

# InstaTest 3017

**The Installation Tester Designed  
for Testing to AS/NZS3000**



“Dedicated to the electrical installation testing needs of Australia”

**EMONA** Instruments

## All electrical installation tests performed and more ...



### Single Measurement Functions

Measurements and tests with fixed parameters and limits set to AS/NZS3017 and Pass/Fail indication. Also, user defined limits for troubleshooting and general electrical work.

#### Visual Tests

Resistance to earth connection and equipotential bonding

Insulation Resistance

Polarity

Correct Circuit Connections

Fault Loop Impedance

RCD Test

### Auto-Sequence Tests

For fast testing and certifying of completed work to AS/NZS3000 Wiring Rules prior to energising the installation. Also, stores test results for safety and compliance reports for installation owner/occupier.

#### Visual Inspections

Main Earth & Insulation Resistance of Complete Installation

Metallic Switchboard Enclosure

Aerial Conductor

Equipotential Bonding Conductors

Lighting Point - RAPID

Lighting Point - FULL

Socket Outlet- RAPID

Socket Outlet - FULL

Fixed Appliances

### Other Measurements

A wide range of measurements to make electrical work faster, easier and reduce the number of instruments you need to carry around.

Line Voltage

Frequency

Phase Rotation

Line impedance and prospective short-circuit current

Earth Resistance: 2-wire & 3-wire

Cable Locating & Tracing

TRMS Clamp current measurement (XA version only)

Lux Measurement (XA version only)

Earth Resistance: 1-clamp & 2-clamp (XA version only)

## Australia's first installation tester set to AS/NZS3000

The InstalTest 3017 is Australia's first installation tester with measurement functions and Pass/Fail limits set to AS/NZS3000 Wiring Rules. The unit conducts all AS/NZS3000's mandatory tests, including Visual Inspection, Polarity and Correct Circuit Connections – tests not found on UK or European installation and multifunction testers.

The testing and certifying of completed work to AS/NZS3000 is mandatory, but often not carried out because traditional methods are so time consuming. Consider a large installation with hundreds of socket outlets that should be tested prior to being energised.

With the Instaltest, simply choose the auto-sequence test called "Socket Outlet – RAPID" and you can test, certify and store test results on each socket outlet at a rate of seconds per socket compared to manual, single test methods.

For the first time, the InstalTest 3017 gives contractors a more practical way of testing and certifying completed work to AS/NZS3000. This guarantees higher productivity and profitability for the contracting business, better compliance to standards and regulations, and improved overall electrical safety.



## In-built Australian pass/fail limits and results tables

Traditional testers are based on European IEC 60364 and British HD 384 standards. That's fine if you are testing in Manchester or Munich, but not so helpful if you are testing in Melbourne to AS/NZS3000 and Victorian EnergySafe's Code of Practice on Low Voltage Electrical Installations.

The InstalTest 3017 is programmed with the Pass/Fail limits, test parameters and tables found in AS/NZS3017 Electrical Installations – Testing & Inspection Guidelines. It conducts all the mandatory tests in AS/NZS3000, including those not found on European and UK testers such as "Polarity", "Correct Circuit Connections" and "Visual Inspection".

For example, the InstalTest's Pass/Fail feature is indispensable in fault loop impedance testing. Often regarded as a complicated test, the user simply selects the required variables from the pull-down menus, i.e. Protective Device, Type, Device Rating, Conductor Size for Active and Earth and performs the test. The instrument indicates a Pass/Fail result. Users no longer have to look-up AS/NZS3017's Table 3.2 "Maximum Values of Resistances".

Unlike traditional multifunction testers, the InstalTest 3017 is also supplied with the essential accessories to conduct tests to AS/NZS3017 such as a Resistor Box for polarity and circuit connection tests on socket outlets and lighting points.



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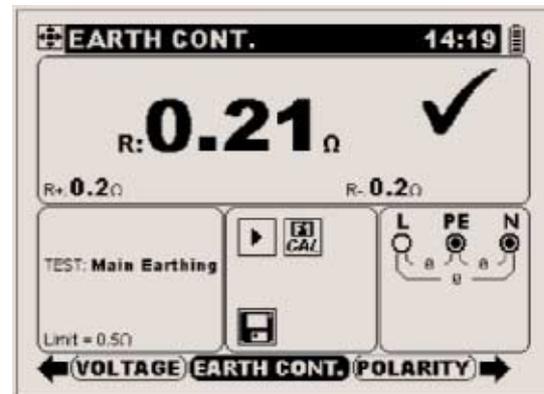
*The InstalTest 3017's measurement functions and Pass/Fail limits are set to the requirements of AS/NZS3017 Electrical Installations – Testing and Inspection guidelines.*

## Measurement functions with pass/fail indication

The InstalTest 3017 conducts all of the tests and inspections required under AS/NZS3000: Voltage, Visual Inspections, Earth Continuity & Resistance, Insulation Resistance, Polarity, Correct Circuit Connections, Fault Loop Impedance and RCD Verification tests.

