

# OCCUPANCY

## P.I.R. OCCUPANCY DETECTORS CEILING MOUNTED

### EO-C..1

These units are used for lighting control and designed to be installed into ceiling tiles. They can be connected to control circuits or BMS systems. The EO-CL1 has an in-built adjustable lux sensor which will switch on the lighting only when ambient light falls below the pre-set level and movement is detected. The time delay prevents nuisance switching and is reset whenever movement is detected.



Terminals 0.5-2.5mm  
Enclosure Flammability = UL94-V0

Lights switch on when movement is detected.

#### EO-CL1

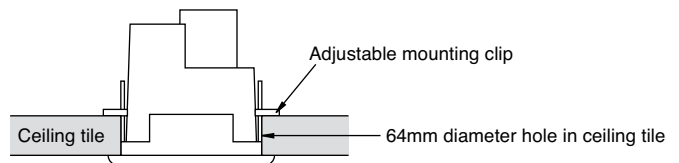
In-built adjustable lux sensor  
Set Lux to max. if it is not required.  
Range: 10-2000 LUX.

| Type           | Ceiling Mounting          | Supply Voltage | Switch Rating<br>230VAC ±10%                           | Movement Time Delay                  | Enclosure mA |
|----------------|---------------------------|----------------|--|--------------------------------------|--------------|
| <b>EO-CO1</b>  | Flush                     | 12-24VAC/DC    | 6A Incandescent<br>6A Fluorescent<br>6A SPDT Resistive | 10s - 30 mins                        | IP40         |
| <b>EO-CL1</b>  | Flush                     | 12-24VAC/DC    | 6A Incandescent<br>6A Fluorescent<br>6A SPDT Resistive | 10s - 30 mins<br><b>+ lux sensor</b> | IP40         |
| <b>EE-BP12</b> | Surface Mounting Back Box |                |  |                                      |              |

**INSTALLATION:** Install the unit at least 1m away from any lighting source. Do not mount onto a vibrating surface.

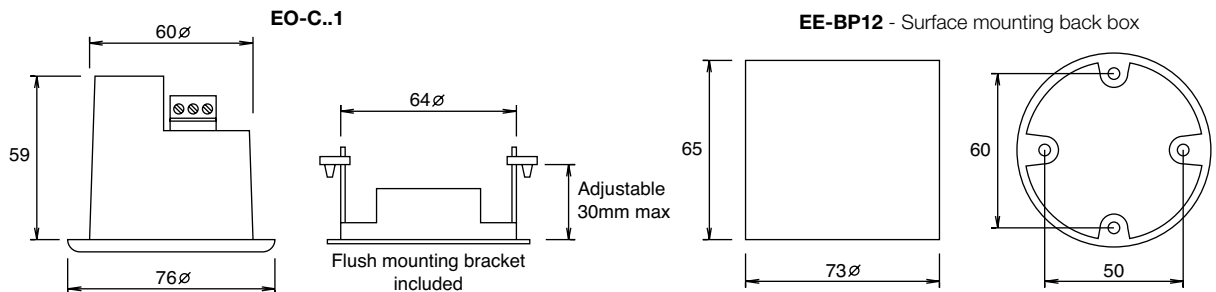
DO NOT MOUNT IN DIRECT SUNLIGHT OR NEAR HEAT SOURCES. In larger areas wire more switches in parallel to power the load.

**Flush Mounting:** The occupancy detectors may be flush mounted through a 64mm diameter hole in the ceiling. Use the plastic mounting bracket and clips supplied to fix the flush mounted detector.

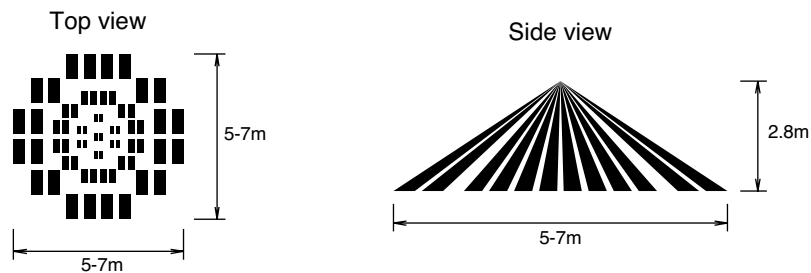


**Surface Mounting:** Alternatively the detectors can be surface mounted using the optional Back Box, which may be screwed to the ceiling.

