DT900 Series Sensors

Honeywell

TECHNOLOGY FOR LARGE COMMERCIAL
AND INDUSTRIAL APPLICATIONS

Impressive Performance, Impressive Coverage

DT900 Series Sensors

Building on more than 20 years of dual technology innovation, Honeywell's DUAL TEC® DT900 Motion Sensor Series provides the features and technology you need for large commercial and industrial applications.

Ideal for the most robust commercial and industrial environments, the DT900 Series sensors rely on exclusive Queue Logic Processing for reliable intruder capture and reduced false alarms.

Other innovations include active infrared anti-masking technology, look-down lens, tamper switch and a patented INFORMER® technology. You can even choose betwen two different detection patterns by simply rotating a unique, double-sided mirror!

These exclusive features, combined with the advanced technology you've come to rely on in Honeywell's DUAL TEC products, provide you with the peace of mind and protection you need in challenging, extended-range applications.

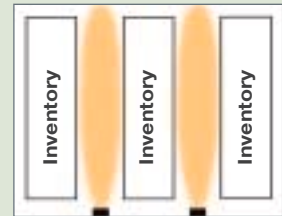**Extended Range
DUAL TEC Motion Sensor**

Applications

Warehouse/Assembly Areas

DT900 Series sensors are ideal for warehouse and assembly area applications. All models are immune to common warehouse pests such as birds and rodents, and the DT900 and the DT906 models provide anti-masking to guard against sabotage.
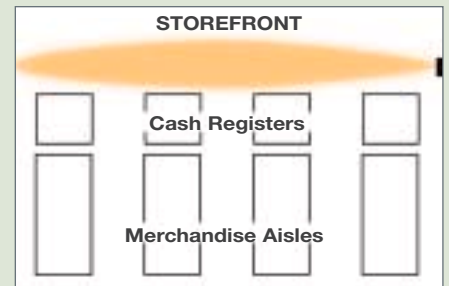
TOP VIEW – DT900 PATTERN

