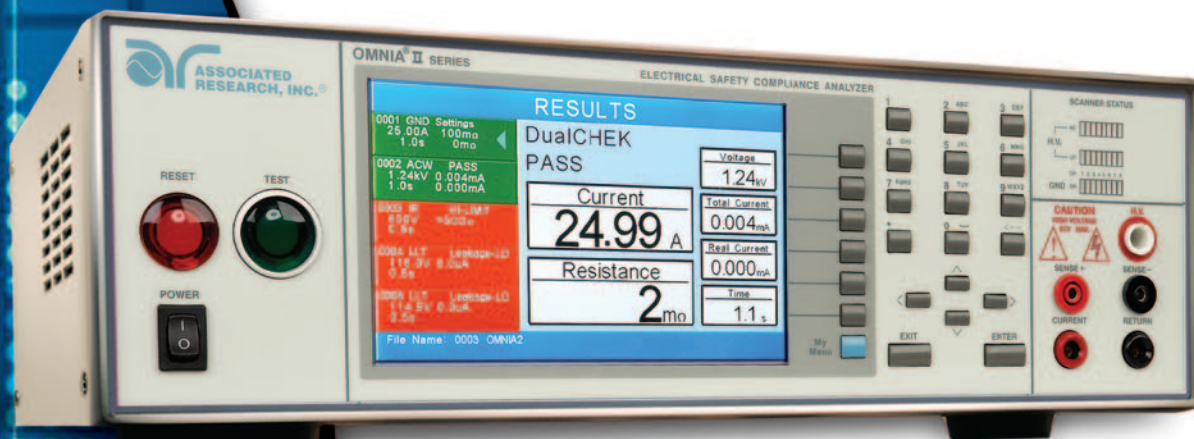


INSTRUMENTS FOR

ELECTRICAL SAFETY COMPLIANCE TESTING



HIPOT TESTERS

GROUND BOND TESTERS

INSULATION RESISTANCE TESTERS

LINE LEAKAGE TESTERS

MEDICAL TEST SYSTEMS

HV/HC SCANNING MATRICES

SOFTWARE SOLUTIONS

FUNCTIONAL RUN TESTERS

CUSTOM INSTRUMENTS





HYPOT® III

Production Line Dielectric Withstand Testers

Hypot® III is a bench top Dielectric Withstand tester with an enhanced graphic LCD. Four models are available: the 3705 AC Hipot tester, the 3765 AC/DC Hipot tester, the 3770 AC/DC Hipot tester with built-in Insulation Resistance, and the 3780 500 VA AC Hipot tester. All testers feature an RS-232 interface for entry-level automation.

Model 3705 - 5 kVAC Hipot Tester

Model 3765 - 5 kVAC, 6 kVDC Hipot Tester

Model 3770 - 5 kVAC, 6 kVDC Hipot & Insulation Resistance Tester

Model 3780 - 500 VA (5 kVA @ 100 mA) AC Hipot 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
- Meets 200 mA Short circuit requirements (Model 3780)



Models 3705, 3765 & 3770.

Model 3780.

3705, 3765, 3770 Specifications

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 mAAC 6000 V @ 7.5 mADC
Voltage Setting	Range: 0 - 5.00 kVAC 0 - 6.00 kVDC 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 kVDC @ 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 kg)
Interface	RS-232 interface standard for entry-level automation
Memory	10 Memories, 3 steps per memory

Specifications subject to change without notice.

3780 Specifications**Input Specifications**

Voltage	115/230 VAC \pm 15%, automatically selected
Frequency	50/60 Hz \pm 5%
Fuse	15 Amp, Slow Blow 250 VAC

Dielectric Withstand Test Mode

Output Rating	5000 V @ 100 mAAC
Voltage Setting	Range: 0 – 5.00 kVAC Resolution: 0.01 kV Accuracy: \pm (2% of setting + 0.01 kV) (Adjustable during operation. Disable when key lockout is active.)
Maximum Limit	AC Range: 0.00 – 99.99 mA Resolution: 0.01 mA Accuracy: \pm (2% of setting + 6 counts)
Minimum Limit	AC Range: 0.000 – 9.999 mA Resolution: 0.001 mA Accuracy: \pm (2% of setting + 6 counts)
Arc Detection	Range: 0 - 9, 0 disabled
Ground Fault Interrupt	GFI Trip Current: 450 μ A max HV Shut Down Speed: < 1ms
Current Display	Auto Range AC Range 1: 0.000 mA – 3.500 mA Resolution: 0.001 mA Accuracy: \pm (2% of setting + 2 counts) Range 2: 3.00 – 99.99 mA Resolution: 0.01 mA Accuracy: \pm (2% of setting + 6 counts)
AC Voltage Wave Form	Sine Wave, Crest Factor = 1.3 – 1.5
Output Frequency	Range: 50 or 60 Hz, User Selectable Accuracy: \pm 0.1%
Output Voltage Regulation	\pm (1 % of output + 5 V) from no load to full load and over input voltage range.
Dwell Timer	Range: 0, 0.3 – 999.9 sec (0 = Constant) Resolution: 0.1 sec 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 Resolution: 0.1 sec Accuracy: \pm (0.1% of reading + 0.05 sec)
Ground Continuity Current	DC 0.1 A \pm 0.01 A, fixed
Ground Continuity Maximum Limit Minimum Limit	Range: 0.0 Ω - 1.50 Ω Resolution: 0.01 Ω Accuracy: \pm (3% of setting + 0.02 Ω)
Ground Continuity Auto Offset	Range: 0.0 Ω - 0.50 Ω Resolution: 0.01 Ω Accuracy: \pm (3% of setting + 0.02 Ω)
Output Short Circuit Current	> 200 mA

General Specifications

Mechanical	Bench or rack mount with tilt up feet
Dimensions	(W x H x D) 16.93 x 5.24 x 13.78 in. (430 x 133 x 350 mm)
Weight	49 lbs (23 kg)
Interface	RS-232 interface standard for entry-level automation
Memory	10 Memories, 3 steps per memory

Specifications subject to change without notice.

Accredited calibration service available. Includes ISO 17025, ANSI Z540.1-1994, CTL & Denan's Law requirements.

For more information on testing to a specific standard, refer back to the Common Safety Standard Reference Chart.

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