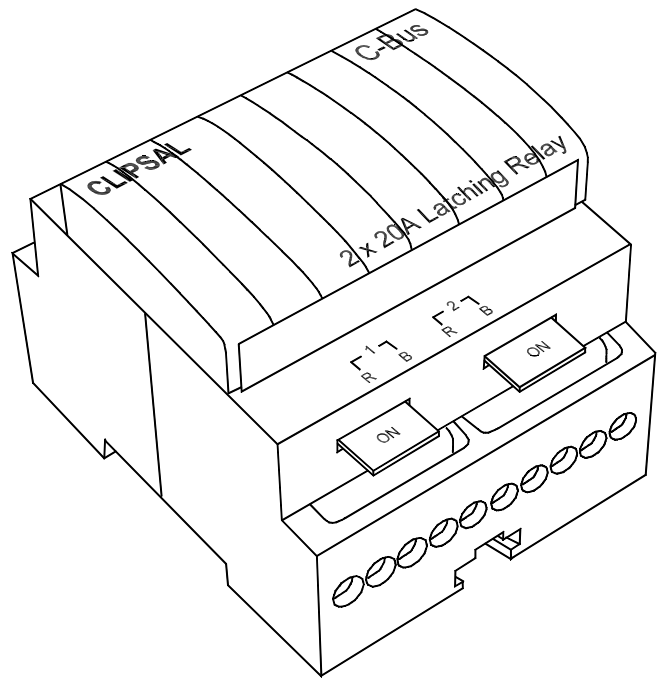




**C-Bus Latching Relay Module  
Installation Instructions**

5002RL20 Series



## Table of Contents

Section.....	Page
1.0 Product Range .....	3
2.0 Description .....	3
3.0 Installation Instructions.....	4
4.0 Manual Override Facilities.....	5
5.0 Power Up Load Status .....	5
6.0 Power Surges.....	5
7.0 Megger Testing .....	5
8.0 Programming Requirements .....	5
9.0 Standards Complied.....	5
10.0 Product Specifications.....	6
11.0 Mechanical Specifications.....	7

### Copyright Notice

© Copyright 2002 Clipsal Integrated Systems Pty Ltd. All rights reserved.

### Trademarks

- Clipsal is a registered trademark of Gerard Industries Pty Ltd.
  - C-Bus is a registered trademark of Clipsal Integrated Systems Pty Ltd
  - Intelligent Building Series is a registered trademark of Clipsal Integrated Systems Pty Ltd
- All other logos and trademarks are the property of their respective owners.

### Disclaimer

Clipsal Integrated Systems reserves the right to change specifications or designs described in this manual without notice and without obligation.

## 1.0 Product Range

**5002RL20** C-Bus Two Channel Latching Relay Module, 20A per channel

## 2.0 Description

The 5002RL20 Two Channel Latching Relay Module is a non-intelligent product which contains two latching relays for load control. For ease of installation they are DIN Rail mounted, measuring 4M wide. Two independent voltage free relay contacts are provided for general purpose switching applications.

The unit is cable of switching mains voltages. Each output is isolated, enabling multiple voltage phases to be switched using the same unit. Extra low voltage signals may also be switched using this unit.

