



C-Bus Single Channel Relay with Cord Set
Installation Instructions

5101RC Series

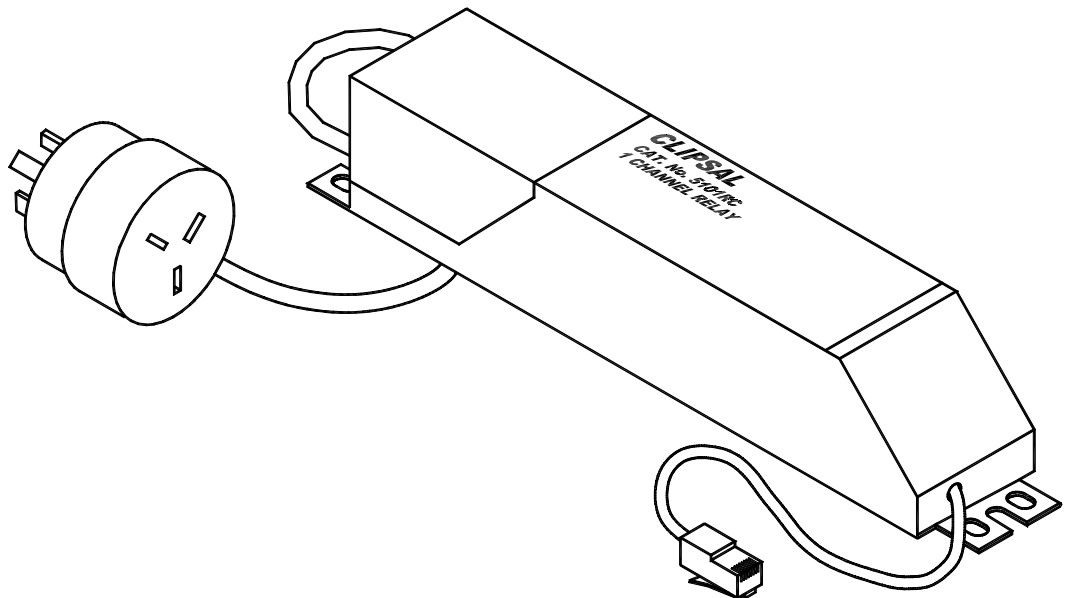


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1.0 Product Range

5101RC C-Bus Single Channel Relay Unit with Cord Set (220-240V, 48-62Hz)

2.0 Description

The 5101RC Single Channel Relay with Cord Set is a C-Bus Output device specifically designed for use with fluorescent light fittings. It provides a switched active output controlled by a C-Bus Network. The switch, when closed, provides mains power to it's connected load. When open, the load is turned off.

Manual Override facilities are available, permitting stand alone operation in the case of a power loss on the C-Bus Network. A special Programming Mode can be used to configure the Unit before the mains are connected. The Unit isolates the mains power from the extra low voltage C-Bus Network.

The Units are pre-wired, permitting fast installations in commercial premises, particularly hi-bays in factories. The C-Bus side is wired with approximately 550mm of cable type 5005C305B terminated with a RJ45 connector. The mains side is wired with approximately 500mm of double insulated mains cable terminated with a Clipsal NO.461 plug and socket.

The 5101RC does not draw any current from the C-Bus Network during normal operation.

3.0 Connection to C-Bus Network

The C-Bus terminals are pre-wired with approximately 550mm of C-Bus cable type 5005C305B and terminated with an 8 way RJ45 plug. The following table shows the pre-terminated C-Bus cable connections:

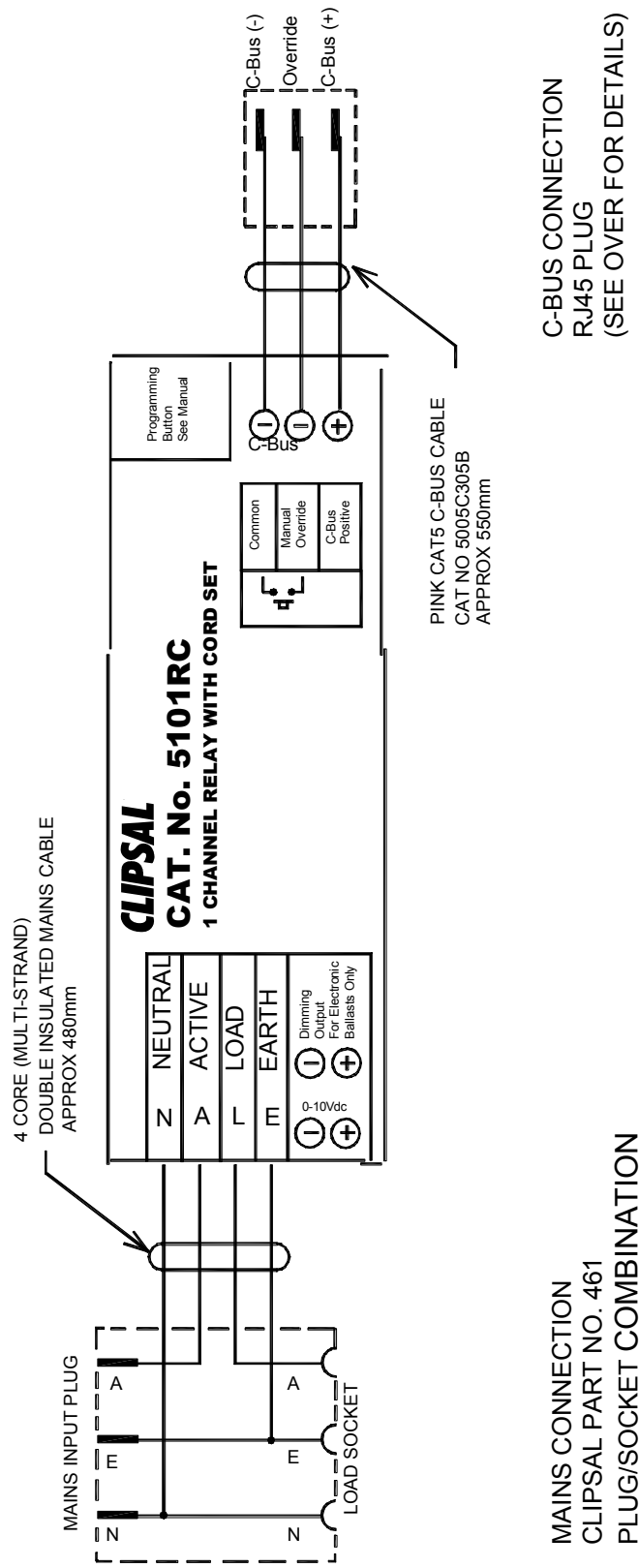
RJ Pin No.	Cable Colour	C-Bus Connections	5101RC
(EIA568A)			
1	Green/White	Remote On	Remote On
2	Green	Remote On	Remote On
3	Orange/White	C-Bus (-)	C-Bus (-)
4	Blue/White	C-Bus (+)	C-Bus (+)
5	Blue	C-Bus (-)	C-Bus (-)
6	Orange	C-Bus (+)	C-Bus (+)
7	Brown/White	Remote Off*	Not Connected
8	Brown	Remote Off*	Not Connected

* Note: The 5101RC does not have a Remote Off function, however these connections must be maintained for the correct operation of this function across the C-Bus Network.

4.0 Status Indicator

Indicator	Mains Power	C-Bus Communications
On	OK	OK
Flashing	OK	Absent
Off	Absent	Unknown

5.0 Wiring Diagram



Note: The 5101RC Unit is pre-wired in accordance with the diagram above.

