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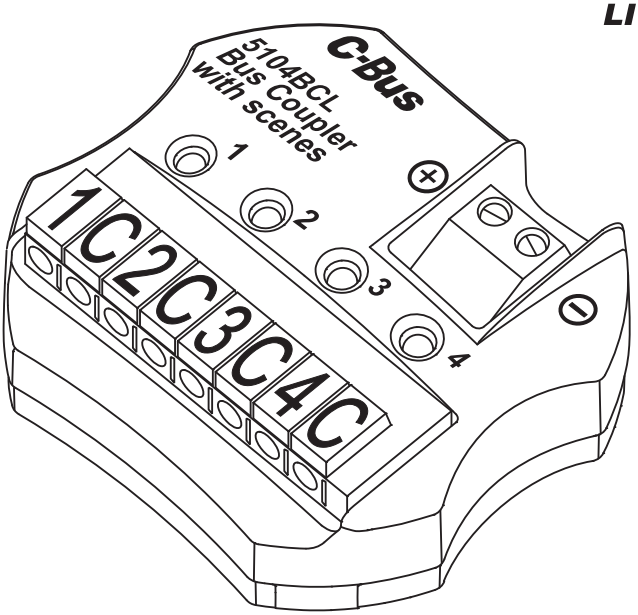


C-Bus®

C-Bus Bus Coupler with Scenes

5102BCLEDL
5104BCL

TWO YEAR WARRANTY

Installation Instructions

Contents

1.0 Product Range

5102BCLEDL C-Bus 2 Channel Bus Coupler with scenes and remote LEDs

5104BCL C-Bus 4 Channel Bus Coupler with scenes

2.0 Important Notes

- Do not connect building power to the C-Bus Bus Coupler.
- The input channels of the C-Bus Bus Coupler are NOT isolated from the C-Bus network. Ensure that all cables connected to C-Bus are well separated from mains wiring, earthed metal structures and electrical noise sources.
- A maximum of 1 metre of wire may be used to connect an individual switch or LED to a C-Bus Bus Coupler's input or indicator terminal.
- A maximum of 10 metres of wire in total may be used to connect switches to all C-Bus Bus Couplers present on an individual C-Bus network. Examples of this are 10 channels at 1000 mm each or 24 channels at 415 mm each. Exceeding this length may adversely affect C-Bus network communications. If longer connections are required, it is recommended that an L5504AUX C-Bus Auxiliary Input Unit be used.
- Use only non-flashing LEDs with a current rating of at least 10 mA to connect to the 5102BCLEDL's indicator terminals.
- Dimming operations are best achieved using momentary, normally open switches.
- 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.

3.0 Description

The 5102BCLEDL and 5104BCL C-Bus Bus Couplers are input devices that enable mechanical voltage free switches to connect to a C-Bus network. Such mechanical switches can then be used in place of regular C-Bus wall switches to control C-Bus devices such as dimmers and relays, or for use in logical input applications.

Virtually any type of voltage free switch can be connected to the 5102BCLEDL or 5104BCL (momentary or latching). This includes standard wall switches such as the 2000 Series, Heritage, and Slimline range, and specialised switches such as reed and pressure switches.

The 5102BCLEDL provides two input channels and allows the connection of external LED indicators using wired leads. The 5104BCL provides four input channels with built-in LED indicators. Both units feature scene management and learn mode capability.

4.0 Wiring Instructions

C-Bus Bus Couplers are designed to fit within a wall box, behind a wall switch. Virtually any type of insulated wire with a diameter between 0.2 mm^2 and 2.0 mm^2 may be used to connect the voltage free switches and LEDs (up to 1 metre of wire per switch/channel/indicator).

The diagram in Figure 1 shows two wiring methods for the 5102BCLEDL. To minimise the amount of wiring required, a single common wire may be used for the channel inputs (as in the unit on the right).

