

HypotULTRA®

The Most Flexible and Feature-Rich Automated Dielectric Analyzer Available



Our HypotULTRA® models provide all the tools you need to modernize your production line with best-in-class 4-in-1 test capability and a slim 2U design. We've added 40A AC Ground Bond test capability to HypotULTRA's already impressive feature list for manufacturers that aim to adopt best testing practices without sacrificing productivity. Whether you're looking to improve traceability with onboard data storage, increase efficiency with our intuitive touch screen interface and direct barcode scanner connection, or automate with a variety of communication interfaces, HypotULTRA was designed to take your production line to the next level.



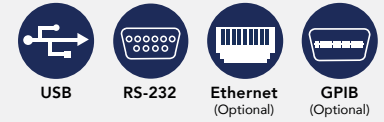
Find the Model that Fits Your Testing Needs



| Model | VA* | AC Hipot | DC Hipot | 40A Ground Bond | Ground Continuity | Insulation Resistance |
|-------|---------|----------|----------|-----------------|-------------------|-----------------------|
| 7800 | 500 VA* | • | • | • | • | • |
| 7804 | | • | • | • | • | • |
| 7820 | | • | • | • | • | • |
| 7850 | | • | • | • | • | • |
| 7854 | 500 VA* | • | • | • | • | • |

*Meets 200 mA short circuit requirements

AVAILABLE INTERFACES



SAFETY & PRODUCTIVITY FEATURES

- SmartGFI®**
Automatic operator shock protection
- Remote Safety Interlock**
Easily disable HV output
- Data Transfer**
Easily import/export test files and data via USB
- Barcode Capability**
Direct barcode connection
- Multiple Languages**
Multi-Language user interface
- Ground Bond Voltage Drop**
Monitor voltage drop vs resistance
- ProVOLT®**
Multi-dwell cycles at different voltages for ACW/DCW/IR
- Internal Multiplexer**
Available with optional HV multiplexer (4 or 8 ports)
- Modular Multiplexer**
Compatible with SC6540 multiplexers
- FailCHECK™**
Confirms failure detection
- Prompt & Hold**
Provides alerts & instructions between tests
- WithStand®**
Automation Software
- Advanced User Security**
Customize ID & password protection
- Ramp-HI®**
Reduce ramp time during DC Hipot
- Charge-LO®**
Confirms proper DUT connection
- PLC Remote**
Basic PLC relay control
- Negative DC Hipot & Insulation Resistance (Optional)**
- On Board Data Storage**
Save up to 100,000 Test Results on-board

| INPUT SPECIFICATIONS | |
|--|--|
| Voltage | 100 – 120 VAC / 200 – 240 VAC ± 10% Auto Range |
| Frequency | 50/60 Hz ± 5% |
| Fuse | 7804/7820/7850: 6.3A, Slow Blow 250 VAC |
| | 7800/7854: 15A, Fast Blow 250 VAC |
| AC WITHSTAND TEST MODE (All Models) | |
| Output Voltage | Range: 0 – 5,000 VAC Resolution: 1 VAC Accuracy: ± (2% of setting + 5V) |
| Output Frequency | 50/60 Hz ± 0.1%, User Selection |
| Output Waveform | Sine Wave, Crest Factor = 1.3 – 1.5 |
| Output Regulation | ± (1% of output + 5V) |
| HI and LO-Limit Total | Total Range: 0.000 – 9.999 mA Resolution: 0.001 mA Range: 10.00 – 40.00 mA (10 – 99.99 mA, Models 7800/7854) Resolution: 0.01 mA Accuracy: ± (2% of setting + 2 counts) 7804/7820/7850 ± (2% of setting + 6 counts) 7800/7854 |
| | Real Range: 0.000 – 9.999 mA Resolution: 0.001 mA Range: 10.00 – 40.00 mA (10 – 99.99 mA 7800/7854) Resolution: 0.01 mA Accuracy: ± (3% of setting + 50 µA) |
| Ramp Up Timer | Range: 0.1 – 999.9 sec |
| Ramp Down Timer | Range: 0.0 – 999.9 sec |
| Dwell Timer | Range: 0, 0.2 – 999.9 sec (0=Continuous) |
| Ground Continuity | Current: DC 0.1A ± 0.01A, fixed |
| Current | Max. Ground Resistance: 1.0 Ω ± 0.1 Ω |
| Arc Detection | Range: 1 – 9 (9 is most sensitive) |
| DC WITHSTAND TEST MODE (Models 7800/7804/7850 & 7854 Only) | |
| Output Voltage | Range: 0 – 6000 VDC Resolution: 1 V Accuracy: ± (2% of setting + 5 V) |
| DC Output Ripple | <4% (6 KV/10 mA at Resistive Load) |
| HI and LO-Limit | Range: 0.0000 – 0.9999 µA Resolution: 0.0001 µA Accuracy: ± (2% of setting + 10 counts), Low Range is ON |
| | Range: 1.000 – 9.999 µA Resolution: 0.001 µA Accuracy: ± (2% of setting + 10 counts), Low Range is ON |
| | Range: 10.00 – 99.99 µA Resolution: 0.01 µA Accuracy: ± (2% of setting + 10 counts), Low Range is ON |
| | Range: 100.0 – 999.9 µA Resolution: 0.1 µA Accuracy: ± (2% of setting + 2 counts) |
| | Range: 1,000 – 20,000 µA range (7804/54) 1,000 – 10,000µA range (7800/50) Resolution: 1 µA Accuracy: ± (2% of setting + 2 counts) |
| Ramp Up Timer | Range: 0.4 – 999.9 sec, Low Range is OFF 0.5 – 999.9 sec, Low Range is ON |
| Ramp Down Timer | Range: 0.0, 1.0 – 999.9 sec (0=OFF) |
| Dwell Timer | Range: 0, 0.4 – 999.9 sec (0=Continuous) 0, 1.0 – 999.9 sec, Low Range is ON |
| Ramp-HI Selectable | Range: 0 – 20 mA selectable |
| Charge-LO | Range: 0.0 – 350.0 µA DC or Auto Set |
| Discharge Time | < 50 ms for no load, < 100 ms for capacitive load |
| Maximum Capacitive Load DC Mode | 1µF < 1kV 0.0 µF < 4 kV 0.75 µF < 2 kV 0.04 µF < 5 kV 0.5 µF < 3 kV 0.015 µF < 6 kV |
| Arc Detection | Range: 1 – 9 (9 is most sensitive) |
| INSULATION RESISTANCE MODE (Models 7800/7804/7850 & 7854 Only) | |
| Output Voltage, DC | Range: 10 – 1,000 VDC Resolution: 1 VDC Accuracy: ± (2% of setting + 2 counts) Range: 1,001 – 6,000 VDC Resolution: 1 VDC Accuracy: ± (2% of setting + 5 V) |

