

RIGEL 288

AS/NZS3551 Medical Safety Tester



The Rigel 288 is the first hand-held medical electrical safety tester to perform tests with in-built PASS/FAIL limits in accordance with AS/NZS3551 Technical Management Programs for Medical devices.

With a compact design and weighing only 1.6kg, the Rigel 288 truly is a next generation solution. It combines the latest handheld instrument technology with in-built Bluetooth communications for downloading test results to PC and for interfacing to the optional Optima test tag printer and bar code scanner without the need for connection cables.

More than a handheld tester, the Rigel 288's keyboard and data logging functionality also provides a complete asset management solution for on-site recording of all electrical safety and performance verification test results for your electrical and non-electrical medical devices.

The Rigel 288's large internal memory stores test results on-site for download to the MEDIGuard Asset Management Software. MEDIGuard provides fast and easy download of test results, as well as management of your asset database, creation of test sequences, scheduling of Preventative Product Maintenance and generating test certificates.

The Rigel 288 represents the next generation solution for managing your medical devices in accordance with the requirements of AS/NZS3551.

Key Features

■ Customised for Australia

Electrical Safety Tests and PASS/FAIL limits in accordance with AS/NZS 3551:2004 Technical Management Programs for Medical Devices.

■ Hand-held

Using purpose designed robust enclosure, the Rigel 288 is truly hand-held, easy to hold single handedly and enables one hand operation and navigation.

■ Easy to use

A full graphic, monochrome LCD display in combination with an integral alpha-numeric ABCD keyboard.

■ Manual and Automatic test modes

Able to perform fully automatic, semi automatic and fully manual testing.

■ User definable test routines

Users can amend the default routines or create new routines for electrical safety or performance testing of electrical and non-electrical medical devices.

■ Multiple Applied Part function

This feature gives the user the capability of testing up to 10 individual Applied Parts from different Modules or classes e.g. Type B, Type BF and Type CF.

■ Data Logging facilities

Store up to 10,000 test records, custom test routines, visual inspections and performance verification tests and download to PC via Bluetooth Interface.

Applications

- Acceptance Testing
- Routine Testing
- Post Modification or Repair Testing
- On-Site Data Logging of All Electrical Safety and Performance Verification Results
- Asset Management
- Electrical Safety Testing of Non-Medical Class I and Class II Electrical Equipment



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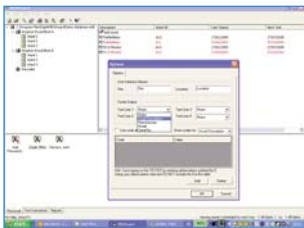
Data Logging Performance Tests

The Rigel 288 not only allows you to configure your own test sequences or modify existing ones to suit your specific needs, but the Rigel 288 also provides the unique feature to configure your own visual or acceptance test routines prior to an electrical safety test. These could be simple instructions to the user, observations required for your own maintenance procedures such as checking for certain labels, software versions and upgrades etc.

In addition, you can configure post safety test procedures such as recording readings during a performance test on a patient monitor (SPO2, NIBP, ECG, Temperature, IBP etc), Defibrillators (Energy, Synch time, Charge time etc) and so on.

These features make the Rigel 288 a truly versatile service tool to ensure all test data is captured on-site and processed in one single test record, maximising traceability and providing a complete medical devices management system.

MEDIGuard Asset Management Software



The Rigel 288 is compatible with the MEDIGuard Asset Management software. MEDIGuard is a comprehensive download software package capable of producing asset management records and work schedules.

Use your Rigel 288 to collect electrical safety test records as well as performance verification tests. This provides the device's complete PPM in one single record. Furthermore, the software allows you to produce certificates both via the printer and email to make sure test records are kept for future reference.

Key Features

1. Windows Explorer type user interface - layout
2. Download from Rigel 288 to PC via BT or RS 232
3. Output of database to Excel / Access.
4. Database function
5. Test schedule function
6. Printing of Test Certificate
7. Store Test certificate as HTML for easy email application

Tag Printing & Barcode Scanning

You'll never need to handwrite test tags again. The Rigel 288 interfaces via Bluetooth to the Optima Test Tag printer and the BCS-Blue barcode scanner.

Test tags are printed customised with the logo of your choice. Multiple logos are also supported, allowing better asset management within organisations.



Bluetooth connectivity also eliminates the need for connection cables between the tester, tag printer and scanner, giving users the ultimate in portability and flexibility.