6.0 Manual Override Input

The centre terminal of the extra low voltage C-Bus connector provides a Manual Override facility. By shorting the Manual Override Input with the C-Bus negative(-) terminal, the load terminal will be forced to the ON state. Any C-Bus command will be ignored until the Manual Override Input short circuit is removed. Upon release of the Manual Override Input, the load terminal will be forced to the OFF state. At this time the C-Bus error detection/correction algorithms will dictate the state of the output (ie: the switched active output will return to the state defined by it's controlling input device(s)).

7.0 Programming Switch

The Single Channel Relay can be programmed without a mains connection. The Unit can be connected to any operational C-Bus Network capable of supporting two or more additional C-Bus Units (current consumption in programming mode is approximately 36mA). Enable the programming mode by pressing and holding the Programming Switch, for approximately 5 seconds. In this mode the Unit may be configured using the C-Bus Installation Software, however the switched mains load terminals will not be functional until programming is completed and a mains connection established. Do not use the Programming Switch during normal mains operation.

The Programming Switch is accessible by removing the plastic cover on the low voltage C-Bus end of the Unit.

8.0 Power Up Load Status

All C-Bus Units have onboard non-volatile memory, which stores the operating state of the Unit in case of a power loss. The Single Channel Relay Units will, by default, retain the current output status if C-Bus power is lost. Please refer to the C-Bus Installation Software User's Guide for information relating to the programming of Relay Output Units.

9.0 Power Surges

The mains voltage must be limited to the range specified for any Unit which is mains powered. 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 overvoltage equipment such as the Clipsal 970 is installed at the switchboard.

10.0 Megger Testing

Megger testing 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.

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

11.0 Programming Requirements

As with other C-Bus Units, the Relay Units must be programmed to set their unique identification and the mode of operation on the C-Bus Network. The C-Bus Installation Software can be used to configure all operational parameters including the specification of control sources, and power up options. Please refer to the C-Bus Technical Manual (5000M/2) for information relating to the programming of Relay Output Units.

Please Note:

The 5101 and 5101RC Series C-Bus Single Channel Relay devices are compatible with C-Bus2 Learn Mode, however these units will not participate in Learn operations. Units must be programmed using the C-Bus Installation Software v2.1.0 (or higher).

12.0 Important Warning

The use of any non C-Bus Software in conjunction with the hardware installation without the written consent of Clipsal Integrated Systems Pty Ltd may void any warranties applicable to the hardware.

