

**DT8016AF4 / DT8016AF5 DUAL TEC® Motion Sensor with Anti-Mask – Installation Instructions**

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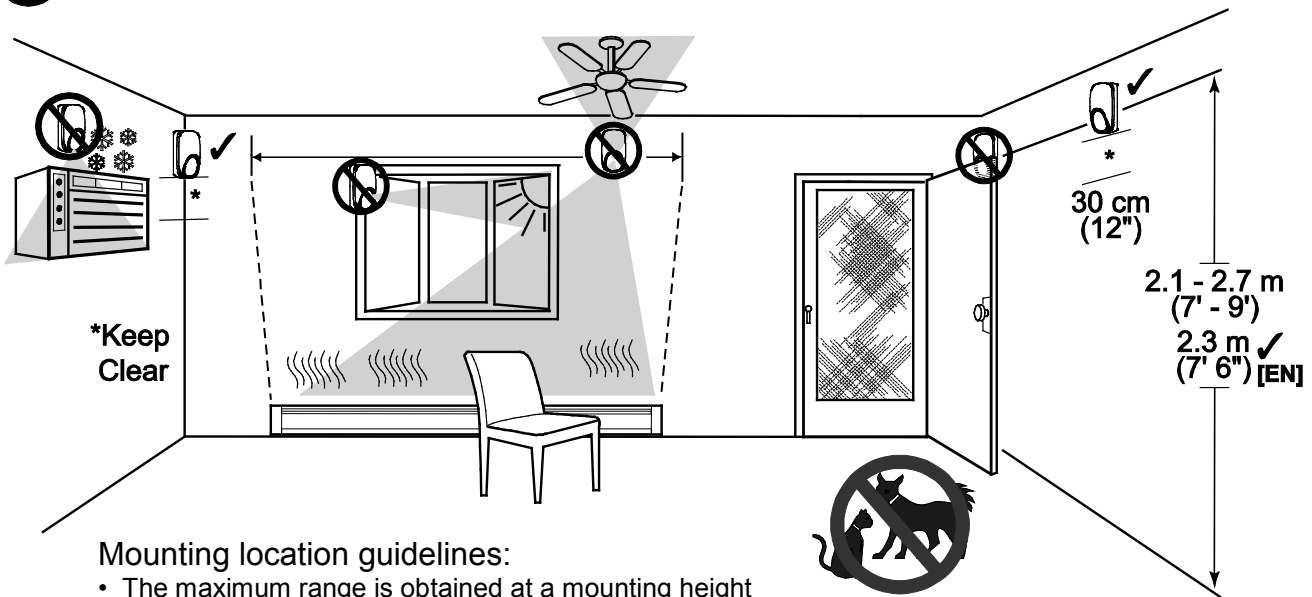
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**1 SELECT THE MOUNTING LOCATION**



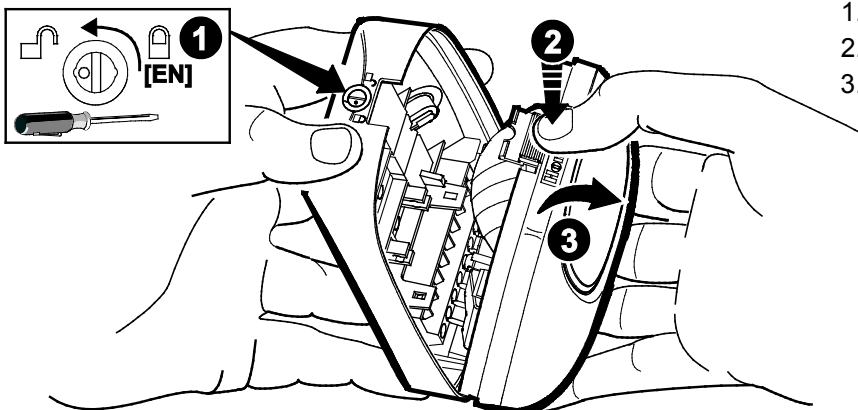
**Mounting location guidelines:**

- The maximum range is obtained at a mounting height of 2.3m (7' 6").
- Allow a clear line-of-sight to all areas to protect.
- Avoid mounting anything within 30cm (12") in front of the sensor.
- Do not directly face windows.
- Avoid close proximity to moving machinery, fluorescent lights, and heating/cooling sources.
- Not for use in applications with pets.

