

DT7435/DT7435C DUAL TEC® MOTION SENSORS



The fully-featured DUAL TEC® DT7435 motion sensor achieves reliable protection and improved false alarm immunity through DualCore™ signal processing. K-Band microwave technology and Uniform Sensitivity Optics ensure optimum performance.

FEATURES

- **Reliable Detection with 100 lb. Animal Immunity**

The combination of DualCore signal processing, Uniform Sensitivity Optics and K-Band technology, provides installers with both quality detection and the ability to ignore pets or other animals up to 100 lbs.

- **Advanced DualCore Signal Processing**

DualCore signal processing analyzes PIR and microwave signals through the microcontroller. It supports a multitude of advanced functions, including Concurrent Diagnostics, Digital Fluorescent Light Interference Filter, Digital Adaptive Microwave Threshold, adaptive baselines, and Bi-Directional 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 DT7435 protects 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.

- **Immune to Pets up to 100 lbs.**

Backed by extensive design and field experience with pet immunity, the DT7435 delivers robust pet immunity without impacting detection performance.

- **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 DT7435 consistent coverage throughout the protected area.

- **Digital Adaptive Microwave Thresholds**

The DT7435 digitally adjusts its thresholds to account for room disturbances such as ceiling fans and other repetitive moving objects which are not intrusion events. The result is 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 60Hz or 50Hz via DIP switch.

- **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.

- **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.

FEATURES

- **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 decor. 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.

- **Global Compliance**

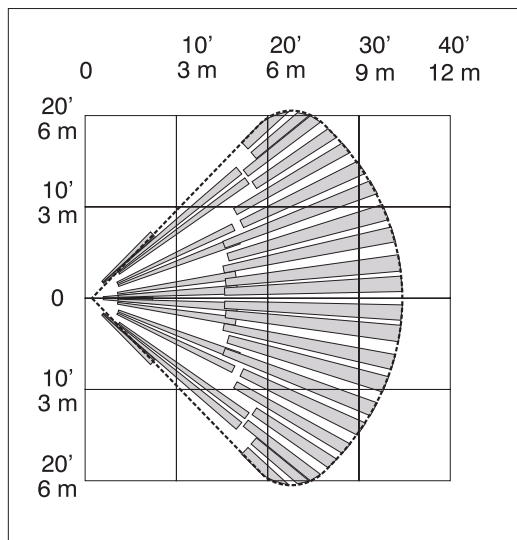
Our designs meet many of the world's motion detector standards, including the new EN50131-1. And with K-band microwave, it can be used in virtually every market all around the globe.

- **Flexible Mountings:**

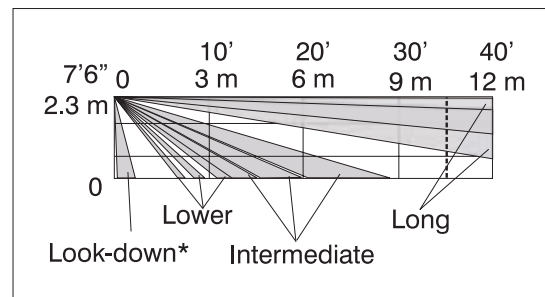
The DT7435 family mounts on walls, in corners or on ceilings with the SMB10 family of swivel brackets.

