

Dielectric Withstand Testers

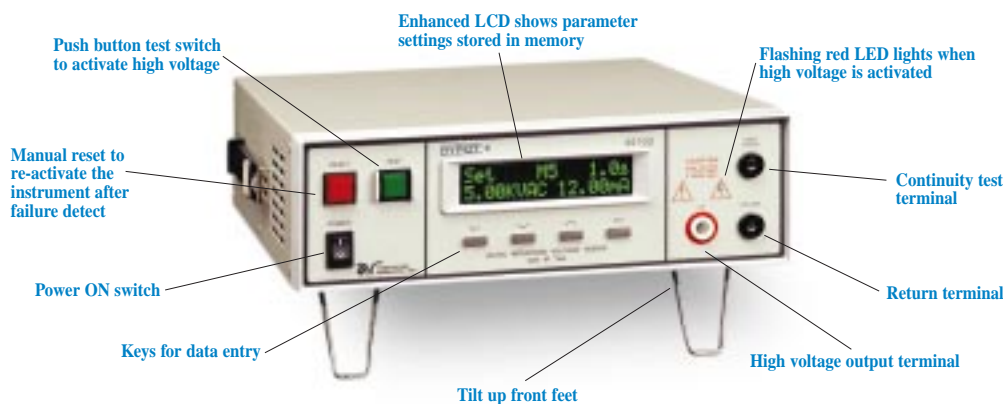
For Production Line Safety Agency Compliance Testing



Models 3500D, 3505D, 3565D, 3570D & 4500D

- Microprocessor Digital Design With Software Friendly Menuing
- Electronic Ramp & Dwell
- Standard Ground Continuity Check
- Interconnects To Ground Bond Tester
- Tamper Proof Front Panel Controls
- Low-Current Sense
- Test Setup Memories
- Switchable 50/60Hz Testing
- PLC Remote Control
- 500VA Model Available





The Hypot®II includes full microprocessor control to enhance ease of use and operator safety. Additionally, it provides you with all the capabilities you need to meet hipot and continuity tests required by UL, CSA, VDE, IEC, TÜV and the European Norms including the Low Voltage Directive 73/23/EEC. Hypot II is available in AC (models 3500D and 3505D), AC/DC (model 3565D), AC/DC/IR (model 3570D), and a 500VA (model 4500D). The wide variety of models we offer on Hypot II provides you with the flexibility you need to meet a wide range of testing applications.

HYPOT® II FEATURES & BENEFITS



Hypot II models 3500D, 3505D, 3565D and 3570D are UL listed.

FEATURE No load setup of trip current and output voltage
BENEFIT This provides the operator with an easy and safe way to set trip currents and output voltages since parameters are set without high voltage activated.

FEATURE Tamper proof front panel controls
BENEFIT No knobs, switches or pots to set or accidentally knock out of setting. Once setup is accomplished through software it is maintained in memory. Front panel controls can be locked via an ON/OFF setting in the calibration menu.

FEATURE Line and load regulation
BENEFIT This system maintains the output voltage to within 1% of settings from no load to full load and over the line voltage range to ensure that test results remain consistent and within safety agency requirements.

FEATURE Interconnects to HYAMP® JR. model 3030D
BENEFIT Interconnects to the model 3030D Ground Bond tester to form an entry-level system incorporating the two most common safety tests.

FEATURE Electronic dwell settings
BENEFIT The electronic dwell control helps keep test results consistent by ensuring that the test duration is the same for each product tested.

FEATURE Front panel LCD displays test parameters and results
BENEFIT A front panel LCD allows the operator to monitor the test. The display holds the results after a test item failure so that the operator can easily review the test results. Indications of failures are clearly displayed.

FEATURE Non-invasive front panel calibration
BENEFIT Complete calibration is performed through the front panel. No need to open the instrument and expose a technician to high voltage.

FEATURE Meets safety agency standards
BENEFIT Hypot II is CE and TÜV listed which means it has passed the tough design and performance requirements as called out in EN 61010 and IEC 1010 international safety standards. The CE mark means it can be used anywhere worldwide including all countries in Europe. Additionally, all of the 35xxD series Hypot II models are UL listed.

FEATURE Low-current sense*
BENEFIT Monitors the minimum level of current flow, thus ensuring that the device under test (DUT) is properly connected and that the hipot test is being performed.

FEATURE Electronic ramping*
BENEFIT Provides a gradual and timed method to increase output voltage to the DUT, minimizing any damage from quickly over-applying high voltage to sensitive DUT's.

FEATURE Test setup memories*
BENEFIT The operator can store and recall test setups, thus eliminating the need to re-enter setup information.

FEATURE Built-in Insulation Resistance test
BENEFIT With the built-in IR test capability in model 3570D, an IR test may be performed alone or in conjunction with an AC or DC hipot test. The 2 MΩ range complies with agency specifications such as IEC.

