

# MicroTect

## Microwave Occupancy Detector

**MicroTect** is an occupancy detector system utilising Microwave technology to provide rapid response detection, with high sensitivity, where PIR technology would be restricted. It is designed to react to the slightest movement within its detection zone, even when concealed within luminaires, located behind glass or thin studded walls.

The Microwave system functions by emitting high frequency electro-magnetic waves (5.8Ghz) and receiving the echo, producing <10Mw that is 100th of the transmission of a mobile phone.

Applications for the **MicroTect** cover areas such as:

- **Corridors**
- **Offices**
- **Store rooms**
- **Car parks**
- **Integral mounting into luminaires**

*\* However due to the sensitivity of the detection system it should not be used in areas where there is equipment under continual operation such as fans or moving parts, as this could cause nuisance switching.*



For further information and technical data please contact **Morgan Hope Industries Limited:**

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**morganhope**  
INDUSTRIES LTD

Light **Where** you need it, **When** you need it

## MicroTect "IM"

**MicroTect "IM"** is primarily designed for location into luminaires and can be concealed behind the diffuser or the louvre of the fitting. It can be retro-fitted into existing luminaires or fitted at the time of manufacture and will function with fluorescent luminaires or as a switching device for certain electrical appliances.  
(See MicroTect "SM" for Technical Details)



## MicroTect "SM" & "IM"

### Dip Switch settings

**Time set:** 12sec to 30mins

**Reach:** 1—10m (radius) adjustable

**Light control:** 150 ~ 2000 LUX

**Detection angle:** 360°

### Technical specifications

**Installation height:** 0.5-3.5m

**Power supply:** 220V/AC ~ 240V/AC

**Frequency:** 50/60HZ

**Power consumption:** Approx 0.9W

**HF system:** 5.8Ghz radar-ISM band

**Rated load:** 1200W (220-240Vac)  
600W (100-130Vac)

**Note:** When refitting the cover ensure the LED & Daylight sensors are viewable through the slot.

## MicroTect "SM"

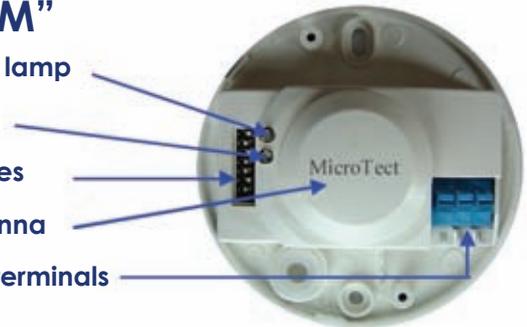
**1: Working indicator lamp**

**2: Light detector**

**3: Setting DIP Switches**

**4: Transceiving antenna**

**5: Wire Connection terminals**



**Caution:** Incorrect connections will cause permanent damage to the **MicroTect** unit. As with all electrical installations, connection of the **MicroTect** unit must be installed by a qualified electrician.

### Views showing Component parts

Complete **MicroTect**

Cover

Cover removed



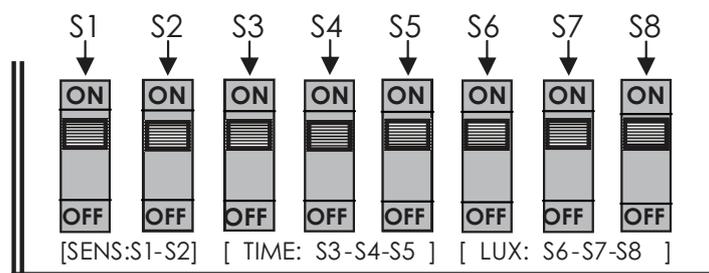
## Parameter Settings

The DIP switches S1—S2 sets the detection range.

The DIP switches S3—S4—S5 sets the delay times.

The DIP switches S6—S7—S8 set the light control.

