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by Schneider Electric



C-Bus[®]

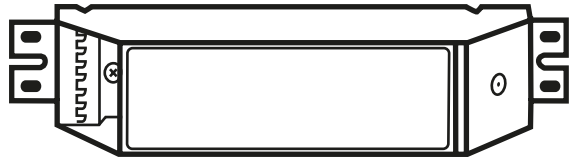
C-Bus Two Channel Voltage Free Relay



Installation Instructions

Attention to the Installing Electrician

5102RVF
E5102TRVF



Product Range

5102RVF - C-Bus Two Channel Voltage Free Relay (240V)

E5102TRVF - C-Bus Two Channel Voltage Free Relay (110V)

Description

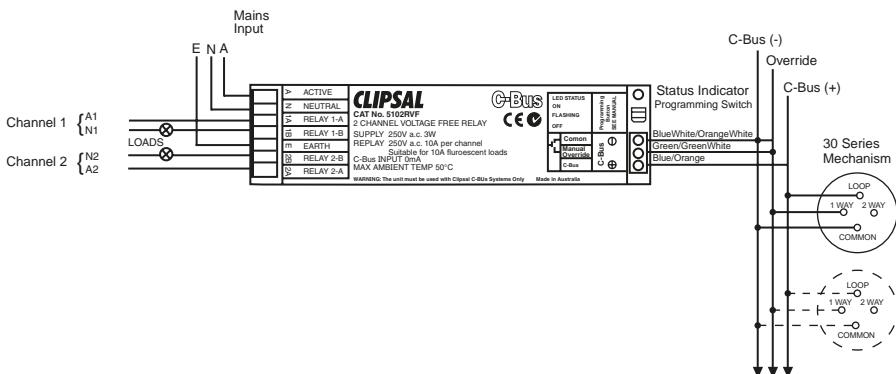
The 5102RVF/E5102TRVF Two Channel Voltage Free Relay is a C-Bus output device that provides two pairs of normally-open relay contacts for general switching applications.

Capabilities

The Two Channel Voltage Free Relay unit comprises two relay switches, controlled by the C-Bus network. Manual Override facilities are available, permitting standalone operation in case of a power loss on the C-Bus network. A special programming mode can be used to configure the unit prior to connection of the mains supply. The unit isolates the mains power from the safe extra low voltage C-Bus network.

The Two Channel Voltage Free Relay unit differs from most other C-Bus devices in that it does not draw any current from the C-Bus network when mains power is on.

5102RVF/E510TRVF C-Bus Two Channel Voltage Free Relay Units



Status Indicator

An indicator shows the status of the C-Bus connection. This indicator is located under the extra low voltage cover of the unit.

Indicator	Mains Power	C-Bus Communications
ON	OK	OK
FLASHING	OK	ABSENT
OFF	ABSENT	UNKNOWN

Manual Override Input

When the centre terminal of the extra low voltage connector is tied to C-Bus negative(-) terminal, both pairs of relay contacts are forced to the ON state. Any C-Bus command is ignored until the Manual Override Input connection to C-Bus negative is removed. Upon release of the Manual Override Input, both pairs of relay contacts are forced to the OFF state. At this time the C-Bus error detection/correction algorithms control the state of the outputs.

Standalone Operation

The C-Bus Two Channel Voltage Free Relay unit can be operated as a 'standalone' device (no C-Bus connection) by means of the Manual Override Input. In this case wiring between 0.2 and 1.5mm² (24-16AWG) of solid or stranded construction should be used, not exceeding one hundred metres in length for each terminal; C-Bus negative(-) or Override.

Programming Switch

The Two Channel Voltage Free 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 extra C-Bus units (current consumption in programming mode approximately 36mA). The programming button may be pressed and held to enable the programming mode. In this mode the unit will not be configured using C-Bus Toolkit software, however the switched mains load is not functional until programming is completed, and a mains connection established. The programming switch should not be used during normal mains operation of the unit.

Power Up Load Status

All C-Bus units have onboard non-volatile memory that stores the operating state of the unit in the event of a power loss. The Two Channel Voltage Free Relay units, by default, retain the current output status if C-Bus power is lost. Please refer to C-Bus Toolkit 'Help' for information relating to the programming of relay output units.

Connection to the C-Bus Network

It is recommended that Category 5 data cable be used (Clipsal catalogue number **5005C305BST STRANDED**). Installation of the Two Channel Voltage Free Relay unit requires connection to the unshielded twisted pair C-Bus network cable. This illustration below shows the recommended cable termination technique for the best electrical performance. Bootlace crimps may also be used to provide a highly reliable connection.



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 Toolkit software is used to configure all operational parameters including the specification of control sources and power up options. Please refer to C-Bus Toolkit 'Help' for information relating to programming the relay output units.

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. For external power surges it is recommended that additional overvoltage equipment such as the Clipsal 970 is installed at the switchboard.

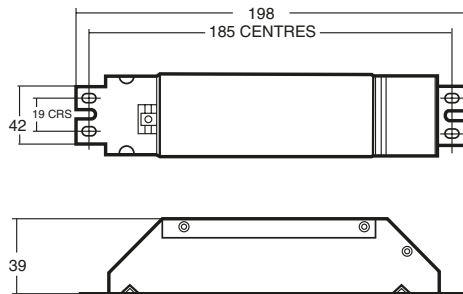
Megger Testing

Do not megger test the relay unit. Test the load wiring only.

Important Warning

The use of any non-C-Bus software in conjunction with the hardware installation, without the written consent of Schneider Electric (Australia) Pty Ltd, may void any warranties applicable to the hardware.

C-Bus Operating Voltage	15 - 36V d.c.	
C-Bus Current	0mA when mains power is on. 36mA programming mode.	
	The relay unit does not provide power to the C-Bus network.	
Mains Supply	192 - 264V a.c.	90 - 130V a.c.
Mains Frequency	48 to 62Hz	
Main Power Consumption	<3W maximum OFF state consumption	
Rated Relay Load Current	10A per channel	
Relay Electrical Endurance	60,000 minimum (operations at rated load current)	
Electrical Isolation Rating (Mains to C-Bus)	3.5kVRMS for one minute (opto-isolated UL recognised File No. E54915)	
Operating Temperature	0 - 50°C	
C-Bus Side Connectors	Screw terminals accommodate 6 x 0.2mm ²	
Output Side Connectors	Spring terminals accommodate 0.2 - 1.5mm ² (24 - 16 AWG) solid or stranded cable	



Dimensions in millimeters

Technical Support Contact Numbers	
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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)

Schneider Electric (Australia) Pty Ltd

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