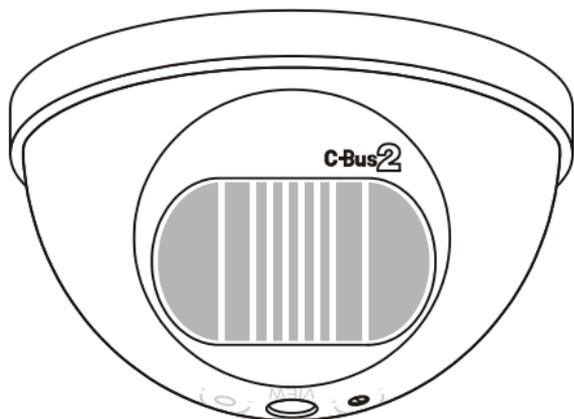


**CLIPSAL**<sup>®</sup>  
LIVING ELECTRICAL



**C-Bus**<sup>®</sup>

**C-Bus PIR Occupancy Sensor**

**Installation Instructions**

**5751L**

**FC**  **CE**

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V1.1 Dec 2008

## 1.0 Description

The 5751L C-Bus PIR Occupancy Sensor is a passive infrared device used to detect the movement of body heat. When installed as part of a C-Bus system the unit can activate lights or other electrical appliances whenever someone enters its detection field.

The 5751L uses an adjustable timer that determines for how long devices are activated. An ambient light sensor enables the unit to perform differently in light or dark conditions. The combination of timer and light sensor means the unit can activate lights for a specific period of time whenever it gets dark (at sunset).

## 2.0 Important Notes

- Do not mount close to objects which can change temperature rapidly (such as air conditioning vents, heater flues, water fountains or sprinklers).
- The use of any software not provided by Clipsal Integrated Systems (CIS) in conjunction with the installation of this product may void any warranties applicable to the hardware.
- Never perform megger testing on the pink C-Bus data cabling or terminals, as this may degrade the performance of the network.

## 3.0 Installation

### Location

The 5751L C-Bus PIR Occupancy Sensor may be mounted on a ceiling or wall. The best location is in a corner of a room on

the ceiling. Position the unit so it faces toward the centre of the room.

If the room is to have any open doorways, consider using a corner of the room that intersects the walls that contain these doorways. This is illustrated in Figure 1. It minimises triggering of the unit by people who pass the room.

Do not position the unit near sources of heat or cold, such as air conditioning vents or direct sunlight. Since infrared transmission is substantially reduced through glass, do not rely on the unit to detect the movement of body heat through windows or glass panels.

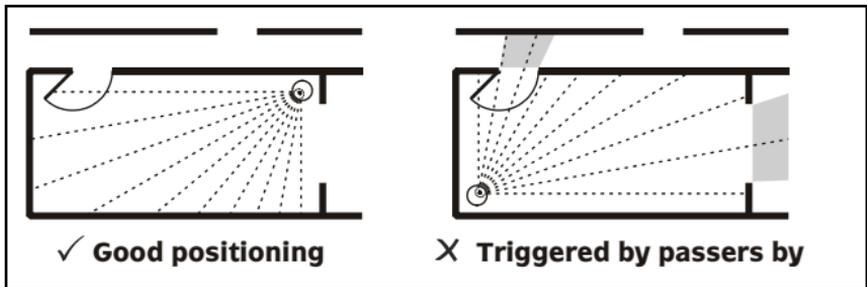


Figure 1 – Position the unit to avoid false triggering

The range of all PIR detectors varies with the ambient temperature and the type of clothing worn. Rapid and large changes in temperature are typically detected at greater distances. When mounted 2.4 m from the floor, the 5751L has a detection field of approximately 6 × 6 m and a range of up to 8.5 m from the sensor head. This is illustrated in Figure 2.