### DIP Switch position detail



## Reach Settings (Sensitivity)

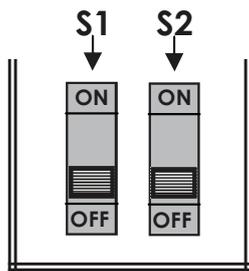
Reach is the term used to describe the radii of the more or less circular detection zone produced on the ground after mounting the sensor light at a height of 2.5m.

DIP switch position to "ON" is position "1"  
DIP switch position to "OFF" is position "0"

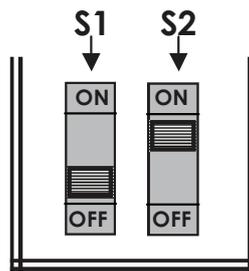
\* Use these Tables to set Dip switch positions for detection ranges

### DIP Switch position details

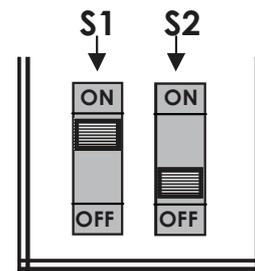
S1	S2	Detection range
0	0	2 metres
0	1	5 metres
1	0	10 metres



2 Metres



5 Metres



10 Metres

**Note:** The above detection distances are taken in the case of a person who is between 1.6m to 1.7m tall with an average stature and moving at a speed of 1 to 1.5 metres a second.

*This is given as a guide and subject to variation depending on the speed and size of the object.*

## Time delay settings

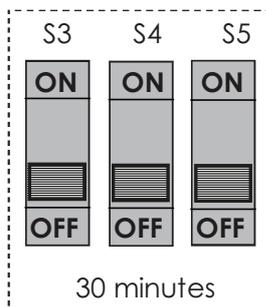
The **MicroTect** can be set to stay "ON" for any pre-set period of time as detailed below. Any movement detected before this time has elapsed and the timer will restart. It is recommended to select the shortest time for adjusting the detection zone and for performing the walk test.

DIP switch position to "ON" is position "1"  
DIP switch position to "OFF" is position "0"

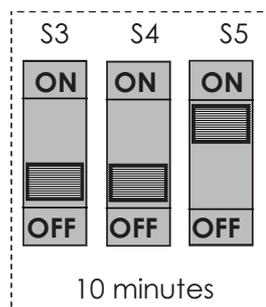
\* Use these Tables to set DIP switch positions for time delay

S3	S4	S5	Delay Time
0	0	0	30 minutes
0	0	1	10 minutes ±2 mins

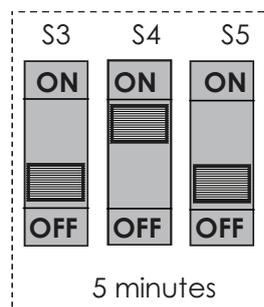
S3	S4	S5	Delay Time
0	1	0	5 minutes ±1min
1	0	0	12 seconds ±3 seconds



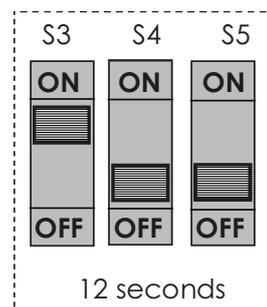
30 minutes



10 minutes



5 minutes



12 seconds

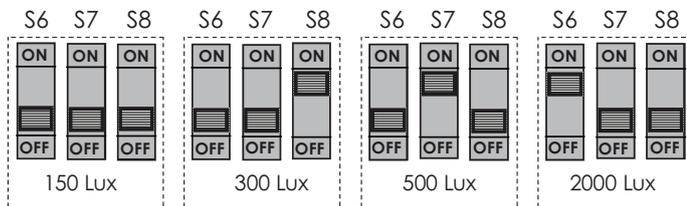
## Light control settings

The chosen light response threshold can be pre-set at 150 Lux—300Lux—500Lux—2000Lux.

Set DIP switch position to "1" for ON.

Set DIP switch position to "0" for OFF.

