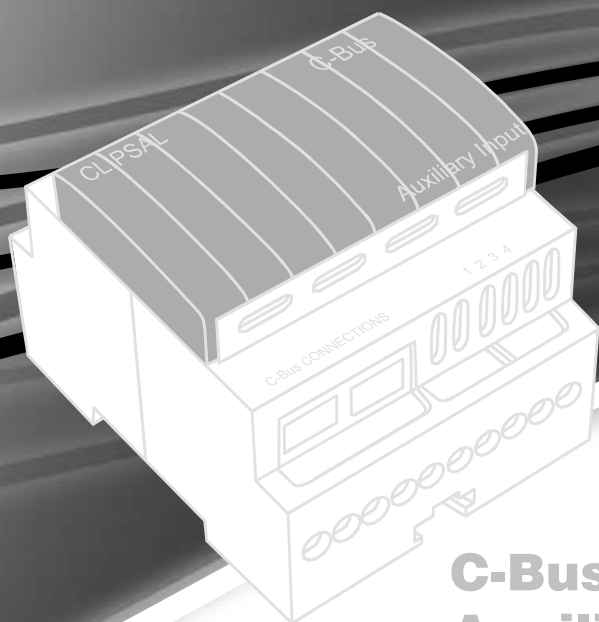


# **CLIPSAL**<sup>®</sup>

by **Schneider** Electric



## **C-Bus**<sup>®</sup> **C-Bus Four Channel Auxiliary Input Unit**

L5504AUX



Installation Instructions

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## 1.0 Product Range

### L5504AUX

C-Bus Four Channel Auxiliary Input Unit.

## 2.0 Description

The L5504AUX Four Channel Auxiliary Input Unit is a C-Bus device that allows you to use voltage-free mechanical switches on C-Bus networks. For ease of installation, L5504AUX is DIN rail mounted and measures 4M (1M = 17.5 +0.5/-0.0 mm) wide.

The L5504AUX is a learn enabled C-Bus device. Units are programmed using Clipsal C-Bus Toolkit software.



The use of any non-approved software in conjunction with the hardware installation, without the written consent of Clipsal Integrated Systems, may void any warranties applicable to the hardware.

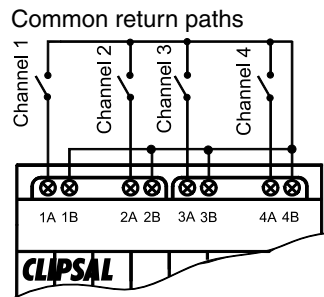
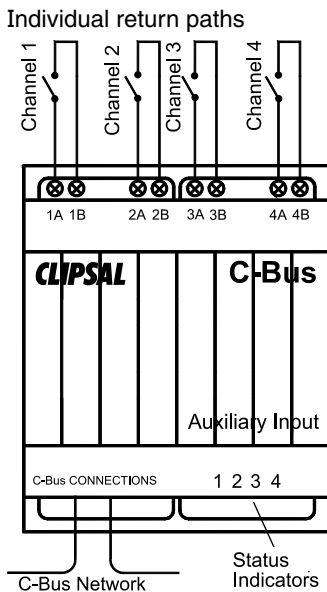
### 3.0 Capabilities

The L5504AUX C-Bus Four Channel Auxiliary Input Unit provides remote access to C-Bus using any dry contact switch mechanism, such as the Clipsal 30M range. In this way, the user can match 2000 Series, Standard range, Heritage range, or Metal Plate products with C-Bus. Reed, pressure, micro or other switches may also be used to enhance system flexibility. The unit is an input device that transmits messages (to output devices) to control loads. All C-Bus switching commands are available, including on / off, toggle, timer, dimming functions, etc. Dimming operations are best achieved using a spring return type switch such as the Clipsal 30MBPR Bell Press mechanism.

The unit's four remote switches are electrically isolated from the C-Bus network by an internal transformer on each channel input. There is no restriction on cable type between remote switches and the L5504AUX unit. Cable runs should be limited in length so the maximum resistance of the cable plus switch does not exceed 1k ohms. The unit's input channels may be wired using common return path wiring, to simplify cabling. However, the inputs are polarity sensitive (refer to wiring instructions and diagrams that follow).

### 4.0 Wiring Diagram

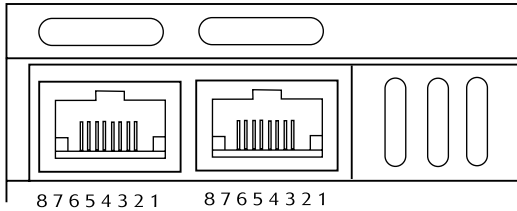
Open collector type switching is allowed with these inputs, however the reference voltage must be Earth potential. Connection to mains reference voltages is NOT allowed.



Be sure to tie the common terminals together when using this wiring style

## 5.0 Connection to the C-Bus Network

Installation requires connection to the unshielded twisted pair (UTP) C-Bus network cable.



Category 5e data cable is required (Clipsal catalogue number 5005C305B or 5005C305BST).

For ease of installation, a Clipsal RJ5CB400PL Category 5e UTP patch cord is included with the L5504AUX. No more than 100 L5504AUX units may be connected to one physical C-Bus network.

