

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 & Test Times
- Programmable High & 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 0.1MΩ to 50GΩ
- 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

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

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

Ordering Information

Guardian 1010 AC Hipot Tester	Optional Accessories:	S11	Gun Probe with remote start
Guardian 1030 AC/DC/IR Hipot Tester	Calibration Data	S12	Load Box, resistive
Guardian 1030S AC/DC/IR/SC Hipot Tester	S02 HV Lead Set, 1m, (std w/unit)	S14	Load Box, custom resistors
Includes:	S03 Corded Product Adapter(115V)	S15	Interconnection Cable to S50
150665 Instruction Manual	S04 HV Lead Set, 2m	G16	International Power Strip
700070 Power Cable	S05 Foot Switch	G25	Corded Product Adapter (240V)
S02 Test Leads	S06 High Voltage Probe	G38	Printer Interface(replaces IEEE)
700100 Ground Continuity Lead	S07 Power Entry Adapter Cable	G39	IEEE-488 Interface
Calibration Certificate Traceable to NIST	S08 Gun Probe	G40	Scanner Lead Set (8), with Clips for G1030S only
Lead Set: (8) Untermated (1030S only)	S09 HV Lead, 1 meter, unterminated		
	S10 HV Lead, 2 meters, unterminated		

Common Features

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 Fall: 0.1 to 999s (+/-20ms), OFF
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

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