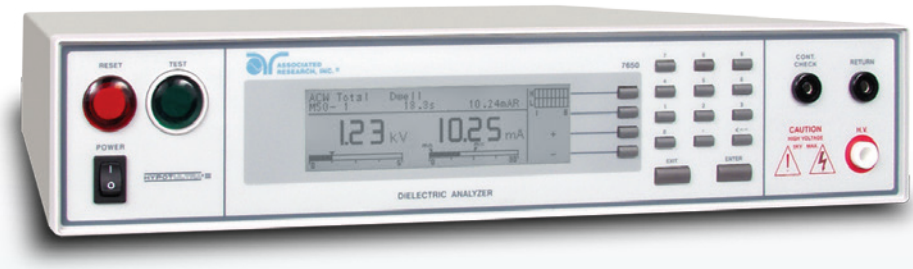
HYPOTULTRA® III

The most flexible and feature-rich automated dielectric analyzer available.



Our HypotULTRA III series of dielectric analyzers provides the perfect combination of features, functions and flexibility. Choose from 2 models with a variety of automation interfaces to maximize test throughput and data collection on the production line. Take advantage of our advanced Continuity mode for point-to-point testing. Get even more out of your instrument with a 4- or 8-port internal scanning matrix for multi-point testing. For even more test points, interface the HypotULTRA III with an SC6540 modular scanning matrix to automatically test an unlimited number of points. With a convenient 2U cabinet design, the HypotULTRA III won't take up too much space on the bench top or in a rack.

Safety agency listed.

EN 61010-1
EN 61010-31

Choose from the following at no charge:

USB · RS-232 · Ethernet · GPIB

	AC Hipot	DC Hipot	Insulation Resistance	Ground Continuity
7650	✓	✓	✓	✓

PRODUCTIVITY-ENHANCING FEATURES

- **PLC Remote** — Basic PLC relay control
- **VERI-CHEK®** — Includes preset verification tests
- **CAL-ALERT®** — Tracks and alerts for calibration
- **Inter-Connection** — Interconnect with HYAMP III to form a complete test system
- **RAMP HI®** — Reduce ramp time during DC Hipot
- **CHARGE LO®** — Confirms proper DUT connection
- **Arc Detection** — High frequency filter for corona detection
- **Internal Scanner** — Available with HV/HC scanning matrix
- **Modular Scanner** — Compatible with SC6540 scanning matrix
- **Autoware** — Use with automation control software
- **Accredited Cal** — Accredited calibration options available
- **Data Storage RS-485** — Download data directly to a USB drive

SAFETY FEATURES

- **Prompt & Hold** — Provides on-screen instructions between tests
- **Smart GFI®** — Automatic operator shock protection
- **Remote Safety Interlock** — Easily disable HV output

Request a Live Web Demo

Signal Test, Inc
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Input Specifications

Voltage	115 / 230 VAC ± 10%, Automatically Selected
Frequency	50/60 Hz ± 5%
Fuse	4 Amp 250 V Slow Blow

Dielectric Withstand Test Mode

Output Rating			5 kV @ 30 mAAC
			5 kV @ 10 mADC for 7650 only
Ramp-HI			12 mA peak maximum, ON/OFF selectable
Charge-LO		Range:	0.0 - 350.0 µADC or Auto set
Maximum & Minimum Limits	AC Total	Range 1:	0.000 – 9.999 mA
		Resolution:	0.001 mA
		Range 2:	10.00 – 30.00 mA
		Resolution:	0.01 mA
		Accuracy:	± (2% of setting + 2 counts)
	AC Real	Range 1:	0.000 – 9.999 mA
		Resolution:	0.001 mA
		Range 2:	10.00 – 30.00 mA
		Resolution:	0.01 mA
	Accuracy:		(3% of setting + 0.05 mA) All Ranges
			PF > 0.1; V > 250 VAC
	DC	Range 1:	0.0 – 999.9 µA for 7650 only
		Resolution:	0.1 µA
		Range 2:	1000 – 10000 µA for 7650 only
		Resolution:	1 µA
		Accuracy:	± (2% of setting + 2 counts)
Current Display			Auto Range
	AC Total	Range 1:	0.000 mA – 3.500 mA
		Range 2:	3.00 – 30.00 mA
	AC Real	Range:	0.000 mA – 30.00 mA
		Resolution:	0.001 mA or 0.01 mA
	DC	Range 1:	0.0 µA – 350.0 µA for 7650 only
		Range 2:	0.300 mA – 3.500 mA for 7650 only
		Range 3:	3.00 mA – 9.99 mA for 7650 only
		Accuracy:	Same as Maximum & Minimum Limits
Arc Detection		Range:	1 - 9
Voltage Display		Range:	0.00 - 5.00 kV Full Scale
		Accuracy:	± (2% of setting + 20 V)
DC Output Ripple			≤ 4% Ripple rms at 5 kVDC @ 10 mA, Resistive Load
Discharge Time			≤ 200 ms
Maximum Capacitive Load in DC Mode			1 µF----< 1 kV 0.08 µF----< 4 kV 0.75 µF----< 2 kV 0.04 µF----< 5 kV 0.5 µF----< 3 kV
AC Output Wave Form			Sine Wave, Crest Factor = 1.3 - 1.5
Output Frequency		Range:	60 or 50 Hz, User Selection
		Accuracy:	± 0.1%
Output Regulation			± (1 % of output + 5 V)
Dwell Timer		Range:	0.0, 0.4 - 999.9 sec (0 = Continuous)
Ramp Timer		Ramp-Up:	0.1 - 999.9 sec
		Ramp-Down:	AC 0.0 - 999.9 sec
		DC:	0.0, 1.0 - 999.9 sec ; 0.0=OFF
Ground Continuity		Current:	DC 0.1 A ± 0.01 A, fixed
		Max. ground resistance:	1 Ω ± 0.1 Ω, fixed
Ground Fault Interrupt			GFI Trip Current: 450 µA max (AC or DC)
		HV Shut Down Speed:	< 1 ms

