

Guardian

1000 Series Hipot Testers

USES:

- Production Testing of Appliances, Instruments and Information Technology Equipment in Accordance with UL, IEC, TÜV and Other Standards such as EN60335, EN60950, EN61010, CSA C22.2 No. 1010.1, UL3111 and UL1950
- Transformer Electrical Safety Testing
- Electric Motor Safety Testing
- Testing a Variety of Electronic Components

FEATURES:

- Easy to Use
- Programmable Output Voltage to 5kV AC and 6kV DC
- Programmable Ramp and Test Times
- Programmable High and Low Limits
- Quick Discharge of DUT in IR and DC Hipot
- Storage of 99 Tests Setups with Multiple Steps per Measurement
- Remote I/O & RS232 Interfaces
- Ground Continuity Check with 1ohm Limit
- Front Panel Lockout
- Arc Detection with Programmable Limit
- Resistance Measurements from 0.1MW to 50GW
- 8 Channel Scanner (1030S)

Multi-Purpose AC/DC/IR/SC Hipot Testers

Introduction

A complete dielectric testing solution, with three models from which to choose. The Guardian 1010 for AC Hipot testing, the Guardian 1030 for AC/DC Hipot testing and insulation resistance (IR) measurements; and the Guardian 1030S which combines both AC and DC Hipot tests and IR measurements with eight HV scan channel capability into a single compact unit. The front panel of the Guardian makes it easy to operate. Digital display and user friendly control allows test parameters and limits to be set easily without the high voltage activated.

Description

The Guardian 1000 Series of electrical safety testers are advanced digital hipots with load and line regulation to ensure measurement integrity. Multistep capability allows the user to perform multiple tests in a sequence such as an AC hipot test followed by an IR test.

The Guardian 1010 AC Hipot Tester performs AC dielectric withstand (hipot) tests. The test voltage can be programmed in the range from 50VAC to 5kVAC with a resolution of 1V. The maximum total output current is 30mA.

The Guardian 1030 AC/DC/IR Hipot Tester has all the features of the Guardian 1010 with the addition of DC hipot and IR measurement capabilities. The test voltage can be programmed in the range from 50VDC to 6kVDC with a resolution of 1V. The maximum total current is 10mA. The IR measurement range is from 0.1MΩ to 50GΩ with test voltages from 50 to 1000VDC.

The Guardian 1030S AC/DC/IR/SC Hipot Tester has all of the features of the Guardian 1030 plus eight HV Scan Channels for multi-point testing.

Quick Discharge: In both the DC hipot and IR tests the device under test is discharged back through the HV transformer. This technique results in a rapid and safe discharge.

Ground Continuity Check: All of the Guardian 1000 Series units have a ground continuity check feature to determine that the resistance, between the ground blade of the power cord and any exposed metal on the product, is less than 1 ohm.



For more detailed specifications, visit www.quadtech.com

For more information about special purchase, rent & lease options, call

1-800-253-1230
Fax 1-978-461-4295
Intl. 1-978-461-2100



G1030S: EMC only

Guardian 1010, 1030 & 1030S

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|-----------------------------|--|
| AC Output Voltage: | Range: 50V to 5000V AC Resolution: 1Volts/step Frequency: 50/60 Hz selectable Waveform: Sinusoidal Regulation: +/- (1% of setting +5V) |
| Voltage Display: | Accuracy: +/- (1% of reading + 5V) Resolution: 1 Volt |
| AC Current Display: | Total and Real Current Range: 0.001mA to 30mA AC Resolution: 1µA Accuracy: +/- (1% of reading + 5cnt) Total Accuracy: +/- (5% of reading + 20cnt) Real |
| High/Low Limit Test: | Range: 0.001mA to 30mA AC Low limit can be turned OFF |

