



U.S. Patents: 6,744,259, 6,549,385, 6,515,484, 6,054,865, 5,548,501.

HYPOT[®] III



Production Line Dielectric Withstand Testers

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 allows operators to remotely control the Hipot tester
- Interconnects with an 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



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Input Specifications

Voltage	115/230 VAC ± 10%, user selectable
Frequency	50/60 Hz ± 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: ± (2% of setting + 5 V)
Maximum Limit	AC Range: 0.00 - 20.00 mA Resolution: 0.01 mA DC Range: 0 - 7500 µA Resolution: 1 µA Accuracy: AC and DC ± (2% of setting + 2 counts)
Minimum Limit	AC Range: 0.000 - 9.999 mA Resolution: 0.001 mA DC Range: 0.0 - 999.9 µA Resolution: 0.1 µA Accuracy: AC and DC ± (2% of setting + 2 counts)
Arc Detection	Range: 0 - 9, 0 disabled
Ground Fault Interrupt	GFI Trip Current: 450 µA max (AC or DC) HV Shut Down Speed: < 1ms
Current Display	Auto Range AC Range 1: 0.000 - 3.500 mA Range 2: 3.00 - 20.00 mA DC Range 1: 0.0 µA - 350.0 µA Range 2: 0.300 mA - 3.500 mA Range 2: 3.00 mA - 7.50 mA Accuracy: All Ranges ± (2% of reading + 2 counts)
DC Output Ripple	≤ 5% Ripple RMS at 6 KV DC @ 7.5 mA, Resistive Load
Discharge Time	≤ 200 ms The maximum capacitive load vs output voltage: 0.20 µF < 1 KV 0.050 µF < 4 KV 0.10 µF < 2 KV 0.040 µF < 5 KV 0.06 µF < 3 KV 0.015 µF < 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	± (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 = Constant) DC 0, 0.4 - 999.9 sec (0 = Constant) Accuracy: ± (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: ± (0.1% of reading + 0.05 sec)
Ground Continuity Current	DC 0.1 A ± 0.01 A, fixed
Ground Continuity	Range: 0.0 Ω - 1.50 Ω Resolution: 0.01 Ω Accuracy: ± (3% of setting + 0.02 Ω)
Maximum Limit	
Minimum Limit	
Ground Continuity	Range: 0.0 Ω - 0.50 Ω Resolution: 0.01 Ω Accuracy: ± (3% of setting + 0.02 Ω)
Auto Offset	

Insulation Resistance Test Mode

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

General Specifications

Interface	RS-232 interface standard for entry-level automation.
Remote Control & Signal Output	The following input and output signals are provided through two 9 pin D type connectors: 1. Remote control: Test, Reset, and Remote Interlock 2. Remote recall of memory program #1, #2, and #3 3. Outputs: Pass, Fail, Test-in-process, and Reset 10 Memories, 3 steps per memory. Key Lock capability to avoid unauthorized access to all test parameters and memory locations.
Program Memory Security	Key Lock capability to avoid unauthorized access to all test parameters and memory locations.
Mechanical Dimensions	Bench or rack mount with tilt up feet. (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)
Calibration	Traceable to National Institute of Standards & Technology (NIST). Calibration controlled by software. Adjustments are made through front panel keypad in a restricted access calibration mode. Calibration information stored in non-volatile memory.

Available Accessories

Probe (38081)	High voltage retractable 5 KV AC probe.
Return Probe (38082)	Retractable probe used on the return side of the Hypot III.
Safe-T-Probe (38814)	Test Gun with trigger that controls retractable probe and activates the instrument's high voltage circuit.
Footswitch (35822)	Interlocked footswitch that provides a "hands-off" remote start.

Specifications subject to change without notice.



- Customer support & technical services
- 5-Year extended warranty*
- 24-Hour turn-around on calibrations
- Industry seminars, expert training & education programs
- Local sales offices throughout the world

*With annual calibration from Associated Research.