Guardian 500VA Plus Hipot Tester

USES:

- **Hipot/Dielectric Withstand**
  - **AC 5kV/100mA**
  - **DC 6kV/20mA**
- **Insulation Resistance**
  - **50 to 5kVDC**
  - **100kΩ~50GΩ**

FEATURES:

- **500VA output rating**
- **Programmable AC Hipot Frequency 50Hz - 600Hz**
- **Total and Real Current Measurement**
- **Floating output complies with EN50191**
- **Open Short Check (OSC)**
- **High Frequency Contact Check (HFCC)**
- **Ground Fault Interrupt**
- **Standard RS232 and USB Interfaces**
- **Standard HANDLER interface**
- **Optional GPIB Interface**
- **Key Lock on fail**
- **Programmable voltage & test limit**
- **Front and Rear Output Connectors**
- **LabView Drivers are available**
- **CE Mark**

Introduction

QuadTech 500VA Plus Hipot Analyzer is designed for applications requiring a 500VA output transformer capacity with 100mA AC current output. The analyzer has both hipot test and analysis modes making the unit flexible for both production and R&D applications. The tests of AC/DC/IR can be programmed to 5000VAC, 6000VDC and 5000VDC for IR. The full floating output complies with the EN50191 requirements for operator safety.

Description

The Guardian 500VA Plus features a large LCD screen for programming and measurement. Ground Fault Interruption and Floating Output features can also be used for operator protection. The hipot tester is equipped with an output to monitor the arc signal with an oscilloscope.

The user interface and overall operation is similar to the Guardian 6000 Plus. The remote command set features SCPI commands for both control and measurement. The command syntax is also compatible with the Guardian 6000 Plus.

The Guardian 500VA Plus is equipped with a new Function called High Frequency Contact Check (HFCC) besides the Open Short Check (OSC). These two features are designed to determine if a connection to the product has been made during testing or prior to testing. HFCC operates during testing and OSC is used as a step prior to hipot or IR testing. OSC operates by measuring the capacitive load (Cx) of the DUT from tens to thousands pF and looking for a change in capacitance from the nominal capacitance of the DUT to determine connection.

HFCC (High Frequency Contact Check) is a new measurement technology for contact check. HFCC is able to be performed during the hipot test using a high frequency, around 1MHz, for improved test time on the production line.

HIGH FREQUENCY CONTACT CHECK (HFCC, PATENT PENDING) **& OPEN SHORT CHECK** (OSC, PATENT:254135)

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ValueTronics International, Inc

Product Specifications

	50V to 5000V AC, 2V resolution
	cy: 50 to 600 Hz Programmable
	Waveform: Sinusoidal
	Regulation: <(1% +0.1% FS) at Rated Load
Voltage Display:	Accuracy: ±(1% of reading + 0.1% FS)
	Resolution: 2Volt
AC Current Display:	**Total current**
	Range: 1µA to 100mA AC
	Resolution: 1µA
	Accuracy: ±(1% of reading + 0.5% of range)
	AC Real current
	Range: 1µA to 100mA AC
	Resolution: 1µA
	Accuracy: ±(1% of reading + 5% of Total Current)
High/Low Limit Test:	1µA to 100mA AC
	Low limit can be turned OFF
DC Output Voltage:	Range: 50V to 6000V DC, 2V resolution
	Regulation: <(1% of setting +0.1% of FS) at Rated Load
Voltage Display:	Accuracy: ±(1% of reading + 0.1% FS)
	Resolution: 2Volt
DC Current Display:	Range: 0.1µA to 20mA DC
	Resolution: 0.1µA
	Accuracy: ±(1% or reading + 0.5% of range)
High/Low Limit Test:	0.1µA to 20mA DC
	Low limit can be turned OFF
Insulation Resistance:	Range: 100kΩ - 50GΩ
	Accuracy: ±3% to ±15% depending upon V and R, see manual for details
Resolution:	0.1MΩ
Voltage Range:	50V to 5000V DC
Voltage Accuracy:	± (5% of setting + 5V)
High/Low Limit Test:	100kΩ - 50GΩ
	Low limit can be turned OFF

Common Features:

AC/DC Test Time:	Ramp: 0.1 to 999s and Off
	Test: 0.1 to 999s and Continuous
	Dwell: 0.1 to 999s and Off (WDC only)
	Fall: 0.1 to 999s and Off
Arc Detection:	Programmable Level and OFF, 0.001mA/step
	AC: 1mA to 20mA
	DC: 1mA to 10mA
HFCC:	Capacitance Range: 1pF to 100pF
	Display Range: 1pF to 100pF
	Accuracy: ± (50% of reading + 3pF)
Remote Control:	Inputs: Start,Stop
	Outputs: Pass/Fail/Under Test
	Connector: 24 Pin Centronics
Standard Interfaces:	Remote I/O, RS-232, USB
Optional Interfaces:	GPIB
Test Setups:	100 Test Setups with 50 Steps each, Max. 500
Connectors:	Front and Rear HV and GND Connections
Front Panel Lockout:	Password
Safety Features:	Fast Cutoff (<0.4ms) and Fast Discharge <0.2s @5.1kV
	GFI Ground Fault Interrupt
	Floating Output porENS0191
Miscellaneous:	Continuous Voltage on Fail
Indication:	Pass/Fail lights, audible sound
Buzzer Level:	1, 2, 3, and Off
Dimensions:	(w x h x d):17x6.8x17.7in (430x175x450mm)
Weight:	54 lbs (25kg) - Net, 61 lbs (27kg) Shipping
Environmental:	Operating: 0°C to + 45°C,
	Humidity: <95%
	Storage: -10°C to +50°C
	Warm-up Time: 1minute
Power:	• 100 - 240V AC • 47 to 66Hz
	• 1200W max

Ordering Information

Guardian 500VA Plus Hipot Tester

Includes:

150942 Instruction Manual
700108 HV Lead
W3800044 Return Lead
320241 BNC to Binding Post Adapter
700070 AC Power Cable
Calibration Certificate Traceable to NIST

Optional Accessories

Calibration Data
S04 HV Lead Set 2m

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
G13*	Corded Product Adapter (115V)
G16*	International Power Strip
G25*	Corded Product Adapter (240V)
A190355	Rack Mount Flanges

*Maximum Voltage Rating: 5kV AC & 6kV DC

A190356 GPIB Interface