

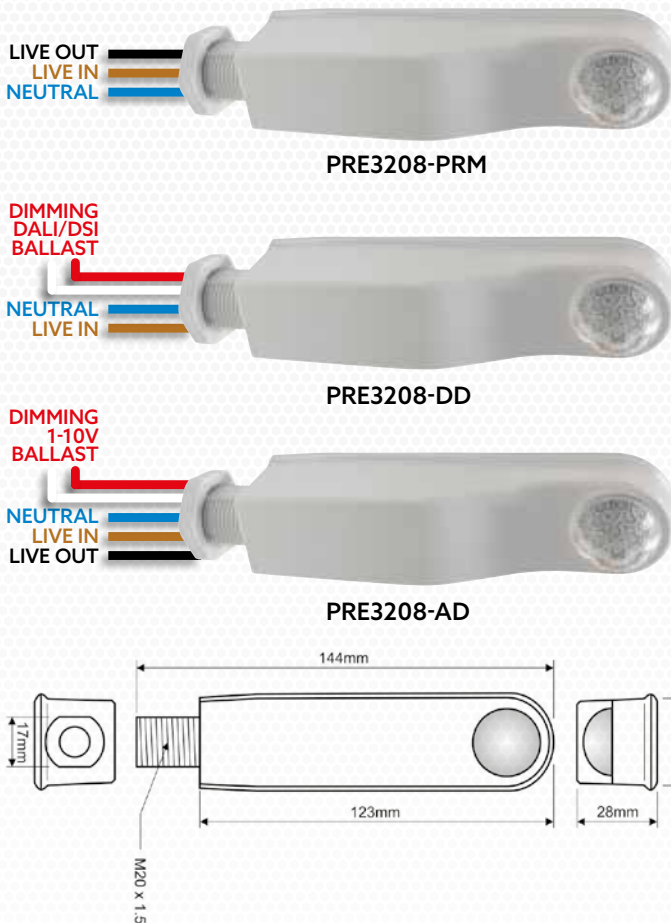
PRE3208

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Mini batten mount PIR



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OPERATION

The PRE3208 series of miniature PIR (passive infrared) presence detectors provide automatic control of lighting loads with optional manual control using an infrared handset. It is specifically designed for mounting onto a batten style luminaire.

Three models are available: premium, direct dim, and analogue dim all of which will switch incandescent, fluorescent, compact fluorescent and LED lighting. The direct dim variant controls DALI or DSI digital dimming ballasts whilst the analogue dim variant controls 1-10V dimming ballasts.

The unit detects movement using a PIR sensor and turns the load on. When an area is no longer occupied the load will switch off after an adjustable time out period.

The units are IP65 rated as standard and are therefore suitable for outdoor use as well as wet and wash-down areas.

A selection of fixing washers are supplied to aid fixing to a variety of luminaires.

All functionality is fully programmable using Either the PRE5901 or PRE5903

Three variants are available:

- PRE3208-PRM Mains voltage, Switched live contact
- PRE3208-AD 1-10V Analogue dimming
- PRE3208-DD Digital dimming Dali and DSI

SPECIFICATION

Load	2A Fluorescent, incandescent, low energy, low voltage lighting (switching primary transformer). Switch SON Lighting loads via a contactor.
Power consumption	PRM - On 7999mW, Off 807mW DD - On 511mW, off 516mW AD - On 807mW, off 817mW
Supply voltage	220-240 Volts AC 50 Hz
Dimming output	Basic Insulation only. Although low voltage this is not SELV output and should be treated as mains potential, Use mains rated wiring.
Number of ballasts	DD - up to 10 dimming ballasts AD - up to 4 dimming ballasts

Time out period	Adjustable between 1 and 99 minutes (PRE5901 only), 10 seconds to 30 minutes (PRE5903)
Light level	Optional adjustment by using IR programming handsets.
Fixing Method	Direct Batten mount, 20mm through hole.
Cable specification	1M 1/1.13 solid core cable 105°C
Material	Flame retardant ABS/PC
Type	Class 2
Temperature	-10°C to 50°C
Humidity	5 to 95% non-condensing
Weight:	0.1kg
Compliance	EMC-2004/108/EC LVD-2006/95/EC

