1. INTRODUCTION

Detector's Features
- Patented 8 independent quad PIR detectors (Octa-QUAD™) operating in true Quad configuration with true motion recognition (TMR) processing for each of the 8 PIR detectors and central motion processing - can distinguish between a moving intruder and moving trees and bushes.
- Advance Obsidian Black Mirror™ optics (patent pending).
- High protection against snow, rain, dust, wind and direct sunlight.
- Tamper protection against opening and removal from wall.
- Alarm LED is visible in sunlight.
- Low voltage detection
- Self test
- Robust housing with recessed window.
- Smart anti masking can distinguish between masking spray and rain.
- Immunity to pets weighing up to 18 Kg (40lb), not pet alley – see Table 2.
- Built in swivel bracket.

2. SPECIFICATIONS

OPTICAL
Black Mirror Max. Coverage: At least 12 meters (40 ft)/90º.
Detector Technology: 8 independent quad PIR detectors operating in true Quad configuration.
Pet-immune: Up to 18Kg (40lb.)
ELECTRICAL
Input Power: 8-16VDC
Standby Current: 15mA@12VDC.
Supply Current: 70 mA max.
Outputs:
- Alarm output: Solid State Relay. NC, 100 mA / 30 V, 35 ohm maximum internal resistance. (see Table 4).
- Trouble output: Solid State Relay. NC, 100 mA / 30 VDC, 35 ohm maximum internal resistance. (see Table 4).

3. INSTALLATION

3.1 DIP Switches Setup
Remove the 2 detector’s bottom covers (see Figure 3, steps 4-8) to gain access to the DIP switches. Set the DIP switches, according to Table 1:

| DIP SW # | Function          | Description                                      | Default | Current
|----------|-------------------|--------------------------------------------------|---------|--------
| 1        | LEDs              | OFF: Motion and masking alarm LEDs is disabled   | ON      |        |
|          |                   | OFF: Can be enabled by TST input (Active low)    |         |        |
|          |                   | ON: Motion and masking alarm LEDs is enabled     |         |        |
|          |                   | (ON).                                            |         |        |
| 2        | PIR Sensitivity   | OFF: Normal PIR sensitivity.                     | OFF     |        |
|          |                   | ON: High PIR sensitivity.                        |         |        |
| 3        | AM OFF / ON       | OFF: AM OFF                                     | ON      |        |
|          |                   | ON: AM on                                       |         |        |
| 4        | Masking event opens Alarm relay (EN standard)    | OFF: masking event reported to panel as TROUBLE (Trouble relay opens). | OFF     |        |
|          |                   | on panel as TROUBLE and ALARM (EN standard).     |         |        |
|          |                   | Trouble and Alarm relay opens at the same time.  |         |        |

* Switching from OFF to ON resets the detector for a stabilization period of 60 sec. and causes the detector to re-adapt to its current surroundings. Remain at a distance of at least 0.5 m (1.5 ft) from the detector to prevent disruption of this process.
** Use ON for EN approved control panels / installations. However, many installers prefer not to have the ALARM relay opened on a masking event.

3.2 Installation
Bracket installation (see figure 3) – firmly fix the bracket on a stable wall or pillar. The orientation of the fixed bracket should be as parallel as possible to the surveyed ground surface.

3.3 Wiring
Perform wiring (see figure 3, step 8 - 10)

3.4 Adjustments
Adjust detector's horizontal and vertical angles (see Fig. 4, steps 1 - 6), according to the surveyed ground surface and close the detector, as shown in Fig. 3, steps 7 - 12.

The vertical angle indicator position for various installation height and coverage distance combinations is detailed in Table 2 (the information refers to a relatively flat surveyed area. however, in any case the correct installation should be verified by walk-test).

Table 2 - Vertical Adjustment Reference

<table>
<thead>
<tr>
<th>Mounting Height</th>
<th>Coverage Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>2m /6.7 ft</td>
<td>3m /9.8 ft</td>
</tr>
<tr>
<td>4m /13 ft</td>
<td>5m /15 ft</td>
</tr>
<tr>
<td>6m /20 ft</td>
<td>8m /26 ft</td>
</tr>
<tr>
<td>10m /33 ft</td>
<td>12m /39 ft</td>
</tr>
</tbody>
</table>

Note: The grayed-in cells in Table 2 are the installation alternatives recommended for further reducing false alarms from pets.

D-301524 TOWER 20 AM Installation Instructions
3.5 Test

A. The detector enters Walk-Test mode after one of the following occurs:
- The 60-second stabilization period ends.
- DIP-SW1 position changes from OFF to ON.
- TST input state changes from OFF to ON.

