Honeywell

DT7550C
DUAL TEC® MOTION SENSOR

Designed for high security commercial installations where masking is a concern, Honeywell's DUAL TEC® DT7550C Motion Sensor combines DualCore™ signal processing with MaskAlert™ anti-mask technology to ensure superior performance.

FEATURES

- **Superior Anti-mask Protection**
  Through a combination of PIR and microwave signal processing, MaskAlert technology quickly detects intentional and accidental masks or blocks. The sensor sends a trouble signal whenever it encounters mask conditions. Power-up anti-mask detects mask conditions at start-up to reduce sensor security breaches during installation, servicing and power outages.

- **Advanced DualCore Signal Processing**
  DualCore signal processing analyzes PIR and microwave signals through the DT7550's microcontroller. DualCore processing supports a multitude of advanced functions, including concurrent diagnostics, digital fluorescent light interference filter, digital adaptive microwave threshold, adaptive baselines, and bidirectional temperature compensation.

- **Superb Detection Through K-Band Technology**
  K-Band microwave technology delivers sharp detection without holes or weak spots. The custom

made source offers pattern shaping to fill the protected area with a broad, balloon-shaped pattern which matches the PIR pattern. It also offers pattern containment to reduce the penetration of microwave energy through walls.

- **Enhanced False Alarm Prevention Features**
  The DT7550 offers more than the standard features that protect against false alarms due to RF signals, electrostatic discharge and electrical overstress. The patented black bug guard improves white light immunity and digital adaptive microwave thresholds automatically adjust for room disturbances.

- **Self-Testing for Consistently Reliable Operation**
  Concurrent diagnostics assure optimum performance and reliability. Self-testing is performed upon power-up and at least once every hour on the PIR, microwave, PCB circuitry and temperature compensation circuitry.

- **Sturdy, Attractive Housing**
  The sleek, sturdy housing fits into a variety of building styles and blends with any room décor. ABS plastic is used for shock and impact protection. The housing offers a convenient wiring channel, knockouts for mounting and wiring, and easy access to wiring terminals.

- **DualCore Signal Processing**
  PIR and microwave signals are analyzed in the microcontroller in multiple domains, including amplitude, time, frequency and duration to provide superior false alarm immunity without compromising detection. DualCore processing not only supports alarm functions, but also advanced temperature compensation, diagnostics and false alarm features.

- **Uniform Sensitivity Optics**
  The custom-designed Fresnel lens provides the same sensitivity for human targets at the edge of the pattern as exists directly in front of the sensor, giving the DT7550 consistent coverage throughout the protected area.

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FEATURES

- **Digital Adaptive Microwave Thresholds**
  The DT7550 digitally adjusts its thresholds to account for room disturbances such as ceiling fans and other repetitive moving objects which are not an intrusion event. The result – excellent false alarm immunity even in "active" rooms.

- **Digital Fluorescent Light Interference Filter**
  Potential false alarms due to fluorescent lights are eliminated with a digital filter with infinite rejection. Frequency of the filter is selectable between 60 Hz or 50 Hz via DIP switch.

- **Patented Mirror Look Down**
  Provides better coverage up close with multiple zones in the look down area.

- **Global Compliance**
  Our designs meet many of the world's motion detector standards, including the new EN50131-1. And with K-band microwave, it can be used in virtually every market all around the globe.

- **White Light Immunity**
  A patented black bug guard reduces false alarms by providing 6,500 lux of white light immunity. This helps reduce false alarm problems caused by lights, flashlights or reflective objects.
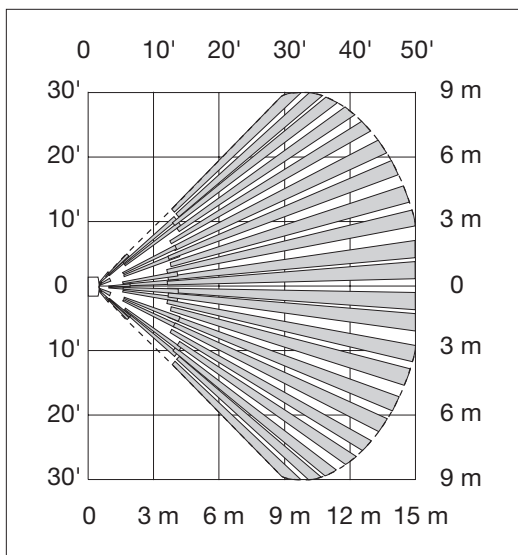
- **Flexible Mountings**
  The DT7550 family mounts on walls, in corners or on ceilings with the SMB10 family of swivel brackets.
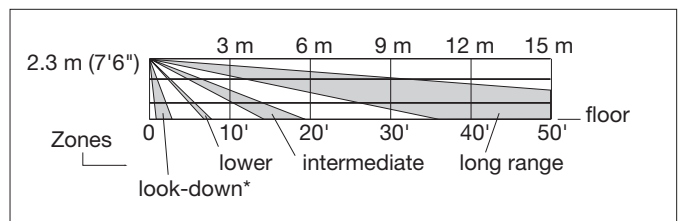
- **Concurrent Diagnostics**
  Optimum performance and reliability are assured through comprehensive diagnostics that do not compromise detection during testing. In addition to performing a full self-test upon power-up, microwave supervision is performed continuously; PIR supervision is performed once every hour. Temperature compensation is monitored and updated every 30 seconds.

