

# PRE3205 - DD

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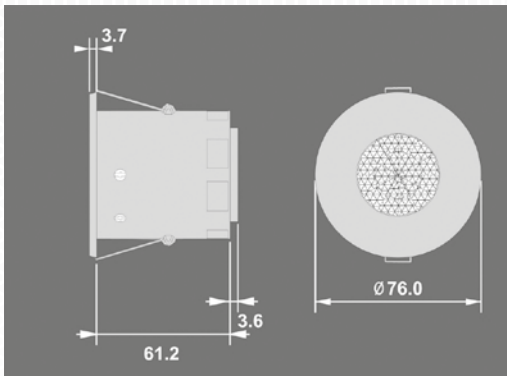
Ceiling mounted dimming photocell



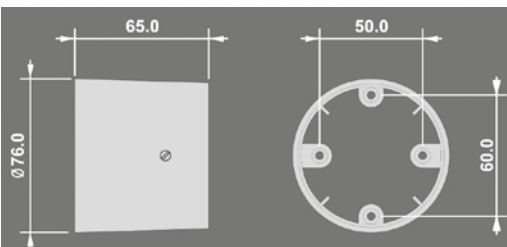
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PRE3205-DD



PRE3BB



## SPECIFICATION

<b>Load</b>	Channel 1 (switching): 10A of lighting and/or ventilation including incandescent, fluorescent, compact fluorescent, low voltage (by switching the primary of transformer).  Channel 2 (dimming): Maximm number of DSI or DALI ballasts is 10 unless the relay is disabled then it is 20.
<b>Power consumption</b>	On 622mW, Off 792mW
<b>Supply voltage</b>	220-240 Volts AC 50 Hz
<b>Dimming Output</b>	basic Insulation only. Although low voltage, this is not SELV output and should be treated as mains potential. Use mains rated wiring.
<b>Time out period</b>	Adjustable between 1 and 99 minutes (PRE5901 only), 10 seconds to 30 minutes (PRE5903)
<b>Terminal capacity</b>	2.5mm <sup>2</sup>
<b>Material</b>	Flame retardant ABS/PC
<b>Type</b>	Class 2
<b>IP Rating</b>	IP40
<b>Temperature</b>	-10°C to 35°C
<b>Humidity</b>	5 to 95% non-condensing
<b>Compliance</b>	EMC-2004/108/EC LVD-2006/95/

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## OPERATION

The ALC-DD dimming photocell automatically adjusts the light output of luminaires depending on the amount of natural light available, to maintain constant brightness (maintained illuminance) using either DALI or DSI digital dimming protocol.

An optional manual control, using a switch input, allows the user to override the dimming levels and turn the output on and off. In addition to changing the output level, the photocell can be set to turn lighting on when the ambient light falls below a preset level. The lighting can also be set to turn off when the total light level rises

above a separate preset level. An integral, adjustable time delay prevents nuisance switching caused by, for example, dark clouds.

All functionality is fully programmable using an IR handset.

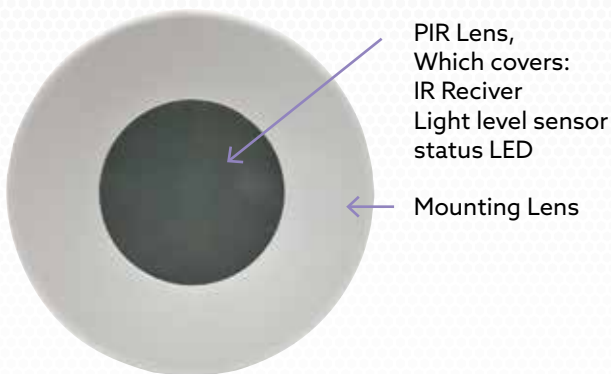
Three variants are available (this manual only covers the PRE3205-AD):

PRE3205-VFC Mains voltage, Volt free contact

PRE3205-AD 1-10V Analogue dimming

PRE3205-DD Digital dimming Dali and DSI.

## FEATURES



### IR Receiver

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

### Light Level Sensor

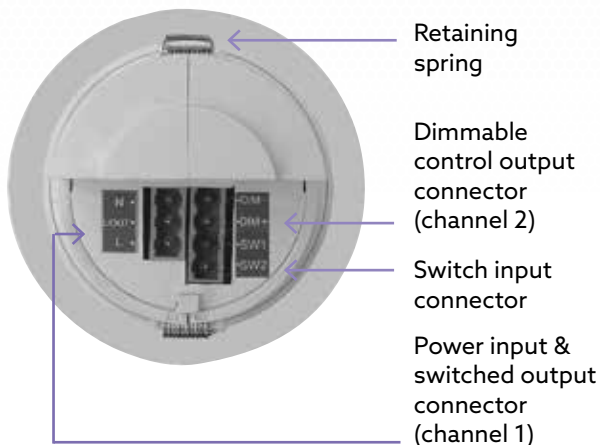
Measures the overall light level in the detection area

### Status LED

The LED flashes Red to indicate the following:

**Walk Test LED active**  when movement is detected

**Valid setting received** 



### Power Input & Switched Output Connector (Channel 1)

Used to connect mains power to the unit and to connect a switched load.

