



by **Schneider** Electric



Lifesaver[®]
Safety
Switch
2031RC
Series



Installation Instructions

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1.0 Product Range

30mA RCD Protection - Professional Range

2031RC30	RCD Protected Flush Switch, 250V AC, 50Hz, 20A, 30mA (2000 Series, Horizontal).
2031VRC30	RCD Protected Flush Switch, 250V AC, 50Hz, 20A, 30mA (2000 Series, Vertical).

10mA RCD Protection - Medical Grade

2031RC10	RCD Protected Flush Switch, 250V AC, 50Hz, 20A, 10mA (2000 Series, Horizontal).
2031VRC10	RCD Protected Flush Switch, 250V AC, 50Hz, 20A, 10mA (2000 Series, Vertical).
ML2031RC10	Medilec RCD Protected Flush Switch, 250V AC, 50Hz, 20A, 10mA (2000 Series, Horizontal).
ML2031VRC10	Medilec RCD Protected Flush Switch, 250V AC, 50Hz, 20A, 10mA (2000 Series, Horizontal).

2.0 Description

The Clipsal 2031RC Series RCD Protected Flush Switch features a powerful 20A residual current device (RCD) - 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 2031RC 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

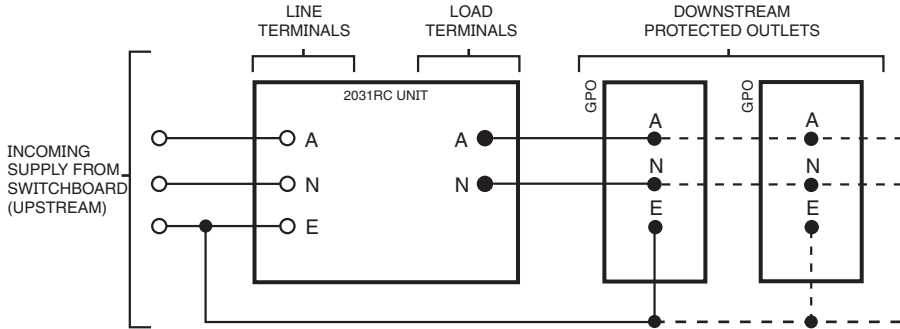
When installing and operating the Clipsal Lifesaver Safety Switch, the following must be observed and complied with:

1. the unit must be installed correctly by a qualified electrician and 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, only LINE terminals are 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

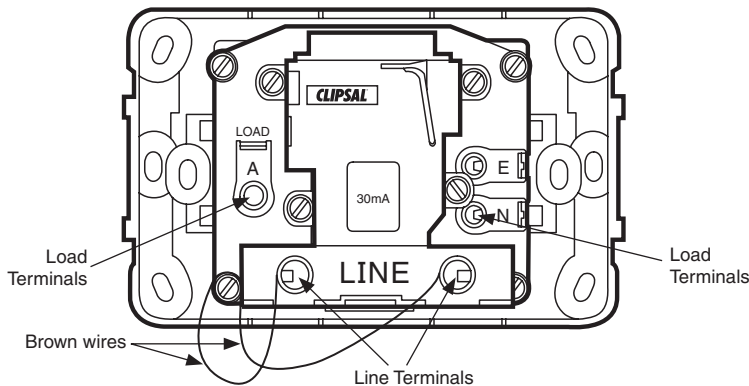
Figure 1. Wiring Diagram



WARNING

DO NOT connect incoming supply cables to the LOAD terminals, damage to the RCD will result.