DETECTION PATTERNS

Top View



Side View



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

DT7435/DT7435C

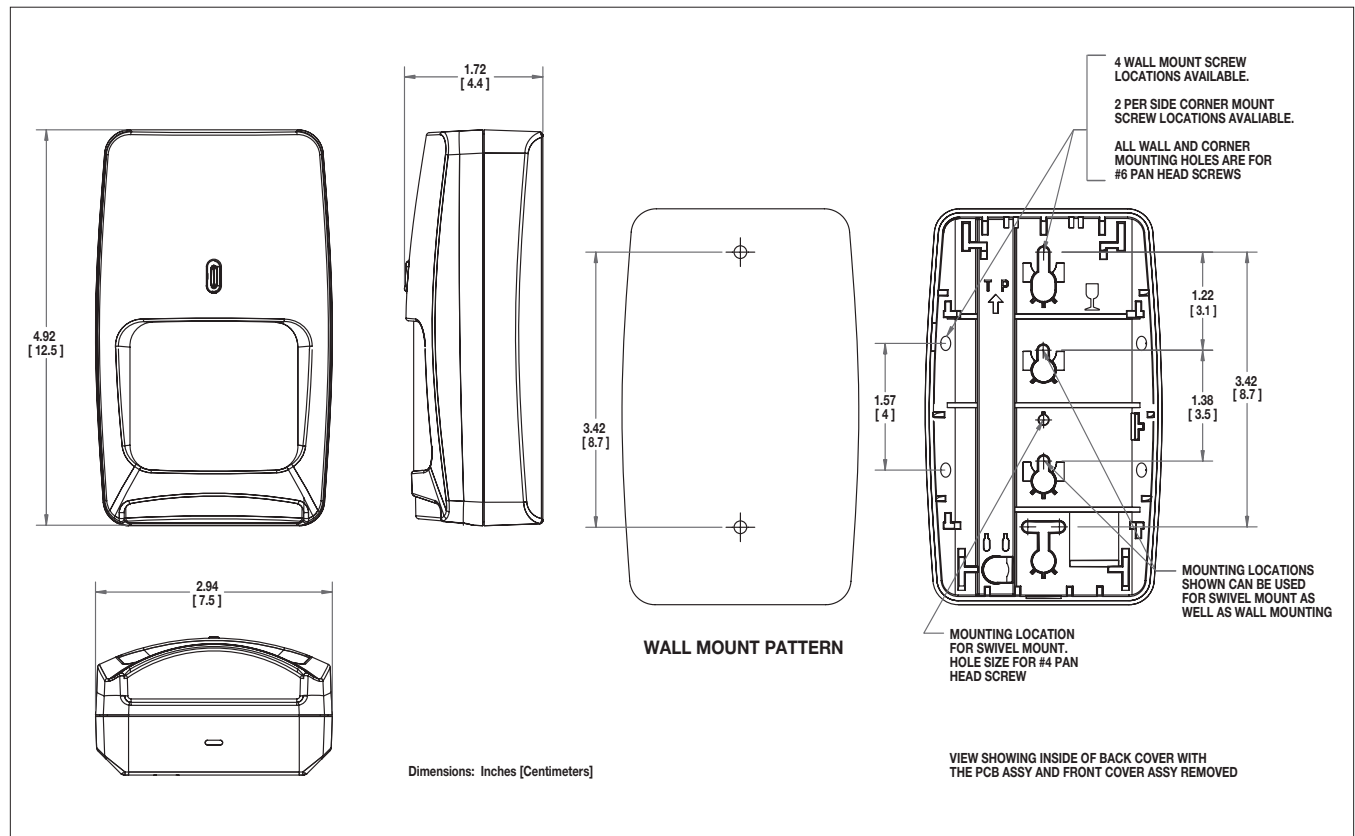
DUAL TEC® MOTION SENSORS

Honeywell

SPECIFICATIONS

- **Range**
 - 35' x 40' (11m x 12m)
- **Alarm Relay**
 - DT7435: Energized Form A
 - DT7435C: Energized Form C
125mA, 25VDC, 20 ohm series resistor
- **Mounting Height**
 - 7'6" (2.3 m) optimal
- **Tamper**
 - (NC) 50mA, 24VDC
- **Power Requirements**
 - 7.5–16VDC (8.0–16VDC for UL installations)
 - DT7435: 25mA typ., 30mA max at 12VDC
 - DT7435C: 30mA typ., 35mA max at 12VDC
 - AC Ripple: 3V peak-to-peak at 12VDC nominal
- **Frequencies**
 - 24.125GHz (K-band)
- **PIR White Light Immunity:**
 - 6,500 lux typical
- **Fluorescent Light Immunity:**
 - 50Hz or 60Hz, selectable
- **RFI Immunity**
 - 30V/m, 10MHz – 1000MHz
- **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
 - Temp. 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 2, Class II
 - cULus – FCC – FG
 - IC – IMQ – INCERT
 - MABISZ – NCP – NFA2P
 - SBSC – SKAFOR

MECHANICAL MOUNTING SPECIFICATIONS



DT7435/DT7435C

DUAL TEC® MOTION SENSORS

ORDERING

- DT7435** DUAL TEC Motion Sensor
DT7435C DUAL TEC Motion Sensor with Form C relay

Accessories

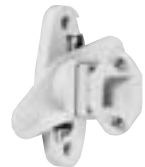
- DT7000-LRLK** Long Range Lens Kit (10 pack)
DT7000-HSLK High Security Lens Kit (10 pack)
DT7000-PALK Pet Alley Lens Kit (10 pack)
0-000-110-01 SMB10 Universal White Swivel Mount Bracket (5 pack)
0-000-155-01 SMB10T Tampered Universal White Swivel Mount Bracket (5 pack)
0-000-111-01 SMB10C Universal White Ceiling Mount Bracket (5 pack)



SMB10

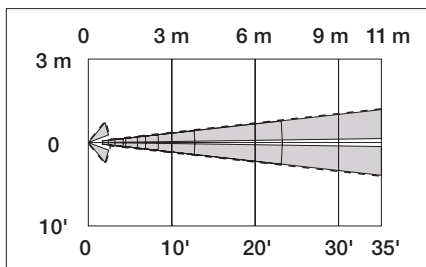


SMB10C

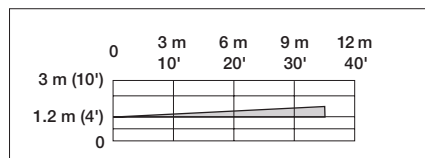
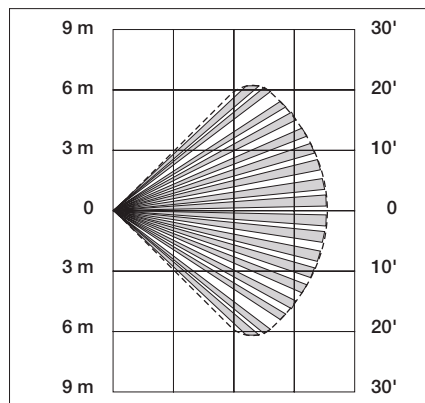


SMB10T

DT7000-LRLK LR Curtain Lens Kit Pattern



DT7000-PALK Pet Alley Lens Kit Pattern



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PL06013
 L/DT7435/D
 July 2006
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