



HYPOT® III

Production Line Dielectric Withstand Testers

Hypot® III is a bench top Dielectric Withstand tester with an enhanced graphic LCD. It features three testers: the 3705 an AC Hipot tester, the 3765 an AC / DC Hipot tester and the 3770 an AC / DC Hipot tester with built-in Insulation Resistance testing. All testers feature an RS-232 interface for entry-level automation.

Model 3705 - 5KV AC Hipot Tester

Model 3765 - 5KV AC, 6KV DC Hipot Tester

Model 3770 - 5KV AC, 6KV DC Hipot & Insulation Resistance Tester

Features and Benefits

- RS-232 interface standard for entry-level automation
- Patented SmartGFI® safety circuit protects the operator from shock hazards
- Patented VERI-CHEK® feature prompts users through steps to validate the instrument's operation
- Patented CAL-ALERT® feature alerts the operator that the tester is due for re-calibration
- Built-in adjustable Continuity test for checking basic continuity
- Graphic LCD provides intuitive menu system to simplify the entire testing process from set-up to results
- Remote Safety Interlock feature prevents the high-voltage from being activated without the interlock enabled
- 10 Memories with 3 Steps per memory for storing and recalling test parameters
- PLC Remote Control for simple remote operation
- Interconnects with a HYAMP III Associated Research Ground Bond tester to form a complete test system
- Digitally controlled arc detection circuit allows the operator to program sensitivity levels for detecting arcs
- Minimum and maximum trip settings for safer and more accurate testing
- Comes complete with an adapter box for products terminated in a line cord

U.S. Patents: 6,744,259, 6,549,385, 6,515,484, 6,054,865.
Other patents pending.



Safety agency listed.

Input Specifications

Voltage	115/230 VAC $\pm$ 10%, user selectable
Frequency	50/60 Hz $\pm$ 5%
Fuse	3.15 A, fast acting 250 VAC

Dielectric Withstand Test Mode

Output Rating	5000 V @ 20 mA AC 6000 V @ 7.5 mA DC
Voltage Setting	Range: 0 - 5.00 KV AC 0 - 6.00 KV DC Resolution: 0.01 KV Accuracy: $\pm$ (2% of setting + 5 V)
Maximum Limit	AC Range: 0.00 - 20.00 mA Resolution: 0.01 mA DC Range: 0 - 7500 μ A Resolution: 1 μ A Accuracy: AC and DC $\pm$ (2% of setting + 2 counts)
Minimum Limit	AC Range: 0.000 - 9.999 mA Resolution: 0.001 mA DC Range: 0.0 - 999.9 μ A Resolution: 0.1 μ A Accuracy: AC and DC $\pm$ (2% of setting + 2 counts)
Arc Detection	Range: 0 - 9, 0 disabled
Ground Fault Interrupt	GFI Trip Current: 450 μ A max (AC or DC) HV Shut Down Speed: < 1ms
Current Display	Auto Range AC Range 1: 0.000 - 3.500 mA Resolution: 0.001 mA Range 2: 3.00 - 20.00 mA Resolution: 0.01 mA DC Range 1: 0.0 μ A - 350.0 μ A Resolution: 1: 0.1 μ A Range 2: 0.300 mA - 3.500 mA Resolution: 0.001 mA Range 3: 3.00 mA - 7.50 mA Resolution: 0.01 mA Accuracy: All Ranges $\pm$ (2% of reading + 2 counts)
DC Output Ripple	$\leq$ 5% Ripple RMS at 6 KV DC @ 7.5 mA, Resistive Load
Discharge Time	$\leq$ 200 ms The maximum capacitive load vs output voltage: 0.20 μ F < 1 KV 0.050 μ F < 4 KV 0.10 μ F < 2 KV 0.040 μ F < 5 KV 0.06 μ F < 3 KV 0.015 μ F < 6 KV

AC Voltage Waveform Sine Wave, Crest Factor = 1.3 - 1.5

Output Frequency Range: 50 or 60 HZ, User Selectable

Output Voltage Regulation $\pm$ (1% of output + 5 V) from no load to full load and over input voltage range.

Dwell Timer Range: AC 0, 0.3 - 999.9 sec (0 = Continuous)
DC 0, 0.4 - 999.9 sec (0 = Continuous)
Accuracy: $\pm$ (0.1% of reading + 0.05 sec)

Ramp Timer Range: Ramp-Up: 0.1 - 999.9 sec
Ramp-Down: AC 0.0 - 999.9 sec
DC 1.0 - 999.9 sec (0=OFF)
Accuracy: $\pm$ (0.1% of reading + 0.05 sec)

Dielectric Withstand Test Mode (continued)

Ground Continuity Current	DC 0.1 A $\pm$ 0.01 A, fixed
Ground Continuity	Range: 0.0 Ω - 1.50 Ω
Maximum Limit	Resolution: 0.01 Ω
Minimum Limit	Accuracy: $\pm$ (3% of setting + 0.02 Ω)
Ground Continuity	Range: 0.0 Ω - 0.50 Ω
Auto Offset	Resolution: 0.01 Ω
	Accuracy: $\pm$ (3% of setting + 0.02 Ω)

Insulation Resistance Test Mode

Voltage Setting	Range: 30 - 1000 VDC Resolution: 1 V Accuracy: $\pm$ (2% of setting + 5 V)
Resistance Display	Range: 1 - 9999 M Ω (4 Digit, Auto Ranging) Resolution: 500 VDC - 1000 VDC M Ω M Ω 0.001 1.000 - 9.999 0.01 10.00 - 99.99 0.1 100.0 - 999.9 1 1000 - 9999 Accuracy: $\pm$ (2% of reading + 2 counts) at test voltage 500 - 1000 V and 1 - 999.9 M Ω $\pm$ (5% of reading + 2 counts) at test voltage 500 - 1000 V and 1000 - 9999 M Ω $\pm$ (8% of reading + 2 counts) at test voltage 30 - 500 V and 1 - 1000 M Ω
Maximum Limit	Range: 0, 1 - 9999 M Ω (0=OFF) Resolution: 1 M Ω Accuracy: Same as Resistance Display
Minimum Limit	Range: 1 - 9999 M Ω Resolution: 1 M Ω Accuracy: Same as Resistance Display
Ramp Timer	Range: Ramp-Up: 0.1 - 999.9 sec Ramp-Down: 1.0 - 999.9 sec (0=OFF) Resolution: 0.1 sec Accuracy: $\pm$ (0.1% of reading + 0.05 sec)
Delay Timer	Range: 0, 0.5 - 999.9 sec (0 = Continuous) Resolution: 0.1 sec Accuracy: $\pm$ (0.1% of reading + 0.05 sec)
GFI Trip Current:	450 μ A max
HV Shut Down Speed:	< 1 ms

General Specifications

Mechanical	Bench or rack mount with tilt up feet.
Dimensions	(W x H x D) 8.46 x 3.5 x 14.57 in. (215 x 89 x 370 mm)
Weight	20.96 lbs (9.53 kgs)
Interface	RS-232 interface standard for entry-level automation.
Memory	10 Memories, 3 steps per memory.

Specifications subject to change without notice.