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
• Electric Motor Safety Testing
• Lighting Fixtures Safety Testing

FEATURES:
• Upgradeable: Add DC and/or IR
• Output Voltage: 5kVAC and 6kVDC
• Leakage Current: 20mAAC, 5mADC
• Resistance Measurements from 0.1MΩ to 50GΩ
• Programmable Ground Continuity from 0.1- 5Ω
• Programmable Ramp, Test & Fall Times
• Store/Recall: 60 Tests
• Ground Fault Interrupt (GFI)
• Fast Discharge of DUT & Fast HV Output Cutoff
• Monitor DC In-Rush Current
• EN 50191 3mA Current Limit
• Pause Mode
• Open/Short Circuit Detection Mode
• Remote I/O Interface
• Large Enhanced Graphical Display
• Front & Rear Output Connectors

Introduction
The Sentry Plus instruments provide a complete dielectric testing solution. The Sentry 10 Plus for AC Hipot testing, the Sentry 20 Plus for AC/DC Hipot testing and the Sentry 30 Plus for AC/DC Hipot tests plus IR measurements. The large enhanced digital display and user friendly controls of the Sentry Plus instrument allow test parameters and limits to be easily programmed and viewed.

Description
The Sentry Plus Series units 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 with the push of one button.

The Sentry 10 Plus AC Hipot Tester performs AC dielectric withstand (hipot) tests. The test voltage is programmable from 50V to 5kV AC with a resolution of 1V. The current range is 1µA to 20mA.

The Sentry 20 Plus AC/DC Hipot Tester has all the features of the Sentry 10 Plus in addition to DC hipot capability. The test voltage is programmable from 50V to 6kV DC with a resolution of 1V. The current range is 0.1µA to 5mA.

The Sentry 30 Plus AC/DC/IR Hipot Tester has all of the features of the Sentry 20 Plus in addition to Insulation Resistance (IR) testing. The IR measurement range is from 0.1MΩ to 50GΩ with test voltages from 50 to 1000VDC.

Program & Display Ground Continuity: The Sentry Plus Series can measure and display the resistance between the ground blade of the power cord and any exposed metal on the product.

Upgradeable: With the Sentry Plus Series, it is possible to add DC and/or IR test capability without purchasing a new instrument. The Sentry 10 Plus can be upgraded to a Sentry 20 or 30 Plus and the Sentry 20 Plus can be upgraded to a Sentry 30 Plus.

Meets UL Hipot Tester Requirements: The Sentry Plus instruments measure & display the output voltage directly at the output terminals. The instruments have both visual and audible failure indications, and after a failure the STOP switch must be pressed prior to another measurement.

Open/Short Circuit Mode: All Sentry Plus models have OS mode to detect connection of the device in order to prevent false readings. Open ensures the device under test is connected properly and Short ensures the device is not shorted prior to applying the high voltage. The Open value is programmable from 10-100% and the Short value from 100-500%.

For more detailed information on specifications, pricing and special purchase, rent and lease options, contact us at:

www.quadtech.com
800-253-1230
### Sentry 10, 20 & 30 Plus

**AC Output Voltage:**
- Range: 50V to 5000V AC
- Resolution: 1 Volt/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:**
- Range: 0.001mA to 20mA AC
- Resolution: 1 µA
- Accuracy: ±(1.5% of reading + 5cnt)

