

Guardian

USES:

- Production Testing of Electrical Products such as Blenders, Fans and other Small Appliances in accordance with UL, CSA and IEC Standards.
- Electrical Safety Compliance Testing on a Variety of Products and Devices.

FEATURES:

- Programmable Output Voltage to 5kV AC and 6kV DC
- Ground Bond Testing to 30A AC with Adjustable Limit
- Monitoring of DUT Current Draw
- Monitoring of DUT Power Consumption
- Line/Earth Leakage Current Measurement (UL1563/UL1950) with 5 Human Body Models
- Insulation Resistance Measurements from 100kΩ to 50GΩ
- Programmable Ramp and Test Times
- Storage of 99 Tests Setups with 99 Steps per Setup
- Continuous Leakage Current Monitoring
- Trip Current Programmable to 40mA AC and 20mA DC
- Front Panel Lockout via Password
- Standard IEEE and Remote Control Interfaces
- Optional RS232 and Printer Interfaces

6200 Production Safety Analyzer

For Single Phase Electrical Products

Introduction

The Guardian 6200 is designed for fast, easy, production testing of electrical products such as blenders, fans and other small appliances in accordance with UL, CSA and IEC standards. Without changing the connection to the product, the tester is able to perform all the essential electrical safety tests in one unit, including AC/DC Hipot, Insulation Resistance, Ground Bond, Current Draw and Power Consumption measurements. Performing all these tests using one box increases production by reducing test time and eliminating multiple test stations.

Description

AC Hipot Test: Performs AC dielectric testing (hipot) over the voltage range from 50V to 5000VAC RMS. Leakage current detection is programmable from 1µA to 40mA, making the 6200 unit ideal for testing electrical products and small appliances having a wide range of leakage currents.

DC Hipot Test: DC dielectric testing is possible from 50V to 6000V DC with leakage current detection down to 0.1µA. The maximum total output current of 20mA allows quick charging of capacitive devices and products.

Insulation Resistance: The insulation resistance test (similar to a DC hipot) calculates and displays a product's insulation resistance value in ohms. This resistance can be measured over the range of 100kΩ to 50GΩ with test voltages programmable from 50V to 1000V DC.

Ground Bond: The ground bond test, sometimes referred to as a high current continuity test, can be programmed from 1A to 30A AC for verifying the integrity of a product's ground system. Resistance measurements are displayed and a high limit is programmable between 0.1mΩ and 510mΩ.

Power Monitoring Function*: The 6200 can monitor voltage across, current draw or power consumption of the product under test. This allows the manufacturer to functionally test the product and verify that the power consumption is within acceptable limits after performing the final electrical safety tests. Additionally, for compliance testing of electrical products, the analyzer can perform line/earth leakage tests in four possible configurations, five human body models, with programmable limits from 0.1uA to 9.999mA.

* Note: This test requires input isolation transformer for proper operation.



For more detailed specifications, visit www.quadtech.com

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



Product Specifications

Guardian 6200

AC Output Voltage:	Range: 50V to 5000V AC, 1V resolution Frequency: 50 or 60 Hz Programmable Waveform: Sinusoidal Regulation: <(1% +5V) at Rated Load
Voltage Display:	Accuracy: ±(1% of reading + 5V) Resolution: 1Volt
AC Current Display:	Total current Range: 1µA to 40mA AC Resolution: 1 or 10µA steps Accuracy: ±(1% + 5cnt)
High/Low Limit Test:	1µA to 40mA AC Low limit can be turned OFF
Arc Detection:	Programmable Level and OFF, >1mA
DC Output Voltage:	Range: 50V to 6000V DC, 1V resolution Regulation: <(1% +5V) at Rated Load
Voltage Display:	Accuracy: ±(1% of reading + 5V) Resolution: 1Volt
DC Current Display:	Range: 0.1µA to 20mA DC Resolution: 0.1, 1 or 10µA steps Accuracy: ±(1% of reading + 5cnt)
High/Low Limit Test:	0.1µA to 20mA DC Low limit can be turned OFF
Arc Detection:	Programmable Level and OFF, >1mA
Insulation Resistance:	Range: 100kΩ - 50GΩ Accuracy: ±5% to ±15% depending upon voltage and resistance
Voltage Range:	50V to 1000V DC
Voltage Accuracy:	±(1% of setting + 5V)
High/Low Limit Test:	100kΩ - 50GΩ Low limit can be turned OFF
IR Test Delay:	0.3 to 99.9 seconds, Programmable in 0.1 second steps
Ground Bond:	
Output Current:	Range: 1.0 to 30.0A AC, setting 0.1A/step Accuracy: ±(1% of setting + 0.3A)
Display:	Accuracy: ±(1% of reading + 3 counts)
Frequency:	50 or 60Hz Selectable
No Load Voltage:	6 to 15 V Programmable
Resistance:	Range: 0.1mΩ - 510.0mΩ, 4 digits Accuracy: ±(1% of reading + 3 counts) Resolution: 0.1mΩ
Hi Limit:	0.1mΩ to 510mΩ
Offset Function:	0 to 100mΩ offset, user selectable
Test Time:	0.5 - 999sec (±20ms)

