

CLIPSAL®
LIVING ELECTRICAL



Lifesaver® Safety Switch

2031RCD
Series



Installation Instructions

REGISTERED DESIGN • REGISTERED PATENT

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1.0 Product Range

30mA RCD Protection

2031RCD30	RCD Protected Flush Switch, 230-240V a.c., 50Hz, 20A, 30mA (2000 Series, Horizontal)
2031VRCD30	RCD Protected Flush Switch, 230-240V a.c., 50Hz, 20A, 30mA (2000 Series, Vertical)

10mA RCD Protection

2031RCD10	RCD Protected Flush Switch, 230-240Vac, 50Hz, 20A, 10mA (2000 Series, Horizontal)
2031VRCD10	RCD Protected Flush Switch, 230-240Vac, 50Hz, 20A, 10mA (2000 Series, Vertical)

* Please note that these products are also available in other configurations and come in a wide range of colours, including those suitable for medical applications. For further information, please contact your nearest Clipsal Sales Representative.

2.0 Description

The Clipsal 2031RCD Series RCD Protected Flush Switch features Status Indication of both line and load, and incorporates a powerful 20A RCD (Residual Current Device) – an electronic sensing device specifically designed to protect both people and property from damage or injury in case of an electrical fault.

The RCD constantly monitors the balance of current flow in Active and Neutral conductors of an electrical installation. Should an electrical fault develop, or if the user should come into contact with live parts, the unit will detect the imbalance and automatically cut the electrical supply, virtually eliminating the risk of electrocution from such faults.

The Clipsal 2031RCD Series RCD Protected Flush Switch is capable of protecting any device hard-wired directly to the LOAD terminals, any socket outlet connected 'downstream' of the LOAD terminals, and any appliance plugged into a 'downstream' socket outlet.

3.0 Important Warnings

When installing and operating the Clipsal Lifesaver® Safety Switch, the following must be observed and complied with:

1. The unit must be installed correctly by a qualified electrician in accordance with the detailed instructions in this manual
2. The unit must be tested and reset at least once a month
3. The unit must never exceed four test and reset operations per minute
4. The protection device must not be tampered with or repaired by anyone other than the manufacturer
5. The unit must not have LINE conductors connected to the LOAD terminals
6. If the unit is installed in a Ring Circuit, LINE terminals are only to be wired
7. This product should not be seen as a replacement for safe electrical practices.

Note: The Clipsal Lifesaver® Safety Switch will only protect individuals from Active to Earth contact which is the largest cause of electrocution. It will not protect against active to neutral faults.

4.0 Installation Instructions

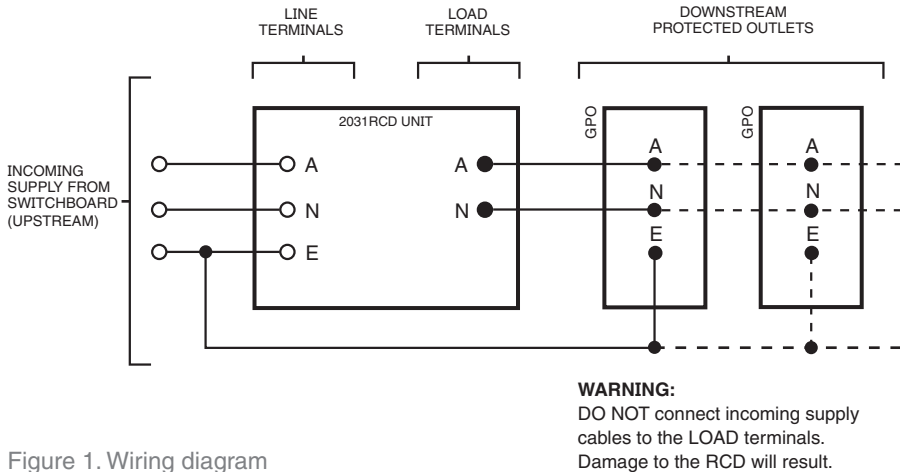


Figure 1. Wiring diagram

Important Notes:

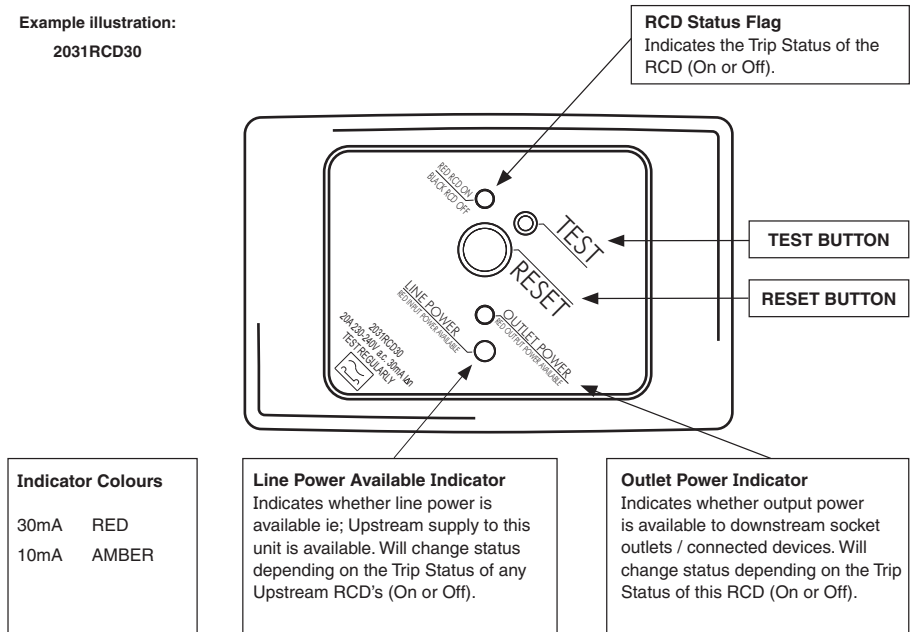
1. LINE terminals MUST be wired with incoming supply wires
2. LOAD terminals MUST NOT be wired with incoming supply wires. Such wiring will DESTROY the unit and VOID the product warranty
3. If there are two or more sets of cables and Earth leakage protection is required in downstream circuits, Active and Neutral supply cables MUST be separated from other Active(s) and Neutral(s) by testing the circuit with a meter or test lamp
4. When the Clipsal Lifesaver® Safety Switch is installed at the beginning of a circuit and wired correctly, all downstream outlets will be Safety Switch (RCD) protected
5. Upstream outlets will NOT be protected by this Safety Switch (RCD)
6. The Safety Switch (RCD) incorporates a double pole 20A isolating switch
7. The Safety Switch (RCD) protects against Earth leakage faults, but will not protect from overload. Fuses or circuit breakers must be installed at the switchboard for affected circuits, and must be 20A maximum rating.

THIS PRODUCT WILL REMAIN UNAFFECTED BY LOSS OF UPSTREAM POWER SUPPLY.

5.0 Operating and Testing

Example illustration:

2031RCD30



Resetting the Unit:

1. Firmly push the large RESET button
2. The RCD Status Flag (RED 'RCD ON'), and Outlet Power Indicator should switch ON.

Testing the Unit:

1. Check that Line Power is available to the unit (Line Power Indicator is ON)
2. Firmly push the small TEST button
3. The RCD Status Flag (RED 'RCD ON'), and Outlet Power Indicator should switch OFF indicating that the RCD has tripped and downstream outlets / devices have been effectively isolated safely from the supply.

Note the above procedures assume that Line Power is available to the RCD Plate (Line Power Indicator is ON). If Line Power is not available (Line Power Indicator is OFF), then:

- The RESET Button will activate the RCD Status Flag (RED 'RCD ON'), but the Outlet Power Indicator will not illuminate. Power will not be available at the socket outlets;
- Pressing the TEST Button will have no effect.

Line Power must be restored to test the unit correctly. Refer to Troubleshooting Guide to remedy.

Important Notes:

1. When the unit is tested it fully checks the operation of the Clipsal Lifesaver® Safety Switch by introducing an actual leakage signal into the detection mechanism
2. When all indicators are illuminated, further operation of the RESET button will have no effect
3. When any indicators are extinguished (black), further operation of the TEST button will have no effect
4. The Clipsal Lifesaver® Safety Switch is a safety device and should be tested at least once a month
5. The Clipsal Lifesaver® Safety Switch has been designed to operate at no more than four reset and four test cycles per minute. Do not exceed these limits
6. Should there be no response to the RESET procedure, DO NOT USE connected devices. Consult the Troubleshooting Guide or seek advice from a qualified electrician.