[EN] = approved installation.



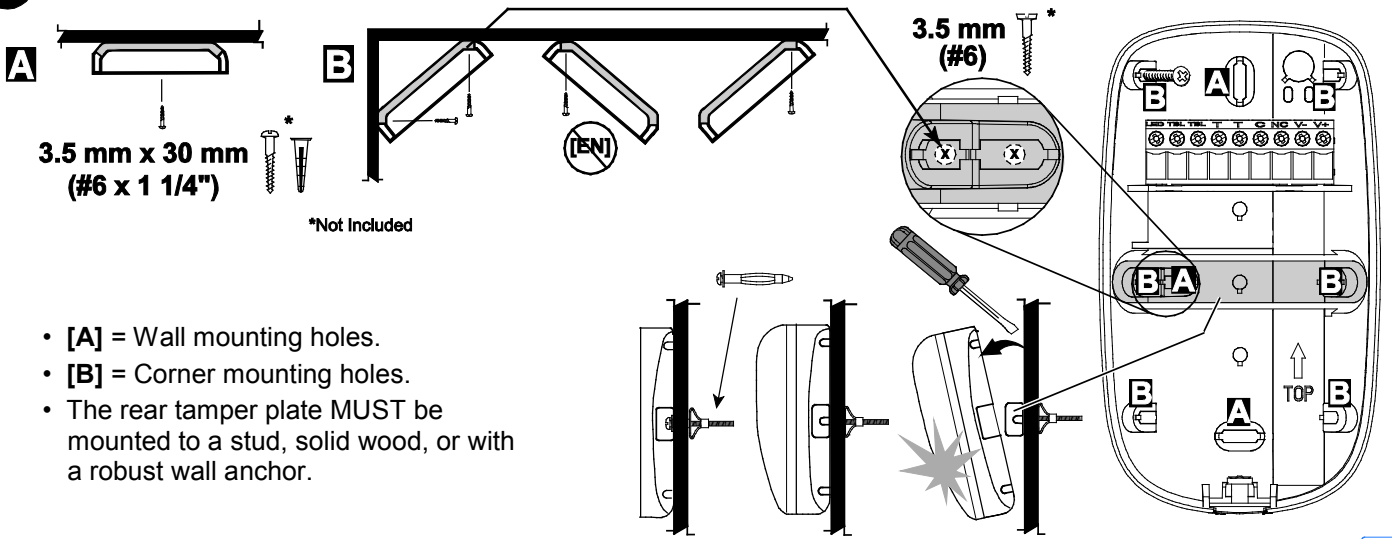
**2 OPEN THE SENSOR**



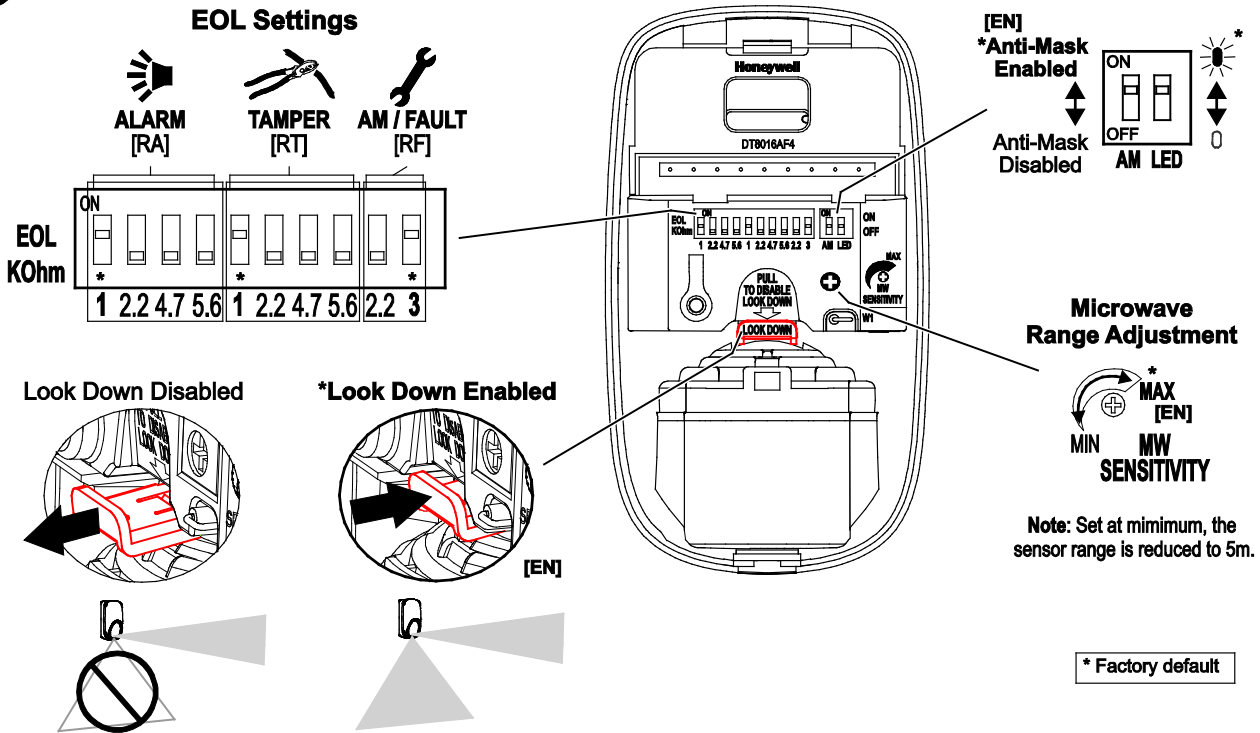
1. Turn the arrow to point to the Unlock symbol.
2. Press firmly on housing latch.
3. Gently separate the front and rear housing.