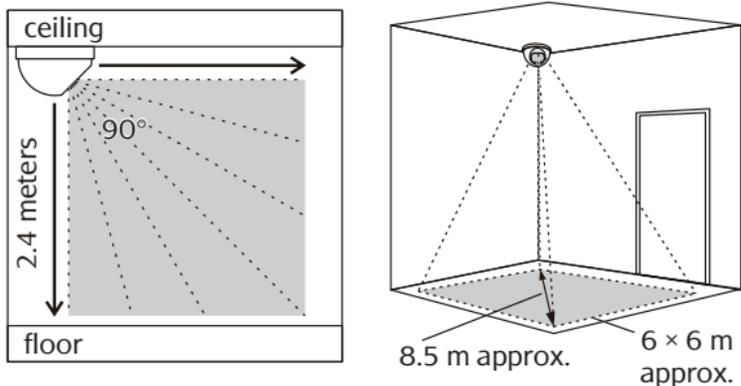


Figure 2 – The 5751L sensor's detection field

## Mounting Procedure

- 1) Fit the mounting plate to the ceiling or wall. An arrow labelled 'Field of View' is embossed on the plate. Ensure the arrow points towards the detection area (normally down for a wall mounted unit).

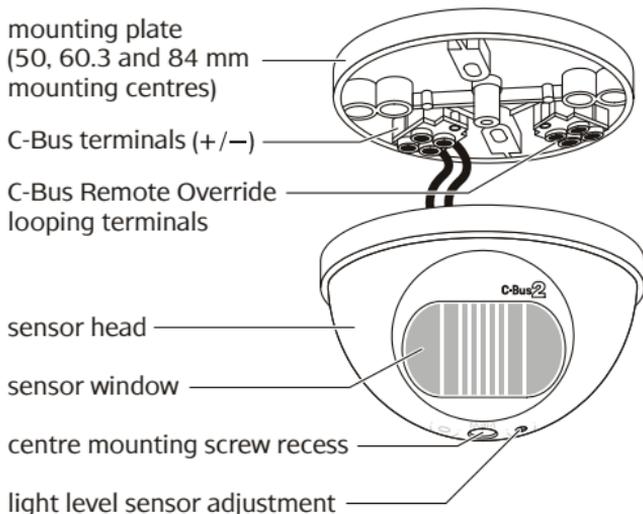


Figure 3 – Identification of 5751L components

- 2) Connect the C-Bus Cat.5e cable as described in the C-Bus Network Connection section.
- 3) Fit the sensor head to the mounting plate via the centre mounted screw. Do not fully tighten the screw until you have aimed the sensor head (refer to Setup Procedure).
- 4) Adjust and program the unit as described in the Programming and Setup section.

## 4.0 C-Bus Network Connection

Connection to the C-Bus network is made via terminals on the base of the 5751L. Use Cat.5e Unshielded Twisted Pair (UTP) C-Bus cable, Clipsal catalogue number 5005C305B. The use of bootlace ferrules (crimps) is recommended for a reliable connection. C-Bus connection is illustrated in Figure 4.

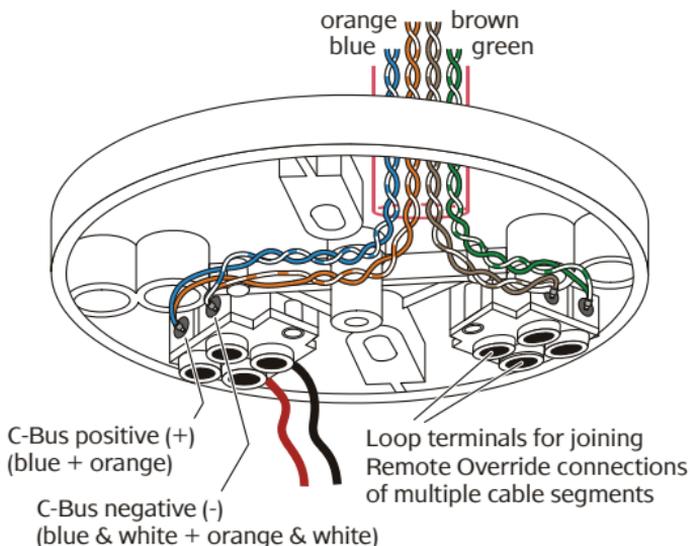


Figure 4 – C-Bus cable connection

## 5.0 Programming and Setup

The 5751L C-Bus PIR Occupancy Sensor needs to be adjusted and programmed before it will function as part of a C-Bus network. Programming may be performed via learn, or by using C-Bus Toolkit software.