*Only available on 3505D, 3565D, 3570D and 4500D.

ACCESSORIES:		
Resistor Kit	Precision 1% resistor is ideal as a load to set current trip points. Meets 120 k ohm requirements.	35534
Black Stationary Probe	Provides an insulated fixed metallic contact point to a DUT for a return path.	35539
Foot Switch	Ideal for applications where an operator needs to start a test "hands off" the instrument.	35822
Retractable Probe	High voltage retractable 5 KV AC probe for safe testing and application of high voltage.	38081
Retractable Return Probe	This retractable probe is used on the return side of the Hypot II.	38082
Safe-T-Probe®	Test gun with trigger that controls retractable probe and activates instruments high voltage circuit.	38083
Adjustable Resistor Bank	Provides test loads from 120 K to 2.148 k ohms. 6 terminals with 12 settings. Helps verify regulation.	36956

OPTIONAL EQUIPMENT:		
Rear Panel Outputs	Allows access to the High Voltage & Return outputs from the rear panel for automated systems.	01
Remote Interlock	This option adds an interface for external safety interlock devices.	03
Digital Arc Detection	This allows you the capability to detect lower level arcing for diagnostic purposes.	04
Floating Return	Designed for testing ungrounded DUT's at low current levels.	05



SYSTEM 3000

A Complete Entry-Level System to Meet the Most Common Electrical Safety Compliance Tests

Combining any versions or models of Hypot II with the 3030D HYAMP®JR, creates an entry-level system. We call it the SYSTEM 3000. It comes complete with hardware and interconnection cables which allow you to perform Dielectric Withstand, Insulation Resistance and Ground Bond tests through a single DUT connection. This system was designed for manufacturers that need to comply with safety agency standards requiring high voltage tests of insulation and high current tests of the protective ground circuit.

HYPOT® II SPECIFICATIONS

INPUT VOLTAGE	115/230 V selectable, ± 15% variation 47-63 Hz
FUSE	115 V AC, 230 V AC — 2 A fast acting 250 V AC
OUTPUT	Rating AC 0-5000 V, 2 V/step, 12 mA DC 0-6000 V, 2 V/step, 5 mA Regulation: ± (1% of output + 5 V)
VOLTAGE SETTING	0 V-Max output rating, 10 V/step Accuracy: ± (2% of Setting + 5 V) (relative to displayed output) Can be adjusted during operation via UP and DOWN arrow keys
OUTPUT FREQUENCY	3500D & 3505D: 50/60 Hz selectable 3565D & 3570D: DC & 50/60 Hz selectable
WAVE FORM	Sine wave, Distortion: < 1% THD
RIPPLE	< 5% at 6 KV DC/5 mA
DWELL TIME SETTING	0 & 0.2-999.9 secs., 0.1 sec./step "0" for continuous running Ramp = 0.1 secs., fixed (3500D only)
FAILURE SETTINGS	AC mode High limit: 0.10 - 12.00 mA, 0.01 mA/step Accuracy: ± (2% of setting + 0.02 mA) DC mode High limit: 0.02 - 5.00 mA, 0.01 mA/step Accuracy: ± (2% of setting + 0.02 mA)
METERING	Voltmeter (3 digits) Range: AC 0.00 - 5.00 KV DC 0.00 - 6.00 KV Resolution: 0.01 KV Accuracy: ± (2% of reading + 10 V) Ammeter (4 digits) Range: AC 0.10 - 12.00 mA DC 0.02 - 5.00 mA Resolution: 0.01 mA Accuracy: ± (2% of reading + 0.02 mA)
TIMER DISPLAY	Range: 0.0 - 999.9 secs. Resolution: 0.1 sec. Accuracy: ± (0.1% of reading + 0.05 secs.)
GROUND CONTINUITY CHECK	Current: DC 0.1 A ± 0.01 A, fixed Max. ground resistance: 1 ohm ± 0.1 ohm, fixed