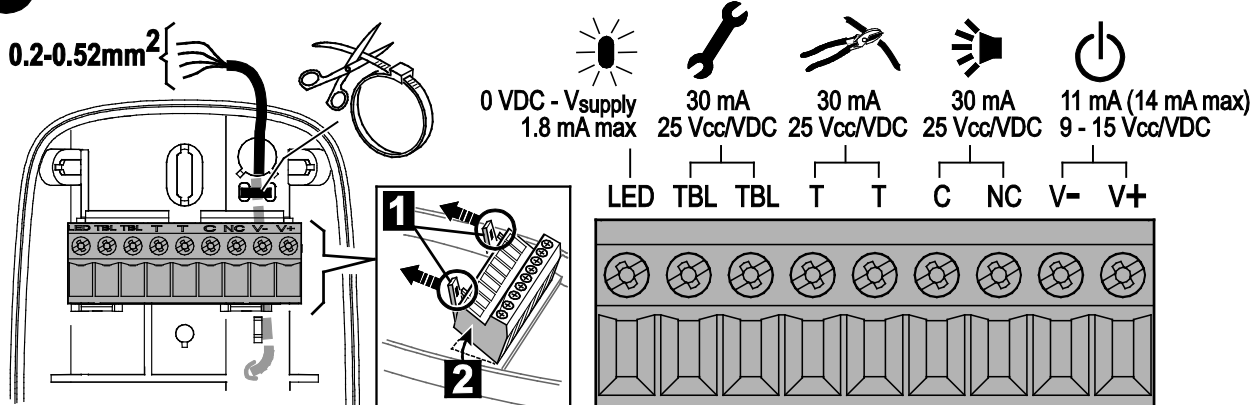
### 3 MOUNT THE SENSOR



### 4 SENSOR COMPONENTS AND SETTINGS



### 5 WIRE THE SENSOR



## WIRING DETAILS

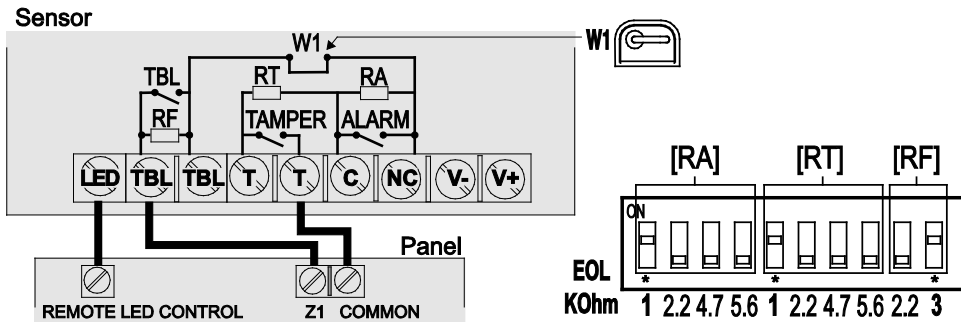
- Observe proper polarity.
- If not using the integrated EOL resistors, set all switches to OFF.
- If using the integrated EOL resistors:
  1. Connect the sensor to the panel (see wiring diagrams below).
  2. Set the appropriate tamper, alarm and Anti-mask/ [RF] DIP switches to ON (see [Step 4](#) on page 2).

### Notes:

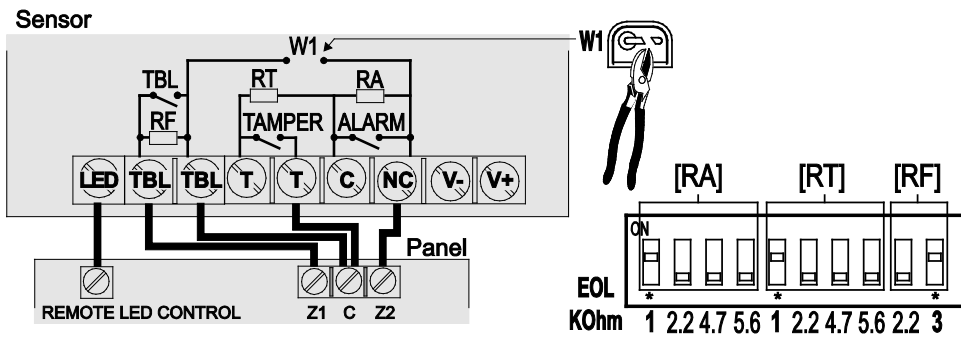
- Consult the Control Panel manual to determine proper EOL selection.
- The Alarm, Tamper and Trouble/anti-mask EOL settings must each only have one switch ON.
- The EOL values should be set at the same time.

## Wiring Examples

### Alarm, Tamper and Trouble/Anti-Mask configured to one loop.



### Alarm, Tamper and Trouble/Anti-Mask configured to two loops.



RA = Alarm EOL resistor	RF = Anti-Mask EOL resistor
RT = Tamper EOL resistor	W1 = 1 and 2 loop connection resistor.