### DIP Switch position detail

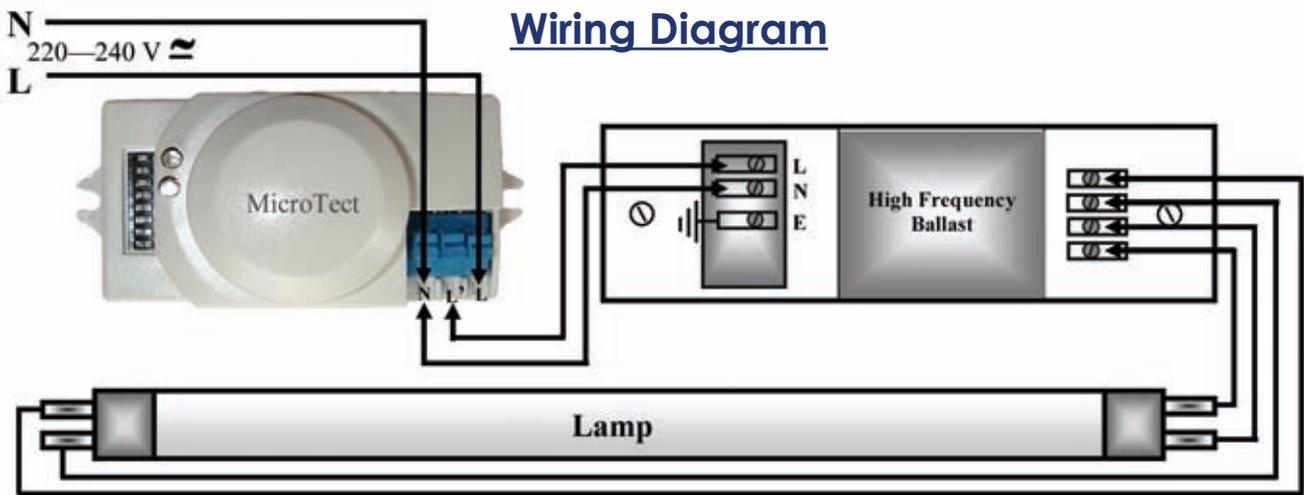


Use these Tables to set DIP switch Daylight Control settings

S6	S7	S8	Luminance
0	0	0	150 Lux
0	0	1	300 Lux

S6	S7	S8	Luminance
0	1	0	500 Lux
1	0	0	2000 Lux

**Note:** To minimise/remove the light control sensing set at 2000 Lux.



Malfunction	Cause	Remedy
Non Operation	<ul style="list-style-type: none"> <li>Wrong light control setting selected</li> <li>Load Faulty</li> <li>Mains switched OFF</li> </ul>	<ul style="list-style-type: none"> <li>Adjust settings</li> <li>Change load</li> <li>Switch ON</li> </ul>
Continual operation	Continuous movement in detection zone	Check zone settings
Nuisance switching	<ul style="list-style-type: none"> <li>Sensor not mounted for detecting movement correctly</li> <li>Movement occurred, but not identified by the Sensor (movement behind a wall or the movement of a small objects such as plant, fans etc)</li> </ul>	Check zone settings
Non operation with movement	Rapid movements are being suppressed to minimise malfunctioning or the reach detection setting is too low	Check zone settings

Ref No.	Component part name	Function
1	Working indicator lamp (LED)	The LED is illuminated when the unit is detecting movement and extinguished when no movement is detected
2	Light detector	Will illuminate depending on the user settings
3	DIP Switches	To adjust detection settings
4	Transceiving antenna	Sensor/detector and should be mounted in excess of 5cm from light tubes, power cables and other items likely to cause interference
5	Wire connection terminal	<b>L</b> is for the <b>LIVE</b> wire <b>L'</b> is for the <b>Load</b> wire <b>N</b> is for the <b>NEUTRAL</b> wire

**Note:** approximately one second restart delay after any new activation

