

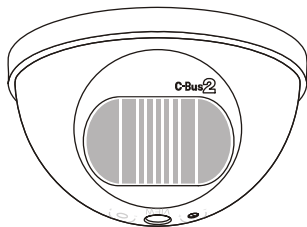
CLIPSAL®

CLIPSAL
 **C-Bus2**

C-Bus PIR Occupancy Sensor

Installation Instructions

5751L



FC  **CE**

Contents

1.0	Description	2
2.0	Important Notes	3
3.0	Installation	4
4.0	C-Bus Network Connection	7
5.0	Programming and Setup	8
6.0	Troubleshooting	11
7.0	Electrical Specifications	12
8.0	Mechanical Specifications	12
9.0	Standards Complied	13
10.0	Warranty	15

© Copyright Clipsal Integrated Systems P/L 2005. All rights reserved.

Clipsal is a registered trademark of Clipsal Australia Pty Ltd.

The information in this manual is provided in good faith. Whilst Clipsal Integrated Systems (CIS) has endeavoured to ensure the relevance and accuracy of the information, it assumes no responsibility for any loss incurred as a result of its use. CIS does not warrant that the information is fit for any particular purpose, nor does it endorse its use in applications which are critical to the health or life of any human being. CIS reserves the right to update the information at any time without notice.

V1.0 Sep 2005

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 which determines for how long appliances 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 which contain these doorways. This is illustrated in Figure 1. It minimises triggering of the unit by people who pass the room.

Avoid positioning 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.

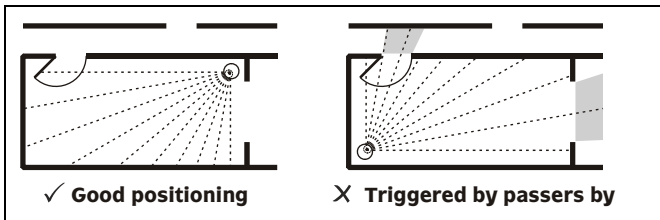


Figure 1 – Position the unit to avoid false triggering

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.

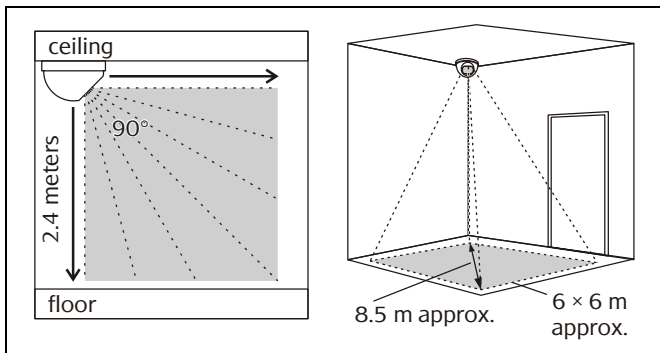


Figure 2 – The 5751L sensor's detection field

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).

- 2) Connect the C-Bus Cat-5 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 the Setup Procedure on Page 8).
- 4) Adjust and program the unit as described in the Programming and Setup section.

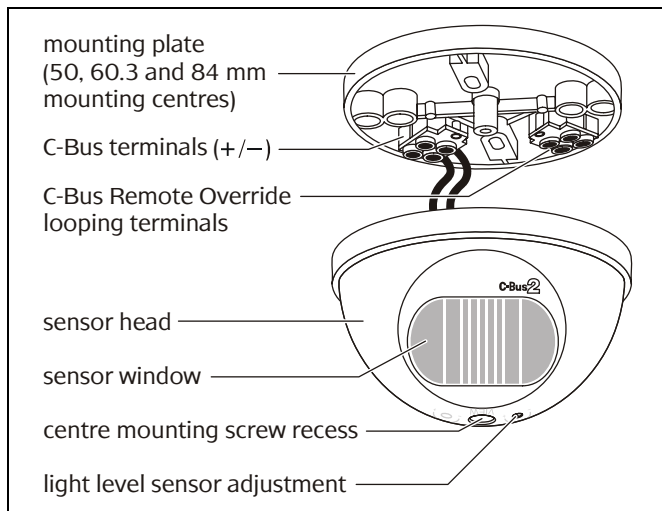


Figure 3 - Identification of 5751L components

4.0 C-Bus Network Connection

Connection to the C-Bus network is made via terminals on the base of the 5751L. Use Cat-5 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.