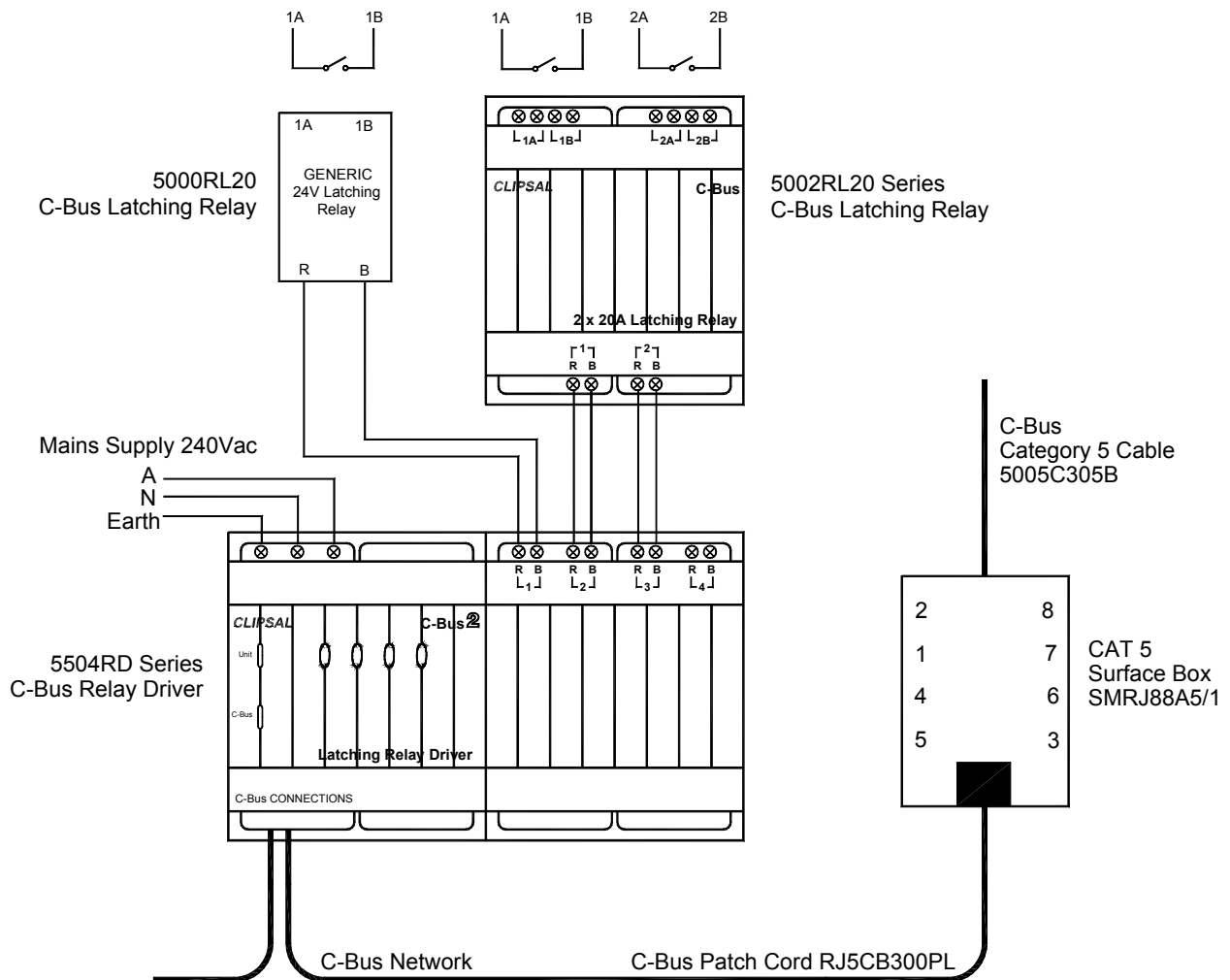
The two latching relays require a suitable drive control for actuation (24Vdc, 20ms pulse input). It is intended that the 5504RD Series C-Bus Relay Drive products be used to provide these drive control signals (refer to wiring diagram).

Manual override facilities are available via mechanical sliders. This permits stand alone operation in the case of a power loss on the relay drive device. The override status is clearly marked on the unit.

The unit provides effective isolation between the load and extra low voltage connections.

### 3.0 Installation Instructions

The 5002RL20 should be wired as shown below:



#### Notes:

A maximum of 1 metre of cable per channel should be allowed for interconnection of the relay driver and latching relay modules. Cable type should be  $\geq 1\text{mm}^2$ , and may be single or double insulated. Adequate segregation to any mains cabling must be provided, and all cabling must be fixed/secured using cable ties or similar as per the safety provisions of AS/NZS3100.

The relay drive terminals are labelled R and B to enable easy wiring when this unit is combined with the 5504RD Series C-Bus Relay Driver products. This ensures the correct polarity for ON and OFF drive pulses.

Note that a maximum of one only 5002RL20 relay module channel may be driven per output channel of the 5504RD Series C-Bus Relay Driver product.

#### 4.0 Manual Override Facilities

Mechanical sliders are provided for each channel on the Unit, allowing the user to override the status of each relay.

Note that the override state is not permanent – once overridden each relay may still be controlled normally, however some temporary state mismatches may occur. To correct, first synchronise the output state with the state of the controlling device.

When used in conjunction with a C-Bus Relay Drive Unit (such as the 5504RD Series Four Channel Latching Relay Driver), additional C-Bus Local and Remote Override facilities are available. Please refer to the installation instructions supplied with the Relay Drive product for more information.