| INSULATION RESISTANCE MODE (Models 7800/7804/7850 & 7854 Only) | |
|--|--|
| Charging Current HI and LO-Limit | Maximum > 20 mA peak |
| | Range: 0.10 MΩ – 99.9 MΩ (HI-Limit: 0=OFF) Resolution: 0.01 MΩ Accuracy: ± (2% of setting + 2 counts) |
| | Range: 100.0 MΩ – 999.9 MΩ Resolution: 0.1 MΩ Accuracy: 1,000 – 9,999 ± (5% of setting + 2 counts) |
| | Range: 1,000 MΩ – 50,000 MΩ Resolution: 1 MΩ Accuracy: 10,000 – 50,000 ± (15% of setting + 2 counts) |
| Ramp Up Timer | Range: 0.1 – 999.9 sec |
| Ramp Down Timer | Range: 1.0 – 999.9 sec |
| Dwell Timer | Range: 0.5 – 999.9 sec (0=Continuous) |
| Delay Timer | Range: 0.5 – 999.9 sec |
| Charge-LO | 0.000 – 3.500 µA or Auto Set |
| CONTINUITY TEST MODE (All Models) | |
| Output Current, DC | 1 A for 0.000 – 1.000 Ω, 0.1 A for 1.01 – 10.00 Ω 0.01 A for 10.01 – 100 Ω, 0.001 A for 101 – 1,000 Ω 0.0001 A for 1001 – 10,000 Ω, 1 A is Max |
| Resistance Display Max & Min Max-Lmt | Range: 0.000 – 1.000 Ω Resolution: 0.001 Ω Accuracy: ± (1% of setting + 3 counts) |
| | Range: 1.01 – 10.00 Ω Resolution: 0.01 Ω Accuracy: ± (1% of setting + 3 counts) |
| | Range: 10.1 – 100.0 Ω Resolution: 0.1 Ω Accuracy: ± (1% of setting + 3 counts) |
| | Range: 101 – 1,000 Ω Resolution: 1 Ω Accuracy: ± (1% of setting + 3 counts) |
| | Range: 1,001 – 10,000 Ω Resolution: 1 Ω Accuracy: ± (1% of setting + 10 counts) |
| Dwell Timer | Range: 0, 0.4 – 999.9 sec (0=Continuous) |
| Resistance Offset | Range: 0.000 – 10.00 Ω |
| GROUND BOND TEST MODE (Models 7804 & 7854 Only) | |
| Output Voltage (Open Circuit Voltage) | Range: 3.00 – 8.00 VAC Resolution: 0.01 VAC Accuracy: ± (2% of setting + 3 counts) Open Circuit |
| Output Current | Range: 1.00 – 40.00 A Resolution: 0.01 A Accuracy: ± (2% of setting + 2 counts) |
| Maximum Loading | 1.00 – 10.00 A, 0 – 600 mΩ 10.01 – 30.00 A, 0 – 200 mΩ 30.01 – 40.00 A, 0 – 150 mΩ |
| HI and LO-Limit | Range: 0 – 150 mΩ for 30.01 – 40.00 A 0 – 200 mΩ for 10.01 – 30.00 A 0 – 600 mΩ for 1.00 – 10.01 A Resolution: 1 mΩ Accuracy: ± (2% of setting + 2 counts) |
| | Range: 0 – 600 mΩ Resolution: 1 mΩ Accuracy: ± (3% of setting + 3 counts) |
| Dwell Timer | Range: 0, 0.5 – 999.9 sec (0=Continuous) |
| Milliohm Offset | 0 – 200 mΩ |
| Voltage Offset | 0.0 – 6.0 V |
| GENERAL SPECIFICATIONS | |
| Memory | 2,000 steps, 200 steps per test file max 100,000 test results |
| Mechanical | Bench or rackmount (2U height) with feet |
| Interface | Standard: USB, RS-232 Optional: GPIB (IEEE-488.2), Ethernet or USB Printer |
| SmartGFI® | 0, 0.4 – 5.0 mA (0=OFF) |
| Dimensions (W x H x D) | 16.92" x 3.50" x 15.75" (430 x 88.1 x 400mm) |
| Weight | 7800: 45 lbs (20.4 kg) |
| | 7804: 41 lbs (18.6 kg) |
| | 7820: 34 lbs (15.4 kg) |
| | 7850: 35 lbs (15.9 kg) |
| | 7854: 46.3 lbs (21 kg) |