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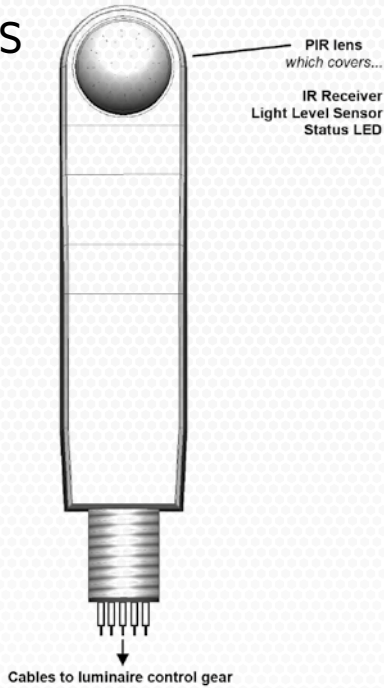
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Mini batten mount PIR



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FEATURES



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.

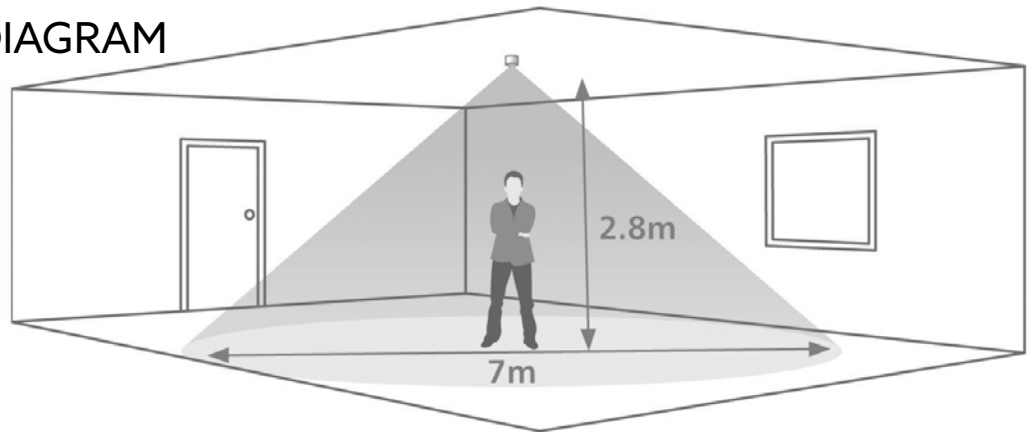
Status LED

The LED flashes Red to indicate the following:

Walk Test LED active  when movement is detected

Valid setting received 

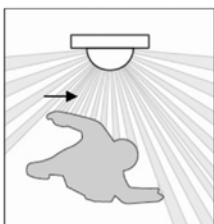
DETECTION DIAGRAM



Area of high sensitivity

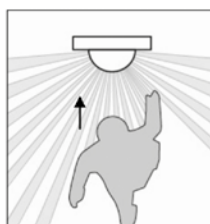
Area of lower sensitivity

WALK ACROSS



Height	Range Diameter
7m	16m
2.8m	9m

WALK TOWARDS



Height	Range Diameter
7m	10m
2.8m	5m

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INSTALLATION

The product is designed to be mounted directly to the outside of a luminaire. The detector should be sited so that the occupants of the room fall inside the detection pattern (shown page 4), at a recommended ceiling height of 2.8m. Note that the lower the sensor is installed the smaller the detection range will be, subject to the parameters shown on the detection diagram.

- For optimum operation of the lux sensor, the lens must be shielded as much as possible from the light source.
- Avoid direct sunlight entering the sensor.
- Do not site within 1m of forced air heating or ventilation.
- Do not fix to a vibrating surface.

