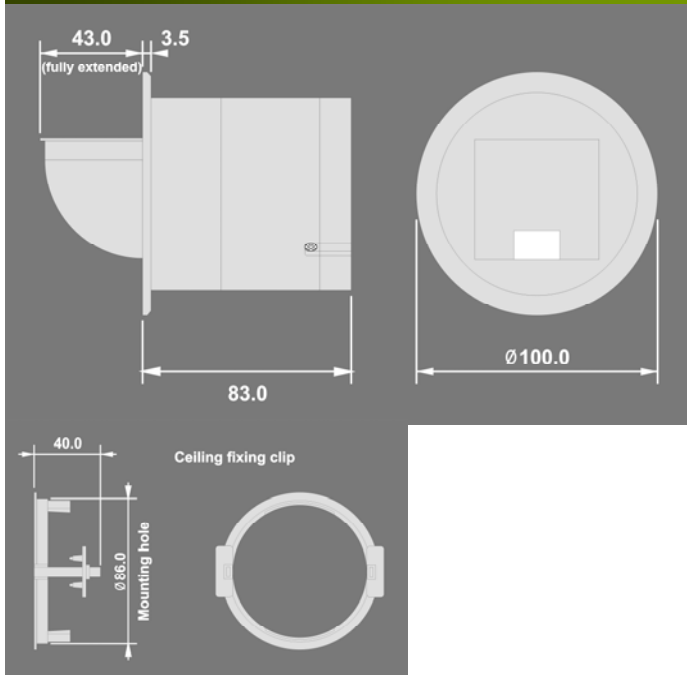


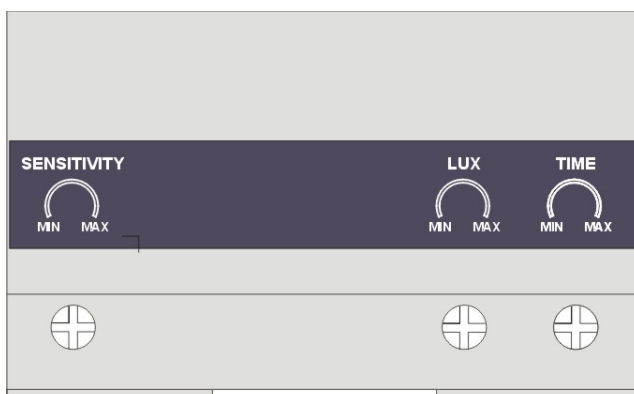
## MWS3 MULTI-SENSE MICROWAVE PRESENCE DETECTOR



### INSTALLATION

**Warning.** This device works at mains potential. Be sure to take care when working with electricity.

1. Make sure the load is connected and in working order.
2. Isolate the mains supply to the circuit at the main consumer unit.
3. Connect the controller via the terminal block. Live supply to the *L* terminal, Neutral to the *N* terminal and the load to the *L/OUT* terminal.
4. Swing the sensor head down using the finger slot to expose the settings.
5. Use a small screwdriver to set the LUX level adjuster fully clockwise, the time to minimum (fully anticlockwise) and the sensitivity to maximum (fully clockwise) using the diagram below.
6. Apply power—the load should come on immediately.
7. Vacate the room or remain very still and wait for the load to switch off (should take no more than 2 minutes).  
Check that the load switches on when movement is detected.
8. To set the LUX level wait until the level of natural daylight is just enough that lighting is required. Starting with the LUX adjuster fully anti-clockwise. Very slowly turn the adjuster clockwise until the lights come on. Note that when the LUX adjuster is fully clockwise then the lights will **always** come on with occupancy.  
*IR handset: LUX setting can be done using the lux up and lux down buttons.*
9. Select the time out range using the adjuster, fully clockwise is the maximum.
10. The area of detection can be varied by altering the angle of the sensor head and the sensitivity adjuster. Note: on maximum sensitivity this unit is extremely sensitive to movement and may detect through thin walls or partitions. If this causes a problem reduce the sensitivity by turning the adjuster anticlockwise.  
*IR handset: the override on button turns the unit on permanently; the override off button turns the unit off permanently; the cancel button cancels the overrides. When an override is selected an LED will flash inside the unit.*
- 11.