DETECTION PATTERNS

Top View

Side View

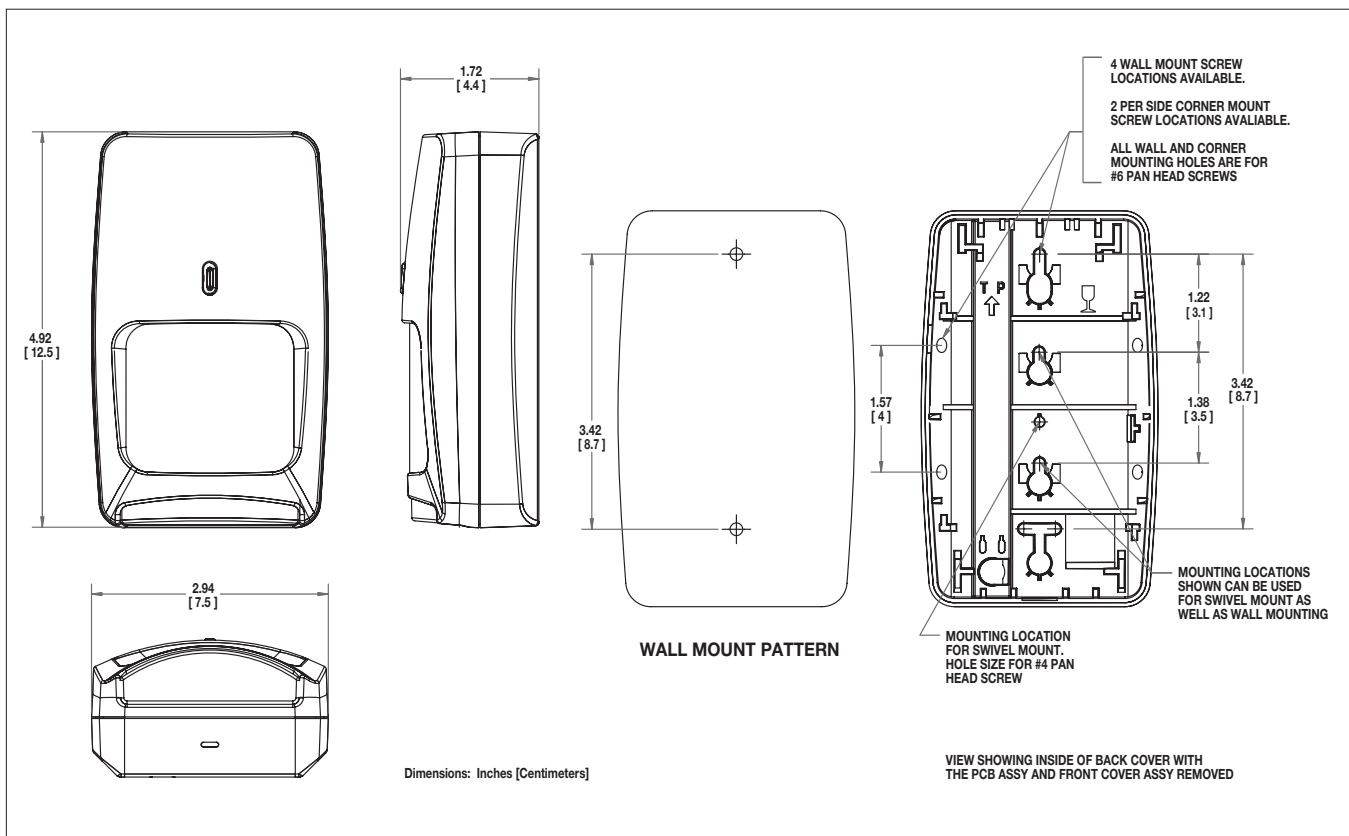*Look-down fingers are enabled only when the look-down mask is removed.