Users can choose tests with fixed parameters and limits, or user defined parameters and limits. Where AS/NZS3017 requires specific test parameters and limits, the InstalTest is pre-programmed with the compliant test settings. For example the "Earth Continuity & Resistance: Main Earthing" test is set to a 200mA with 0.5ohm Pass/Fail limit. Pass is indicated by ✓ and Fail is indicated by ✗.

In addition, the InstalTest can be used as a multimeter, insulation tester, loop impedance tester and RCD tester for troubleshooting and general electrical work.

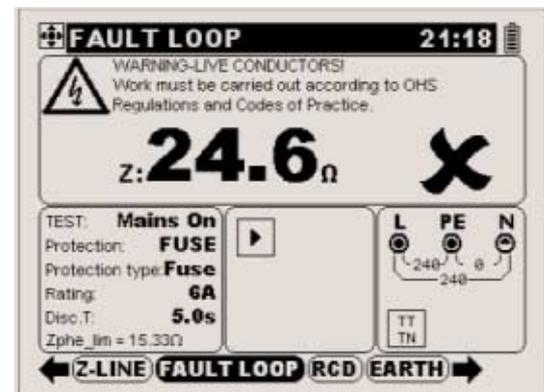


Example of main earthing resistance result with Pass indication.

## Easy to use graphical display

Traditional installation and multi-function testers are operated via a rotary switch. The InstalTest features a full graphical display with pull down menus for measurement parameters, help screens with connection diagrams and user prompts for test connections or inspections.

The screen also displays "Warning – Live Conductors" messages when carrying out supply available tests, a particular benefit that improves operator safety. Another advantage of a graphics display is that functions can easily be edited or added if standards or regulations change.

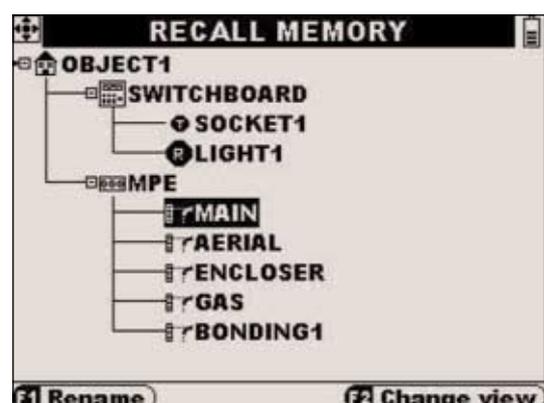


Example of "Warning – Live Conductors" message and Fail indication on a fault loop impedance measurement.

## Print complete installation compliance reports

Where record keeping and reporting is required, such as in OHS and electrical safety regulations, the InstalTest will store 4,000 results, download to the supplied "InstalLink" PC software and print Safety & Compliance Test Reports with user name, license number, switchboard, sub-boards, article locations and test results.

This provides users with a complete installation compliance management system, allowing contractors provide a professional report of test results to the installation owner/occupier and maintain PC based records for required statutory period.



## Fast compliance testing with grouped tests

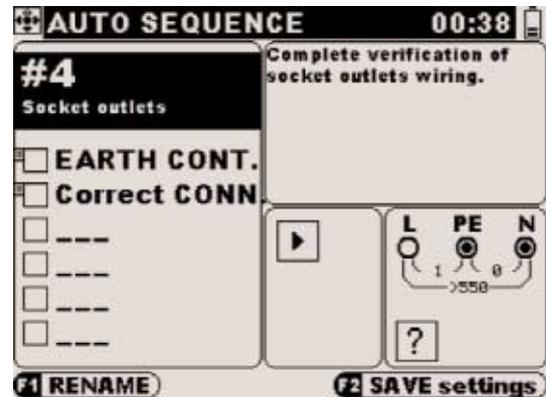
Traditional installation testers conduct single measurement functions only. The InstalTest introduces the concept of "Auto-Sequence Testing". An auto-sequence groups several single tests together to carry out a particular task.

For example testing a socket outlet with the InstalTest, the user connects the supplied Resistance Box on the switchboard side, plugs the mains measuring cable into the socket under test, chooses "Socket Outlets – RAPID" from the auto-sequence menu and the InstalTest automatically sequences through earth resistance, polarity and correct connections tests. The InstalTest can also record the site and location of the socket outlet and save the test results for download to the included "InstalLink" PC software.