### Dimmable Control Output Connector (Channel 2)

Used to connect DALI/DSI controllable ballasts and transformers for dimmable loads.

### Switch Input Connector

Two input terminals can be used to manually override the dimming levels and override the lights on or off.

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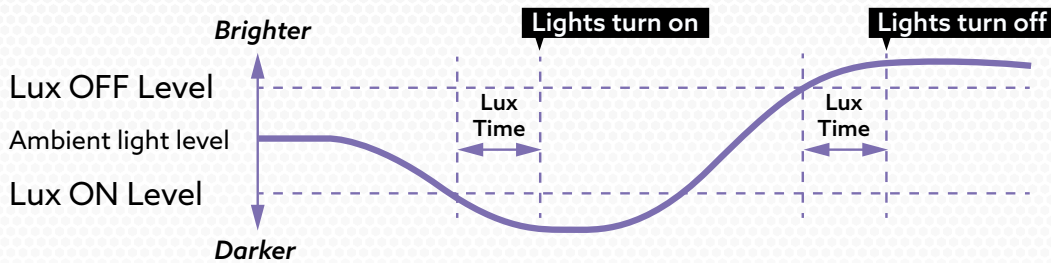
## INSTALLATION

### Choosing a suitable location:

The PRE3205 is designed to be ceiling mounted. Avoid placing the sensor where direct sunlight may enter the sensor element.

### Sensor Functionality:

The device can be made dependant on the ambient light level using the Lux On level and Lux Off level parameters.



### Maintained illuminance (daylight harvesting)

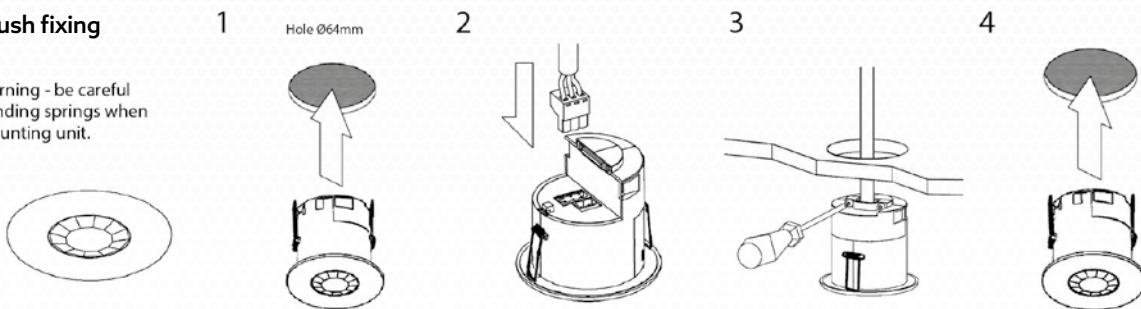
The detector measures the overall light level in the detection area and calculates the correct output for the lumiares, to achieve a preset lux level (Maintained illuminance or daylight harvesting).

## INSTALLATION

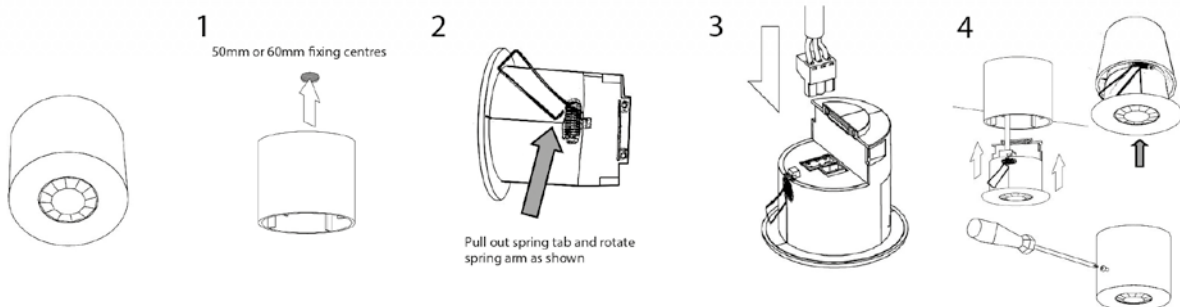
The PRE3205-AD is designed to be ceiling mounted:

### • Flush fixing

Warning - be careful bending springs when mounting unit.