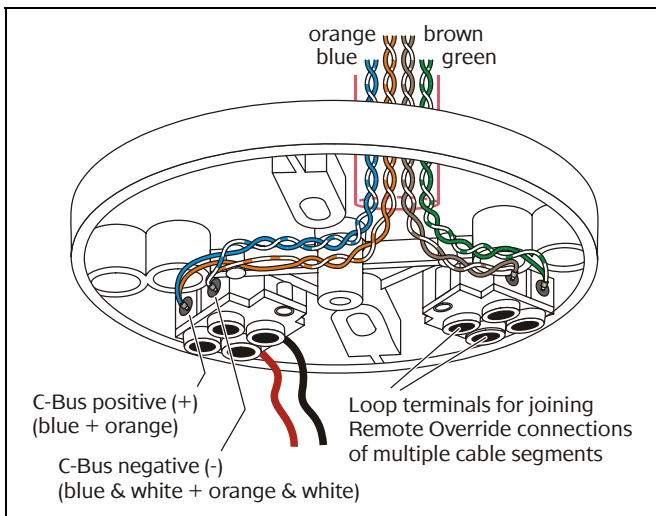


Figure 4 – C-Bus cable connection

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 mode (see Page 9), or by using the C-Bus Toolkit software.

The 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).

Setup Procedure

- 1) Wait 2 minutes after powering up to enable the sensor to stabilise.
- 2) Using the 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.

Load Activation	Setting
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

- 1) Using the provided adjustment tool or a small flat head screwdriver, rotate the light level sensor adjustment screw fully anticlockwise.
- 2) Press and hold any button on a C-Bus2 Relay or Dimmer unit for 10 seconds. The Unit and C-Bus indicators will flash alternately once learn mode is activated.

- 3) Electrical loads wired to a C-Bus2 Relay or Dimmer unit can be controlled by the buttons on the unit. Use the buttons to select the loads you want to associate with the 5751L. (Deselect any illuminated buttons you don't want associated).
- 4) Rotate the light level sensor adjustment screw fully clockwise. The sensor window will illuminate briefly.
- 5) After 5 seconds the sensor window will double-flash. Immediately rotate the adjustment screw fully anticlockwise. The sensor window will illuminate. If you exit learn mode at this point, the 5751L will use a timeout value of 5 seconds.
- 6) You can set a longer timeout value of up to many hours in increments of 5 minutes. To do this, rotate the adjustment screw fully clockwise. The sensor window will begin to double-flash, each double-flash representing 5 minutes.
- 7) Once the required number of double-flashes has occurred, rotate the adjustment screw fully anticlockwise. The sensor window will continually flicker, indicating the timeout has been set.
- 8) Press and hold any button on a C-Bus2 Relay or Dimmer unit for 2 seconds, to exit learn mode. The Unit and C-Bus indicators will no longer flash alternately.

6.0 Troubleshooting

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

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
Light level inhibit threshold	Continuous < 1 Lux to full sunlight
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:



EMC (C-Tick)	
Standard	Title
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:



EMC Directive 89/336/EEC	
Standard	Title
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:

EMC	
Standard	Title
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:



Regulation	Title
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 Warranty

The 5751L C-Bus PIR Occupancy Sensor carries a two year warranty against manufacturing defects (refer to Warranty Statement).



Technical Support and Troubleshooting

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

Technical Support Hotline: 1 300 722 247 (Australia)
0800 888 219 (New Zealand)

Technical Support Email: techsupport.cis@clipsal.com.au

Sales Support Email: sales.cis@clipsal.com.au

A list of worldwide contacts, additional product information and technical resources is provided at <http://www.clipsal.com/cis/>

Product of Clipsal Integrated Systems Pty Ltd

ABN 15 089 444 931

Head Office

12 Park Terrace, Bowden, SA 5007, Australia

Telephone: (+61) 8 8345 9500

Facsimile: (+61) 8 8346 0845

Email: cis@clipsal.com.au

Web: <http://www.clipsal.com/cis/>

10326801