Insulation Resistance Test Mode (Model 7650 Only)

Output Voltage	Range:	50 - 1000 VDC
	Resolution:	1 V
	Accuracy:	± (2% of reading + 2 counts)
Short Circuit Current Maximum:		12 mA peak
Voltage Display	Range:	0 – 1000 V
	Accuracy:	± (2% of reading + 2 V)
Resistance Display	Range:	0.05 MΩ - 50000 MΩ (5 Digit, Auto Ranging)
	Resolution:	500 VDC MΩ / 1000 VDC MΩ
		0.001 / 0.050 - 9.999 / 0.100 - 9.999
		0.01 / 1.00 - 99.99 / 1.00 - 99.99
		0.1 / 10.0 - 999.9 / 10.0 - 999.9
		1 / 100 - 50000 / 100 - 50000
	Accuracy:	50 – 499 V
		0.05 MΩ – 999.9 MΩ ± (7% of reading + 2 counts)
		500 – 1000 V
		0.10 MΩ – 999.9 MΩ
		± (2% of reading + 2 counts)
		1000 MΩ – 9999 MΩ
		± (5% of reading + 2 counts)
		10000 MΩ – 50000 MΩ
		± (15% of reading + 2 counts)
Charge-LO	Range:	0.000 - 3.500 µA or Auto Set
Maximum and Minimum Limits	Range:	0.0, 0.05 MΩ – 99.99 MΩ
	Resolution:	0.01 MΩ
	Range:	100.0 MΩ – 999.9 MΩ
	Resolution:	0.1 MΩ
	Range:	1000 MΩ – 50000 MΩ
	Resolution:	1 MΩ
	(Max Limit: 0 = OFF)	
	Accuracy:	Same as Resistance Display Accuracy
Ramp Timer	Ramp-Up:	0.1 - 999.9 sec
	Ramp-Down:	0.0, 1.0 - 999.9 sec
Delay Timer		0.0, 1.0 - 999.9 sec 0 = Continuous

Continuity Test Mode

Output Current	DC 0.1 A ± 0.01 A	Total Resistance*: 0.00-33.0 Ω
	DC 0.01 A ± 0.001 A	Total Resistance*: 31.0-330 Ω
	DC 0.001 A ± 0.0001 A	Total Resistance*: 310-2000 Ω
Resistance Display	Range 1:	0.00 – 19.99 Ω
	Accuracy:	± (1 % of reading + 0.05 Ω)
	Range 2:	20.0 – 199.9 Ω
	Accuracy:	± (1 % of reading + 0.2 Ω)
	Range 3:	200 – 2000 Ω
	Accuracy:	± (1 % of reading + 2 Ω)
*Total Resistance of Test Leads, Fixture and DUT.		
Maximum and Minimum Limits	Range 1:	0.00 – 99.99 Ω
	Resolution:	0.01 Ω
	Accuracy:	± (1% of setting+0.05 Ω)
	Range 2:	100.0 – 999.9 Ω
	Resolution:	0.1 Ω
	Accuracy:	± (1% of setting+0.2 Ω)
	Range 3:	1000 – 2000 Ω
	Resolution:	1 Ω
	Accuracy:	± (1% of setting+2 Ω)
	(Max Limit: 0 = OFF)	
Dwell Timer	Range:	0.0, 0.3 - 999.9 sec (0 = Continuous)
Milliohm Offset	Range:	0.00 - 10.00 Ω

General Specifications

Mechanical Dimensions	Bench or rack mount (2U height) with tilt up front feet (WxHxD) 16.92 x 3.50 x 15.75 in (430 x 89 x 400 mm)
Weight	31.38 Lbs (14.23 kg) variable with options
Interface	Standard USB/RS-232 Optional Ethernet, GPIB, Data Storage (RS-485) or Printer Port with Date and Time Stamp
Memory	50 memories, 30 steps/memory

Why We Use Counts

Associated Research publishes some specifications using "counts" which allows us to provide a better indication of the tester's capabilities across measurement ranges. A count refers to the lowest resolution of the display for a given measurement range. For example, if the resolution for voltage is 1V then 2 counts = 2V.

Specifications subject to change without notice.