RJ Pin	C-Bus Connection	Colour	5504AUX
1	Remote ON	Green/White	Not Connected
2	Remote ON	Green	Not Connected
3	C-Bus Neg (-)	Orange/White	C-Bus Neg (-)
4	C-Bus Pos (+)	Blue	C-Bus Pos (+)
5	C-Bus Neg (-)	Blue/White	C-Bus Neg (-)
6	C-Bus Pos (+)	Orange	C-Bus Pos (+)
7	Remote OFF	Brown/White	Not Connected
8	Remote OFF	Brown	Not Connected

### Notes:

The L5504AUX does not have remote override (On/Off) functions. However, override connections are internally connected and looped through the unit.

Care must be taken when installing the auxiliary input unit inside a mains-rated enclosure. The installer must secure mains cables in the distribution enclosure using cable ties or trunking as required by local wiring rules. All extra low voltage wiring and input wiring for each channel must be segregated and secured from the mains wiring. Mains rated insulation is recommended for all auxiliary input unit channel wiring.

Several rubber plugs are supplied for unused RJ45 connectors, to stop foreign bodies from entering the unit. Always install these plugs in unused locations.

## 6.0 Status Indicators

The L5504AUX incorporates four status indicators (one per channel) to indicate the group address status.

Indicator Status	Meaning
On	Load/Group address is on; indicator is programmed to always be on.
Flashing	Timer operation in progress.
Off	Load/Group address is off; indicator is programmed to always be off; unit is not powered.

## 7.0 C-Bus Power Requirements

The L5504AUX draws 18mA from the C-Bus network. Adequate C-Bus Power supply units must be installed to support the connected devices. If in doubt, use C-Bus Toolkit for power calculations.

## 8.0 Power Surges and Short Circuit Conditions

The L5504AUX is not directly connected to mains, however the mains voltage that is used to supply power to the C-Bus network must be limited to the range specified. Each unit incorporates transient protection circuitry and additional external power surge protection devices should be used to enhance system immunity to power surges. It is strongly recommended that protection equipment such as the Clipsal 970 be installed.

## 9.0 Programming Requirements

The L5504AUX must be programmed to set a unique identification (unit address) and mode of operation on the C-Bus network. C Bus Toolkit can be used to configure the:

- project name
- part name
- unit address
- key/channel configurations.

The C-Bus installation software can be downloaded from the Clipsal Integrated Systems web site ([www.clipsal.com/cis](http://www.clipsal.com/cis)). For further information about the programming of this, and other C-Bus units, please refer to the C Bus Toolkit help file.

## 10.0 Megger Testing

Megger testing must never be performed on the C-Bus data cabling or terminals as it may degrade the performance of the network.

Megger testing of the mains wiring of an electrical installation that has C-Bus units connected will not cause any damage to C-Bus units. Since C-Bus units contain electronic components, the installer should interpret megger readings with due regard to the nature of the circuit connection.

## 11.0 Standards Complied

Changes or modifications not expressly approved by Clipsal could void the user's authority to operate the equipment.

### *Australian/New Zealand EMC & Electrical Safety Frameworks and Standards*

Standard/Directive	Title
AS/NZS 1044: 1995, incl. A1, A2IEC/CISPR14-1: 1993, incl. A1, A2EN55014-1: 2000, incl. A1CISPR14-1: 2000, incl. A1	Limits and methods of measurement of radio disturbance characteristics of electrical motor-operated and thermal appliances for household and similar purposes, electric tools and similar electric apparatus.

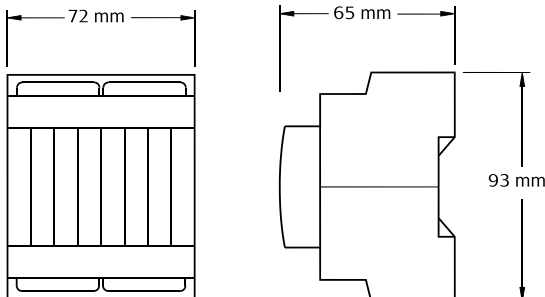
### *European Council Directives and Standards*

Standard/Directive	Title
EN61000-3-2: 2000 IEC61000-3-2: 2000	Electromagnetic Compatibility (EMC) Part 3 Limits Section 2: Limits for Harmonic Current Emissions.
EN60669-2-1: 2000 IEC60669-2-1: 1995, incl. A1, A2	Switches for household and similar fixed electrical installations - Part 2: Particular requirements – Section 1: Electronic switches.

## 12.0 Electrical Specifications

Catalogue No.	5504AUX Series
C-Bus Supply Voltage	15 - 36 V d.c.
Current Drawn	18mA
a.c. Input Impedance	50k $\Omega$ @ 1kHz
Electrical Isolation Rating	500 V RMS C-Bus/Remote input 500 V RMS Remote input/Remote input
Maximum Switch Resistance	1k $\Omega$ (including cable resistance)
Contact Voltage	5 V d.c.
Switch Closed Current	0.4mA
Maximum Number of Units on a Single C-Bus Network	100 units
C-Bus Unit Type	DINAUX4 L5504AUX
Control Functions	Load switching, dimming, timers, remote scene triggering
Status Indicators	Orange, one indicator per channel
Warm-Up Time	5 seconds
C-Bus Input Terminals	2 x RJ45 sockets
Shipping Weight	130g
Storage Temperature Range	-10 – 60° C
Operating Temperature Range	0 – 45° C
Operating Humidity Range	10 – 95% RH
Dimensions (L x W x H)	72 x 93 x 65 mm

## 13.0 Dimensions



There are no user serviceable parts inside.

## 13.0 Warranty

### Two-Year Warranty

The L5504AUX C-Bus auxiliary input unit is guaranteed against faulty workmanship and materials for a period of two (2) years from the date of installation. The warrantor is Clipsal Australia Pty Ltd, with registered offices in all Australian States.

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.

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