C-Bus Toolkit software provides a greater level of flexibility and customisation. It can be downloaded from the Clipsal Integrated Systems web site ([www.clipsal.com/cis](http://www.clipsal.com/cis)).

### Setup Procedure

- 1) Wait 2 minutes after powering up to enable the sensor to stabilise.
- 2) Using C-Bus Toolkit software or learn mode, associate the 5751L with a load (such as a light connected to a dimmer unit).
- 3) Using C-Bus Toolkit or learn mode, set the timeout (expiry time) to 5 seconds.
- 4) Using the provided adjustment tool or a small flat head screwdriver, rotate the light level sensor adjustment screw fully anticlockwise.
- 5) Walk slowly around the room, through doorways, etc. to ensure the load activates within an appropriate area. Rotate the sensor head if necessary.
- 6) Set the timeout (expiry time) to the required interval (using C-Bus Toolkit or learn mode).
- 7) Set the light level sensor adjustment. Use Table 1 as a guide. Rotate clockwise if you want to prevent activation of the load when the sensor is exposed to light.
- 8) Tighten the centre-mounted screw.

<b>Load Activation</b>	<b>Setting</b>
very dark condition	rotate fully clockwise
low light or dark condition	rotate about half way between clockwise and anticlockwise
any lighting condition	rotate fully anticlockwise

Table 1 – Light level sensor adjustment

### Learn Mode Programming

The actions listed below must be performed in conjunction with *Learn Mode* programming of output devices and may only be done when *Learn Mode* has been activated.

<b>Action 1</b>	Enter Learn Mode by pressing any toggle switch on a Relay or Dimmer Output Unit for 10 seconds.	<b>Result 1</b>	Unit and C-Bus indicators flash alternately to indicate Learn Mode active.
<b>Action 2</b>	Use a screwdriver to slowly change the light level setting (either direction is ok) until the orange LED turns ON.	<b>Result 2</b>	The orange indicator behind the Sensor window will flash.

Continued

## Learn Mode Programming (continued)

<b>Action 3</b>	Wait for the indicator to double-flash (after 5 seconds) and then immediately (within 1 second) turn the light level adjustment back to its original position.	<b>Result 3</b>	The orange indicator behind the Sensor window will stop flashing and remains on. If the indicator turns off again, go back to Action 2)
<b>Action 4</b>	Slowly change the light level setting again until the LED starts to double-flash at 1-second intervals.	<b>Result 4</b>	The first double flash is for a 5 second timer. Each subsequent double-flash represents an additional 5 minute timer duration.
<b>Action 5</b>	After the desired timer interval has been reached (in steps of 5 minutes), turn the light level adjustment back to its original position.	<b>Result 5</b>	The indicator will single-flash at 1-second intervals showing that the timer function has been set.
<b>Action 6</b>	Exit Learn Mode by pressing any toggle switch on a Relay or Dimmer Output Unit for 2 seconds.	<b>Result 6</b>	The units will have learned the relationship and return to normal operation.

## 6.0 Troubleshooting

Symptom and Cause	Solution
<b>Light switches on for no apparent reason</b> Momentary power failure Unseen target Extreme draughts of hot or cold air	Unit will reset after timeout. Check for pets/animals. Check doors, windows, heating /cooling outlets. Consider relocating sensor.
<b>Light switches on during daylight</b> Incorrect light level sensor adjustment setting	Rotate light level sensor adjustment clockwise.
<b>Lights won't switch on in dim or dark conditions</b> Incorrect setup Light globe has blown	Rotate light level sensor adjustment anticlockwise. Replace light globe.
<b>Light won't switch off</b> Unit programmed incorrectly A moving infrared (IR) source is detected	Use C-Bus Toolkit software to verify parameters. Check for IR sources such as candles, pets, air draughts.