#### 5.0 Power Up Load Status

The 5002RL20 Relay Module contains latching relays, and will therefore retain the current output status on each channel during and after a mains power loss.

When used in conjunction with a C-Bus Relay Drive Unit (such as the 5504RD Series Four Channel Latching Relay Driver), programmable power-up options provided on that unit allow the installer to customize the relay settings after a power failure. Please refer to the installation instructions supplied with the Relay Drive product for more information.

#### 6.0 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.

#### 7.0 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.

#### 8.0 Programming Requirements

There is no programming required for this product.

#### 9.0 Standards Complied

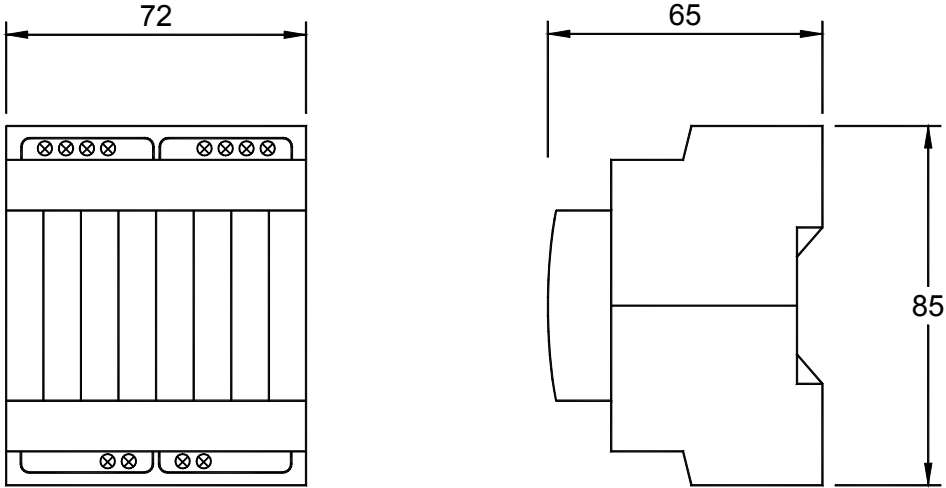
Standard/Directive	Title
AS/NZS 3100:1997	General Requirements for Electrical Equipment
IEC 742:1983;	Requirements for Safety Extra Low Voltage

## 10.0 Product Specifications

### Electrical Specifications

Catalogue No.	5002RL20
Input Drive	
Drive Voltage	24Vdc nominal (polarity defines ON or OFF)
Drive Current	500mA nominal
Drive Pulse Duration	20 to 100 ms (non-continuous)
Rated Load Voltage	240Vac
Rated Load Current	20A
Electrical Endurance	
Resistive Load	60,000 minimum switching operations
Incandescent Load	60,000 minimum switching operations
Fluorescent Load	60,000 minimum switching operations
Inductive Load	60,000 minimum switching operations
Contact Type	SPST, Voltage Free, Magnetically Latched
Electrical Isolation Rating	3.5kV RMS for one minute (opto-isolated UL recognized File No. E54915)
Input Terminals	1 terminal per channel, each accommodating 2 x 1.5mm <sup>2</sup> or 1 x 4mm <sup>2</sup> cable
Load Terminals	2 terminals per channel, each accommodating 2 x 1.5mm <sup>2</sup> or 1 x 4mm <sup>2</sup> cable
Shipping Weight	180 gm
Storage Temperature Range	0 – 60°C
Operating Temperature Range	0 – 45°C
Operating Humidity Range	10 – 95% RH
Dimensions (L x W x H)	72 x 85 x 65 mm

### 11.0 Mechanical Specifications



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

## Further Information

For further information about configuring this product 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.

<b>Technical Support Hotline</b>	1 300 722 247 (Cost 25¢ per call, Australia Only)
<b>Technical Support Email</b>	techsupport.cis@clipsal.com.au
<b>Sales Support Email</b>	sales.cis@clipsal.com.au
<b>Clipsal Integrated Systems Website</b>	clipsal.com/cis

## Products of Clipsal Integrated Systems Pty Ltd

ABN 15 089 444 931

### Head Office

12 Park Terrace, Bowden  
South Australia 5007

International Phone +61 8 8269 0560  
International Fax +61 8 8346 0845  
Internet clipsal.com/cis  
E-Mail cis@clipsal.com.au

1036295