

PRE4201

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Wall mounted microwave detector



Cleverly simple
control of energy.



SPECIFICATION

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

Power consumption - On 1.01W, Off 712mW

Supply Voltage - 220-240 Volts AC 50 Hz

Time out period - Adjustable 10 seconds to 99 minutes.

Light Level - Optional adjustment by using IR programming handsets.

Fixing method - Surface fixing 35mm deep plastic surface mount moulded box. Flush fixing 25mm steel wall box or 25mm deep cavity wall box.

Terminal capacity - 2.5mm²

Material - Flame retardant ABS

Type - Class 2

Temperature - -10°C to 35°C

Humidity - 5 to 95% non-condensing

Weight - 0.1kg

Compliance - EMC-2004/108/ECLVD-2006/95/EC

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 is <84% of recommended power density.

OPERATION

The PRE4201 series of microwave presence detector switches are designed to provide automatic control of lighting, heating or ventilation loads.

The PRE4201 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 PRE4201 is optimized for wall mounting applications to give detection over long distances. 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.

The 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.

Three variants are available:

PRE4201	Mains voltage, Switched live contact
PRE4201-VFC	Mains voltage, isolated changeover contact
PRE4201-LV	Low voltage, isolated changeover contact

Due to our policy of continuous improvement, we reserve the right to change specifications without notice. All information was correct at time of when this product file was produced - April 2020

PRE4201

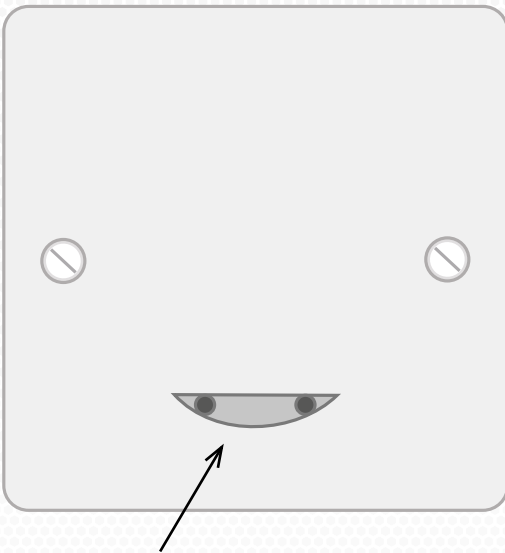
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FEATURES



Sensor Lens which covers:
IR Receiver, Light level sensor, Status LED

Microwave Sensor

Detects movement within the unit's detection range, allowing load control in response to changes in occupancy.

IR receiver

Receives control and programming commands from an IR (infrared) handset.

Light level sensor

An integral adjustable photocell allows the lights to be kept off if there is sufficient ambient light.

Presence detection

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

Status LED

The LED flashes Red to indicate the following:

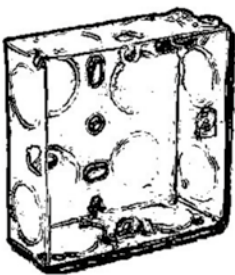
Walk Test LED active  when movement is detected