TOP VIEW – DT906 PATTERN

Inventory   Inventory   Inventory

Large-Scale Retail

Now one sensor can do the job of many, thanks to extended range coverage. The long, narrow pattern provides exceptional long range coverage (up to 61m/200ft) for storefront and aisle applications. The highly visible appearance conveys the presence of strong security and serves as a deterrent to criminals.
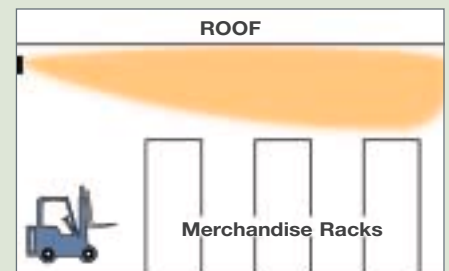
TOP VIEW – DT906 PATTERN
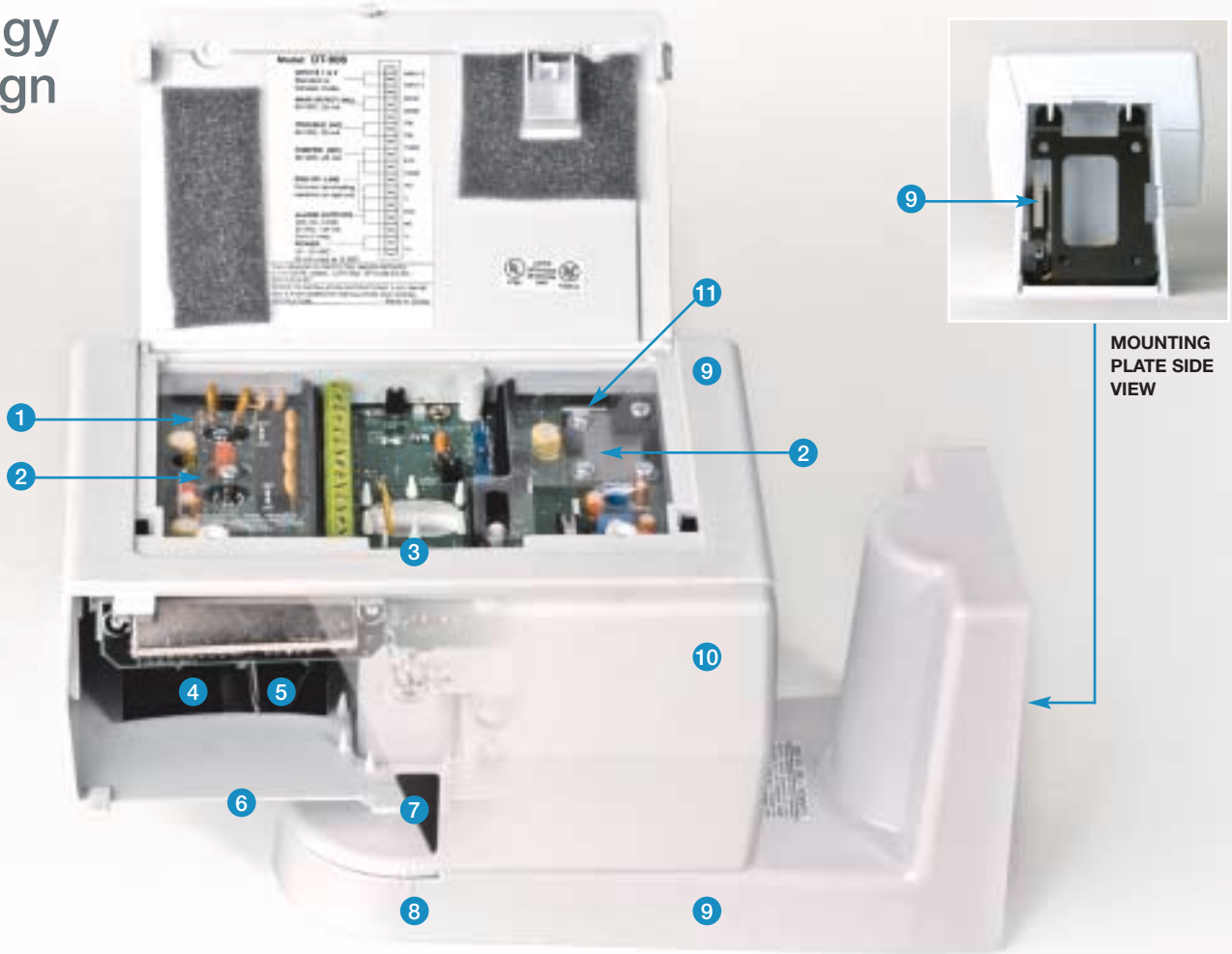

STOREFRONT

Cash Registers

Merchandise Aisles

Roofs/Ceilings

Protect against break-ins through a skylight or air shaft. By mounting the sensor near the ceiling, you'll protect the large area between the top of storage racks and the roof. Consequently, an intruder thinking they are bypassing the detection pattern by entering from above will be detected.

SIDE VIEW – DT900 PATTERN

ROOF

Merchandise Racks

Technology and Design

MOUNTING PLATE SIDE VIEW

1 QUEUE LOGIC PROCESSING
A Motorola® microcontroller retains valid PIR and microwave signals in a queue and analyzes them within a rolling time frame. The sensor looks at incoming PIR and microwave signals simultaneously (non-sequentially), so nothing is ignored. Intruder capture is more reliable because the microcontroller takes into consideration signals that may have been ignored under other processing schemes.

2 ZERO-CLEARANCE BUG GUARD
Gasketed, clear plastic shields prevent insects from entering the sensitive microwave and pyroelectric chambers.

3 EASY HEIGHT ADJUSTMENTS
Vertical adjustment markings make it easy for the installer to accurately tilt the sensor. The markings coincide with the chosen range and mounting height.

4 MIRROR OPTICS
The custom-designed segmented mirror delivers long range capability with highly effective capture at the furthest points of the range.

5 TWO DETECTION RANGES
The double-sided optical mirror rotates 180° to give you a choice of two detection ranges.
- DT900/901: 15m x 12m (50ft x 40ft) or 27m x 21m (90ft x 70ft)
- DT906/907: 37m x 3m (120ft x 10ft) or 61m x 5m (200ft x 15ft)

6 PATENTED 90° LOOK-DOWN ZONES
Look-down zones directly beneath the sensor catch intruders creeping along the wall, detecting attempts to disable the sensor from below.