**NOTE:** Regardless of the DIP-SW1 and TST input settings, the Alarm and AM LED indications are enabled in Walk-Test mode. Crossing a single beam causes the red LED to double-blink.

B. Walk into the detector's field of view at the expected far edge of the coverage area. Verify that each time your motion is detected the red LED lights for 2 seconds and the control panel receives the alarm. If required, perform detector's horizontal / vertical readjustments.

**Important!** Instruct the user to perform walk test at least once a week, to verify proper operation of the detector.

C. Place a piece of cardboard on the detector's front side, to deliberately mask the optical window. After 2 minutes, the yellow LED should light (see Table 3) and the alarm control panel should receive the masking alarm.

D. Remove the masking from the detector's front side. The LED should extinguish (after about 30 seconds).

3.6 Cover Closure (see Fig. 4, steps 7 - 10)

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### Table 3 – LED Operation

<table>
<thead>
<tr>
<th>Event / status</th>
<th>Indication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low voltage</td>
<td>Red flashing</td>
</tr>
<tr>
<td>Warm-up (60sec.)</td>
<td>Yellow + Red flashing alternately</td>
</tr>
<tr>
<td>Self-test failure</td>
<td>Yellow + Red flashing simultaneously</td>
</tr>
<tr>
<td>AM detection</td>
<td>Yellow ON</td>
</tr>
<tr>
<td>ALARM</td>
<td>Red ON for 2 sec.</td>
</tr>
<tr>
<td>Crossing Beam during Walk-Test</td>
<td>Red Double blink</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Event / status</th>
<th>Relay Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trouble</td>
<td>Alarm</td>
</tr>
<tr>
<td>Complete power failure</td>
<td>Open Open</td>
</tr>
<tr>
<td>Standby</td>
<td>Closed Closed</td>
</tr>
<tr>
<td>Low voltage</td>
<td>Open Open</td>
</tr>
<tr>
<td>Self-test failure</td>
<td>Open Open</td>
</tr>
<tr>
<td>AM detection DIP-SW4 = ON</td>
<td>Open Open</td>
</tr>
<tr>
<td>AM detection DIP-SW4 = OFF</td>
<td>Open Closed</td>
</tr>
<tr>
<td>Alarm</td>
<td>Closed Open for 2 sec.</td>
</tr>
</tbody>
</table>

---

### Table 4 – Relay Outputs

<table>
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<tr>
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<tbody>
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<td>Open Closed</td>
</tr>
<tr>
<td>Alarm</td>
<td>Closed Open for 2 sec.</td>
</tr>
</tbody>
</table>

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Bracket fastening (3 cable routing options)

Note: The 2 screw holes enable adjustment of the bracket on the wall, if needed as a result of the walk test.

Wiring

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D-301524 TOWER 20 AM Installation Instructions
Figure 3 - Installation

Correct Installation

Incorrect Installation

Mounting on bracket

Figure 3 – Installation (Continued)

HORIZONTAL ADJUSTMENT
(-45° to +45°)

1. Release locking
2. Adjust
3. Lock

VERTICAL ADJUSTMENT
(0° to -10° in 2.5° clicks / steps)

4. Release locking
5. Adjust

Figure 4 – Adjustment and Cover Closure
4. MISCELLANEOUS COMMENTS

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television 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:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician.

FCC Warning! Modifications not expressly approved by Visonic Ltd. could void the user authority to operate the equipment under FCC rules.

WARRANTY

Visonic Limited (the "Manufacturer") warrants this product only (the "Product") to the original purchaser only (the "Purchaser") against defective workmanship and materials under normal use of the Product for a period of twelve (12) months from the date of shipment by the Manufacturer.

This Warranty is absolutely conditional upon the Product having been properly installed, maintained and operated under conditions of normal use in accordance with the Manufacturer's recommended installation and operation instructions. Products which have become defective for any other reason, according to the Manufacturer's discretion, such as improper installation, failure to follow recommended installation and operational instructions, neglect, willful damage, misuse or vandalism, accidental damage, alteration or tampering, or repair by anyone other than the manufacturer, are not covered by this Warranty.

The Manufacturer does not represent that this Product may not be compromised and/or circumvented or that the Product will prevent any death and/or personal injury and/or damage to property resulting from burglary, robbery, fire or otherwise, or that the Product will in all cases provide adequate warning or protection. The Product, properly installed and maintained, only reduces the risk of such events without guaranteeing that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television 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:

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