## 7.0 Electrical Specifications

Parameter	Description
C-Bus supply voltage	15 to 36 V DC @ 18 mA
Rated detection field at maximum sensitivity	6 × 6 m @ 8.5 m from sensor head @ 2.4 m mounting height (approx.)
Sensor head rotation	120° when installed
Timer delay	Up to 18 h 12 min 15 s
Operating light level Range	0 - 2000 lux
Operating temperature	0 to 50 °C
Operating humidity	0 to 95% RH

## 8.0 Mechanical Specifications

Parameter	Description
Dimensions (W×H×D)	100 × 57 × 100 mm
Weight	125 g (approx.)
Mounting centres	50 mm, 60.3 mm, 84 mm

## 9.0 Standards Complied

### ***DECLARATIONS OF CONFORMITY***

#### ***Australian/New Zealand Frameworks and Standards***

The 5751L C-Bus PIR Occupancy Sensor complies with the following:



<b>EMC</b>	
<b>Standard</b>	<b>Title</b>
AS/NZS 1044	RFI Emissions
AS/NZS 61000.3.2	LF Harmonic Current Emissions

#### ***European Directives and Standards***

The 5751L C-Bus PIR Occupancy Sensor complies with the following:



<b>EMC Directive 89/336/EEC</b>	
<b>Standard</b>	<b>Title</b>
EN 55014-1	RFI Emissions
EN 60669-2-1 Clause 26	Immunity & Emissions
EN 61000-3-2	LF Harmonic Current Emissions

#### ***Other International Directives and Standards***

The 5751L C-Bus PIR Occupancy Sensor complies with the following:

<b>EMC</b>	
<b>Standard</b>	<b>Title</b>
CISPR 14-1	RF Emissions
IEC 60669-2-1 Clause 26	Immunity & Emissions
IEC 61000-3-2	LF Harmonic Current Emissions

## **US FCC Regulations**

The 5751L C-Bus PIR Occupancy Sensor complies with the following:



<b>Regulation</b>	<b>Title</b>
FCC	FCC Part 15 Class B Digital Device for Home or Office Use

### **Supplemental Information**

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesirable operation

### **Class B Product**

#### **NOTE:**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

**Warning:** Any changes or modifications not expressly approved by Clipsal Integrated Systems could void the user's authority to operate this equipment.

## 10.0 Two-Year Warranty

The 5751L C-Bus PIR Occupancy Sensor carries a two-year warranty against manufacturing defects.

- 1) The benefits conferred herein are in addition to, and in no way shall be deemed to derogate; either expressly or by implication, any or all other rights and remedies in respect to Clipsal Integrated Systems Product, which the consumer has under the Commonwealth Trade Practices Act or any other similar State or Territory Laws.
- 2) The warrantor is Clipsal Pty Ltd, with registered offices in all Australian States.
- 3) This Clipsal Integrated Systems Product is guaranteed against faulty workmanship and materials for a period of two (2) years from the date of installation.
- 4) Clipsal Australia Pty Ltd reserves the right, at its discretion, to either repair free of parts and labour charges, replace or offer refund in respect to any article found to be faulty due to materials, parts or workmanship.
- 5) This warranty is expressly subject to the Clipsal Integrated Systems Product being installed, wired, tested, operated and used in accordance with the manufacturer's instructions.
- 6) All costs of a claim shall be met by Clipsal Australia Pty Ltd, however should the product that is the subject of the claim be found to be in good working order, all such costs shall be met by the claimant.
- 7) When making a claim, the consumer shall forward the Clipsal Integrated Systems Product to the nearest office of Clipsal Australia Pty Ltd with adequate particulars of the defect within 28 days of the fault occurring. The product should be returned securely packed, complete with details of the date and place of purchase, description of load, and circumstances of malfunction.

For all warranty enquiries, contact your local Clipsal sales representative. The address and contact number of your nearest Clipsal Australia office can be found at <http://www.clipsal.com/locations> or by telephoning Technical Support 1300 722 247 (CIS Technical Support Hotline).

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## Technical Support and Troubleshooting

For further assistance in using this product, consult your nearest Clipsal Integrated Systems (CIS) Sales Representative or Technical Support Officer.

Technical Support Contact Number	
Australia	1300 722 247 (CIS Technical Support Hotline)
New Zealand	0800 888 219 (CIS Technical Support Hotline)

Technical Support email: [cis\\_support@clipsal.com.au](mailto:cis_support@clipsal.com.au)

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