Figure 2. Terminal Configuration



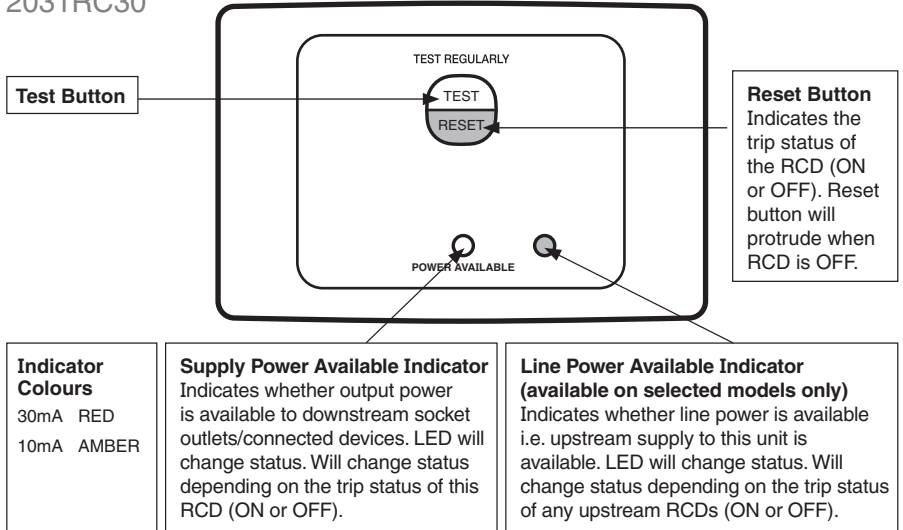
IMPORTANT NOTES

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. The twin brown wires connect to the Line Power Available LED. These wires must be connected into the Line Active and Neutral terminals with the incoming supply wires.
4. 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.
5. 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.
6. Upstream outlets will NOT be protected by this safety switch (RCD).
7. The safety switch (RCD) incorporates a double pole 20A isolating switch.
8. 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 2031RC30



Resetting the Unit

1. Firmly push the RESET button.
2. The 'POWER AVAILABLE' LED indicator will light up and the RESET button will remain at the same height as the TEST button.

Testing the Unit

1. Firmly push the TEST button.
2. The 'POWER AVAILABLE' LED indicator will go out and the RESET button will protrude further than the TEST button.

NOTE

When the indicator is illuminated, further operation of the RESET button will have no effect.

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	LED	BUTTON POSITION	REASON	ACTION
1. Clipsal Lifesaver Safety Switch will not reset.	OFF	RESET is in level position.	No power to Clipsal Lifesaver Safety Switch.	<ol style="list-style-type: none"> 1. Check supply fuse/circuit breaker. 2. Check incoming power supply to Clipsal Lifesaver Safety Switch.
2. Clipsal Lifesaver Safety Switch resets then immediately trips out (power available LED gives a quick flash).	Flashes ON then OFF	RESET is level then flashes to protruded position.	Faulty appliance plugged into Clipsal Lifesaver Safety Switch or protected circuit.	<ol style="list-style-type: none"> 1. Disconnect all appliances on protected circuit. 2. Reset Clipsal Lifesaver Safety Switch then test each appliance individually using the safety switch until the faulty appliance is discovered. 3. Faulty appliances should be checked by a qualified person.
3. Clipsal Lifesaver Safety Switch resets then some time later trips out.	ON then OFF	RESET is level then sets to protruded position.	Faulty appliances with a slow leakage build up plugged into Clipsal Lifesaver Safety Switch, protected circuit or cumulative leakage from several appliances combining to exceed rating of outlet.	<ol style="list-style-type: none"> 1. Determine time taken for Clipsal Lifesaver Safety Switch to cut out. 2. Disconnect all appliances on protected circuit. 3. Reset Clipsal Lifesaver Safety Switch then test each appliance individually using the safety switch for the duration of cut out time until the faulty appliance is discovered. 4. Faulty appliance should be checked by a qualified person using Clipsal 489 Clamp Meter.
4. Clipsal Lifesaver Safety Switch will not trip out when TEST button is pushed.	OFF	RESET is in level position.	No power to Clipsal Lifesaver Safety Switch.	<ol style="list-style-type: none"> 1. Check supply fuse/circuit breaker. 2. Check incoming power supply to Clipsal Lifesaver Safety Switch.
5. Clipsal Lifesaver Safety Switch will not trip out when TEST button is pushed.	ON	RESET is in level position.	Clipsal Lifesaver Safety Switch is faulty. Neutral to earth fault upstream.	<ol style="list-style-type: none"> 1. Have Clipsal Lifesaver Safety Switch checked by a qualified person and if faulty, return to manufacturer. 2. Have electrical contractor check wiring.

GENERAL NOTES REGARDING PROBLEMS

1. 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.
2. 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 will, after a period of time, blow the fuse or 'trip out' the circuit breaker. It is therefore 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.
3. **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 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.

WARNING: Electricity can be dangerous - the use of this product cannot be regarded as a substitute for basic electrical safety precautions. In the interests of safety this unit should be installed by a licensed electrician or warranty will become void.

7.0 Technical Specifications

Parameter	2031RC30 Series	2031RC10 Series
RCD Specifications		
Nominal Operating Voltage	250V AC	
Nominal Operating Frequency	50 Hz	
Maximum Load	20A	
RCD Type	Type II	Type I
Maximum Tripping Current	30mA	10mA
Typical Trip Time	30ms	
RCD Capability	a.c. and pulsating d.c. protection	
Circuit Protection Required	Inc. 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 dialysing locations.</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.		

8.0 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 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 Schneider Electric. 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. Schneider Electric reserves the right, at its discretion, to either repair (free of parts and labour charges), replace or offer a 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 Schneider Electric, however should the product that is the subject of the claim be found 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 by Schneider Electric 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.

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