SENSOR FUNCTIONALITY

Detection mode

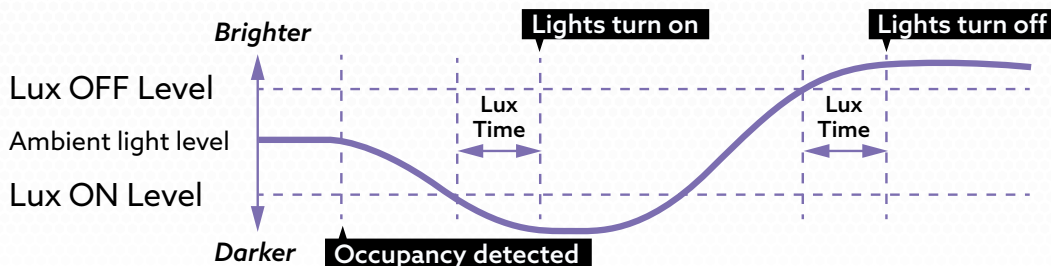
Presence when movement is detected the load will automatically turn on. When the area is no longer occupied the load will automatically switch off after an adjustable time period.

Sensitivity to movement of the PIR sensor can be adjusted using the Sensitivity parameter.

HINT: To assist in setting the Sensitivity, turn on the Walk Test LED which will flash red when movement is detected.

Switch Level On/Off

Occupancy detection can be made dependant on the ambient light level using the Lux On Level and Lux Off Level parameters.



Maintained Illuminance (daylight harvesting) - DD and AD variants only

The detector measures the overall light level in the detection area and calculates the correct output for the luminaires, to achieve a preset lux level (maintained illuminance or daylight harvesting).

BURN-IN DD AND AD VARIANTS ONLY

Overview

It is a requirement of many fluorescent lamp manufacturers to have the lamps on at maximum output for a period of time to guarantee lamp life (refer to the manufacturer's datasheet for details). As the PRE3208-DD & AD are able to dim the lamps using DALI/DSI or 1-10V, the products provide a facility to disable this for a given period of time.

Operation

By setting the "Burn in" parameter, you can select a time during which the lamps are not allowed to deviate from maximum output. The unit counts the time, and even remembers how long has elapsed in the event of a power failure. To cancel the burn in function, simply select a time of 0. Note that when the lamps are changed, the burn in time should be set again.

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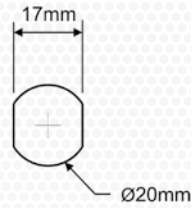
INSTALLATION

Do not grip unit at the lens end. Hold the square body near the threaded end when installing and tightening the nut. Care must be taken to prevent damage to the lens and surrounding IP seal.

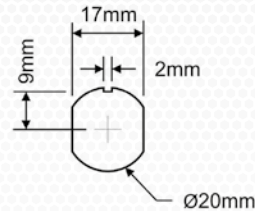
Components

Part	Quantity Supplied
 IP Spacer with silicone coating	1
 Silicone washer	1
 5° washer	1
 5° spacer	1
 M20 nut	1

Mounting hole without key

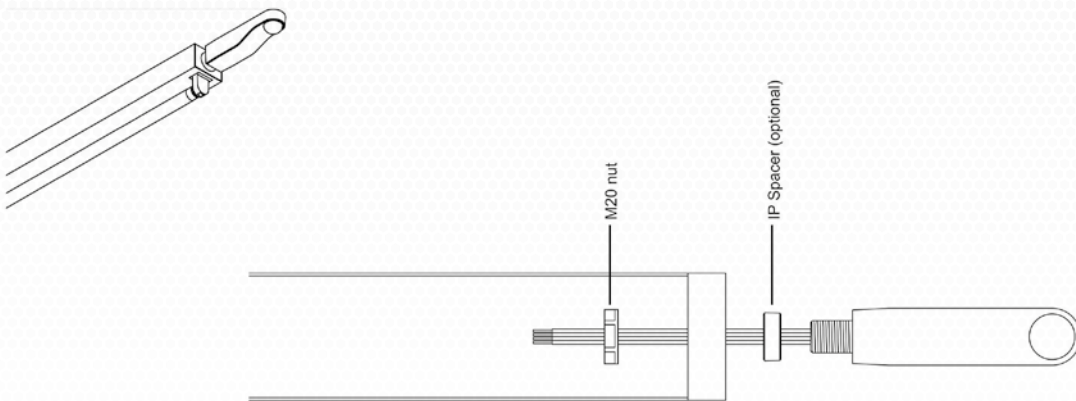


Mounting hole with key



Note. Key to be at top of sensor.

