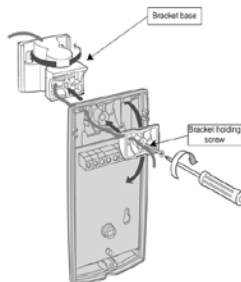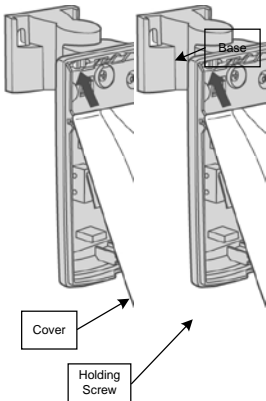

9m

9m

2.4m

18m
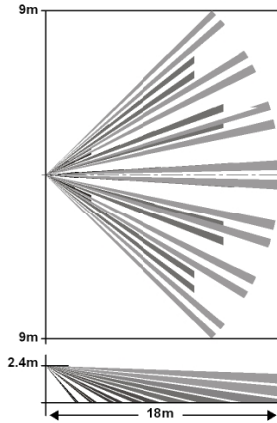
AVOID THE FOLLOWING LOCATIONS:
- Facing direct sunlight.
- Facing areas that may change temperature rapidly.
- Areas where there are air ducts or substantial airflows.
- Avoid screen, curtain that may block detection area.
- Do not install outdoors.

SPECIFICATION

Detection Method	PIR & electret microphone
Detection Speed	0.15 – 3.6 m/sec
Power Input	8.2 - 16 Vdc
Current Draw	Alarm PIR :16.5mA; Alarm Shock & Glass: 22mA; Alarm all: 18mA Standby: 16.5 mA
Temperature Comp.	YES
Pulse Count	1, AUTO
Alarm Period	2 sec
Alarm Output	N.C 28Vdc 0.1 A with 10 Ohm series protection resistors
Tamper Switch	N.C 28Vdc 0.1A with 10 Ohm series protection resistor – open when cover is removed
Warm Up Period	60 sec
Operating Temperature	-20℃ to +50℃
RFI Protection	30V/m 10 - 1000MHz
EMI Protection	50,000V of electrical interference from lighting
Visible Light Protection	stable against halogen light reflected light
Detection range	Glass up to 10m (90°); PIR up to 15m (WA lens)
LEDs indicator	Yellow LED (GLASS) - glass break signal for testing & adjustment Green LED (SHOCK) - shock signal for testing & adjustment Red LED (ALARM) - alarm signal: Fleshing light - glass & break detection or glass & shock & PIR detection Constant light - PIR detection
Dimensions	115mm x 61mm x 37.5mm
Weight	120g

INSTALLING THE DETECTOR

Base

Cover

Holding Screw

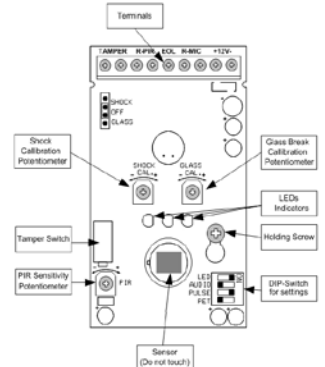Bracket base

Bracket holding screw
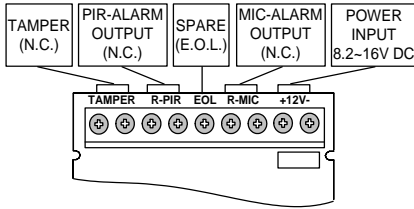

WIRE REQUIREMENTS

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

Terminals

Shock Calibration Potentiometer

Glass Break Calibration Potentiometer

LEDs Indicators

Holding Screw

Tamper Switch

PIR Sensitivity Potentiometer

DIP-Switch for settings

Sensor (Do not touch)

WIRE CONNECTIONS

TAMPER (N.C.)	PIR-ALARM OUTPUT (N.C.)	SPARE (E.O.L.)	MIC-ALARM OUTPUT (N.C.)	POWER INPUT 8.2~16V DC

TAMPER R-PIR EOL R-MIC +12V-

Terminals 1 & 2 - Marked TAMPER
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 3 & 4 - Marked R-PIR
These are the output PIR relay contacts of the detector. Connect to a normally closed zone in the control.

Terminal 5 - Marked EOL
End of line option.

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

Terminal 8 - Marked + (+12V)
Connect to the positive Voltage output of 8.2 ~ 16Vdc source (usually from the alarm control unit).

Terminal 9 - Marked - (GND)
Connect to ground of the control panel.

DETECTOR SETTINGS

Switch 1: LED Control.
Position Right - ON – LED ENABLE
Position Left – OFF - LED DISABLE.

Switch 2: AUDIO Sensitivity.
Position Right – ON – reducing the sensitivity of sound detection by 50%. (for small room)
Position Left – OFF – sensitivity of sound detection 100%.

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

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.

Switch 4: PET Immune function
Position Right (ON) Immunity up to 15 kg.
Position Left (OFF) Immunity up to 25 kg

SHOCK/GLASS ADJUSTMENT

Use only during testing and setting

SHOCK / OFF / GLASS — SHOCK - for adjustment of the low frequency sensitivity with potentiometer "SHOCK"

SHOCK / OFF / GLASS — GLASS - for adjustment of the high frequency sensitivity with potentiometer "GLASS"

SHOCK / OFF / GLASS — OFF - for regular operation

GLASS BREAK CALIBRATION

To calibrate the glass break sensitivity, place the jumper accordingly GLASS marking. Green (SHOCK) LED is constantly ON.
Now you can adjust the sensitivity by rotating the GLASS potentiometer.
Operate the Sound Break Simulator near the protected window and rotate the potentiometer GLASS clock-wise to increase sensitivity, and counter-clock-wise to decrease sensitivity until the Yellow and Red LEDs are illuminating for each glass break sound.

SHOCK CALIBRATION

To calibrate the shock setting (increase/decrease sensitivity) place the jumper accordingly SHOCK marking - Yellow (GLASS) LED is constantly ON.
Now you can adjust the sensitivity by rotating the potentiometer SHOCK.
Hit gently on the protected glass and rotate the potentiometer clockwise to increase sensitivity, and counter-clockwise to decrease sensitivity until the Green and Red LEDs are illuminating for each hit.

FINAL TESTING

- Make sure to set jumper "GLASS/SHOCK" in position OFF. When the jumper is in this position, the detector will detect both shock and sound frequencies.
- To ensure maximum protection against false alarms, activate any device in the area, which might automatically cycle pumps, generators, heating/air conditioning units, etc. If the cycling devices trigger an alarm, mount the unit in a different location.

SIM
SECURITY IN MOTION

www.sim-security.net