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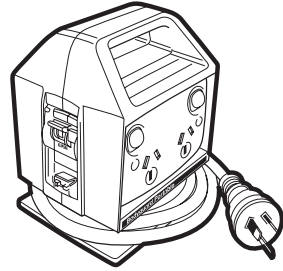
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1 INTRODUCTION

Congratulations! Your purchase of a Clipsal Lifesaver™ 485 Series RCD Protected Portable Power Outlet has been a wise investment in electrical safety. The units offer unsurpassed protection against electric shock and overload in a wide range of applications.

The range has been specifically designed to protect both people and property from damage or injury in case of an electrical fault, and also incorporates additional safety features including protection against electrical overload.

Units comprise up to four double pole, separately switched shuttered socket outlets, mounted in a high impact resistant, durable plastic housing. The enclosure is splash proof, with convenient carry handle, and is fitted with a 1.8m cord.



Electrical protection is provided by means of a highly reliable electronic combination RCD MCB module.

Built tough for use by professional tradespeople, the unit is ideal for use either in the field or in the workshop, and is fully Class H Compliant, being certified as approved for use on construction sites (AS/NZS 3012 Portable Socket Outlet Assemblies (PSOA)). The outlet offers superior protection and peace of mind for the home handyman.

2 PRODUCT SELECTION GUIDE

CAT NUMBER	Number of Outlets				Current Rating		RCD Trip Current		RCD Type	Class H Compliant	Cord Length	Power Available Neon
	1	2	3	4	10A	15A	10mA	30mA				
Clipsal 485 Series – Trade Professional / Home Handyman / General Use												
485P2CB30,EO		✓			✓			✓	Type A	Yes	1.8m	No
485P4CB30,EO				✓	✓			✓	Type A	Yes	1.8m	No
485P2CB15/30,EO		✓				✓		✓	Type A	Yes	1.8m	No
485P4CB15/30,EO				✓		✓		✓	Type A	Yes	1.8m	No
485P4CB15T,EO ¹				✓		✓		✓	Type A	No	10m	No
485P4CB10,EO				✓	✓		✓		Type A	Yes	1.8m	No
485P3CB30,EO ²			✓		✓			✓	Type A	Yes	1.8m	No
485P4CB30NZ,EO ³				✓	✓			✓	Type FS	Yes	1.8m	No
ESP Medilec Series – Hospital / Medical Applications												
E12,EO		✓			✓		✓		Type A	No	3m	Yes
E13,EO				✓	✓		✓		Type A	No	3m	Yes
E13R,EO				✓	✓		✓		Type FS	No	3m	Yes
E13/15,EO				✓		✓	✓		Type A	No	3m	Yes
Accessories												
485FLAP,TR	Spare Flap (RCD Cover) to suit 485 Series											
NOTES:												
1. This model has been designed specifically for the home handyman or camping enthusiast, and is fitted with a 10m lead (all other models have 1.8m lead only). As such, this unit is NOT Class H Compliant, and is therefore not suitable for use on construction sites.												
2. This model is rated at 10A, but for convenience is fitted with 2 x 10A Socket Outlets, and 1 x 15A Socket Outlet.												
3. Unit specifically designed for use in New Zealand, complies with Type FS RCD Requirements.												

3 KEY FEATURES

- Portable Power Outlet with Residual Current and Overload Protection
- Built-in Electronic RCD/MCB Combo Device
- Highly robust electronics – Resistant to drop / shock / vibration
- Excellent electrical noise immunity – Eliminates nuisance tripping
- Individual status flags for RCD and MCB trip condition
- Class H compliant device, suitable for use on construction sites
- Separately dwitched, double pole shuttered socket outlets
- Impact resistant orange case to ensure survival in harsh environments
- Neat fitting seams help prevent ingress of dust and moisture
- Impact resistant flush plates
- Cowl protects outlets from water ingress and impact damage
- Press to Test Button
- Clear cover flap protects RCD
- Dual purpose base keeps outlets clear of dirt and moisture and cord tidy when not in use
- Convenient carry handle
- 1.8 metre heavy duty cord assembly
- IP33 rated.

THE CLIPSAL ADVANTAGE !