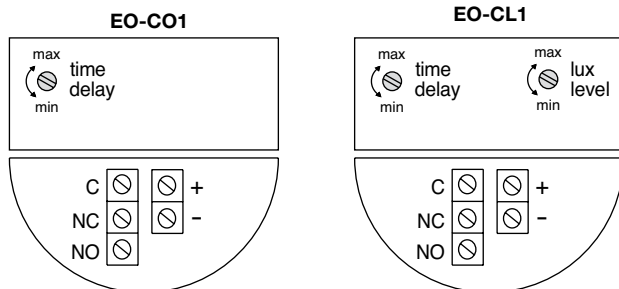
### DIMENSIONS



### DETECTION FIELD:



### WIRING:



#### Time Delay Setting (EO-CO & EO-CL):

Timing is adjustable between 10secs to 30mins using the screwdriver slot labelled TIME.

#### LUX Setting (EO-CL only):

The LUX level can be adjusted using the screwdriver slot labelled LUX. Turning towards maximum allows the lights to come on at a higher ambient light level (set fully to maximum, lights will be activated regardless of ambient level).

On movement C-NO closes  
No movement C-NO opens (after time delay)

P.I.R. OCCUPANCY DETECTORS

EO..

These units are used for lighting control. They can be connected to control circuits or BMS systems. The EO-NF has an in-built adjustable lux sensor which will switch on the lighting only when ambient light falls below the pre-set level and movement is detected. The time delay prevents nuisance switching and is reset whenever movement is detected



Terminals 0.5-2.5mm<sup>2</sup>  
Enclosure Flammability = UL94-V0

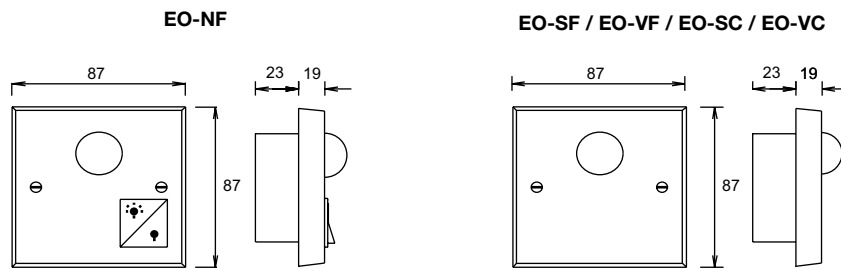
**EO-NF**  
Directly replaces a light switch  
No neutral connection is required.  
Manual On-Off switch.  
In-built adjustable lux sensor  
Set Lux to max. if it is not required.

**EO-NF / SF / SC**  
Suitable for direct connection to lights.

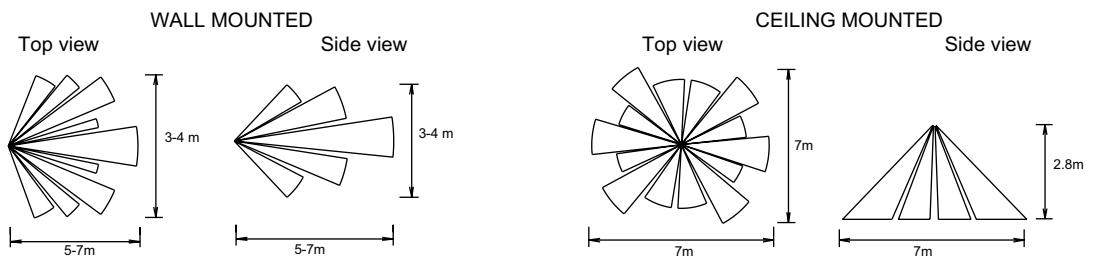
**EO-VF / VC**  
Suitable for use with BMS systems  
Volt free contacts  
Flush mounting units fit square BS box  
Unit protrudes 19mm + bulb from wall.