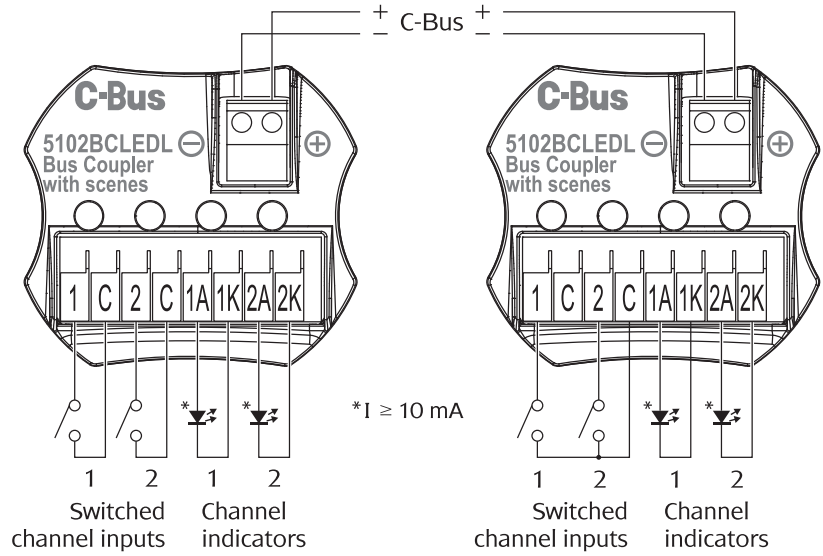


Figure 1 - 5102BCLEDL wiring

If an indicator is not required the relevant A and K terminals are not connected (nor are they linked together).

The diagram in Figure 2 shows two wiring methods for the 5104BCL. As with the 5102BCLEDL, a single common wire may be used for the channel inputs (as in the unit on the right).

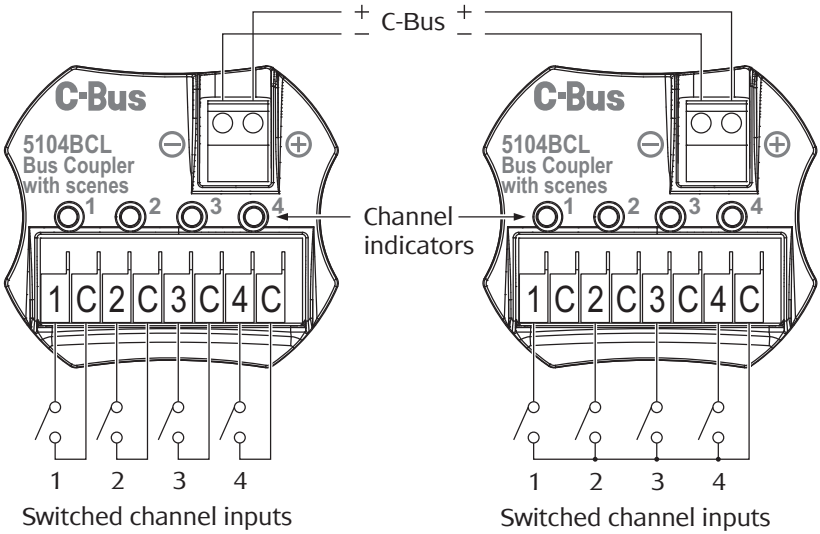


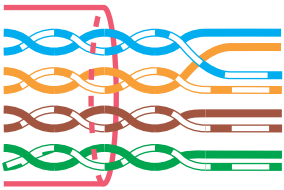
Figure 2 - 5104BCL wiring

NOTE The Common (C) terminals are internally connected to C-Bus negative.

5.0 C-Bus Network Connection

Connection to the C-Bus network is made using the two-terminal connector on the top of the Bus Coupler. Use Cat-5 Unshielded Twisted Pair (UTP) C-Bus cable. The use of bootlace ferrules (crimps) is recommended for a reliable connection.

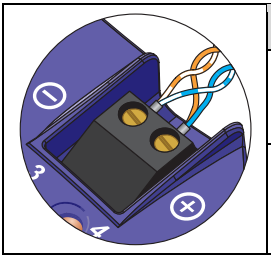
C-Bus cable conductor assignments are provided in Figure 3. The Clipsal catalogue number for the C-Bus Cat-5 UTP cable is 5005C305B.



C-Bus Positive: blue + orange
C-Bus Negative: blue & white + orange & white
Remote OFF: brown + brown & white
Remote ON: green + green & white

Figure 3 - C-Bus cable conductor assignments

Connector pinouts are provided in Table 1. The Remote ON and Remote OFF conductors are not connected to this unit.



Terminal	C-Bus Connection	Conductors
	C-Bus Negative (-)	orange & white
		blue & white
	C-Bus Positive (+)	blue
		orange

Table 1 - C-Bus connector pinouts

6.0 C-Bus Power Requirements

C-Bus Bus Couplers draw 18 mA from the C-Bus network. Adequate C-Bus Power Supply Units must be installed to support the connected devices.

The Network window of a C-Bus Toolkit project provides a summary of a C-Bus network according to the units added to the Database. This can be helpful in determining the power supply requirements of a particular network.

7.0 Megger Testing

Important points when megger testing an electrical installation:

- Only megger test when mains cabling is disconnected from C-Bus output units.
- Do not megger test the C-Bus cable.