### DESCRIPTION AND OPERATION

The MWS3 microwave presence detectors are designed to provide automatic control of lighting, heating or ventilation loads. The MWS3 detects movement using a highly sensitive microwave detector. This works by emitting low power microwave signals and measuring the reflections as the signals bounce off moving objects. The MWS3 has a unique adjustable sensor head that allows the area of detection to be optimised for the application.

When movement is detected the load is turned on. When an area is no longer occupied the load will switch off after an adjustable time out period.

An internal light sensor provides additional energy saving in lighting applications. When an area is occupied lighting is only switched on when the level of natural light is below a preset level.

An integral IR sensor in the unit allows the lux settings to be changed and the sensor to be overridden using a remote control handset (part no: UHS).

### WIRING & FIXING

Wire the products as in the diagram below.

To switch from more than one position simply wire two or more units in parallel to achieve two way and intermediate switching.

The detector should be sited so that the occupants of the room fall inside the detection pattern shown overleaf, at a recommended ceiling height of 2.8m.

**Corridors or aisles:** the unit should be placed at the end of the corridor or aisle and the sensor head should be angled to look down the corridor or aisle.

**Open plan areas and offices:** the unit can be mounted in a corner looking outwards in which case the sensor head should be angled. Or the unit can be mounted in the centre of the area with the sensor head flat.

Note that the higher the sensor is installed the shorter the detection range will be.

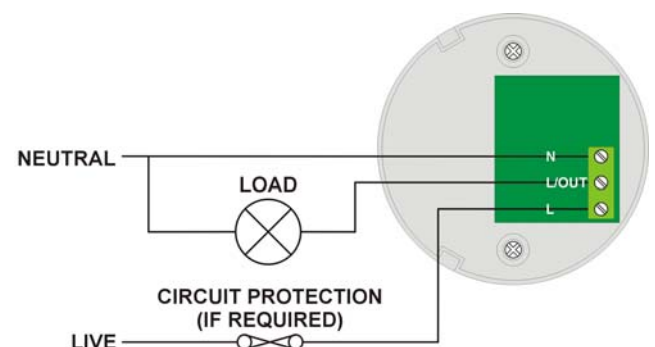
- Do not site within 1m of any lighting or ventilation equipment.
- Do not fix to a vibrating surface.
- Site as far away as possible from the surface of metal objects.

To flush mount:

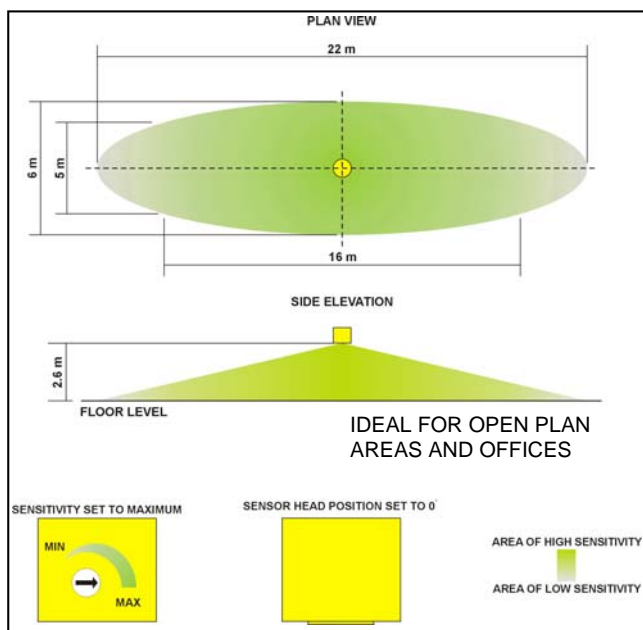
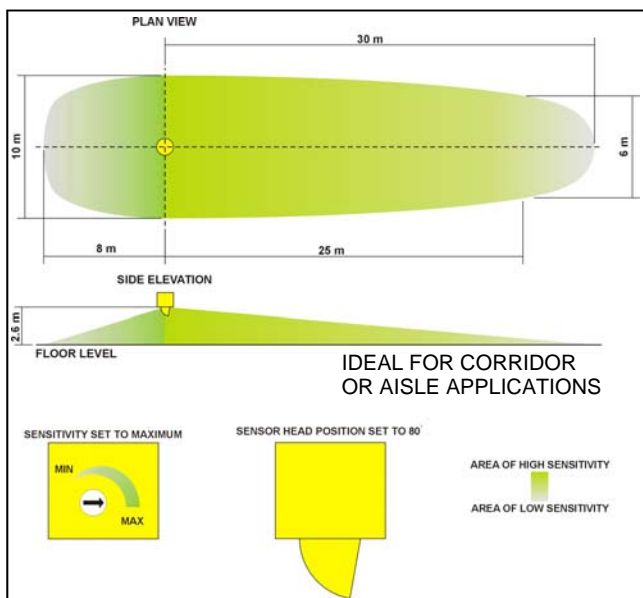
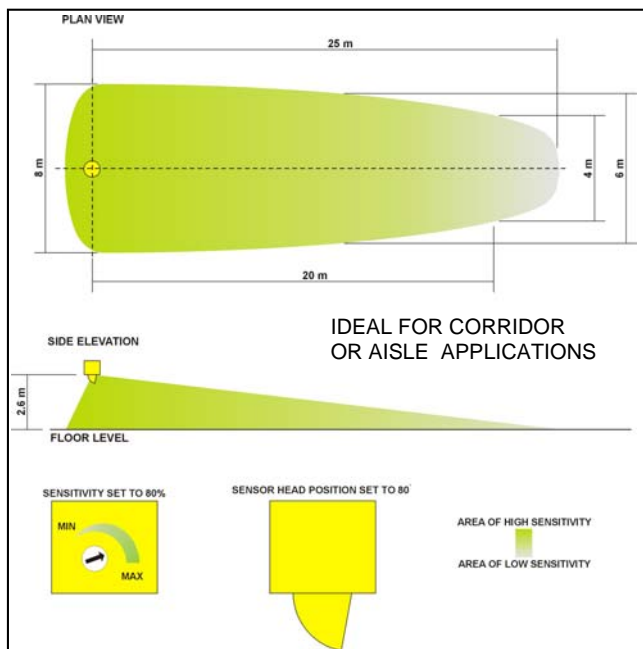
- Cut a 86mm hole in the ceiling
- Insert the mounting clip into the hole and carefully push the two fixings on the arms downwards until they grip firmly to the ceiling
- Unscrew the back plate, connect (see below) and re-fix the back plate
- Push the unit into the clip and setup as instructed below