Functional/Power Consumption:

Line Voltage Meter:	0 - 300V AC, ±(1% of reading + 5cnts)
Line Current Meter:	0 - 10A, ±(5% of reading + 5cnts)
Line Power Meter:	1 - 2200VA
Line Leakage Current:	
Input Voltage: Range: 0V to 300V AC, 50 or 60Hz.	
AC Current Display:	Range Res. Accuracy 0.0001-0.59mA 0.0002mA ±(2% + 5cnts) 0.6 - 9.99mA 0.003mA ±(2% + 5cnts)
Current Trip Limits: 0.1µA to 9.99mA, 1µA Resolution	
Measuring Circuit: 5 Types of Human Body Models in accordance with UL544 NP, UL544P, UL1563, UL2601-1, IEC60601-1, IEC 950, UL1950, UL3101 Stds.	
Measurement Modes: Normal, Reverse and Single Fault	
Max. DUT Current:	10A
Common Features:	
AC/DC Test Time:	Ramp: 0.1 to 999s (±20ms) Test: 0.1 to 999s (±20ms) and Continuous
Remote Control:	Inputs: Start,Stop Outputs: Pass/Fail/Under Test Connector: Terminal Strip and 9 pin D Series
Test Setups:	99 Test Setups with 99 Steps each, Alpha-Numeric Label
Rear Connectors:	Input: Binding Posts (Line & Neutral) Isolation Transformer (not included) required for proper operation (10A, 300V max.). Output: High Voltage sockets for connection to 115V corded adapter, G30 (included)
Front Panel Lockout:	Password
Safety Features:	Fast Cutoff (<0.4ms) and Fast Discharge Adjustable Discharge: 0.05-5.1kV DC
Miscellaneous:	Fail Retest Scanner Delay: 0.1 to 99.9, 0.1s/step PAUSE Mode: Program pause between steps
Indication:	Pass/fail lights, audible sound
Buzzer Level:	1,2,3 and Off
Standard Interface:	IEEE-488
Optional Interfaces:	RS232, Printer
Dimensions:	(w x h x d):17x6.8x17.7in (430x175x450mm)
Weight:	53 lbs (24kg) - Net, 60 lbs (27kg) Shipping
Environmental:	Operating: 0°C to + 40°C, Humidity: <75% Storage: - 20°C to + 70° C
Power:	• 90 - 130V AC • 50 or 60Hz • 200 - 250V AC • 500W max

Ordering Information

Guardian 6200 Production Safety Analyzer	G30	Corded Product Adapter (115V)	G26	RS232 Interface
Includes:	G33	Power Entry Adapter Cable	G27	Rack Mount Flanges
Guardian 6000 Electrical Safety Analyzer	700070	AC Power Cable	G28	Printer Interface (replaces IEEE 488)
6000-04 Line Leakage Current Scan Unit	No P/N	Calibration Certificate Traceable to NIST	G31	Isolation Transformer (500VA)
150528 Instruction Manual	Optional Accessories		G32	Isolation Transformer (1000VA)
S02 HV Lead Set, 1m	No P/N	Calibration Data	G41	RS232 Cable: DB9F to DB25M, 3 feet
G15 Ground Continuity Lead Set	S05	Foot Switch		

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