| Type            | Ceiling Mounting | Supply Voltage                                       | Switch Rating  | 230VAC ±10%            | Movement Time Delay         | Enclosure mA |
|-----------------|------------------|--|--|------------------------|-----------------------------|--------------|
| <b>EO-NF</b>    | Flush            | Switched live + on/off switch<br>No neutral required | 10A Incandescent<br>6A Fluorescent with Power Factor Capacitor | 6A Compact Fluorescent | 5 - 60 mins<br>+ lux sensor | IP40         |
| <b>EO-SF</b>    | Flush            | Switched live<br>Neutral required                    | 10A Incandescent<br>6A Fluorescent                             | 16A Resistive          | 10s - 60 mins               | IP40         |
| <b>EO-SC</b>    | Ceiling          | Switched live<br>Neutral required                    | 10A Incandescent<br>6A Fluorescent                             | 16A Resistive          | 10s - 30 mins               | IP40         |
| <b>EO-VF</b>    | Flush            | live & neutral + SPDT                                | 7A Resistive   |                        | 10s - 60 mins               | IP40         |
| <b>EO-VC</b>    | Ceiling          | live & neutral + SPDT                                | 7A Resistive   |                        | 10s - 60 mins               | IP40         |
| <b>OPTIONAL</b> |                  | <b>L24</b> = 24VAC supply                            |  |                        |                             |              |

DIMENSIONS

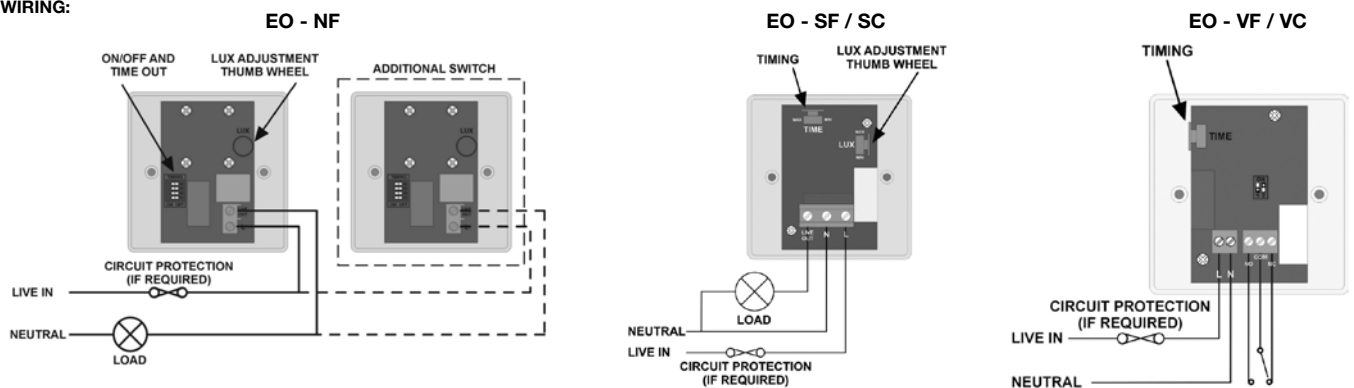


DETECTION FIELD:



DO NOT MOUNT IN DIRECT SUNLIGHT OR NEAR HEAT SOURCES. In larger areas wire more switches in parallel to power the load.

WIRING:



# OCCUPANCY

## MICROWAVE OCCUPANCY DETECTORS

### MWS1

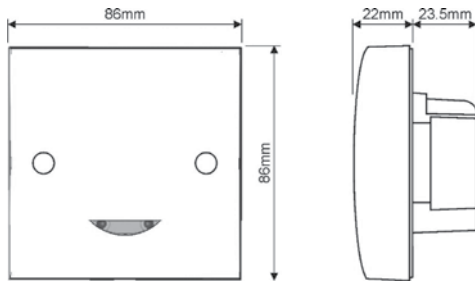
These detectors detect movement within its range and can be used to control lighting, heating or water shut off functions. An adjustable integral light level sensor will inhibit the switching on of lights if the ambient lighting is already sufficient. Adjustment of light level, time delay and sensitivity is by a hand held programming handset **UHS5** which should be ordered at the same time.



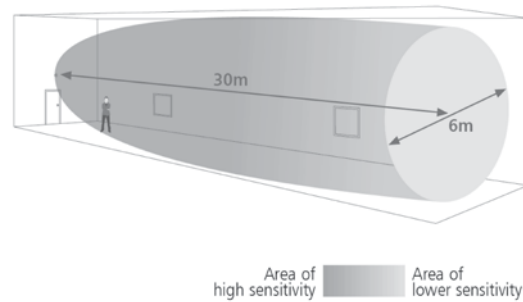
Size 86x86x22 projecting from wall.  
Adjustable time delay 10 secs to 99min.  
Terminals 2.5mm<sup>2</sup>.  
Casing flame retardant ABS class 2.  
Wall mount 1.2 to 1.5 metres from floor.