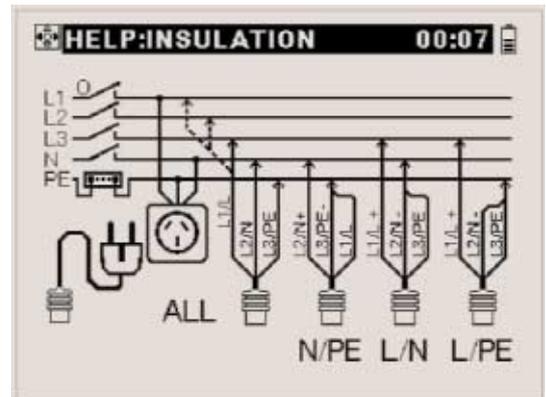
Sequence testing is particularly effective for carrying out testing and certifying of completed work. Testing and certifying a large new installation with hundreds of socket outlets and lighting points using traditional methods is extremely time consuming.

Each auto-sequence has pre-defined Pass/Fail limits and the tests are conducted in the sequence specified by AS/NZS3000 and AS/NZS3017.

*Example "Help" screen. The help menus contain basic schematic/connection diagrams illustrating recommended instrument connections to the electrical installation.*



*Example of socket outlet auto-sequence conducting a complete test of earth continuity, polarity and correct connections.*



### Auto-Sequence Grouped Tests

#### Visual Inspection

General, Consumer Mains, Switchboards, Wiring Systems, Electrical Equipment, Earthing

#### Main Earth & Insulation Resistance of Complete Installation

Earth Continuity – main earthing/PE connections

Insulation Resistance of complete Installation

#### Metallic Switchboard Enclosure

Earth Continuity – PE conductor

#### Aerial Conductor

Earth Continuity – PE conductor

#### Equipotential Bonding Conductors

Earth Continuity – Equipotential bonding

#### Lighting Point – RAPID & Lighting Point – FULL

Earth Continuity – PE conductor

Polarity

Correct Connections – Lighting points

#### Socket Outlet– RAPID & Socket Outlet – FULL

Earth Continuity – PE conductor

Polarity Test

Correct Connections – Socket Outlets

#### Fixed Appliances

Earth Continuity – PE conductor

Insulation – heating elements

Correct Connections – Equipment

# Comprehensive measurement functions

Function	Sub-Function	Test Parameters	Limits
Visual Tests	General	As per AS/NZS3017	Pass/Fail/No Inspection
	Consumer Mains	As per AS/NZS3017	Pass/Fail/No Inspection
	Switchboards	As per AS/NZS3017	Pass/Fail/No Inspection
	Wiring systems	As per AS/NZS3017	Pass/Fail/No Inspection
	Electrical equipment	As per AS/NZS3017	Pass/Fail/No Inspection
	Earthing	As per AS/NZS3017	Pass/Fail/No Inspection
Insulation Resistance	General	50V, 100V, 250V, 500V, 1000V	-
	Installation	500V	1Mohm
	Heating Elements	500V	0.01Mohm
Resistance to Earth	General	200mA	-
	Main Earthing	200mA	0.5ohm
	PE Conductor	200mA	Table 3.2
	Equipotential Bonding	200mA	0.5ohm
	General	7mA	-
Polarity – no supply	Consumers Mains	7mA	Pass/Fail
	Submains	7mA	Pass/Fail
	Single pole switch	7mA	Pass/Fail
Polarity – supply	Submains with MEN at Outbuilding	Voltage	Pass/Fail
	Submains inc Protective Earth	Voltage	Pass/Fail
	Single Pole Switch	Voltage	Pass/Fail
Correct Connections	Lighting Points	7mA	Pass/Fail
	Socket Outlets	7mA	Pass/Fail
	Equipment	7mA	Pass/Fail
	Conductors	7mA	Pass/Fail
Fault Loop Impedance	No Supply	Protection Type, Protection Rating Conductor Size	Table 3.2
	Mains On	Protection Type, Disconnection Times, Protective Device Rating	Table 3.1
RCD Test	Trip Time, Trip Current, AUTO	10mA, 30mA, 100mA, 200mA 500mA, 1000mA, x1/2, x1, x2 x5, 0° and 180°	Pass/Fail

Function	Measuring Range
Line Voltage	0–550V
Frequency	0.00 – 999.99Hz
Phase Rotation	100V AC – 550V AC, 14Hz – 500Hz
Line Impedance	0.00 – 19.9k ohm
Prospective short-circuit current (calculated value)	0.00 – 199k ohm
*Earth Resistance Two-wire & Three-wire method	0.00 – 9999ohm

\*Cable locating and tracing

Tracing wires, finding shorts & fuses

## InstalTest 3017 kit and optional accessories

### Included Accessories

Soft carry bag	20m Earth resistance cable reel
Neck carrying belt	5 x Black alligator clips
Short Instruction Manual	Resistance box
Instruction Manual	InstalLink Software
Calibration Certificate	USB interface cable
Mains Measuring cable, 1.5m	6 x Rechargeable batteries
Universal test cable	Power supply adaptor
Black, Red and Green test clips	

### \* Optional Accessories

Cable locating and tracing kit

Available from:

**EMONA Instruments Pty Ltd**

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