13.0 Standards Complied

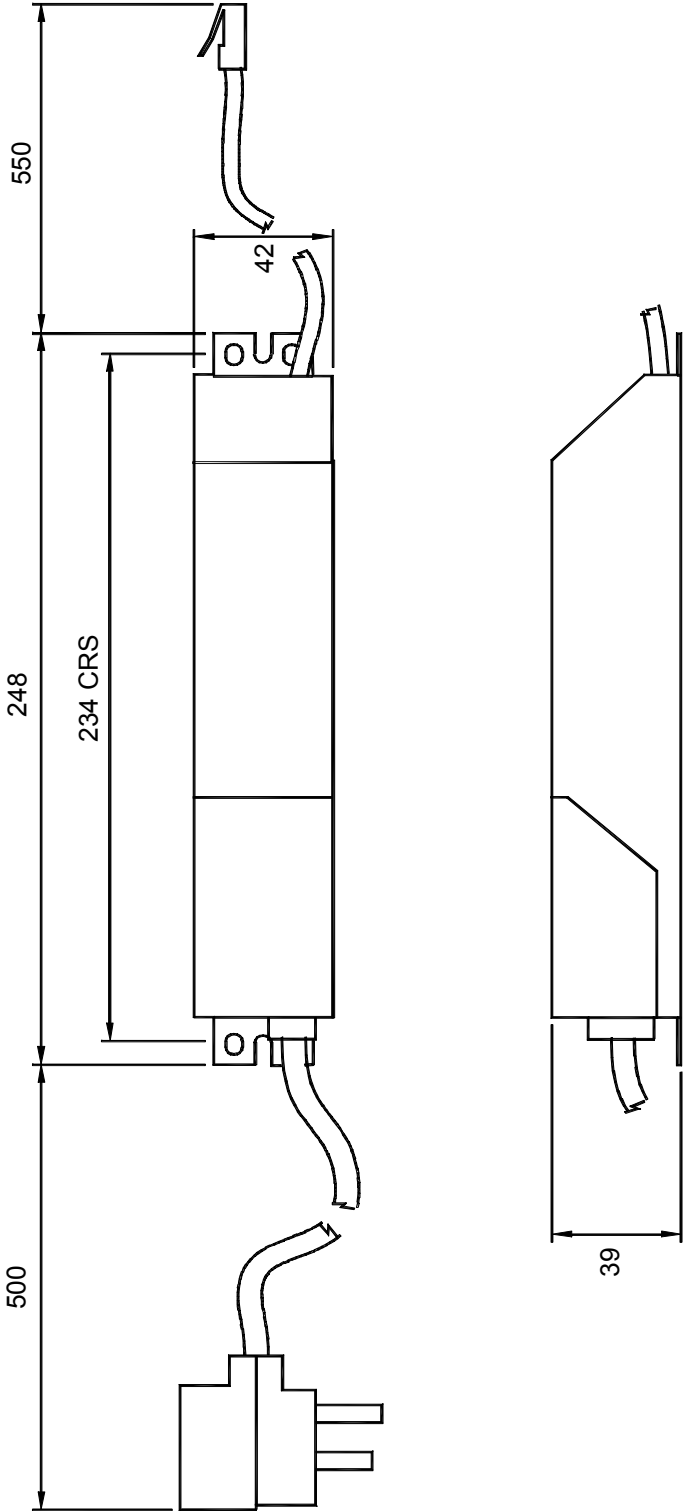
Standard/Directive	Title
AS/NZS 1044:1995; IEC/CISPR 14-1:1993; BS/EN 55014-1:1994	RFI Emissions Standard
AS/NZS3100	General Requirements for Electrical Equipment

14.0 Product Specifications

Electrical Specifications

Catalogue No.	5101RC
C-Bus Input Voltage Normal Operation Programming mode	15 - 36Vd.c. @ 0mA nominal 15 - 36Vd.c. @ 36mA nominal
Mains Supply	220 – 240Va.c.
Mains Frequency	48 to 62 Hz
Mains Power Consumption	<3W Maximum OFF state consumption
Rated Load Current	10A
Electrical Endurance Resistive Load Incandescent Load Fluorescent Load Inductive Load	60,000 minimum switching operations 60,000 minimum switching operations 60,000 minimum switching operations 60,000 minimum switching operations
Electrical Isolation Rating	3.5kV RMS for one minute (opto-isolated UL recognised File No. E54915)
Shipping Weight	580 gm
Operating Temperature Range	0 – 50°C
Operating Humidity Range	10 – 95% RH
Dimensions	248L x 42W x 39H (not including cables)

15.0 Mechanical Specifications



All dimensions are in millimeters.
No user serviceable parts inside.

Further Information

For further information about configuring the 5101RC and other C-Bus devices please consult the documentation supplied. Further assistance can be obtained as follows:

- **C-Bus Manuals**
The 5000M/2 C-Bus Technical Manual provides a comprehensive and definitive guide to Clipsal C-Bus. Includes hardware and software specifications, product datasheets, system design and installation guides, and software overview with fully worked programming examples.
- **C-Bus Installation Software**
The 5000S/2 C-Bus Installation Software (includes 5000M/2 C-Bus Technical Manual) may be used to unlock the power and flexibility of Clipsal C-Bus. Unit operation may be completely customised to suit user requirements. Advanced control functions may be programmed.
- **C-Bus Installer Training Courses**
Contact your nearest Clipsal Integrated Systems Sales or Technical Support Officer and enquire about Clipsal C-Bus Installer Training and Certification Programs today !!
- **Technical Support and Troubleshooting**
For further assistance, please consult your nearest Clipsal Integrated Systems Sales Representative or Technical Support Officer.

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