Electrical Safety Tests Performed

Tests Specific to AS/NZS3551

- Protective Earthing Resistance
- Insulation Resistance
- Earth Leakage Current
- Applied Part Leakage Current
- Mains Contact Current

Rigel 288 Test Sequences

- AS/NZS3551 Class I
- AS/NZS3551 Class II
- AS/NZS3551 Class I X-Ray
- AS/NZS3551 IEC Lead
- AS/NZS3200 Class I
- AS/NZS3200 Class II
- 62353-Class I-Direct
- 62353-Class I-Diff
- 62353-Class I-Alt
- 62353-Class II-Direct
- 62353-Class II-Diff
- 62353-Class II-Alt

In-Built PASS/FAIL Limits

- In accordance with requirements of AS/NZS3551



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RIGEL 288 SPECIFICATIONS TO AS/NZS3551

Protective Earthing Resistance

Method	2 wire technique, using 'zero' lead function.
Test Current	>+200mA, -200mA DC into 2 ohms
Max Test Voltage	4-24V rms o/c (6V for IEC 60601 tests)
Measuring Range (low range)	0.001 – 0.999 ohms @ 0.001 ohms resolution
Measuring Range (mid range)	1.00 – 9.99 ohms /@ 0.01 ohms resolution
Measuring Range (high range)	10.0 – 19.9 ohms @ 0.1 ohms resolution
Accuracy	± 3% of reading + 10 m ohms

Insulation Resistance

Measurement	EUT to Earth / Ground, EUT to AP, AP to Ground
Voltage	250V DC, 500 V DC @1mA.
Range (low range)	0.01Mohms - 20 Mohms
Accuracy (low range)	± 5% of reading +2 counts
Range (high range)	20Mohms – 100Mohms
Accuracy (high range)	±10% +2 counts
Resolution	0.01Mohms

Earth Leakage Current Test

Applied Part Leakage Current Test

Mains Contact Current Test

Measuring Range	4µA to 9999µA
Accuracy	± 5% or reading +2 counts
Mains on A.P. voltage	F-type only @ 110% of mains
Measuring Device	As per IEC 60601-1 requirements
Measurement Type	Separate AC & DC for Patient (-Auxiliary) Leakage to IEC 60601 True RMS for all remaining Leakage tests

Benefits

The Rigel 288 has been designed with the customer's requirements in mind. It offers a complete medical devices management solution with data logging, PC based asset management software and optional accessories including on-site test tag printing and bar code scanners.

The Rigel 288 is the smallest and lightest medical electrical safety tester on the market making it easier to meet the needs of hospitals, biomedical engineering service groups and other healthcare providers.

The Rigel 288 is also firmware upgradeable to meet future test requirements.

Rigel 288 includes

- Calibration Certificate
- Carrying Case
- Earth bond test probe with clip
- Earth bond clip lead
- Patient Applied part module
- 10 Applied part adaptors
- Detachable 2 meter mains cable
- Blue Tooth USB dongle
- Electronic Instruction Manual
- Removable 'quick start' card



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RIGEL 288 SPECIFICATIONS TO IEC 62353

Differential Leakage Measurement

Measuring Range	75µA to 9999µA
Accuracy	±5% of reading + 5 counts
Measurement / display resolution	1µA
Measurement Type	True RMS
Measuring Device	Similar frequency response characteristics to IEC 60601-1.

Alternative Leakage Measurements

Test Voltage	250V at mains frequency
Test Current	3.5 mA current limited
Measurement Range	4µA to 9999µA
Measurement Resolution	1µA
Measurement Accuracy	±5% of reading + 2 counts
Measurement Type	True RMS
Measuring Device	As per IEC 60601-1

RIGEL 288 GENERAL TESTS

Power Measurement

Method	VA rating.
Range	0.1KVA – 4KVA
Accuracy	±10% + 2 counts

Mains Outlet Test

Input voltage range:	0-300V AC, max current 16A
Measures	L – E, N – E & L – N
Accuracy	± 5% of reading + 2 counts

IEC Mains Lead Test

Test Duration:	2s
Test:	Continuity of all conductors, Earth bond, Insulation & Polarity

RIGEL 288 GENERAL SPECIFICATIONS

General

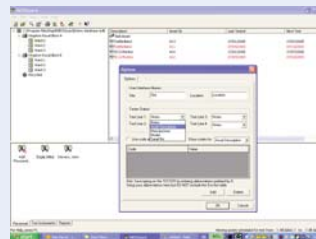
Mains power	230 VAC ±10%, 50Hz +/- 1Hz
Battery	6 x 1.5V Alkaline AA
Weights	1.6 kg including batteries
Size (L x W x D)	270 x 110 x 75 mm / 10.5 x 4 x 3"
Operating conditions	0° - 40°C, 0-90% RH - NC
Storage environment	-15° - +60°C
Environmental Protection	IP 40

How to Order

Rigel 288 Australian Version

331A912-SEA

Accessories



■ MEDIGuard Database Software



■ BCS-Blue Barcode scanner with Bluetooth



■ ProTag Optima Test Tag Printer with Bluetooth

Shipping Information

Packaging	Corrugated cardboard box
Weight	3.4kg
Size	410*290*220mm

Related Products

- Rigel 311 NIBP Simulator
- Rigel 322 SPO2 Simulator
- Rigel 333 Patient Simulator
- Rigel 344 Defibrillator Tester
- Rigel 355 Ventilator Tester
- Rigel 601 Plus



WORLD LEADERS IN SAFETY TEST AND MEASUREMENT

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