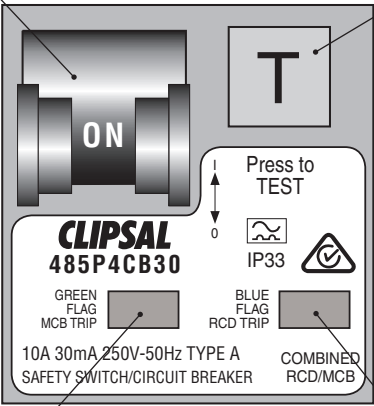
All Clipsal 485 Series Protected Portable Power Outlets come complete with a high quality combination RCD/MCB. Clipsal units are completely electronically controlled giving greater reliability than other units which use an electro-mechanical trip mechanism. In addition, Clipsal Electronic RCDs are highly immune to electrical interference, and unlike their electro-mechanical counterparts, are much more robust giving excellent resistance to false tripping owing to drop, shock or vibration when in use.

RESET SWITCH

- Operate to reset RCD/MCB.
- Switches OFF automatically in case of any electrical fault being detected.

TEST BUTTON

- Press to test for correct RCD function.



Electronic RCD/MCB Combo Device

MCB TRIP STATUS

- RED POWER AVAILABLE ALL OK
- GREEN FAULT DETECTED MCB TRIPPED

RCD TRIP STATUS

- WHITE POWER AVAILABLE ALL OK
- BLUE FAULT DETECTED RCD TRIPPED

4 HOW IT WORKS

WHAT IS A RESIDUAL CURRENT DEVICE (RCD) ?

Residual Current Devices (RCDs) guard against electrocution, cutting power in an instant should the user come into contact with live parts.

HOW DO THEY WORK?

Residual Current Devices (sometimes called “Earth Leakage Breakers” or “Safety Switches”) constantly monitor and compare the current flow in both the Active and Neutral conductors of an electrical installation. Should the current flow become sufficiently unbalanced it indicates that some of the current in the Active wire is leaking to earth and not returning through the Neutral wire. If this occurs the unit detects the imbalance and automatically cuts the electrical supply.

A Residual Current Device will instantaneously cut off the power when this type of fault occurs, virtually eliminating the risk of electrocution from earth leakage faults.

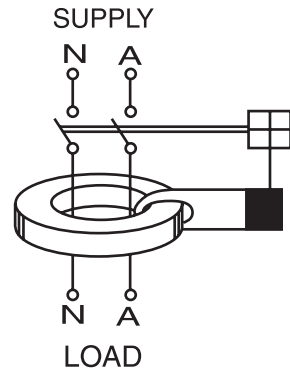
A Residual Current Device can also protect portable appliances and power tools against severe electrical damage should a short circuit develop in the unit between the electrical components and the outer frame. This protection can save the appliance from requiring expensive repairs. Fires resulting from electrical faults can also be averted if the faulty equipment is connected to a power outlet fitted with a Residual Current Device.

Note that an RCD can protect against faults to earth through the body, but not against active to neutral faults.

WHAT IS A MINIATURE CIRCUIT BREAKER (MCB) ?

Miniature Circuit Breakers (MCBs) protect property from damage in case of electrical overload. This can occur when too many high powered appliances are connected to the unit. Should the connected load exceed the maximum current rating, then there is danger of overload, damage to equipment, or even fire! The Miniature Circuit Breaker will detect the condition and disconnect the power to the appliances, preventing dangerous situations from occurring.

The MCB ensures that the total load connected cannot not exceed the total current rating of the device (typically 10A, 15A models also available – refer to product selection guide).



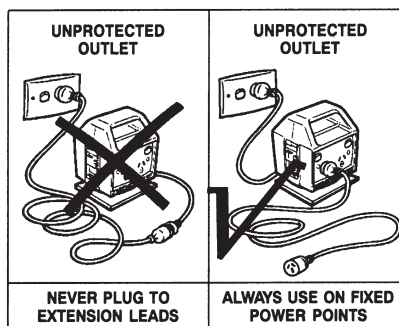
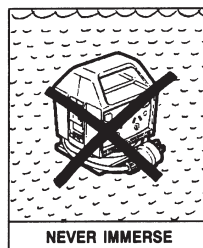
5 UNIT OPERATING INSTRUCTIONS

STEP 1	Uncoil the lead fully from around the base of the unit.
STEP 2	Plug the unit into a convenient mains socket outlet and turn on the switch.
STEP 3	Lift the clear flap on the side of the unit and switch the unit ON, by operating the toggle switch.
STEP 4	TEST THE RCD before each use by depressing the Test Button. This will immediately cause the unit to trip. This confirms that the RCD circuit is operational. Should the unit fail to switch OFF after the Test Button is depressed, then the unit may be faulty and should not be used. It should be returned to your nearest Clipsal office for service or repair.
STEP 5	RESET THE RCD by operating the toggle switch to the ON position.