**High/Low Limit Test:**
- Range: 0.001mA to 20mA AC
- Low limit can be turned OFF

### Sentry 20 & 30 Plus

**DC Output Voltage:**
- Range: 50V to 6000V DC
- Resolution: 1 Volt/step
- Regulation: ±(1% of setting +5V)

**Voltage Display:**
- Accuracy: ±(1% of reading + 5V)
- Resolution: 1 Volt

**DC Current Display:**
- Range: 0.0001mA to 5mA DC
- Resolution: 0.1 µA
- Accuracy: ±(1.5% of reading + 5cnt)

**High/Low Limit Test:**
- 0.1µA to 5mA DC
- Low limit can be turned OFF

**Charging Current:**
- 5mA max

**In-Rush Current:**
- Monitors: 0.5µA - 5mA, OFF

### Sentry 30 Plus

**Insulation Resistance:**
- Range: 0.1MΩ - 50GΩ
  - 0.1M - 1G: ± (10% + 5 cts), <100V
  - 0.1M - 1G: ± (7% + 5 cts), <500V
  - 1M - 1G: ± (4% + 5 cts), >500V
  - 1G - 10G: ± (7% + 5 cts), >500V
  - 10G - 50G: ± (12% + 5 cts), >500V

**IR Output Voltage:**
- Range: 50V to 1000V DC
- Accuracy: ±(1% of setting +5V)

**High/Low Limit Test:**
- 0.1MΩ - 50GΩ
- High limit can be turned OFF

### Common Features

- **Ground Continuity:**
  - Programmable: 0.1Ω - 5Ω, ±0.2Ω
  - Current: 0.1A or OFF

- **Arc Detection:**
  - Arc Level: adjustable OFF or 1mA - 20mA AC & 5mA DC
  - Arc Duration: > 10µs

- **Indication:**
  - Pass/fail lights, audible sound

- **Time:**
  - Ramp: 0.1 to 999s (±20ms), OFF
  - Dwell: 0.1 to 999s (±20ms), (DC & IR)
  - Test*: 0.1 to 999s (±20ms), Continuous
  - Fast Test Time <60 seconds when VI=100VA
  - Fast Test Time for IR: 0.3 to 999s (±20ms)

- **Fast Discharge:**
  - <0.2s Typical Voltage Discharge across DUT back through the HV transformer

- **Fast Cutoff:**
  - <0.4ms Typical Cutoff of Voltage on FAIL and when STOP is pressed

- **Ground Fault Interrupt:**
  - Automatic instrument shutdown for current imbalance >0.5mA ± 0.25mA

- **EN 50190 Limit:**
  - 3mA AC, 5mA DC or OFF

- **Standard Interface:**
  - Inputs: Start, Stop and Interlock
  - Characteristics: 24V Active Low, Pulse Width >20ms.
  - Outputs: Pass/Fail/Under Test
  - Characteristics: Dry Contact relay
  - Ele. Characteristics: 115V <300mA
  - Logic: Closed if True
  - Connector: 9 pin Male D-Series

- **Test Sets:**
  - 60 Memory Locations/10 Steps

- **Connectors:**
  - Front & Rear Connectors (HV and RTN)
  - HV OUTPUT (Custom Banana)
  - RTN/LOW (Binding Post)
  - GC (Binding Post, Rear Only)

- **Front Panel Lockout:**
  - Key press with or without memory recall

- **Miscellaneous:**
  - Zero Offset
  - Operating: 0°C to +40°C
  - Humidity: <80%
  - Storage: -10°C to +60°C

### Power Specifications

- **Dimensions:**
  - (w x h x d): 10.8 x 4.0 x 14.0 inches (270 x 100 x 350 mm)

- **Weight:**
  - Net: 26.0 lbs (12kg)
  - Ship: 28.0 lbs (13kg)

- **Environmental:**
  - Meets MIL-T-28800E, Type 3, Class 5
  - Operating: 0°C to +40°C
  - Humidity: <80%
  - Storage: -10°C to +60°C

- **Optional Accessories:**
  - S04: HV Lead Set, 2m
  - S05: Foot Switch
  - S06: High Voltage Probe
  - S07: Power Entry Adapter Cable
  - S08: Gun Probe
  - S11: Gun Probe with remote start
  - S12: Load Box, resistive
  - S13: Load Box, custom resistors
  - S14: Interconnection Cable to S50
  - S16: International Power Strip
  - S20: 100V, 500mA, 2 meters, unterminated
  - S21: 50V, 100mA, 2 meters, unterminated

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