

### Product Overview



The AX-MWS-1 microwave presence detectors provide automatic control of lighting, heating or ventilation loads and have a sensing range of up to 30 meters. These units detect movement using a highly sensitive microwave detector. Low power microwave signals are emitted and the reflections measured as the signals bounce off moving objects.

The AX-MWS-1 is for wall mounting applications to give detection over long distances. When movement is detected the load is turned on. An internal light sensor provides additional energy saving advantages - when an area is occupied lighting is only switched on when the level of natural light is below a preset level.

Note: Programming of the settings is only possible by use of the additional remote control handset.

### Features

- Wall Mounting
- Variety of Supply / Output Options
- Hand Held Programmer for fast commissioning
- Fits a standard Single Gang Backbox (25mm deep min.)
- Unaffected by heat sources (unlike PIR sensors)
- Ceiling Mount Version Available (AX-OC-MWS-C1)

### Product Specifications

Sensor Type:	Microwave with Light Level
Power Supply:	220-240Vac 50Hz 1.15W maximum
Contact Rating:	NO 6A, 240Vac maximum resistive, incandescent and fluorescent lighting 3A, 240Vac low energy lighting, compact fluorescent lighting, fans NC (VFC option) 2A, 240Vac maximum resistive
Field of View:	See diagram
Delay Timer:	Adjustable 10 seconds to 99 minutes
Electrical Connections:	2.5mm <sup>2</sup>
Ambient Temp. Range:	-10 to +35°C
Materials:	Flame retardant ABS
Fixing:	25mm deep backbox for flush fix, 35mm deep plastic surface box for surface fix
Microwave Radiation:	Extremely low power complies with ANSI IEEE95.1-1999
Microwave Frequency:	10.687GHz approved for use in UK, Middle East, China, India (alternative frequencies available for other countries - please enquire)
Conformity:	EMC: 2004/108/EC, LVD: 2006/95/EC
Weight:	100g
Country of Origin:	United Kingdom

### Order Codes

AX-OC-MWS-1	Wall Mount Microwave Occupancy Detector - 230V, switched live output
AX-OC-MWS-1VF	Wall Mount Microwave Occupancy Detector - 230V, VFC output
AX-OC-MWS-UHS	Remote Programming/Commissioning Handset

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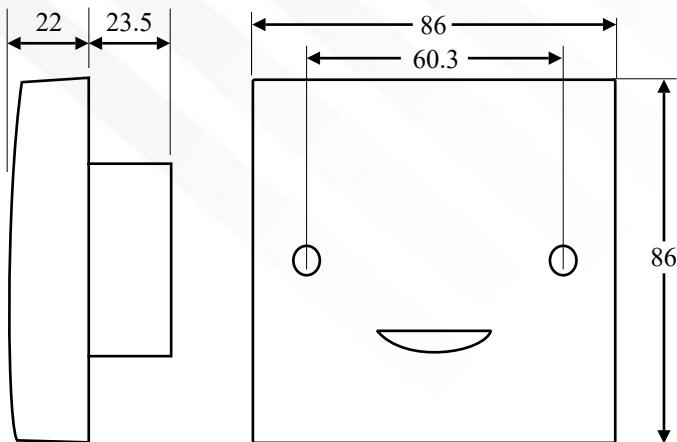
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# AX-OC-MWS-1

Microwave Occupancy Detector - Wall Mount

# AXIO

## Dimensions



## Installation

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

The detector should be sited so that the occupants of the room fall inside the detection pattern shown on page 3, and at a recommended height of 1.2m to 1.5m. 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.
1. Site as far away as possible from the surface of metal objects.
  2. Make sure the load is connected and in working order.
  3. Isolate the mains supply to the circuit.
  4. To switch from more than one position simply wire two or more units in parallel to achieve two way and intermediate switching
  5. Connect the controller - refer to connection diagram
  6. Screw the unit to the wall and switch on the mains supply.
  7. The load should come on immediately.
  8. 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 back on when movement is detected.
  9. 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.

## Adjusting Settings

The adjustments for time-out, light level and sensitivity must all be made using the Remote Handset. Valid commands will be indicated by a green LED flash in the sensor window.

## Fault Finding

### LOAD DOES NOT COME ON

Check to see if the live supply to the circuit is good. For the AX-OC-MVS-1 only, 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.