### • Surface fixing, using the optional surface mounting box (part no. PRE3BB).



The PRE3205 is designed to be mounted using either Flush fixing, or surface fixing, using the optional Surface Mounting Box (part no. PRE3BB). Both methods are illustrated above.

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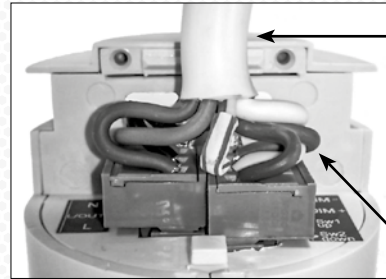
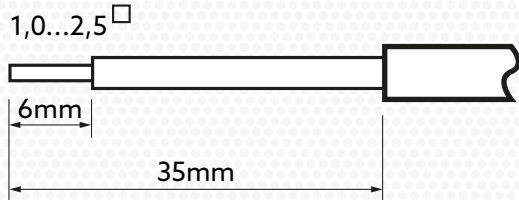
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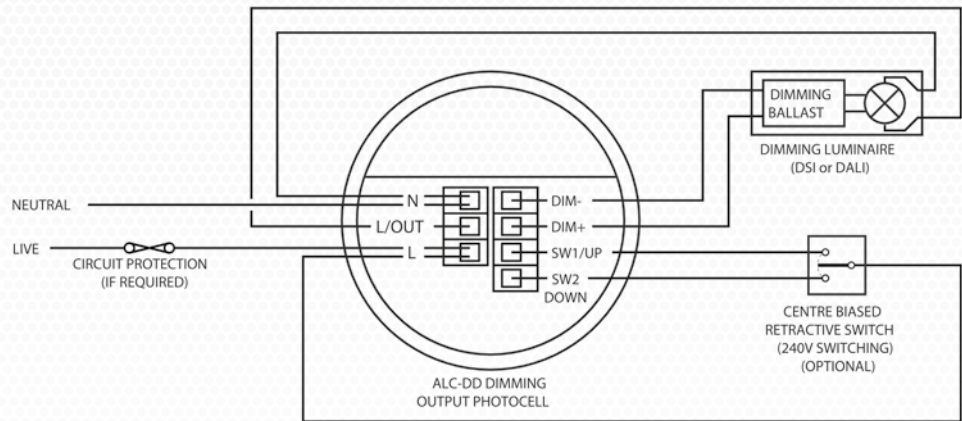
## WIRE STRIPPING DETAILS



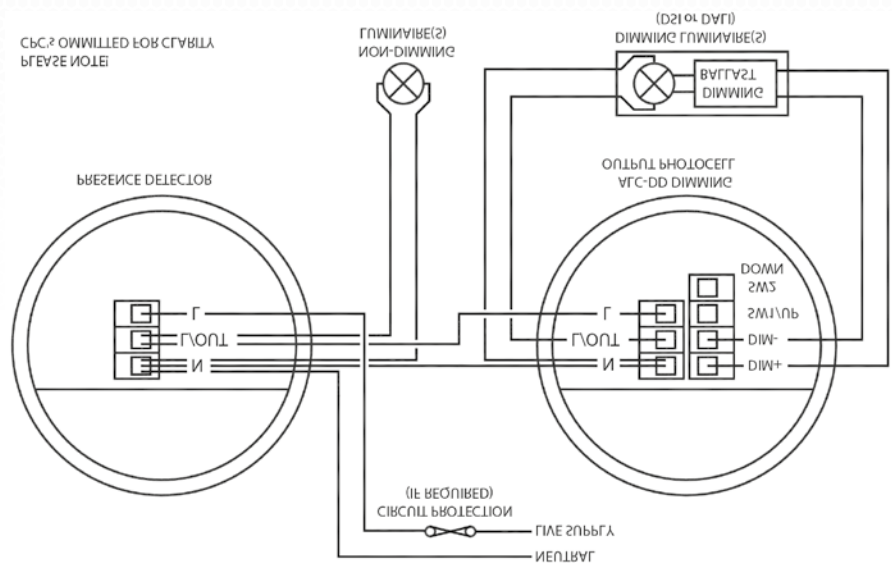
**Important**  
Ensure that the cables are formed as shown before fixing the cable clamp. The clamp **MUST** clamp the outer sheath only.  
Bend cores as shown

## WIRING DIAGRAMS

This is a general wiring diagram. In this configuration the unit will switch the supply to a luminaire using the switched output, and dim using DALI or DSI. Manual dimming and switching can be achieved using the optional centre biased retractive switch (MK K4900 or similar).