7 ACTIVE INFRARED FOR ANTI-MASKING
The DT900 and DT906 models send out an infrared beam every few seconds to detect whether someone has tried to mask the sensor by throwing a tarp or box over it. If a mask attempt is detected, the sensor flashes its LEDs and signals the control panel. Anti-Mask remains active 24 hours a day. Anti-mask is not available on DT901 and DT907 models.

8 RATCHETED SWIVEL BASE
Horizontal adjustments can be made quickly and accurately to precisely position the sensor for optimum pattern coverage.

9 THREE INDIVIDUAL TAMPER SWITCHES
Built-in tamper switches detect attempts to open the top of the sensor, remove the support base cover or pry the unit off the wall. DT901 and DT907 models have cover tampers only.

10 VANDAL-RESISTANT HOUSING
In addition to the tamper switches, the sensors are protected by a durable, impact-resistant housing designed to withstand acts of vandalism.

11 INFORMER
The INFORMER circuit counts the number of events registered by both the microwave and PIR technologies, and uses the information to determine if either technology is working properly or is misapplied. The INFORMER reports via the trouble relay.

Features

Technology:
- PIR for intrusion detection
- Microwave for intrusion detection
- Active infrared for anti-masking (DT900 and DT906 only)

Digital Fluorescent Light Filter:
Virtually eliminates interference caused by fluorescent lighting

Three Microcontroller-based Sensitivity Modes:
- High for fastest capture
- Normal
- Low for maximum false alarm immunity in harsh environments

Sensitivity:
Two to four steps within field-of-view, depending on sensitivity setting selected

Zero Clearance Bug Guard:
The bug guard provides zero clearance, protecting the pyro chamber from insects that can cause false alarms

Small Animal Immunity:
Offers immunity to small animals commonly found in commercial conditions (birds, rodents, snakes)

Installer-Friendly Design:
- Large wiring space
- Protective clear plastic covers over the circuit boards to prevent damage
- Two end-of-line terminals
- Flashed over LEDs visible at great distance
- Fast-install wall mounting plate for the included swivel mounting bracket
- Easy vertical and horizontal adjustment

Mirror Optics for Long Range:
Utilizes custom designed mirror optics to provide effective capture at long range. Each model is easily selectable between two ranges

LED Diagnostic Codes:
- Anti-masking condition
- INFORMER condition
- Trouble condition
- Recallable codes to indicate INFORMER results and self-test failures

Advanced Commercial/Industrial Features:
- Anti-masking (DT900 and DT906)
- Remote LED enable input
- Command input for initiating self-tests remotely
- CENELEC two-wire input options

PIR Fields-of-View (Edges):

DT900/DT901:

27m (90') Range
Long: 18
Intermediate long: 18
Intermediate: 16
Intermediate lower: 12
Lower: 8
Look-down: 2

15m (50') Range
Long: 18
Intermediate long: 16
Intermediate: 12
Lower: 8
Look-down: 2

DT906/DT907:

61m (200') Range
Long: 2
Intermediate long: 6
Intermediate: 4
Intermediate lower: 4
Lower: 8
Look-down: 2

37m (120') Range
Long: 6
Intermediate long: 4
Intermediate: 4
Lower: 8
Look-down: 2

