

# Sentry

# Series Hipot Testers

## Economical AC/DC/IR 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
- Variety of Electronic Components
- Testing Electronic Components

### FEATURES:

- Easy to Use
- Cost Effective Solution for Hipot and IR
- 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 40 2-Step Tests or 80 1-Step Tests
- Remote Control
- Ground Continuity Check with 1ohm Limit
- Front Panel Lockout
- Arc Detection with Programmable Limit
- Resistance Measurements from 10MW to 10GW
- CE Mark Models (Sentry 15, 25, 35)

### Introduction

A complete dielectric testing solution, with three models from which to choose. The Sentry 10 for AC Hipot testing, the Sentry 20 for AC/DC Hipot testing, and the Sentry 30 which combines both AC and DC Hipot with insulation resistance (IR) measurements into a single compact unit. The front panel of the Sentry 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.

These three units are also available in a CE Mark version, the Sentry 15 for AC Hipot, Sentry 25 for AC/DC Hipot and the Sentry 35 for AC/DC Hipot and IR.

### Description

The Sentry 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 up to two tests in a sequence such as AC hipot followed by IR.

**The Sentry 10/15 AC Hipot Tester** performs AC dielectric withstand (hipot) tests. The test voltage can be programmed in the range from 100V AC to 5kV AC with a resolution of 10V. The maximum total output current is 15mA.

**The Sentry 20/25 AC/DC Hipot Tester** has all the features of the Sentry 10/15 with the addition of DC hipot capability. The test voltage can be programmed in the range from 100V DC to 6kV DC with a resolution of 10V. The maximum total current is 7.5mA (5.0mA for the CE Mark version, Sentry 25).

**The Sentry 30/35 AC/DC/IR Hipot Tester** has all of the features of the Sentry 10/15 and 20/25 plus measurement of insulation resistance. The IR measurement range is from 10MΩ to 10GΩ with test voltages from 50 to 1000V DC.

**Quick Discharge:** In both the DC hipot and IR 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 Sentry 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](http://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



## Sentry 10, 20, 30, and 15, 25, 35

|                             |  |
|-----------------------------|--|
| <b>AC Output Voltage:</b>   | Range: 100V to 5000V AC<br>Resolution: 10Volts/step<br>Frequency: 50/60 Hz selectable<br>Frequency Accuracy: 100ppm<br>Waveform: Sinusoidal<br>Regulation: +/- (1% of setting +5V) |
| <b>Voltage Display:</b>     | Accuracy: +/- (1% of reading + 5V)<br>Resolution: 1Volt  |
| <b>AC Current Display:</b>  | Total current<br>Range: 0.001 to 15mA AC<br>Resolution: 1µA<br>Accuracy: +/- (1.5% of reading + 5cnt)  |
| <b>High/Low Limit Test:</b> | 1µA to 15mA AC<br>Accuracy: +/- (1% of limit + 5cnt)<br>Low limit can be turned OFF  |

## Sentry 20, 30 and 25, 35

|                             |  |
|-----------------------------|--|
| <b>DC Output Voltage:</b>   | Range: 100V to 6000V DC<br>Resolution: 10Volts/step<br>Regulation: +/- (1% of setting +5V)                       |
| <b>Voltage Display:</b>     | Accuracy: +/- (1% of reading + 5V)<br>Resolution: 1Volt  |
| <b>DC Current Display:</b>  | Range: 1µA to 7.5mA DC<br>(5.0mA for Sentry 25, 35)<br>Resolution: 1µA<br>Accuracy: +/- (1.5% of reading + 5cnt) |
| <b>High/Low Limit Test:</b> | 1µA to 7.5mA DC<br>(5mA for Sentry 25, 35)<br>Low limit can be turned OFF  |
| <b>Charging Current:</b>    | 7.5mA max (5mA for Sentry 25, 35)  |

## Sentry 30 and 35

|                               |   |
|-------------------------------|---|
| <b>Insulation Resistance:</b> | Range: 10MΩ - 10GΩ<br>+/- (10% of reading + 10 cts), ≥500V<br>+/- (15% of reading + 10 cts), <500V<br>Voltage Range: 50V to 1000V DC<br>Accuracy: +/- (1% of setting +5V) |
| <b>High/Low Limit Test:</b>   | 10MΩ - 10GΩ<br>High limit can be turned OFF   |
| <b>Charging Current:</b>      | 7.5mA max (5mA for Sentry 35)   |

## Ordering Information

Sentry 10 AC Hipot Tester  
Sentry 20 AC/DC Hipot Tester  
Sentry 30 AC/DC/IR Hipot Tester  
Sentry 15 AC Hipot Tester  
Sentry 25 AC/DC Hipot Tester  
Sentry 35 AC/DC/IR Hipot Tester

### **Includes:**

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  
S16 Rack Mount Kit  
G16 International Power Strip  
G25 Corded Product Adapter (240V)

## Common Features

|                             |  |
|-----------------------------|--|
| <b>Arc Detection:</b>       | Arc Level: >1mA - 15mA or OFF<br>Arc Duration: > 10µs  |
| <b>Indication:</b>          | Pass/fail lights, audible sound  |
| <b>Buzzer Level:</b>        | On / Off   |
| <b>Time:</b>                | Ramp: 0.1 to 999s (+/-20ms)<br>Test: 0.1 to 999s (+/-20ms) and Continuous  |
| <b>Quick Discharge:</b>     | Discharge of voltage across DUT back through the HV transformer  |
| <b>Ground Continuity:</b>   | High Limit: 1Ω<br>Accuracy: +/-0.1Ω<br>Test Current: 100 mA DC   |
| <b>Remote Control:</b>      | Inputs: Start, Stop and Interlock<br>Characteristics: 24V Active Low, Pulse Width >1ms.<br>Outputs: Pass/Fail/Under Test<br>Characteristics: Dry Contact relay<br>Ele. Characteristics: 120V 100mA max.<br>Logic: Closed if True<br>Connector: 9 pin Male D-Series Connector |
| <b>Test Setups:</b>         | 40 Memory Locations with 2 Steps each<br>80 Memory Locations with 1 Step each  |
| <b>Connectors:</b>          | Front Connection (HV and Ground)<br>HV Socket<br>Ground (Binding Post)<br>Grnd Cont.(Banana Socket)  |
| <b>Front Panel Lockout:</b> | Key press with or without memory recall  |
| <b>Miscellaneous:</b>       | Continuous Voltage on Fail<br>Zero Offset  |
| <b>Dimensions:</b>          | (w x h x d):11x4x14in<br>(270x100x350mm)   |
| <b>Weight:</b>              | 21 lbs (10kg) Shipping: 28 lbs (13kg)  |
| <b>Environmental:</b>       | Meets MIL-T-28800E, Type 3, Class 5<br>Operating: 0° to + 40° C<br>Humidity: <75%<br>Storage: - 10° to + 60° C<br>Warm-up Time: 1minute  |
| <b>Power:</b>               | •90 - 130V AC •50 or 60Hz<br>•200 - 250V AC •300W max  |

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5 Clock Tower place, 210 East, Maynard, MA 01754

