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## Test & Measurement

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## Complimentary Reference Material

This PDF has been made available as a complimentary service for you to assist in evaluating this model for your testing requirements.

TMG offers a wide range of test equipment solutions, from renting short to long term, buying refurbished and purchasing new. Financing options, such as Financial Rental, and Leasing are also available on application.

TMG will assist if you are unsure whether this model will suit your requirements.

Call TMG if you need to organise repair and/or calibrate your unit.

If you click on the "Click-to-Call" logo below, you can call us for FREE!

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Product Lifecycle Management System

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

# HYPOT<sup>®</sup> III



## Production Line Dielectric Withstand Testers

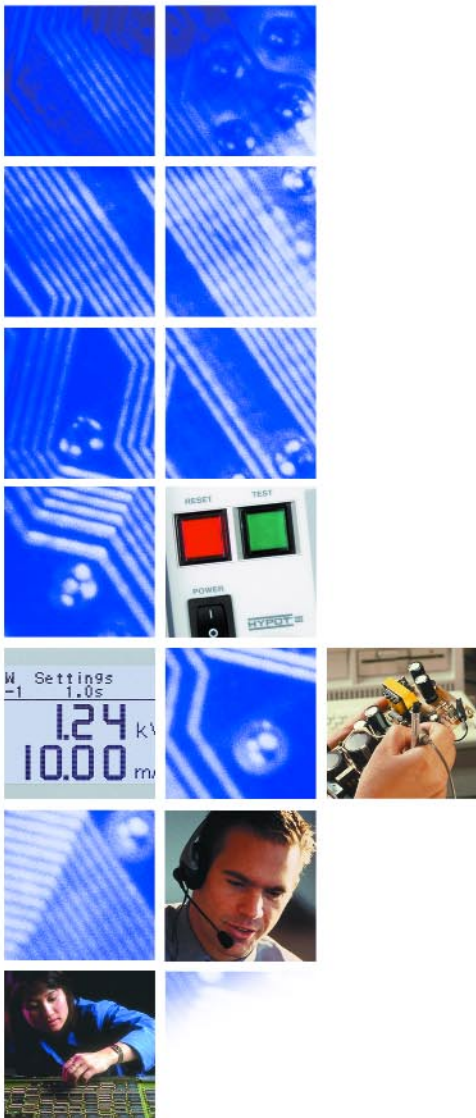
### Model 3605 5KV AC Hipot Tester

### Model 3665 5KV AC, 6KV DC Hipot Tester

### Model 3670 5KV AC, 6KV DC Hipot & Insulation Resistance Tester

## Features and Benefits

- Patented SmartGFI<sup>®</sup> safety circuit protects the operator from shock hazards
- Patented VERI-CHEK<sup>®</sup> feature prompts users through steps to validate the instrument's operation
- Patented CAL-ALERT<sup>®</sup> 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
- PLC Remote Control allows operators to remotely control the Hipot tester
- 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
- Electronic Ramp and Dwell timers for more consistent and reliable testing
- 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



**ASSOCIATED  
RESEARCH, INC.<sup>®</sup>**  
www.asresearch.com  
**1.800.858.TEST [8378]**

## Input Specifications

<b>Voltage</b>	115/230 VAC ± 10%, user selectable
<b>Frequency</b>	50/60 Hz ± 5%
<b>Fuse</b>	3.15 A, fast acting 250 VAC

## Dielectric Withstand Test Mode

<b>Output Rating</b>	5000 V @ 20 mA AC 6000 V @ 7.5 mA DC
<b>Voltage Setting</b>	Range: 0 - 5.00 KV AC 0 - 6.00 KV DC Resolution: 0.01 KV Accuracy: ± (2% of setting + 5 V)
<b>Maximum Limit</b>	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)
<b>Minimum Limit</b>	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)
<b>Arc Detection</b>	Range: 0 - 9, 0 disabled
<b>Ground Fault Interrupt</b>	GFI Trip Current: 450 µA max (AC or DC) HV Shut Down Speed: < 1ms
<b>Current Display</b>	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)
<b>DC Output Ripple</b>	≤ 5% Ripple RMS at 6 KV DC @ 7.5 mA, Resistive Load
<b>Discharge Time</b>	≤ 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
<b>AC Voltage Waveform</b>	Sine Wave, Crest Factor = 1.3 - 1.5, <2% THD
<b>Output Frequency</b>	Range: 50 or 60 HZ, User Selectable
<b>Output Voltage Regulation</b>	± (1% of output + 5 V) from no load to full load and over input voltage range.
<b>Dwell Timer</b>	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)
<b>Ramp Timer</b>	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)
<b>Ground Continuity Current</b>	DC 0.1 A ± 0.01 A, fixed
<b>Ground Continuity</b>	Range: 0.0 Ω - 1.50 Ω Resolution: 0.01 Ω Accuracy: ± (3% of setting + 0.02 Ω)
<b>Maximum Limit</b>	
<b>Minimum Limit</b>	
<b>Ground Continuity</b>	Range: 0.0 Ω - 0.50 Ω Resolution: 0.01 Ω Accuracy: ± (3% of setting + 0.02 Ω)
<b>Auto Offset</b>	

## Insulation Resistance Test Mode

<b>Voltage Setting</b>	Range: 30 - 1000 VDC Accuracy: ± (2% of setting + 5 V)
<b>Resistance Display</b>	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
<b>Maximum Limit</b>	Range: 0, 1 - 9999 MΩ (0=OFF) Accuracy: Same as Resistance Display
<b>Minimum Limit</b>	Range: 1 - 9999 MΩ Accuracy: Same as Resistance Display
<b>Ramp Timer</b>	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)
<b>Delay Timer</b>	Range: 0, 0.5 - 999.9 sec (0 = Constant) Accuracy: ± (0.1% of reading + 0.05 sec)
<b>Ground Fault Interrupt</b>	GFI Trip Current: 450 µA max HV Shut Down Speed: < 1 ms

## General Specifications

<b>Remote Control &amp; Signal Output</b>	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
<b>Program Memory</b>	10 Memories, 3 steps per memory.
<b>Security</b>	Key Lock capability to avoid unauthorized access to all test parameters and memory locations.
<b>Mechanical</b>	Bench or rack mount with tilt up feet.
<b>Dimensions</b>	(W x H x D) 8.46 x 3.5 x 14.57 in. (215 x 89 x 370 mm)
<b>Weight</b>	20.96 lbs (9.53 kgs)
<b>Calibration</b>	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

<b>Probe (38081)</b>	High voltage retractable 5 KV AC probe.
<b>Return Probe (38082)</b>	Retractable probe used on the return side of the Hypot III.
<b>Safe-T-Probe (38083)</b>	Test Gun with trigger that controls retractable probe and activates the instrument's high voltage circuit.
<b>Footswitch (35822)</b>	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.