Your Clipsal 485 Series Portable Power Outlet is now ready for operation. Simply plug in you appliance or tool, and use as normal.

Important Notes:

- Electricity can be dangerous – the use of this product cannot be regarded as a substitute for basic electrical safety precautions.
- If the unit continually trips or if it fails to trip when tested in accordance with instructions seek advice from your electrical contractor or Clipsal immediately.
- Should the device “trip” the supply at any time during operation, you may well be operating a faulty appliance. You should have your appliance checked by a licenced electrician. Where multiple outlets are used “nuisance” tripping may occur due to the accumulation of earth-leakage currents in a number of appliances. Each appliance should be checked by a licenced electrician before proceeding.
- Unplug equipment before any inspection or repair of that equipment is attempted. There are no user-servicable parts inside. Return to place of purchase for service/replacement.
- A Portable Residual Current Device should be plugged into a fixed power outlet / powerpoint only. Never plug the unit into the socket end of an extension lead. Plug directly into a powerpoint, then plug in any extension leads into protected outlets of the portable device.
- This product is designed for use in dry conditions. Storage and use in adverse conditions may affect performance. Do not use in areas where the product is exposed to rain or the ingress of any liquid. Never immerse. Do not allow to come into contact with petroleum products, alkaline detergents or cleaners.



6 TROUBLESHOOTING

Problem	Possible Cause	Suggested Remedy
No power available at outlets	Unit not plugged in, or not switched on at the powerpoint.	Plug in and switch on.
	RCD tripped.	Reset the RCD/MCB by setting the toggle lever under the clear flap on the side of the unit to the ON position.
	MCB tripped.	Reset the RCD/MCB by setting the toggle lever under the clear flap on the side of the unit to the ON position.
RCD Doesn't trip when tested	RCD malfunction.	Return to place of purchase for service / replacement. Proof of purchase may be requested upon arrival.
RCD continually trips	One or more faulty / unsafe appliance(s) connected.	- Disconnect all connected appliances and confirm correct RCD operation by depressing the Test Button. The RCD should operate normally. - Isolate the offending appliance(s) and/or consult a licenced electrician to service the faulty item(s). Do not continue to use the suspect appliance(s).
	Excessive earth leakage current resulting from an accumulation of minor leakages from a number of appliances	Reduce total earth leakage current by disconnecting one or more offending appliances.
	RCD/MCB malfunction.	Do not use the device. Return to place of purchase for service / replacement.

7 TECHNICAL SPECIFICATIONS

Catalogue Number	485 Series General Specifications
Operating Voltage	230 – 250V~ a.c.
Operating Frequency	50Hz
Operating Temperature Range	-10° to 55°C
Protection Device	Combination RCD/MCB
Protection Type	Electronic
Tripping Time at Rated RCD Current	20ms Typical 40ms Maximum
MCB Tripping Characteristic	C-Curve
Socket Outlet Type	Double Pole, Shuttered Socket Outlets
Lead Type	Heavy Duty Flex
Lead Length	1.8m
International Protection Rating	IP33
Device Class	CLASS H Suitable for use in construction sites
Compliant Standards	AS/NZS3100: Approval and Test Specification — General requirements for electrical equipment
	AS/NZS3190: Approval and Test Specification — Residual Current Devices (Current Operated Earth Leakage Devices)
	AS/NZS3105: Approval and Test Specification — Electric portable outlet device
	AS/NZS3112: Approval and Test Specification — plugs and socket outlet
	AS/NZS3012: Electrical Installations — Construction and Demolition Sites (Class H Portable Socket Outlet Assembly (PSOA))
	AS/NZS3003: Electrical Installations — Patient areas of hospitals, medical and dental practices and dialyzing locations (E12, E13, E13R, E13/15 only)
Please refer to Product Selection Guide for additional specifications	
Specifications typical @ 240Va.c., 25°C	
No user serviceable parts inside	

8 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.

9 Technical Support and Troubleshooting

For all technical enquiries and assistance please contact our

National Customer Service Enquiries Hotline

Tel 1300 2025 25

Fax 1300 2025 56

(Call cost 25c, number valid within Australia only)

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