

HypotULTRA®

THE MOST FLEXIBLE AND FEATURE-RICH
AUTOMATED DIELECTRIC
ANALYZER AVAILABLE

SCAN TO VIEW
QUICK START
VIDEO



AVAILABLE INTERFACES



USB



RS-232



Ethernet
(Optional)



GPIB
(Optional)

SAFETY & PRODUCTIVITY FEATURES



Smart GFI®
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



Autaware®3
Advanced
Automation
Control
Software



**Advanced
User Security**
Customize ID
& password
protection



Ramp-HI®
Reduce ramp
time during
DC Hipot



Charge-LO®
Confirms
proper DUT
connection



**Accredited
Cal**
Accredited
calibration
options
available



**Negative
DC Hipot**
Reverse
polarity
DC Hipot
(optional)

Our new 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 on-board 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.

**EN 50191
COMPLIANT**



Find the Model that Fits Your Testing Needs



AC Hipot



DC Hipot



40A
Ground Bond



Ground
Continuity



Insulation
Resistance

	AC Hipot	DC Hipot	40A Ground Bond	Ground Continuity	Insulation Resistance
7800*	500 VA*	•	•	•	•
NEW 2017 7804	•	•	•	•	•
7820	•	•	•	•	•
7850	•	•	•	•	•
NEW 2017 7854	500 VA*	•	•	•	•

*Meets 200 mA short circuit requirements

INPUT SPECIFICATIONS

Voltage	100 – 120 VAC / 200 – 240 VAC±10% Auto Range
Frequency	50/60 Hz ± 5%
Fuse	7804/7820/7850: 6.3 A, Slow Blow 250 VAC 7800/7854: 15 A, Fast-acting 250 VAC

AC WITHSTAND TEST MODE (ALL MODELS)

Output Voltage	Range: 0-5,000 VAC Resolution: 1 VAC Accuracy: ± (2% of setting + 5 V)
Output Frequency	50/60 Hz ± 0.1% , User Selection
Output Waveform	Sine Wave, Crest Factor = 1.3 - 1.5
Output Regulation	±(1% of output + 5 V)
HI and LO-Limit Total	Range: 0.000 – 9999 mA Resolution: 0.001 mA Range: 10.00 – 30.00 mA (10-99.99 mA, Model 7800 & 7854) Resolution: 0.01 mA Accuracy: 7804, 7820 & 7850 ± (2% of setting + 2 counts) 7800 & 7854: ± (2% of setting+ 6 counts)
Real	Range: 0.000 – 9999 mA Resolution: 0.001 mA Range: 10.00 – 30.00 mA (10-99.99 mA, Models 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 0.1 A ± 0.01 A, fixed
Current	Max. ground resistance: 1.0 Ω ± 0.1 Ω
Arc Detection	Range: 1 - 9 ranges (9 is most sensitive)

DC WITHSTAND TEST MODE (7800, 7804, 7850 & 7854 ONLY)

Output Voltage	Range: 0 - 6000 VDC
DC Output Ripple	<4 % (6KV/10mA 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 - 9999 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: 1000 - 20000 µA Resolution: 1 µA Accuracy: ± (2% of setting + 2 counts)
Ramp Up Timer	Range: 0.4 - 999.9 sec 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	1µF < 1kV 0.08 µF < 4 kV
Capacitive	0.75 µF < 2 kV 0.04 µF < 5 kV
Load DC Mode	0.5 µF < 3 kV 0.015 µF < 6 kV
Arc Detection	Range: 1 - 9 ranges (9 is most sensitive)

INSULATION RESISTANCE (7800, 7804, 7850 & 7854 ONLY)

Output Voltage, DC	Range: 10-1,000 VDC Resolution: 1 VDC Accuracy: ± (2% of reading + 2 counts)
Charging Current	Range: 1001-6000 VDC Resolution: 1 VDC Accuracy: ± (2% of setting + 5 V)
HI & LO-Limit	Maximum > 20 mA peak Range: 0.10 M – 99.99 MΩ (HI-Limit: 0 = OFF) 1.00 - 99.99 when voltage > 1,000 V Resolution: 0.01 M

Accuracy:	±(2% if setting + 2 counts)
Range:	100.0 M – 999.9 M
Resolution:	0.1 M
Accuracy:	1,000-9,999 ±(5% if setting + 2 counts)
Range:	1,000 M – 50,000 M
Resolution:	1 M
Accuracy:	10,000-50,000 M ±(15% if 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 or 0
Delay Timer	Range: 0.5 – 999.9 sec or 0
Charge-LO	0.000-3.500 µA or Auto Set

CONTINUITY TEST (ALL MODELS)

Output Current, DC	1A for 0.000 - 1.000 Ω 0.1A 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
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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: 1001 – 10,000 Ω Resolution: 1 Ω Accuracy: ± (1 % of setting + 10 counts) Range: 0, 0.4 – 999.9 sec (0=Continuous)
Dwell Timer	Range: 0, 0.4 – 999.9 sec (0=Continuous)
Resistance Offset	Range: 0.000-10.00 Ω

GROUND BOND TEST MODE (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 + 0.02 A)
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 mΩ) Range: 0 – 600 mΩ for 1.00 – 5.99 A Resolution: 1 mΩ Accuracy: ±(3% of setting + 3 mΩ)
Dwell Timer	Range: 0, 0.5 – 999.9 sec (0 = Continuous)
Milliohm Offset	0 – 200 mΩ

GENERAL SPECIFICATIONS

Memory	2,000 steps 200 steps per test file max
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)	Bench or rack mount (2U height) w/ feet 16.92 x 3.50 x 15.75 in, (430 x 88.1 x 400) mm
Weight	7804 = 41lbs (18.6kg), 7820 = 34 lbs (15.4 kg), 7850 = 35 lb (15.9 kg), 7854 = 46.3lbs (21 kg), 7800 = 45 lbs (20.4 kg)