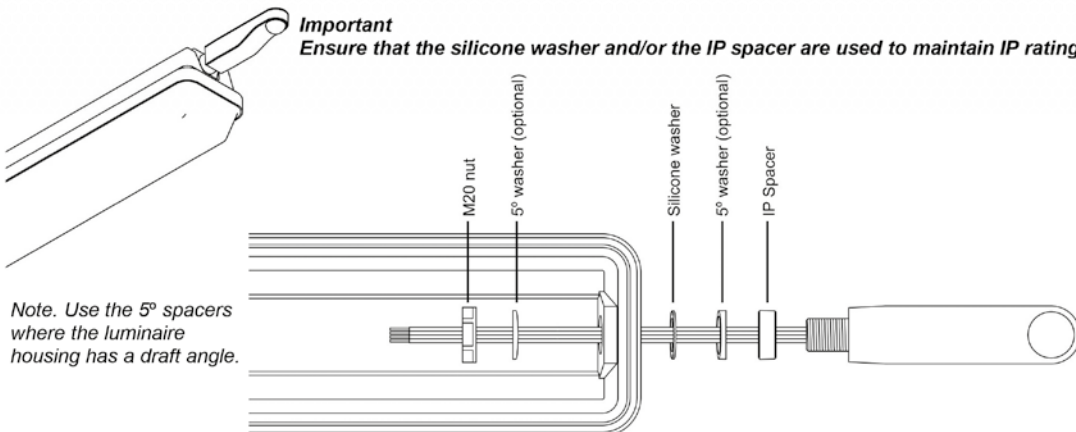
Standard luminaire fitting



IP luminaire fitting

Important

Ensure that the silicone washer and/or the IP spacer are used to maintain IP rating.



Note. Use the 5° spacers where the luminaire housing has a draft angle.

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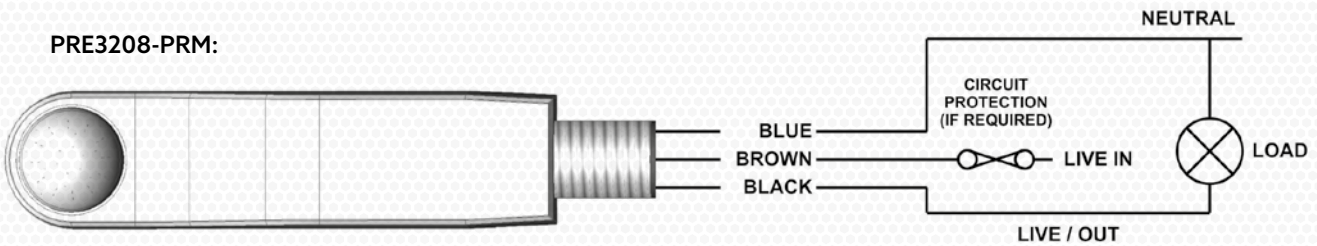
Mini batten mount PIR



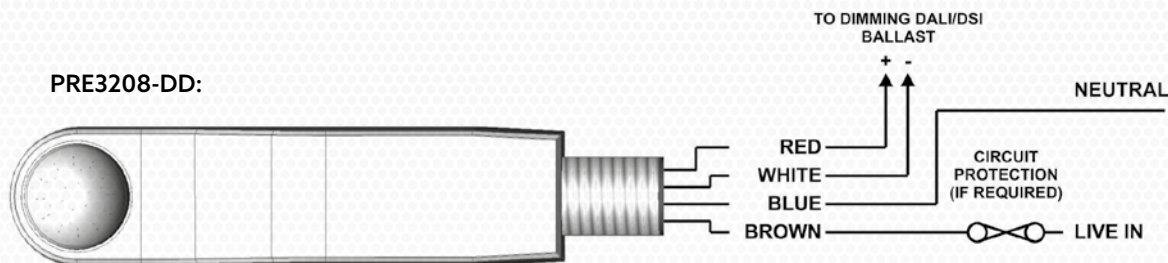
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WIRING DIAGRAMS