### LOAD DOES 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.

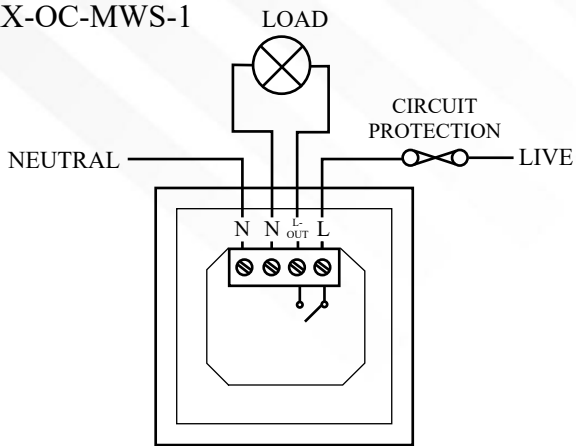
# AX-OC-MWS-1

Microwave Occupancy Detector - Wall Mount

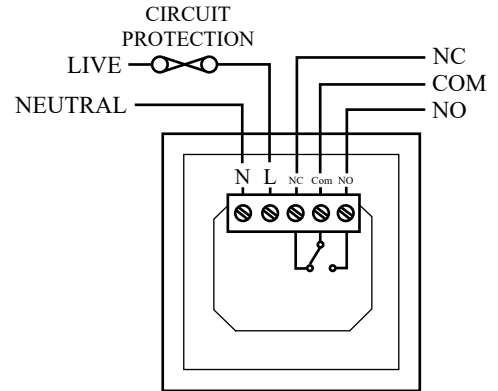


## Connections

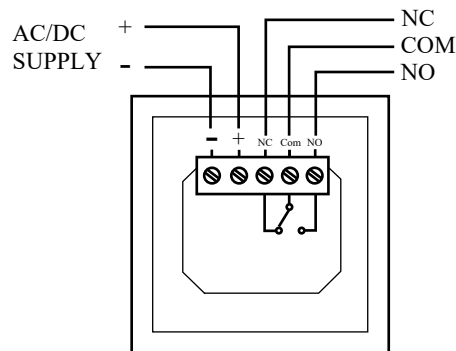
AX-OC-MWS-1



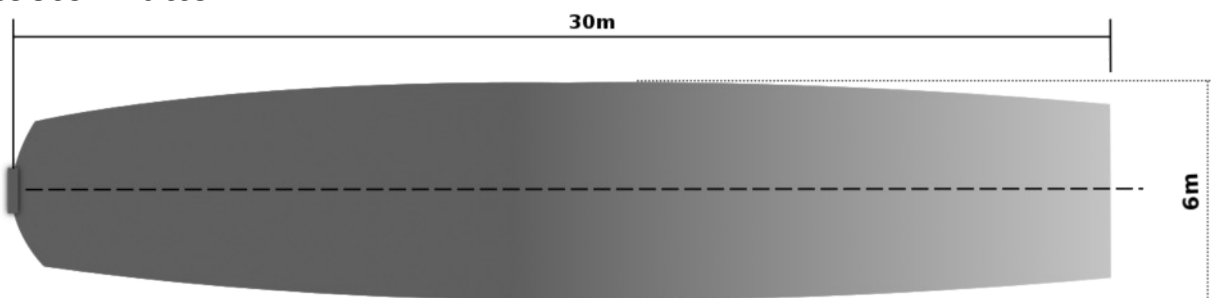
AX-OC-MWS-1VF



AX-OC-MWS-1LVF



## Detector Pattern



AREA OF HIGH SENSITIVITY



AREA OF LOW SENSITIVITY

# AX-OC-MWS-1

Microwave Occupancy Detector - Wall Mount



## Programming

See table below for programming the sensors. Point the handset at the sensor. Valid commands will be indicated by a green LED flash behind the sensor lens.

Note, not all functions available on the handset are applicable to this product.



Parameter Name	Default Value	Number of Shift key presses				UHS5 Handset Graphics	Description
		0 SHFT 1 SHFT 2	1 SHFT 1 SHFT 2	2 SHFT 1 SHFT 2	3 SHFT 1 SHFT 2		
<b>Button Activation</b>							
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				Presence mode allows the output to turn on when movement is detected and off when movement ceases. Absence mode allows the output to turn off when movement ceases, but must be manually turned on first.
Preset PRS		A	B				2 presets for Presence mode with the following parameters: • A: Proximity enabled • B: Proximity disabled
Preset ABS		A					1 preset for Absence mode with the following parameter: • A: Proximity enabled
Shift							Use this button to select the settings in red and blue signified by the 'Shift 1' and 'Shift 2' LEDs

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