## 6 WALK TEST THE SENSOR AND ADJUST AS NEEDED

Diagram illustrating the walk test process. A person walks through the sensor's detection area. A stopwatch shows 30 seconds. A dial is adjusted for microwave sensitivity. A table shows the LED status during the walk test.

LED	Power Up	Walk Test [10 min.]	Normal	Trouble	
				Fault	Anti-Mask
Red	Slow Blink	ON Alarm	ON Alarm	Fast Blink	OFF
Yellow	OFF	ON Microwave	OFF	OFF	Fast Blink
Green	OFF	ON PIR	OFF	OFF	OFF

1. Close the sensor and apply power to the sensor. Initialization is complete when the LED stops flashing slowly (about 30 seconds).
2. Walk through the detection area and observe the LED.
3. Adjust the microwave range as necessary to meet installation requirements.

Walk test mode is active for 10 minutes, then automatically exits test mode, disables the LED and enters normal operation mode. For an additional 10 minute walk test, enable walk test mode again with the [flashlight feature](#) (see the following page).

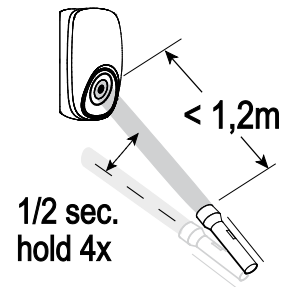
### Notes:

- During power up and walk test modes the LED is active regardless of the LED Enable/Disable DIP switch setting.
- When the [microwave sensitivity](#) is set to minimum, the sensor range is reduced to 5m.