8.0 Programming Requirements

The C-Bus Bus Coupler must be programmed before it will function as part of a C-Bus network. This can be accomplished using Learn Mode. However, using the C-Bus Toolkit software provides a greater level of flexibility and customisation.

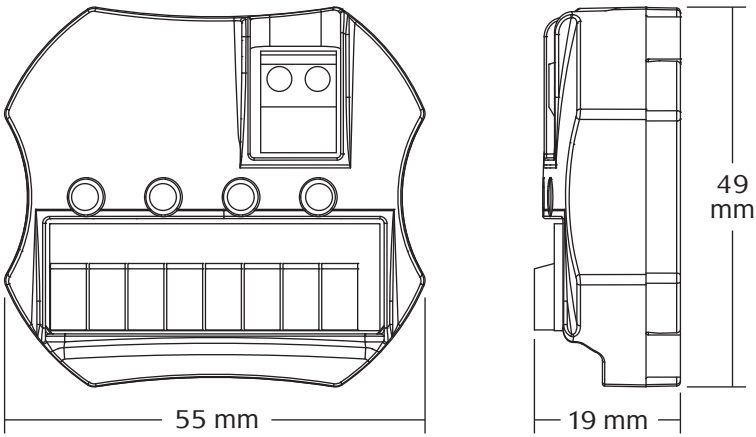
The C-Bus Toolkit software can be downloaded from the Clipsal Integrated Systems web site (www.clipsal.com.au). Further information about programming C-Bus units is provided at this site.

9.0 Electrical Specifications

Parameter	Description
C-Bus supply voltage	5102BCLEDL with no LEDs : 25 to 36 V d.c. 5102BCLEDL with both LEDs or 5104BCL : 15 to 36 V d.c.
C-Bus current	18 mA
C-Bus AC input impedance	100 kΩ @ 1 kHz
Voltage across input	External switch open: 5 V d.c. External switch closed: 0 V d.c.
Current through closed external switch	< 50 μA
Isolation between inputs	Not isolated
Isolation between inputs and C-Bus	Not isolated
Control functions	Load switching, dimming, timers
Status indicators (5104BCL)	Orange, one indicator per channel
LED current rating (5102BCLEDL)	≥ 10 mA
Warm-up time	5 seconds
Operating temperature range	0 to 45 °C
Operating humidity range	10 to 95% RH

10.0 Mechanical Specifications

Parameter	Description
Dimensions (W×H×D)	55 × 49 × 19 mm
Weight	30 g
Input terminals	Spring loaded terminal block accommodating 0.2 to 2.0 mm^2 (24 to 14 AWG)
C-Bus connections	Terminal block accommodating 0.2 to 1.5 mm^2 (24 to 16 AWG)



11.0 Standards Complied

DECLARATIONS OF CONFORMITY

Australian/New Zealand EMC & Electrical Safety Frameworks and Standards
Model 5102BCLEDL and 5104BCL products comply with the following:

Regulation	Standard	Title
EMC (C-Tick)	AS/NZS CISPR 14-1	Electromagnetic compatibility – Requirements for household appliances, electric tools and similar apparatus – Part 1: Emissions
	AS/NZS CISPR 15	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment

European Directives and Standards
Model 5102BCLEDL and 5104BCL products comply with the following:

European Council Directive	Standard	Title
EMC Directive 204/108/EC	EN 60669-2-1	Switches for Household and Similar Fixed Electrical Installations Part 2-1

Other International Directives and Standards
Model 5102BCLEDL and 5104BCL products comply with the following:

Regulation	IEC Standard	Title
EMC	60669-2-1	Switches for Household and Similar Fixed Electrical Installations Part 2-1
	CISPR 14-1	Electromagnetic compatibility – Requirements for household appliances, electric tools and similar apparatus – Part 1: Emissions
	CISPR 15	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment

12.0 Warranty

5102BCLEDL and 5104BCL C-Bus Bus Couplers carry a two-year warranty against manufacturing defects.

Warranty Statement

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 Australia 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 (refer to the back page).

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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 Numbers	
Australia	1300 722 247 (CIS Technical Support Hotline)
New Zealand	0800 888 219 (CIS Technical Support Hotline)
Northern Asia	+852 2484 4157 (Clipsal Hong Kong)
South Africa	011 314 5200 (C-Bus Technical Support)
Southern Asia	+603 7665 3555 Ext. 236 or 242 (CIS Malaysia)
United Kingdom	0870 608 8 608 (Schneider Electric Support)

Technical Support email: tech.training@clipsal.com.au

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Contact us: clipsal.com/feedback

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