PRODUCT FEATURES	WIDE ANGLE LENS		LONG RANGE LENS	
	DT900	DT901	DT906	DT907
Range	15 x 12m (50' x 40') or 27 x 21m (90' x 70')	15 x 12m (50' x 40') or 27 x 21m (90' x 70')	37 x 3m (120' x 10') or 61 x 5m (200' x 15')	37 x 3m (120' x 10') or 61 x 5m (200' x 15')
Sensor Look-Down	Yes	Yes	Yes	Yes
Microcontroller Processing	Yes	Yes	Yes	Yes
Anti-Masking	Yes	No	Yes	No
Sensitivity Adjustments	Yes	Yes	Yes	Yes
Separate Outputs for Trouble & Anti-Mask	Yes	No	Yes	No
Alarm Relay	Form C	Form C	Form C	Form C
Swivel Mount Bracket	Included	Included	Included	Included
Tamper Switch on Housing	Yes	Yes	Yes	Yes
Tamper Switch(es) on Swivel Mount	Yes (2)	No	Yes (2)	No
Maximum Recommended Mounting Height	3.6m (12')	3.6m (12')	3.6m (12')	3.6m (12')
Calibrated Mounting Adjustments	Yes	Yes	Yes	Yes
Self-Diagnostics	Yes	Yes	Yes	Yes
Remote LED Enable	Yes	No	Yes	No
Zero-Clearance Bug Guard	Yes	Yes	Yes	Yes
EOL Terminals	Yes	Yes	Yes	Yes
Temperature Compensation	Yes	Yes	Yes	Yes
Cenelec Conformity	Yes	No	Yes	No
Remote Self-Test	Yes	No	Yes	No

Specifications

Physical Dimensions:
20cm x 17cm x 15cm (8" x 6-1/2" x 6")

Weight:
Product, 1.36 kg (3 lbs)
Pkgd Product, 1.6 kg (3.5 lbs)

Alarm Relay:
Energized Form C; 25VDC, 125 mA
22 ohm series protection resistor

Tampers:
Wall and bottom cover (DT900 and DT906),
Top cover (all models) 30VDC, 25 mA
(N.C.)

**Anti-Mask (DT-900 and DT-906)
and Trouble Relays:**
De-energized Form B (Normally closed)
relays, 30VDC, 25 mA

Power Requirements:
10–15VDC; 50 mA (max) at 12VDC
AC ripple; 3V peak-to-peak at nominal
12VDC

Operating Temperature:
0° to 49° C (32° to 120° F); 5% to 95%
relative humidity, noncondensing

PIR White Light Immunity:
6500 LUX

RF Immunity:
30V/m, 10 MHz to 1000 MHz

Input 1 & 2:
Self-test initiate; Active low 0 to 1.5 V,
Inactive high 5 to V+

Optimal Mounting Height Range:
2m (6') min. to 3.8m (12') max.

Microwave Frequency: X-Band

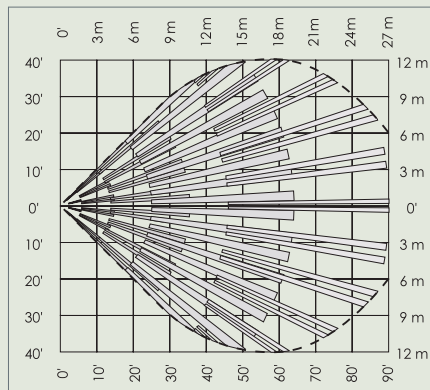**ESD Immunity:** ± 10 kV

Approvals/Listings:
UL, ULC, CE, C-Tick,
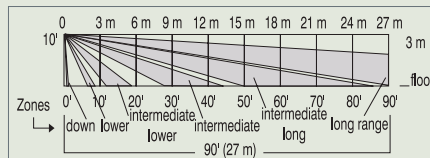EN50131-1 Grade 3, Class II (DT900/DT906)

**Extended Range DUAL TEC
Motion Sensors:**
- **DT900** (anti-masking)
- **DT901**
- **DT906** (anti-masking)
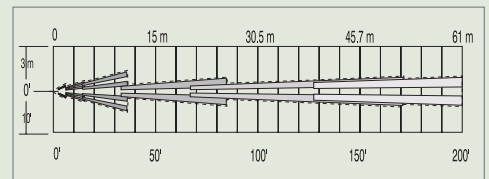- **DT907**

**Wide Angle Lens Top View
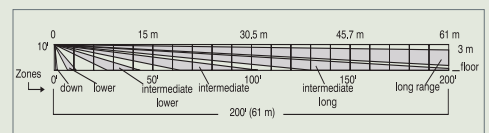DT900 and DT901 set for 27m (90ft) range**

**Wide Angle Lens Side View
DT900 and DT901 set for 27m (90ft) range**

**Barrier Lens - All Zones Top View
DT906 and DT907 set for 61m (200ft) range**

**Barrier Lens - All Zones Side View
DT906 and DT907**

Honeywell