To surface mount:

- Unscrew the back plate and fix straight to the ceiling or to a BESA box
- Connect and re-fix the back plate
- Setup as instructed below



## DETECTION PATTERNS



### IMPORTANT NOTICE!

This device should be installed by a qualified electrician in accordance with the latest edition of the IEE wiring regulations.

Due to our policy of continual product improvement CP Electronics reserves the right to alter the specification of this product without prior notice.

## FAULT FINDING

### LOAD DOES NOT COME ON

Check to see if the live supply to the circuit is good. Strap across the *L* and *LIVE OUT* terminal to turn the load on.

If the supply and wiring are good, check the LUX level setting. Increase the LUX level setting to allow the controller to turn on at higher ambient natural light level.

### LIGHTS DO NOT GO OFF

Ensure that the area is left unoccupied for a greater time period than the time out period set using the switch.

Make sure that the sensor is not adjacent to vibrating surfaces or objects (e.g. ventilation equipment).

The unit may pick up movement through thin partitions or walls. Reduce the sensitivity by turning the adjuster anticlockwise.

The unit may pick up movement that occurs behind the sensor. Reduce the sensitivity by turning the adjuster anticlockwise.

## SPECIFICATION

### LOAD

10A of lighting and or ventilation including incandescent, fluorescent, compact fluorescent, low voltage (switch primary of transformer).

**SUPPLY VOLTAGE** 220-240 Volts AC 50 Hz

**TIME OUT PERIOD** Adjustable 15 seconds to 30 minutes.

**LIGHT LEVEL** Light to dark.

**FIXING METHOD** Flush fixing in 86mm hole using clip provided  
Surface fixing using integral back plate

**TERMINAL CAPACITY** 1.5 mm<sup>2</sup>

**MATERIAL TYPE** Flame retardant ABS, fixing clip polypropylene Class 2

**TEMPERATURE** -10°C to 35°C

**SAFETY** The microwave radiation emitted by these units is extremely low power.

At a distance of > 50mm the power density is <6% of the ANSI IEEE C95.1 –1991 recommended microwave power density.

At a distance of 5mm from the unit it is <84% of recommended power density.

### CONFORMITY

EMC-89/336/EEC  
LVD-73/23/EEC



## PART NUMBERS

MWS3

Multi-sense microwave presence detector

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