Valid setting received 

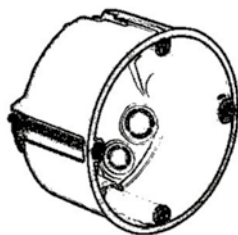
INSTALLATION INSTRUCTIONS

Back box compatibility

The PRE4201 is designed to fit both UK and EU styles backboxes

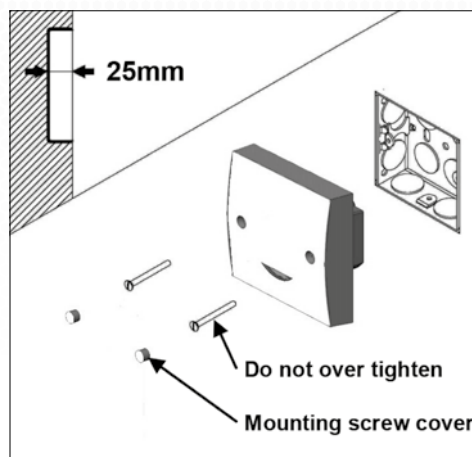


BS4662
Square back box



DIN standard
round back box

Mounting



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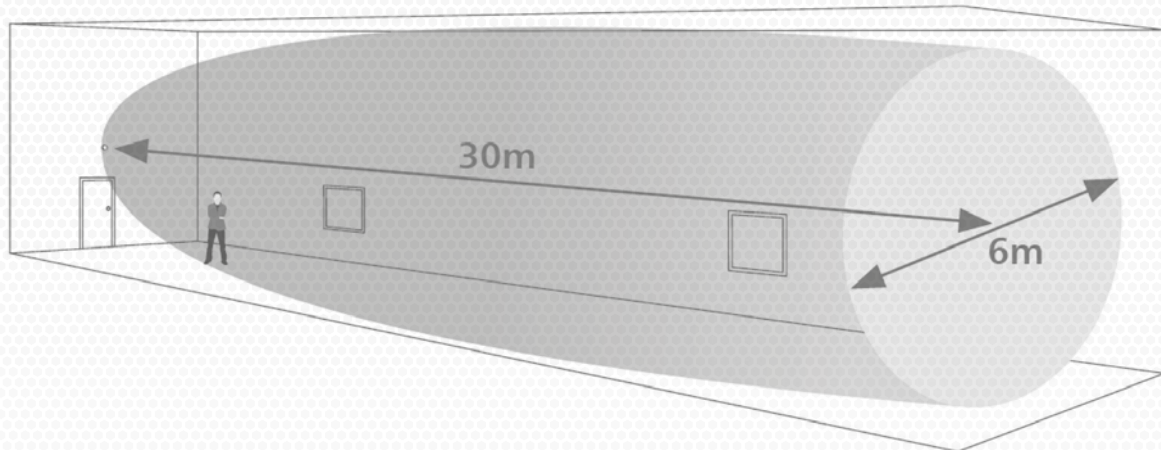
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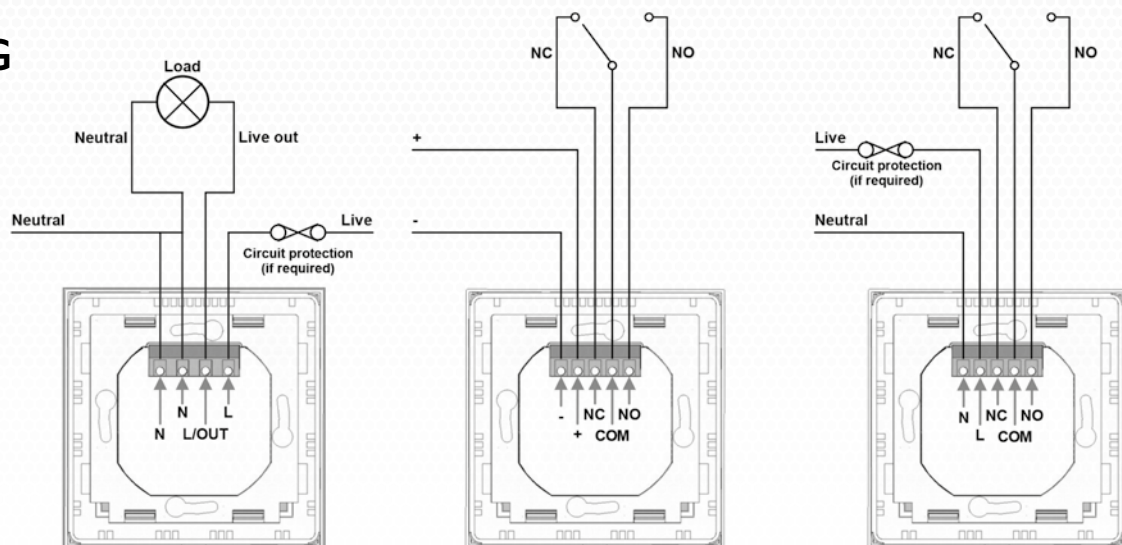
DETECTION PATTERN



Area of high sensitivity

Area of lower sensitivity

WIRING



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 above, at a recommended height of 1.2m to 1.5m for wall sensors. 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.

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FAULT FINDING

What if the load does not turn on?

- Check to see if the Live supply to the circuit is good. For the standard PRE4201 version 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 a higher ambient natural light level.

What if the load does not turn 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 partition walls. Reduce the sensitivity.

FREQUENCY COMPATIBILITY

The allowable frequency of operation of this product is the different depending on region. Please select the correct order code using the table below:

Code suffix	Region	Frequency
Blank	UK, India, Malaysia, Hong Kong, Singapore	10.687 GHz
-R2	Australia and all of Europe except: UK, France, Portugal, Germany, Switzerland, Austria, Slovak Republic, Republic of Ireland	10.525GHz
-R3	France, Portugal, Switzerland	9.900GHz
-R4	Germany, Australia, Slovak Republic	9.350GHz
-R5	Republic of Ireland	10.41GHz



PROGRAMMING



The functionality of the PRE4201 is controlled by a number of parameters which can be changed or programmed by any of the following devices:

- PRE5903 See below for programming functions.
- PRE5900L Infrared handset (with LCD). See user guide for full programming details.

For most basic programming operations the PRE5903 handset can be used and the following procedures are based on using this device.

Point the handset at the sensor and send the required programming commands to the unit as shown to the left .

Valid commands will be indicated by a red LED flash. See page 1 for details of other LEDresponse. Note: other functions on the PRE5903 which are not shown are not applicable to this product.

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Parameter name	Default value	Number of shift key presses				UHS5 Handset Graphics	Description
		0	1	2	3		
		Shift 1 Shift 2	Shift 1 Shift 2	Shift 1 Shift 2	Shift 1 Shift 2		
		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 minutes	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 setting".
Sensitivity	9	1, 5 & 9	3, 6 & 8				Sensitivity 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.

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