Ground Bond Tester

For Safety Agency Production Line Compliance Testing

HYAMP® III

MODEL 3160

60 Amp Ground Bond Tester designed to meet the testing needs of products with higher input current ratings.

FEATURES AND BENEFITS

FEATURE BENEFIT **Enhanced graphic liquid crystal display**

The enhanced graphic LCD provides the operator with an advanced user-interface. The backlit graphic display makes viewing and interpreting test results and data easier than ever before. The LCD can display text and symbols eliminating the need to decipher abbreviations.

FEATURE BENEFIT **Ground bond tester with extended test capability up to 60 amps**

The 3160 is the most advanced high current Ground Bond tester available. The 3160 was specifically designed to provide 60 amps of Ground Bond test current to meet testing needs for products with higher input current ratings.

FEATURE BENEFIT **Simple menu driven setup**

The easy to follow setup screens ensure that the operator correctly sets up all test parameters.

FEATURE BENEFIT **Tamper proof front panel controls**

This makes it possible to limit user access to the setup screens so that only authorized personnel with a security code can change test parameters.

FEATURE BENEFIT **Multiple test memories & steps**

A real benefit for manufacturers that test different products. This makes it possible to store all the various test parameters required and quickly recall them for each of the different products that need to be tested. There are 10 different memories with 3 steps per memory. Memories can also be linked to run multi-step tests.

FEATURE BENEFIT **User selectable output voltage frequencies of 50 or 60 hertz**

This feature makes it simple for the user to select the output frequency so that products can be tested at the same frequency at which they will be used.

FEATURE BENEFIT **Adjustable output current and milliohm trip ranges**

This capability makes the 3160 versatile enough to meet all safety agency specifications for ground bond test requirements.

FEATURE BENEFIT **Four wire measurement and milliohm offset**

The four-wire measurement (Kelvin Method) technique eliminates test lead resistance when using the standard test leads. The Milliohm offset function allows the use of longer test leads and test fixtures without compromising the test results.

FEATURE BENEFIT **Built-in VERI-CHEK™ self verification system**

Regular verification is required by some agencies to validate that the instrument is functioning correctly. The VERI-CHEK feature, by prompting the user through the correct steps, allows for quick and easy validation. This built-in feature eliminates the additional cost of having to purchase an external box for verification.

FEATURE BENEFIT **CAL-ALERT™**

This feature automatically alerts the user when the instrument is due for re-calibration. This eliminates the need for manual tracking of calibration dates.

FEATURE BENEFIT **Electronic dwell settings**

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

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Or contact us toll-free at: **1-800-858-TEST (8378)**

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HYAMP III, Model 3160 includes standard remote control connections to make it easier to build into a test system. It can also be interconnected to the Hypot® III family of products. This provides the capability to automate the test sequence or sequences chosen by the operator such as AC Hipot, DC Hipot, IR test and Ground Bond test.

MODEL 3160 Specifications

INPUT

VOLTAGE	115/230 VAC ± 10%, user selectable
FREQUENCY	50/60 Hz ± 5%
FUSE	15.0 Amp, slow acting 250 VAC

TEST MODE

OUTPUT RATING	Current:	1.00 – 60.00 Amps
	Resolution:	0.01 Amp/step
	Regulation:	± (2% of setting + 0.02 Amps)
	Voltage:	9 Volts AC, fixed
OUTPUT FREQUENCY	Range:	50 / 60 Hz, user selectable
DWELL TIME SETTING	Range:	0 and 0.5 – 999.9 seconds, 0 for continuous running
	Resolution:	0.1 second/step
	Accuracy:	± (0.1% of setting + 0.05 seconds)
MAXIMUM AND MINIMUM LIMITS	Range:	0 – 150 mΩ for 30.01 – 60 Amps 0 – 300 mΩ for 15.01 – 30 Amps 0 – 600 mΩ for 1.00 – 15 Amps
	Resolution:	1 mΩ/step
	Accuracy:	± (2% of setting + 2 mΩ)
OFFSET CAPABILITY	Range:	0 – 100 mΩ
	Resolution:	1 mΩ/step
	Accuracy:	± (2% of setting + 2 mΩ)
CURRENT DISPLAY	Range:	0.00 – 60.00 Amps
	Resolution:	0.01 Amp/step
	Accuracy:	± (3% of reading + 0.03 Amps)
OHMMETER DISPLAY	Range:	0 – 600 mΩ
	Resolution:	1 mΩ/step
	Accuracy:	± (2% of reading + 2 mΩ)
TIMER DISPLAY	Range:	0.0 – 999.9 seconds
	Resolution:	0.1 seconds/step
	Accuracy:	± (0.1% of reading + 0.05 seconds)

GENERAL

REMOTE CONTROL	The following input and output signals are provided through two 9 pin D type connectors; 1. Remote control: Test, Reset, Interlock, and Withstand Processing. 2. Remote recall of memory program #1, #2 and #3. 3. Outputs: Pass, Fail, Test-in-Process, Start Out, and Reset Out.
PROGRAM MEMORY	10 Memories, 3 steps per memory, all steps within a memory are linkable.
SECURITY	Key Lock capability to avoid unauthorized access to all test parameters. Memory Lock capability to avoid unauthorized access to memory locations.
VERIFICATION SYSTEM	Built-in software driven verification menu to test fault detection circuits.
DISPLAY	128 x 64 dot resolution with front panel contrast setting.
ALARM VOLUME SETTING	Front panel adjustable volume setting with 10 set points.
LINE CORD	Detachable 6 ft. (1.80m) power cable terminated in a three prong grounding plug.
TERMINATIONS	5 ft. (1.52) high current and return leads with clips.
MECHANICAL	Tilt up front feet. Dimensions: (W x H x D) 16.9 x 5.1 x 15.7 in. (430 x 130 x 400 mm) includes feet. Weight: 43.86 lbs. (19.89 Kgs)
ENVIRONMENTAL	Operating Temperature: 32º - 104º F (0º - 40º C) Relative Humidity - 0 to 80%
CALIBRATION	Traceable to National Institute of Standards and 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.

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