| Type                | Mounting                                   | Supply | Load                            | Power consumption  |
|---------------------|--|--------|---------------------------------|--------------------|
| <b>MWS1A-PRM</b>    | Flush, wall mounting                       | 230VAC | 10A                             | ON 1.15W OFF 790mW |
| <b>MWS1A-PRM-LV</b> | Flush, wall mounting                       | 24VDC  | 16A resistive/<br>10A inductive | ON 1.01W OFF 790mW |
| <b>UHS5</b>         | Hand Set (Not included – Order separately) |        |                                 |                    |

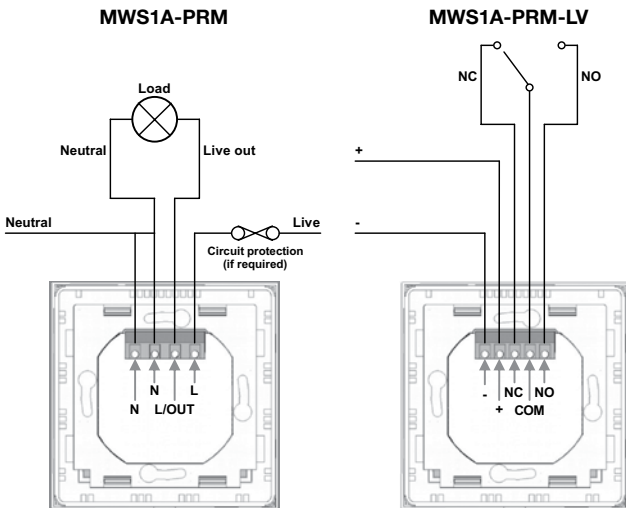
### DIMENSIONS



### DETECTION PATTERN



### WIRING:



### PROGRAMMING USING THE HAND SET

| Parameter Name                   | Default Value | Number of Shift key presses |                    |             |             | UHS5 Handset Graphics | Description  |
|----------------------------------|---------------|-----------------------------|--------------------|-------------|-------------|-----------------------|--|
|                                  |               | 0<br>SHIFT1                 | 1<br>SHIFT1        | 2<br>SHIFT1 | 3<br>SHIFT1 |                       |  |
| Button Activation                |               |                             |                    |             |             |                       |  |
| On / Raise                       | On            |                             |                    |             |             |                       | Turn lights on.  |
| Off / Lower                      | Off           |                             |                    |             |             |                       | Turn lights off.   |
| Walk test                        | Off           | On                          | Off                |             |             |                       | When set to On this causes a red LED to flash on the sensor when it detects movement. Use this feature to check for adequate sensitivity levels.   |
| Time Out (Time adjustment)       | 10 mins       | 1, 10 & 20 minutes          | 5, 15 & 30 minutes |             |             |                       | Once the detector is turned on, this value sets how long the lights will stay on once movement has ceased.   |
| Lux on level (Switch level on)   | 9             | 2, 5 & 7                    | 4, 6 & 9           |             |             |                       | Lux level setting to prevent the luminaires being switched on if the ambient light level is sufficient (adjustable between 1 and 9). The luminaires will always be switched on at level 9.   |
| Lux off level (Switch level off) | 9             | 2, 5 & 7                    | 4, 6 & 9           |             |             |                       | Lux level setting to switch the luminaires off during occupancy if the ambient light level goes above the setting (adjustable between 1 and 9). Level 9 will always keep the lights on. This setting can be used for "window row switching". |
| Sensitivity                      | 9             | 1, 5 & 9                    | 3, 6 & 8           |             |             |                       | Sensitivity level for detecting movement. 1 = low sensitivity 9 = high sensitivity   |
| Defaults                         |               |                             | D                  |             |             |                       | Returns the unit to the default settings.  |
| Presence / Absence               | Presence      | Presence                    | Absence            |             |             |                       | Absence mode not implemented—do not use.   |
| Shift                            |               |                             |                    |             |             |                       | Use this button to select the settings in red and blue signified by the 'Shift 1' and 'Shift 2' LEDs   |

### INSTALLATION

Do not site within 1m of any lighting or ventilation equipment.  
Do not fix to a vibrating surface.  
Site as far as possible from the surface of metal objects.

Point the hand set at the Sensor and send the required programming commands to the unit as shown below. Valid commands will be indicated by a green LED flash.

### NOTES:

The microwave radiation emitted by these units is of extremely low power. At a distance greater than 50mm the power density is less than 6% of the ANSI IEE C95.1-1991 power density. At a distance of 5mm from the unit it is less than 84% of the recommended power density.