Guardian 1030 & 1030S

| | |
|-------------------------------|---|
| DC Output Voltage: | Range: 50V to 6000V DC Resolution: 1Volts/step Regulation: +/- (1% of setting +5V) |
| Voltage Display: | Accuracy: +/- (1% of reading + 5V) Resolution: 1 Volt |
| DC Current Display: | Range: 0.0001mA to 10mA DC 3 Ranges: .0001mA - 0.3mA, 0.31mA - 3mA, 3.1mA - 10mA Accuracy: +/- (1% of reading + 5cnt) |
| High/Low Limit Test: | 0.1µA to 10mA DC Low limit can be turned OFF |
| Charging Current: | 10mA max |
| Insulation Resistance: | Range: 0.1MΩ - 50GΩ 1M - 1G: +/- (5% + 10 cts), ≥500V 1G - 10G: +/- (10% + 10 cts), ≥500V 10G - 50G: +/- (15% + 10 cts), ≥500V 0.1M - 1G: +/- (10% + 10 cts), <500V |
| IR Output Voltage: | Range: 50V to 1000V DC Accuracy: +/- (1.5% of setting +5V) |
| High/Low Limit Test: | 0.1MΩ - 50GΩ High limit can be turned OFF |

Guardian 1030S

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|-----------------------|--------------------------------|
| Scan Channels: | 8 HV Scan Channels |
| Test Cables: | 8 Custom Banana (unterminated) |

Common Features

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| Arc Detection: | Arc Level: adjustable OFF or 1mA - 15mA AC & 10mA DC Arc Duration: > 10µs |
| Indication: | Pass/fail lights, audible sound |
| Time: | Ramp: 0.1 to 999s (+/-20ms), OFF Test: 0.1 to 999s (+/-20ms), Continuous |
| Quick Discharge: | Discharge of voltage across DUT back through the HV transformer |
| Output Cutoff: | <0.4msec after limit exceeded |
| Ground Continuity: | High Limit: 1Ω Accuracy: +/-0.2Ω |
| Ground Fault Interrupt: | Automatic instrument shutdown for current imbalance >0.5mA |
| Standard Interfaces: | RS232, Remote Inputs: Start, Stop and Interlock Characteristics: 24V Active Low, Pulse Width ≥20ms. Outputs: Pass/Fail/Under Test Characteristics: Dry Contact relay Ele. Characteristics: 120V 100mA max. Logic: Closed if True Connector: 9 pin Male D-Series |
| Optional Interfaces: | IEEE 488 or Printer |
| Test Setups: | 99 Memory Locations, 99 Steps, max 500 |
| Connectors: | Front Connection (HV and RTN) HV OUTPUT (Custom Banana) RTN/LOW (Binding Post) |
| Front Panel Lockout: | Key press with or without memory recall |
| Miscellaneous: | Zero Offset |
| Dimensions: | (w x h x d): 12.8x4.2x16in (320x105x400mm) |
| Weight: | 1010 & 1030: 30.5 lbs (14kg) net, 36 lbs (16.5kg) ship 1030S: 32.5 lbs (15kg) net, 38 lbs (17.5kg) ship |
| Environmental: | Meets MIL-T-28800E, Type 3, Class 5 Operating: 0°C to + 40°C Humidity: <70% Storage: - 10°C to + 60°C |
| Power: | •90 - 130V AC •50 or 60Hz •200 - 250V AC •500W max |

Ordering Information

Guardian 1010 AC Hipot Tester
Guardian 1030 AC/DC/IR Hipot Tester
Guardian 1030S AC/DC/IR/SC Hipot Tester

Includes:

150665 Instruction Manual
700070 Power Cable
S02 Test Leads
700100 Ground Continuity Lead
Calibration Certificate Traceable to NIST

Optional Accessories:

Calibration Data
S02 HV Lead Set, 1m, (std w/unit)
S03 Corded Product Adapter(115V)
S04 HV Lead Set, 2m
S05 Foot Switch
S06 High Voltage Probe
S07 Power Entry Adapter Cable
S08 Gun Probe
S09 HV Lead, 1 meter, unterminated
S10 HV Lead, 2 meters, unterminated

S11 Gun Probe with remote start
S12 Load Box, resistive
S14 Load Box, custom resistors
S15 Interconnection Cable to S50
G16 International Power Strip
G25 Corded Product Adapter (240V)
G38 Printer Interface(replaces IEEE)
G39 IEEE-488 Interface
G40 Scanner Lead Set (8), unterminated
for G1030S only

For more detailed specifications, visit www.quadtech.com
For more information about special purchase, rent & lease options, call
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