**PRE3205-DD switched on by a presence detector.**  
In some configurations it is useful to supply the sensor from a separate presence detector.



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## BASIC PROGRAMMING

The functionality of the PRE3201-DD is controlled by a number of parameters which can be changed or programmed by any of the following devices:

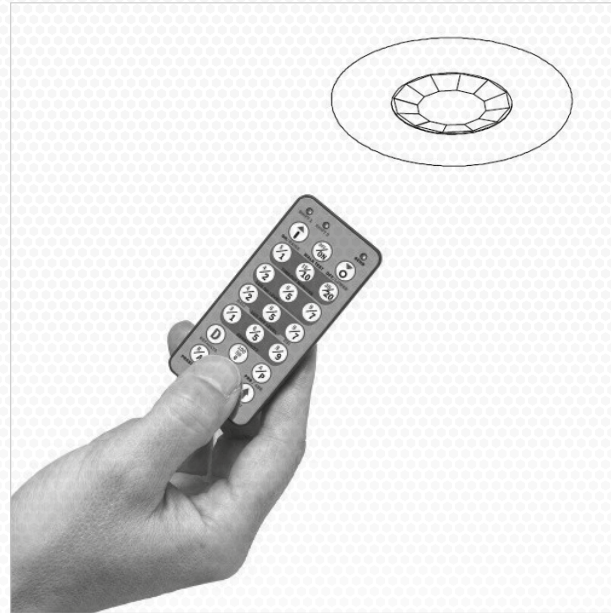
- **PRE5903** See next page for programming functions
- **PRE5900L** Infrared handset (with LCD). See user guide for full programming details.

For most basic programming operations the PRE5903 handset can be used. 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 right.

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.



**Number of shift key presses**

0      1      2      3

Shift 1 Shift 2    Shift 1 Shift 2    Shift 1 Shift 2    Shift 1 Shift 2

Parameter name	Default value	Button activation				UHS5 Handset Graphics	Description
On/Raise		On	Raise				Turn lights on or to raise lights.
Off/Lower		Off	Lower				Turn lights off or to lower lights.
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	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.
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".*
Defaults					D		Returns the unit to the default settings.
Burn-in	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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Parameter Name	Default Value	Range / Options	Description	PRE9503	PRE901
<b>Channel 1-Switching channel (PRM &amp; AD Only)</b>					
Lux on level (switch level on)	9	1 to 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. Note: the Lux Level Off value must always be greater than the Lux Level On value.	✓	✓
Lux on level (switch level off)	9	1 to 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.	✓	✓
<b>Channel 2-Dimming channel (DD &amp; AD only)</b>					
Lux on level (switch level on)	9	1 to 9 For a higher resolution a scale of 101-199 is available	Lux level setting to prevent the luminaires being switched on if the ambient light level is sufficient. Note: the Lux Level Off value must always be greater than the Lux Level On value.	✓	✓
Lux on level (switch level off)	9	1 to 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 to 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 4 unless the relay is disabled then it is 10.	✓ ✓  ✗	✓ ✓  ✓
Max Value	100%	0-100%	Maximum dimming output level.	✗	✓
Min Value	0%	0-100%	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 999 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.	✓	✓
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.	✗	✓
Set 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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Parameter Name	Default Value	Range / Options	Description	PRE9503	PRE5901
<b>Detector parameters</b>					
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.	✗	✓
Factory default	-	-	Restores factory default settings.	✓	✓
<b>User modes</b>					
Raise	-	-	Increase light level.	✓	✓
Lower	-	-	Decrease light level.	✓	✓
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.	✓	✓
Disable detector	-	-	Cancels the on or off override, returning the detector to normal operation.	✗	✓

## 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 its normal state 2 seconds after the read back has been completed.

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## BURN-IN

### 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 PRE3205-AD is able to dim the lamps using 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.

## PART NUMBERS

	Part number	Description
Detectors	PRE3205-AD	Batten PIR detector AD 1-10V
	PRE3205-DD	Batten PIR detector DD DALI/DSI
	PRE3205-VFC	Batten PIR detector VFC
Accessories	PRE5903	Programming IR handset
	PRE5901	Universal LCD IR handset

## FAULT FINDING

### What if the load does not turn ON?

- Check that the live supply to the circuit is good.
- Increase the lux on level to switch off at a lower brightness.

### What if the load does not turn OFF?

- Increase the lux off level to switch off at a lower brightness.

### Load cycles on and off

- Increase the difference between the lux on level and the lux off level.
- increase the lux time setting.
- Angle the sensor away from the light that it is controlling.

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.



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