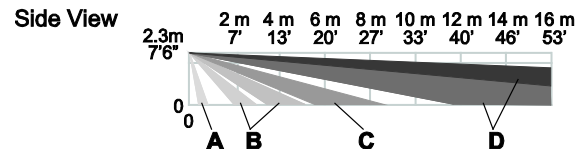
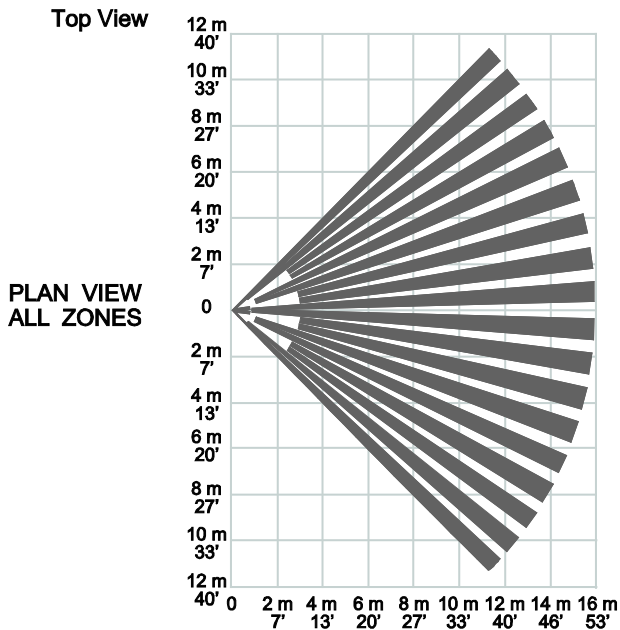
## Flashlight Feature:

1. Use a flashlight with a bright light beam, and stand within 1.2 m (4') of the sensor.
2. Swing the light beam past the sensor IR window 3-5 times, holding the beam on the window for 0.5 second each pass.

The flashlight feature is only available for the first 24 hours after the first power up.



## 7 DETECTION PATTERNS



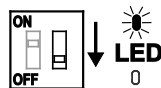
### Zones

A	2 Look-down
B	12 Lower
C	10 Intermediate
D	36 Long



## REMOTE LED ENABLE (LED INPUT)

The LED input terminal allows the LED to be remotely enabled. To use this feature, the LED DIP switch (switch 2) must be OFF, allowing the LED to operate based on the voltage level connected to the LED Input (see [Wiring Details](#)).



Switch 2	LED Input	LED Operation
OFF	High (+12 V)	Enabled
OFF	Low (0 V)	Disabled
ON	Low (0 V) or High (+12 V)	Enabled

## RELAY OPERATION

	SENSOR STATUS			
	Normal	Intrusion	Trouble <sup>1</sup>	Mask <sup>2</sup>
Alarm Relay	Closed	Open	Closed	Open
Trouble Relay <sup>3</sup>	Closed	Closed	Open	Open

<sup>1</sup> For information on Trouble conditions, see the [Troubleshooting](#) section.

<sup>2</sup> In a Mask condition, the Alarm and Trouble relays will activate simultaneously, and remain open until the condition has been cleared.

<sup>3</sup> In a Trouble condition, the Trouble relay will latch open until the Trouble condition has been cleared.

## MASK CONDITION

### Normal Anti-Mask Condition

The sensor uses Active Infrared (AIR) technology to detect masking. The sensor signals a mask condition when a variety of materials and reflective objects are placed within 50mm (2 inches) in front of the sensor. To avoid false mask alarms, follow the mounting guidelines shown in [Step 1](#).



## Clearing an Anti-Mask Condition

When most masking materials or objects are removed, the anti-mask condition will be cleared after several seconds. When the cause of the anti-mask condition is any type of spray or paint coating applied to the window, the window must be replaced before the anti-mask condition can be cleared. After replacing the window, perform a walk-test on the sensor.

## TROUBLESHOOTING

	NORMAL	TROUBLE*		
		Mask <sup>1</sup>	Low Voltage <sup>2</sup>	Self-Test Failure <sup>3</sup>
Alarm Relay	Closed	Open	Closed	Closed
Trouble Relay	Closed	Open	Open	Open
Red LED	Off	Off	Off	Flashing
Yellow LED	Off	Flashing	Off	Off

### \*TROUBLE CONDITIONS:

<sup>1</sup> Mask condition: Sensor IR window is blocked or masked.