REMOTE CONTROL & SIGNAL OUTPUT	The following input & output signals are provided through the 9 pin D type connector: 1. Inputs: test and reset 2. Outputs: pass, fail, & test in process
SECURITY	Lockout capability to avoid unauthorized access to test set-up program.
LINE CORD	Detachable 7 ft. (2.13m) power cable terminated in a three prong grounding plug.
TERMINATIONS	5 ft. (1.52 m) high voltage & return leads with clips & a standard U.S. style (NEMA 5-15) remote receptacle box for testing items terminated with a line cord, International receptacles also available.
MECHANICAL	Tilt up front feet Dimensions: (W x H x D) 11 x 3.5 x 14.56 in. (280 x 89 x 370 mm) Weight: 20 lbs. (9 Kgs)
ENVIRONMENTAL	Operating Temperature: 32° - 113° F (0° - 45° C) Relative Humidity: 0 to 95%
CALIBRATION	All adjustments are made through front panel.
LOW CURRENT SENSE*	3505D: 0.00 - 12.00 mA AC Accuracy: ± (2% of setting + 0.02 mA) 3565D & 3570D: 0.00 - 12.00 mA AC, 0.00 - 5.00 mA DC Accuracy: ± (2% of setting + 0.02 mA)
RAMP TIMER*	0.2 - 999.9 secs. in 0.1 sec. increments 0 Ramp setting = 0.1 secs. fixed Accuracy: ±10 milliseconds
MEMORY*	Allows storage of up to 5 different test programs
IR TEST**	Range: 1 MΩ - 1000 MΩ Accuracy: ± (3% of reading + 2 counts) > 500 Volts ± (7% of reading + 2 counts) < 500 Volts Voltage: 100 - 1000 V DC in 10 V steps Accuracy: ± (2% of output + 5 V) Failure Settings: High/Lo limit 1 MΩ - 1000 MΩ IR Delay Range: 0, 0.5 - 999.9 secs. (0 = constant) Resolution: 0.1 secs. Accuracy: ± (0.1% of reading + 0.05 secs.)

*Only available on 3505D, 3565D & 3570D.

**Only available on 3570D.

ADDITIONAL SPECIFICATIONS MODEL 4500D (500 VA)



INPUT VOLTAGE	115/230 V selectable, ± 15% variation 50/60 Hz ± 5%
FUSE	115 V AC, 230 V AC — 15 A fast acting 250 V AC
OUTPUT	Rating AC 0 - 5000 V, 10 V/step, 100 mA Regulation: ± (1% of output + 5 V)
FAILURE SETTINGS	High limit: 0.10 - 99.99 mA, 0.01 mA/step Low limit: 0.00 - 100.00 mA Accuracy: ± (2% of setting + 0.05 mA)
METERING	Voltmeter (4 digits) - Range: AC 0.00 - 5.00 KV, Resolution: 0.01 KV, Accuracy: ± (2% of reading + 10 V) Ammeter (4 digits) - Range: AC 0.10 - 99.99 mA, Resolution: 0.01 mA, Accuracy: ± (2% of reading + 0.05 mA)
MECHANICAL	Tilt up front feet. Dimensions: (W x H x D) 16.92 x 5.24 x 11.8 in. (430 x 133 x 300 mm) Weight: 62 lbs. (28 Kgs)

All other instrument specifications match the grids shown above.

At Associated Research, Safety Compliance Testing Is Our Only Focus!

The Industry's Most Complete Line of Instruments for Electrical Safety Compliance Testing

For Over 60 Years,
We've Provided...



autaware™

Software designed to store, analyze and retrieve data on automated Associated Research instruments, while performing Line Leakage, Insulation Resistance, Dielectric Withstand, Ground Bond and Functional Run tests. Autaware also allows for bar coding inputs and provides basic statistical analysis graphs.



QUADCHEK II

4-in-1 Electrical Safety Compliance Analyzers include AC/DC Hipot, Insulation Resistance, Ground Bond tester and optional built-in scanner in a single instrument. Complete with IEEE-488 (GPIB), RS-232 or printer interface. Available in 500 VA output versions.



HYPOTULTRA II

3-in-1 Dielectric Analyzers with AC, DC or AC/DC Hipot, Insulation Resistance and optional built-in scanner available on some models. All models available with either IEEE-488 (GPIB), RS-232 or printer interface. Available in 500 VA output versions.



LINECHEK

Designed to automate line leakage testing in production line or lab environments. The 510L is a stand-alone system and the 520L can interconnect with other AR safety testers to form a complete automated testing system.



SWITCHING MATRIX

The HS-8A is an 8 port scanner and the HS-16 is a 16 port scanner. Both models are high-voltage and high-current matrix scanners for multi-point or multi-product testing. (For use with QUADCHEK®II or HypotULTRA®II.)



RUNCHEK

The 905D functional run test system measures current, voltage, power factor and watts. It can be interconnected to our safety testers so all tests can be performed through a single DUT connection. Available with standard GPIB or RS-232 interface.



HYPOTPLUS II

The first semi-automated microprocessor controlled Dielectric Withstand testers available in AC or AC/DC versions. All models include enhanced PLC control, remote memory recall, advanced failure detection systems and optional 10 V analog signal.



HYAMP II

30 Amp Ground Bond tester that works as a stand-alone instrument or can be interconnected to the HypotPLUS®II to form a semi-automated test system with a single DUT connection.



HYAMP JR.

30 Amp Ground Bond tester that works as a stand-alone instrument or can be interconnected to the Hypot®II to form a complete entry-level test system with a single DUT connection.



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