HypotULTRA®

The Most Flexible and Feature-Rich Automated Dielectric Analyzer Available

CE   UKCA   RoHS 3 COMPLIANT 2015/863/EU   EN 50191 COMPLIANT

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

	AC Hipot	DC Hipot	Ground Bond (40A)	Ground Continuity	Insulation Resistance	EN 50191 COMPLIANT
7800	500 VA*			•	•	
7804	•	•	•	•	•	•
7820	•			•		•
7850	•	•		•	•	•
7854	500 VA*	•	•	•	•	

*Meets 200 mA short circuit requirements

AVAILABLE INTERFACES

USB   **RS-232**   **Ethernet** (Optional)   **GPIB** (Optional)

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

FailCHEK™
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
Reverse polarity DC Hipot (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 Ramp Down Timer Dwell Timer	Range: 0.1 – 999.9 sec Range: 0.0 – 999.9 sec 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)	