<sup>2</sup> Low Voltage: The sensor is disabled. [Note: If voltage drops below 5V, both Alarm and Trouble relays open.]

<sup>3</sup> Self-Test Failure conditions:

- Microwave supervision failure: The sensor is operating in PIR mode only.
- PIR self-test failure: The sensor is disabled.
- Temperature compensation failure: The temperature compensation is disabled.

Depending on the Trouble condition, take the following corrective actions:

- Verify the sensor is not blocked or masked.
- Verify the power supply is sufficient (at least 9V at the sensor).
- Cycle power to the sensor.
- [Walk test](#) the sensor.

If the Trouble condition does not clear, replace the sensor.

## SPECIFICATIONS

**Range:** 16 m x 22 m

**Power:** 9.0 - 15 VDC; 11 mA typical, 14 mA maximum, 12 VDC;  
AC Ripple: 3 V peak-to-peak at nominal 12 VDC

**Alarm Relay:** Energized Form A; 30 mA, 25 VDC, 22 Ohms  
resistance maximum. Alarm Relay Duration: 3 seconds

**Trouble Relay:** Energized Form B; (NC) 30 mA, 25 VDC; 22 Ohms  
resistance maximum

**Tampers:** Cover & Wall; (NC with cover installed) Form A;  
30 mA, 25 VDC; Magnetic field

**Microwave Frequencies:** DT8016AF4 - 10.525 GHz  
DT8016AF5 - 10.587 GHz

**RFI Immunity:** 15 V/m, 80 MHz – 2.7 GHz

**PIR White Light Immunity:** 10,000 Lux typical

**Fluorescent light filter:** 50 Hz / 60 Hz.

**Operating Temperature:** -10° to 55° C

**Relative Humidity:** 5 to 95%; non-condensing

**Temperature Compensation:** Advanced Dual Slope

**Dimensions:** 11.6 cm H x 7.0 cm W x 4.3 cm D

**Weight:** 135 g / 5 oz (net weight)

## ACCESSORIES



<b>SMB-10</b> (P/N 0-000-110-01)	Swivel Mount Bracket
<b>SMB-10C</b> (P/N 0-000-111-01)	Swivel Mount Ceiling Bracket
<b>SMB-10T</b> (P/N 0-000-155-01)	Swivel Mount Bracket w/Tamper

**Note:** The accessories are not covered by certifications.

## APPROVAL LISTINGS



EN50131-2-4:2008, Security Grade 3, Environmental Class II.

Suitable for connection to an EN 60950 Class II Limited Power Source.

**Note: In EN 50131-2-4 compliant installations, mount the sensor at 2.3m, do not use only the right side corner mounting holes, enable look down, set the microwave sensitivity to maximum and lock the sensor housing with the cover lock (see "[EN]" where noted in Steps 1-4).**

**Important:** The sensor should be tested at least once each year.



NF&A2P 3 boucliers (référentiel NF324-H58) et  
conforme aux normes EN50131-2-4 et  
RTC50131-2-4; IP30 IK04

DT8016AF4 – N° de certificat: 2831420015

DT8016AF5 – N° de certificat: 2821420015

Organisme de certification:

CNPP Cert. : [www.cnpp.com](http://www.cnpp.com) et

AFNOR Cert.: [www.marque-nf.com](http://www.marque-nf.com)

Honeywell Security Group - BP1219

1198 avenue du docteur Maurice Donat

Sophia Antipolis

06254 Mougins Cedex.

TEL: +33.4.92.94.29.50

FAX: +33.4.92.94.29.60



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INCERT  
B-893-0012

**DT8016AF5**  
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For any additional information, please refer to our Website:  
<http://www.honeywell.com/security/emea/hscdownload>

Or contact:

Honeywell Security Group  
Newhouse Industrial Estate  
Motherwell  
Lanarkshire ML1 5SB  
United Kingdom

Tel: +44(0)1698 738200  
Email: [UK64Sales@Honeywell.com](mailto:UK64Sales@Honeywell.com)



Please contact your local authorised Honeywell representative for product warranty information.