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SPECIFICATIONS

- **Range**
  – 50' x 60' (15m x 18m)

- **Alarm Relay**
  – Energized Form C 125mA, 25VDC, 20 Ohm series resistor

- **Mounting Height**
  – 7'6" (2.3m) optimal

- **Trouble Relay**
  – De-energized Form B (NC) 125mA, 25VDC

- **Tamper**
  – (NC) 50mA, 24VDC

- **Power Requirements**
  – 7.5–16VDC (8.0–16VDC for UL installations)
  – 30mA typ., 40mA max. at 12VDC
  – AC Ripple: 3V peak-to-peak at 12VDC nominal

- **Frequencies**
  – 24.125 GHz (K-Band)

- **PIR White Light Immunity**
  – 6,500 Lux typical

- **Fluorescent Light Filter**
  – 50 Hz or 60 Hz, selectable

- **RFI Immunity**
  – 30V/m, 10 MHz – 1000 MHz

- **Operating Temperature**
  – 14° to 131° F (-10° to 55° C) 5% – 95% relative humidity (non-condensing)

- **Self-Test Intervals**
  – Microwave Supervision: Continuous
  – PIR Self-Test: Once every hour
  – Temperature Compensation: Every 30 seconds

- **PIR Fields of View**
  – 22 long range
  – 12 intermediate
  – Six lower
  – Four look-down

- **Dimensions**
  – 4.685" x 2.795" x 1.654" (11.9cm x 7.1cm x 4.2cm)

- **Sensitivity**
  – Low (Pulse count 2): 3-4 steps
  – High (Pulse count 1): 2-3 steps

- **Temperature Compensation**
  – Advanced Dual Slope Temperature Compensation

- **Agency Listings**
  – EN50131-1 Grade 3, Class II
  – cULus   – FCC   – FG
  – IC   – IMQ   – INCERT
  – MABISZ – NCP   – NFA2P
  – SBSC   – SKAFOR

MECHANICAL MOUNTING SPECIFICATIONS

4.92 [12.5]

2.94 [7.5]

1.72 [4.4]

3.42 [8.7]

1.57 [4]

WALL MOUNT PATTERN

Dimensions: Inches [Centimeters]

4 WALL MOUNT SCREW LOCATIONS AVAILABLE.

2 PER SIDE CORNER MOUNT SCREW LOCATIONS AVALIABLE.

ALL WALL AND CORNER MOUNTING HOLES ARE FOR #6 PAN HEAD SCREWS

1.22 [3.1]

3.42 [8.7]

1.38 [3.5]

T P

MOUNTING LOCATIONS SHOWN CAN BE USED FOR SWIVEL MOUNT AS WELL AS WALL MOUNTING

MOUNTING LOCATION FOR SWIVEL MOUNT. HOLE SIZE FOR #4 PAN HEAD SCREW

VIEW SHOWING INSIDE OF BACK COVER WITH THE PCB ASSY AND FRONT COVER ASSY REMOVED

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ORDERING

DT7550C   DUAL TEC Motion Sensor

Accessories
DT7000-LRLK   Long Range Lens Kit (10 pack)
0-000-110-01   SMB10 Universal White Swivel Mount Bracket (5 pack)
0-000-155-01   SMB10T Tampered Universal White Swivel Mount Bracket (5 pack)
0-000-111-01   SMB10C Universal White Ceiling Mount Bracket (5 pack)
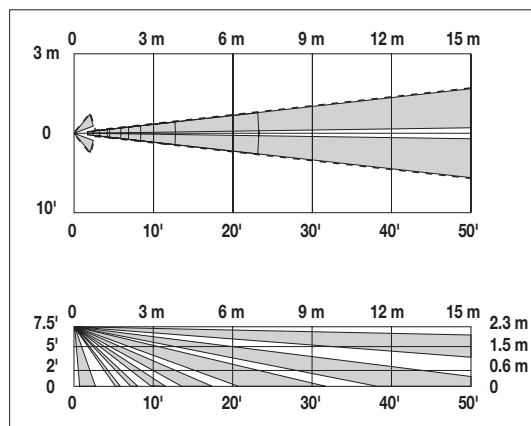
SMB10   SMB10C   SMB10T

**DT7000-LRLK
LR Curtain Lens
Kit Pattern**

L/DT7550C/D
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