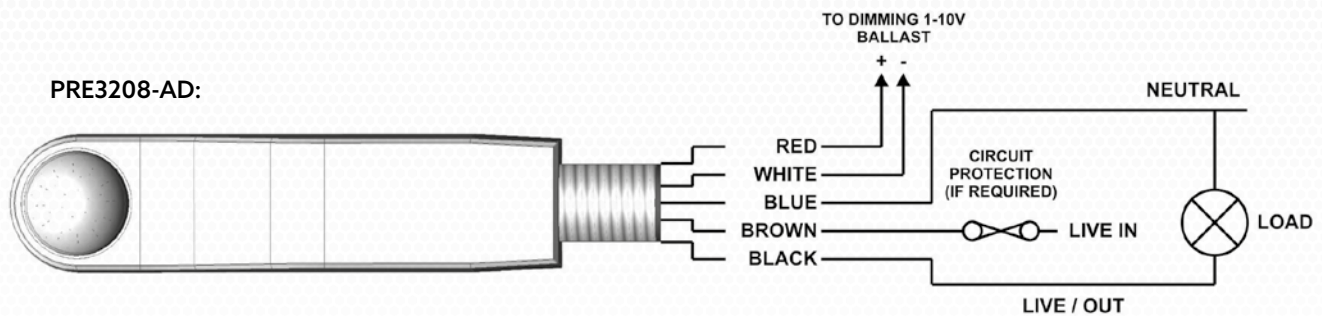
PRE3208-PRM:



PRE3208-DD:



PRE3208-AD:



POWER-UP TEST PROCEDURE

- When power is applied to the unit, the load will turn on immediately.
- Set the timeout to 10 seconds, vacate the room or remain very still and wait for the load to switch off.
- Check that the load switches on when movement is detected.
- The unit is now ready for programming.

POWER-UP TEST PROCEDURE

What if the load does not turn ON?

- Check that the live supply to the circuit is good.
- Check that the load is functioning by bypassing the sensor (e.g. link L and L/ Out).

HINT: The Walk Test LED function can be used to check that the unit is detecting movement in the required area.

What if the load does not turn OFF?

- Ensure that the area is left unoccupied for longer than the Time Out Period.
- Ensure that the sensor is not adjacent to circulating air, heaters or lamps.
- If the unit "false triggers" reduce the sensitivity using the sensitivity settings

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READBACk FUNCTION (PRE5901 ONLY)

The PRE5901 has the ability to read back the settings stored in a device

To read back individual parameters

Navigate to the parameter and press the 'R' (Read) button whilst pointing at the device. The handset will click when the parameter has been read back, the device will flash its LED, and the value will be shown against the parameter in the menu.

To read back all of the parameters in a menu

- Press and hold the 'R' (Read) button for more than 1 second.
- The handset will click every time a parameter is received
- The device will show multiple flashes of its LED
- All of the values will be shown against the parameters in the menu.
- The individual parameters may be edited and then saved as a 'Macro'.

Notes:

If a parameter(s) has been missed because of a communication error, the missing value(s) is replaced by dashes. When reading back, the Channel 1 relay (where fitted) will temporarily be switched off, and will return to it's normal state 2 seconds after the read back has been completed.

PROGRAMMING

The functionality of the PRE3208 is controlled by a number of parameters which can be changed or programmed by any of the following devices:

- PRE5903 See next page 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 LED response. 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 Shift 1 Shift 2	1 Shift 1 Shift 2	2 Shift 1 Shift 2	3 Shift 1 Shift 2		
On/Raise		On	Raise				Turn lights on or to raise lights.
Off/Lower		Off	Lower				Turn lights off or to lower lights.
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)	20 minutes	1, 10 & 20 minutes	5, 15, & 30 minutes	10 seconds			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.
Light level (DD & AD only)	6 (600)			2 (200) 5 (500) 7 (700)	4 (400) 6 (600) 9 (900)		Sets a target light level to be maintained by the lighting system. 9 (999) = disabled
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". *
Load type (DD only)	DALI			2-DALI 7-DSI	2-DALI on		Sets the ballast control protocol to be used by the output channel.
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.
Burn-in (DD & AD only)	0	0	50	100			Determines how long the output will be at 100% so that lamps 'burn-in'. The 'burn-in' time is not affected by power supply interruptions.
Shift							Use this button to select the settings in red and blue signified by the 'Shift 1' and 'Shift 2' LEDs.