6.0 Troubleshooting Guide

PROBLEM	RCD STATUS FLAG	OUTLET POWER INDICATOR	LINE POWER AVAILABLE INDICATOR	REASON	ACTION
1. There is no power available to devices connected to the Clipsal Lifesaver Safety Switch (connected devices including hard-wired devices, or downstream socket outlets).	OFF	OFF	OFF	Line Power is not available to the unit.	1. Check incoming power supply to the unit. Replace fuse / Reset circuit breaker as required.
	ON	OFF	OFF		
	OFF	OFF	ON	Unit RCD had tripped	1. Press the RESET Button on the unit.
2. Clipsal Lifesaver Safety Switch Resets OK, then immediately trips out.	Pulses ON then OFF	Flashes ON then OFF	ON	Faulty appliance plugged into Clipsal Lifesaver Safety Switch or protected circuit (downstream)	1. Disconnect all appliances on protected circuit 2. Reset Clipsal Lifesaver Safety Switch, then test each appliance individually using the Clipsal Lifesaver Safety Switch until the faulty appliance is discovered - Do not use the faulty appliance.
3. Clipsal Lifesaver Safety Switch resets then some time later trips out.	Pulses ON then OFF	Flashes ON then OFF	ON	Faulty appliance with a slow leakage build up, plugged into Clipsal Lifesaver Safety Switch or protected circuit OR Cumulative leakage from several appliances combining to exceed rating of outlet.	1. Determine time taken for Clipsal Lifesaver Safety Switch to cut out 2. Disconnect all appliances on the protected circuit 3. Reconnect one appliance at a time and Reset Clipsal Lifesaver Safety Switch for the duration of cut out time until the faulty appliance is discovered 4. Faulty appliance should be checked by qualified person using Clipsal 489D Clamp Meter.
4. Clipsal Lifesaver Safety Switch will not trip out when Test Button is pressed.	ON	ON	ON	Neutral to Earth fault upstream, or Clipsal Lifesaver Safety Switch is faulty.	1. Have electrical contractor check wiring 2. Have Clipsal Lifesaver Safety Switch checked by a qualified person and if faulty return to manufacturer.

General Notes Regarding Problems

- The following appliances may occasionally cause problem No. 3 (Water Heaters, Electric Jugs and Kettles, Steam Irons, Dishwashers, Swimming Pool Equipment, Auto Defrost Refrigerators and Freezers). These items may also cause the Clipsal Lifesaver Safety Switch to 'trip out' initially due to the presence of moisture and dust.
- If problem No. 4 occurs the number of appliances operating from the Clipsal Lifesaver Safety Switch and protected circuit may exceed 20A in total loading and would, after a period of time, blow the fuse or trip out the circuit breaker. It would be necessary to determine the total current being drawn by the appliances. If exceeding 20A, appliances must be disconnected until the total current is less than 20A.
- IMPORTANT:** The Clipsal Lifesaver Safety Switch, when first installed, may result in numerous faulty appliances 'tripping out' the unit. These initial situations should be rectified once the faulty appliances have been located and repaired.
NOTE: Unplug equipment to achieve isolation before any inspection or repair of faulty appliances is attempted. Clipsal's Lifesaver Safety Switch is designed and manufactured to help protect human life, whether in a home, commercial or industrial situation. If a faulty appliance is discovered when using the unit, **DO NOT** use it in an unprotected outlet under any circumstances. The faulty appliance **MUST** be fixed by a qualified person before it is used again.

7.0 Technical Specifications

Parameter	2031RCD30 Series	2031RCD10 Series
RCD Specifications		
Nominal Operating Voltage	230 - 240V a.c.	
Nominal Operating Frequency	50 Hz	
Maximum Load	20A	
Max Tripping Current	30mA	10mA
Typical Trip Time	30ms	
RCD Capability	AC and Pulsating DC Protection	
Circuit Protection Required	I _{nc} 3kA Circuit Protection by MCB or HRC Fuse, 20A Max	
General Specifications		
Operating Temperature Range	-10 to 40°C	
Operating Humidity Range	10 to 90% R.H.	
Mounting Centres	84mm Australian Pattern Plate	
Compliant Standards	<p>AS/NZS 3100: Approval and Test Specification – General Requirements for Electrical Equipment</p> <p>AS/NZS 3190: Approval and Test Specification – Residual Current Devices (Current Operated Earth Leakage Devices)</p> <p>AS/NZS 3003: Electrical Installations – Patient areas of Hospitals, Medical and Dental Practices and Dialyzing Locations (2031RCD10 Series Only)</p> <p>This device complies with the requirements of AS/NZS 3175 Clause 9.21, Type A Residual Current Devices.</p>	
EMC Emission Compliance	AS/NZS CISPR 15:2002	
Specifications Typical @ 25°C ± 5°C		
No User Serviceable Parts Inside		

Warranty

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 the Clipsal 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 of 12 Park Terrace Bowden, South Australia 5007. Telephone (08) 8269 0511. With registered offices in all Australian States.
3. This Clipsal 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 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 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.

Product of Clipsal Australia Pty Ltd

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