

Industrial

# Multi-Function Electrical Tester

Spark-e-Mate

Electrical Installation Tester



**CLIPSAL**  
by Schneider Electric

**Schneider**  
Electric

The Clipsal brand is part of Schneider Electric.

# Comprehensive electrical wiring tests

## Installation testing made easy

Why waste your precious time finding the correct instrument to test installations? The Clipsal Spark-e-Mate has you tested and covered. One instrument does it all!

The Clipsal Spark-e-Mate performs comprehensive spark electrical wiring tests relevant to Australian and New Zealand Standards from socket outlets to the switchboard.

Recording your verification results has never been easier. The 493BTLi Spark-e-Mate with *Bluetooth*® connectivity can save you even more time and money.

With a *Bluetooth*-enabled device, you can save, store and print reports for each installation, making accessibility to your original verification records simpler. Android and Apple iOS devices are supported by the 493BTLi.

## Features

- Three-pin plug for socket testing.
- Optional test probes for lighting and Switchboards (493L).
- Optional *Bluetooth* logging.
- 493BTLi for Android and Apple iOS devices.
- Dimensions: 220mm x 110mm x 45mm.
- Tough rubber protective cover.
- Optional three-phase adaptor for industrial applications.
- Complies with AS/NZS Standards: AS/NZS3017, AS/NZS3260 (AS/NZS60950), AS/NZS3100, AS/NZS3350.1, AS/NZS61010.1 Category IV 600V.
- Integrated testing for AS/NZS 3003 Compliance for Electrical Installations in Hospitals, Aged Care & Child Minding

## Benefits

- One electrical installation tester that does the required AS/NZS 3000 testing.
- Ensures every electrical installation is safe for your customers to use.
- No need to maintain and calibrate multiple pieces of test equipment.
- Using the optional *Bluetooth*, faster test cycles with reports for each installation can be stored and emailed.



## Confidence with electrical certificates of compliance



1 Select function

2 Plug into socket outlet or connect active, neutral and earth using the 493L



3 Record and report results

# Save time, save money

## Clipsal's Spark-e-Mate can test for:

### Earth continuity

Is the earth bonded to the neutral properly?  
Is the earthing conductor resistance low enough to permit the passage of current necessary to operate the over current protective device?

### Insulation resistance

Is the resistance between all live conductors and earth as high as it should be? (Tested using 250V DC or 500V DC selectable).

### Polarity

Are the active and neutral wires wired correctly?  
Are there no other transpositions?

### Correct circuit connections

Is the earth connected and at a safe potential?

### Earth fault loop impedance (without tripping RCDs)

Is the total loop resistance of the active and earth wires as low as it should be, so that protective devices will operate?

### Residual current device (earth leakage detector or safety switch)

Does it really work and trip in time at the correct residual current from the power outlet? (Includes advanced testing to AS/NZS3017:2007.)

### Extension leads and power accessories

Test extension leads, power boards, double adaptors, etc.

### Supply voltage

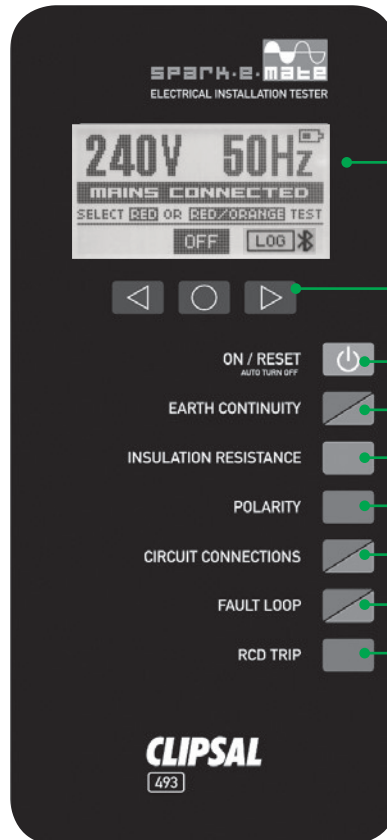
Is the mains supply within -6% and 10% of the specified 230V AC? (Other voltages to order.)

### Mains frequency

Is it at 50Hz?

### Three-phase circuits

Tests three-phase circuits for RCD trip, insulation resistance and fault loop with 493AD1050 three-phase adaptor.



Backlit graphical liquid crystal display (LCD) – displays instructions and test results

Menu buttons used to select voltage and current values, YES/NO actions and manual off

Turns on the tester and is used to reset after a test

Tests the earth impedance

Tests the wiring insulation

Tests for no wiring transpositions

Tests for no shorts and safe earth

Tests the active to earth loop

Tests RCD trip time and trip current

*"I bought my Spark-e-Mate with Bluetooth and thought I should tell you that it is a fantastic piece of equipment. The Spark-e-Mate takes so little time to commence testing that I reckon it has cut my testing down by over half.*

*Good job! I have been and will continue to voice my appreciation to my fellow electricians about Clipsal's Spark-e-Mate"*

Lindsay Schafer, DML Electrical,  
Rockhampton, QLD

# Electrical installation tester typical results

Test	Result	Test	Result
EARTH CONTINUITY	0.50 $Z_{S\Omega}$ Powered Earth Cont. Test Complete.	CIRCUIT CONNECTIONS	CIRCUIT CHECKS OK NO HAZARD ON EARTH. NO LOAD ACROSS ACTIVE AND EARTH.
INSULATION RESISTANCE	>20 $M\Omega$ (A-E) Insulation Resistance at 500V d.c. nominal	FAULT LOOP	0.84 $Z_{S\Omega}$ Powered Fault Loop Test Complete.
POLARITY	POLARITY CORRECT NO WIRING TRANSPOSITION DETECTED - REFER TO HANDBOOK	RCD TRIP	27 ms trip time Trip Current: 30mA RCD Test Complete
RCD TRIP	AS/NZS 3760 IN-SERVICE RCD TESTING HOLD FOR 3003 TEST YES ADV 3760	RCD TRIP	The RCD tripped at 10.0mA RCD Test Complete MAXIMUM TRIP TIME
	RESULTS S AVG ms 110 10 2190 S LOG OFF NEXT	RCD TRIP	RESULTS S AVG ms 115 15 2114 11 2300 S 2331 22 2320 22 LOG OFF AVG 16
			CONTINUE? SIX 10.5mA FAULTS WILL BE APPLIED AT RANDOM TIMES EACH TIME YOU RESET THE RCD YES NO

## Product catalogue numbers

Catalogue number	Description
493	Spark-e-Mate Electrical Installation Tester
493L	Optional test probes
493BTLi	Spark-e-Mate with Bluetooth for Android and Apple iOS devices
493BTLKi	Spark-e-Mate kit with Bluetooth and leads for Android and Apple iOS devices (kit not currently available in NZ)
493AD1050	Three Phase Adaptor kit
493SB	Shoulder bag

## Accessories



For more information about the Clipsal Spark-e-Mate, contact your local Clipsal and Schneider Electric Partner Business Representative, electrical wholesaler or visit [clipsal.com](http://clipsal.com)

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