* NOTE: The Lux Off Level value must always be greater than the Lux On Level value.

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ADVANCED PROGRAMMING

Parameter Name	Default Value	Range / Options	Description	UHS5	UNLCDHS
Detector Parameters					
Walk Test LED	Off	On or 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)	20 minutes	0-99 minutes	Once the detector is turned on, this value sets how long the lights will stay on once movement has ceased. Select 0 for 10 second delay - use for commissioning only.	✓	✓
Manual Time Out	10 minutes	0-99 minutes	When a manual operation occurs, either via the switch input or the infrared, it invokes the timeout period. Example 1: a detector in presence mode has a detector timeout of 15 minutes and a manual timeout of 3 minutes. When the user leaves the room they press the off button. The sensor will revert to automatic after 3 minutes, and then walking back in the room will turn the lights on. Example 2: using the settings above, the user turns the lights off (say for a presentation) but stays in the room. Every time a movement is detected, the manual timeout period is re-triggered, but when it doesn't pick up for the short timeout period, the sensor will timeout and revert to automatic. This means the lights may turn on inadvertently during the presentation, if the occupants are still for the manual timeout period, so adjust the timing carefully.	✗	✓
Sensitivity On	9	1 (min) to 9 (max)	Sensitivity level for detecting movement when the detector is already on. *PRE5903 sets Sensitivity On and Off to the same value.	✓*	✓
Sensitivity Off	9	1 (min) to 9 (max)	Sensitivity level for detecting movement when the detector is off. *PRE5903 sets Sensitivity On and Off to the same value.	✓*	✓
Lux time	0	0 (disabled) 1-99 minutes	If the detector measures the lux level and decides that the output needs switching on or off as a consequence, the lux time must elapse first. If at any time during the timed delay the lux change reverses then the process is cancelled.	✗	✓
Power Up State	On	On or Off	Select No for a 30 second delay on start up. If Yes is selected, there will be no delay on start up and the detector will always power up detecting.	✗	✓
Disable Detector	N	Y or N	Disables detection, leaving the relay output permanently off with the dimming output operational. This mode is used when the unit is for maintained illuminance only.	✗	✓
On Delay	0 minutes	0-99 minutes	The On Delay to allows the first channel to switch on after the second channel. A typical application for this would be where a detector is controlling lighting and air conditioning in an area. When the occupant is detected, the lighting will be turned on immediately, whereas the air conditioning may be turned on after 15 minutes. If the area is vacated and the detector times out before the delay, then the air conditioning would never go on. The delay can be set only for channel 1 using the on delay parameter.	✗	✓
Inhibit	4 seconds	1 to 999 seconds	When the detector turns off, a delay is instigated to prevent retriggering. In certain circumstances this delay may not be enough. This parameter allows the delay to be changed.	✗	✓
Factory default	-	-	Restores factory default settings	✓	✓

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User Modes

Raise (DD & AD only)	-	-	Increase light level. Reverts when occupancy cycle complete.	✓	✓
Lower (DD & AD only)	-	-	Decrease light level. Reverts when occupancy cycle complete.	✓	✓
Scene up	-	-	Steps up between 6 pre-defined scenes.	✗	✓
Scene down	-	-	Steps down between 6 pre-defined scenes.	✗	✓
Scene #	-	-	Select the individual scene, between 0 and 6. (1 = min. output; 2 = 10%; 3 = 25%; 4 = 50%; 5 = 75%; 6 = 100%)	✗	✓
Override On	-	-	If the lights are off, sending the IR command will turn them on immediately and revert to automatic operation using the manual timeout period.	✓	✓
Override Off	-	-	If the lights are on, sending the IR command will turn them off immediately. After the manual timeout period (described above), the sensor will revert to automatic.	✓	✓
Cancel	-	-	Cancels the on or off override, returning the detector to normal operation.	✗	✓

Channel 1 - Switching Channel

Lux on level (Switch level on)	9	1-9 For a higher resolution a scale of 101-199 is available	Sets a minimum light level below which the PIR sensor is enabled, allowing lights to be turned on by movement. <i>Note: the Lux Level Off value must always be greater than the Lux Level On value.</i>	✓	✓
Lux on level (Switch level off)	9	1-9 For a higher resolution a scale of 101-199 is available	Sets a maximum light level above which the PIR sensor is disabled, preventing lights from being turned on by movement.	✓	✓

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Parameter Name	Default Value	Range / Options	Description	UHSS	UNLCDHS
Channel 2 - Dimming Channel					
Lux on level (Switch level on)	9	1-9 For a higher resolution a scale of 101-199 is available	Sets a minimum light level below which the PIR sensor is enabled, allowing lights to be turned on by movement. <i>Note: the Lux Level Off value must always be greater than the Lux Level On value.</i>	✓	✓
Lux on level (Switch level off)	9	1-9 For a higher resolution a scale of 101-199 is available	Sets a maximum light level above which the PIR sensor is disabled, preventing lights from being turned on by movement.	✓	✓
Light Level (maintained illuminance)	600	1-998 (999 disabled)	Sets a target light level to be maintained by the lighting system.	✓	✓
Load Type (DD only)	DALI	DSI DALI DALI On	Sets the ballast control protocol to DSI. Sets the ballast control protocol to DALI. DALI On provides a permanent voltage to DALI ballasts when DALI has not been implemented correctly in the ballast. Maximum number of ballasts is 5 unless the relay is disabled then it is 10.	✓ ✓ ✗	✓ ✓ ✓
Max Value	100%	0 to 100%	Maximum dimming output level.	✗	✓
Min Value	0%	0 to 100%	Minimum dimming output level.	✗	✓
Memorise	N	Yes or No	If this is set to Yes, the last manual lux level set will be memorised and used as the new switch on level.	✗	✓
On Value	99	0 to 99	Dimming output level when switched on (0-99).	✗	✓
Off Value	0	0 to 99	Dimming output level when switched off (0-99). If a non-zero off value is set, then the output will toggle between this value and completely off depending on the switch level on and off values. For example, if it is light outside, the fittings will be off if there is no occupancy. If it is dark outside, they will adopt the preset off value. This feature is only enabled if 'Min value' is set to 99.	✗	✓
Burn-in	0	0 (disabled) or 1 to 99 hours	Determines how long the output will be at 100% so that lamps 'burn-in'. The 'burn-in' time is not affected by power supply interruptions.	✓	✓
Fade Value	10	0 to 99	After occupancy ceases, this dimming output level is loaded for the fade time (adjustable between 0 and 99).	✗	✓
Fade mins	0	0 to 99	This is the time period (adjustable between 0 and 99 minutes) that the luminaire will be held at the fade value before turning off. A value of 0 disables the fade function.	✗	✓
Speed On	40	Measured in 0.1 sec intervals.	Determines the dimming response speed after the setup time has finished.	✗	✓
Speed Set	5	Measured in 0.1 sec intervals.	Determines the dimming response speed during the set up time. Measured in 0.1 sec intervals. If set to 0 will disable dimming for "Set seconds" below, used if fittings are required to warm up before dimming.	✗	✓
Speed Seconds	120	1 to 999 seconds	Determines how long the dimming response set-up period lasts on power-up or on setting change. This enables the desired lux level to be achieved rapidly when the lights come on, or during setup.	✗	✓

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PART NUMBERS

	Part number	Description
Detector	PRE3208-AD	Batten PIR detector AD 1-10V
	PRE3208-DD	Batten PIR detector DD DALI/DSI
	PRE3208-DD-LT30	Batten PIR detector DD DALI/DSI -30°C
	PRE3208-PRM	Batten PIR detector PRM
	PRE3208-PRM-LT30	Batten PIR detector PRM -30°C
Accessories	PRE5903	Programming IR handset
	PRE5901	Universal LCD IR handset

IMPORTANT NOTICE

This device should be installed by a qualified electrician in accordance with the latest edition of the IEE Wiring Regulations and any applicable Building Regulations.



FM45789



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