

# THE ELECTROM iTIG II MOTOR TESTER AND WINDING ANALYZER



## EASY TO USE TESTER THAT FINDS MORE FAULTS.

The state of the art Electrom iTIG II provides a wide range of tests to analyze the condition of insulation systems in all types of motors, generators, windings and coils.

It comes in several different models with varying options and output ranges to fit most budgets. Tests and product features can be added to models at any time if your needs change.

**CONTACT US ABOUT LOW RISK INVESTMENTS IN TESTERS**

FOUR MODELS FROM BASIC TO A FULLY AUTOMATIC TESTER WITH WINDING RESISTANCE DONE THROUGH THE HIGH VOLTAGE LEADS.

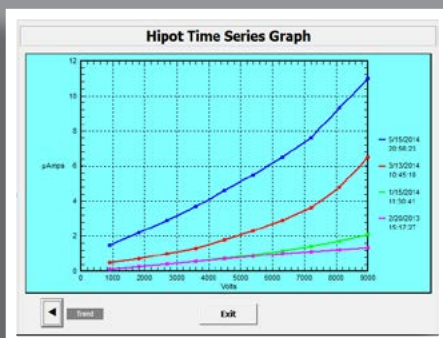
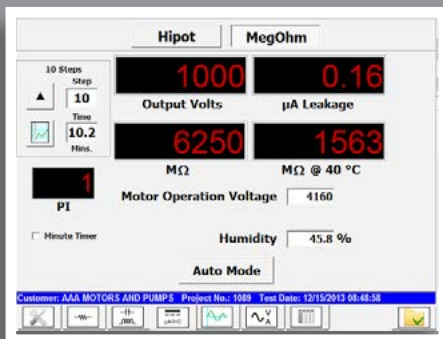
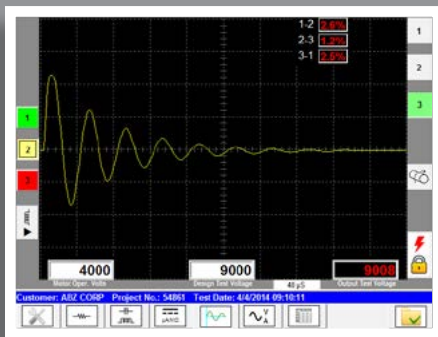
## SURGE AND HIPOT TESTS

- **Superior High Frequency Surge Pulses.** Eliminates ionization dissipation present in low frequency surge testers such as those pulsing at 5Hz and lower. As a result, the iTIG II finds weak insulation at lower voltages than low frequency testers and better simulates motor operating conditions.

- **Automatic Quick Surge™ and Surge Guard™** Enables the user to push a button and let the iTIG II quickly run the test with a controlled and limited number of pulses. Surge waveform ranges are automatically set for all models; no need to push buttons or turn dials.

- **Compare Coils to Master Coil** Coil testing mode with easy comparison to a master coil or the first coil tested is available. Automatic calculation of differences and detection of faults.

- **Manual or Automated IR & Hipot Tests** Includes Meg, DAR, PI and Step Voltage tests. Multi-point test graphs and comparisons to previous tests for trend analysis is available.



# iTIG II TEST AND MEASUREMENT OPTIONS

Surge comparison	Low resistance ( $\mu\Omega$ )
DC Hipot	Impedance (Z)
Step Voltage	Phase Angle
Insulation Resistance (Meg test)	Inductance (L)
Dielectric Absorption (DAR)	Capacitance (C)
Polarization Index (PI)	Rotor Influence Check (RIC)

## USES FOR iTIG II TESTS AND MEASUREMENTS

Failures / Test	Surge	DC Hipot	Step Voltage	IR	DAR	PI	Low R ( $\mu\Omega$ )	Z	L	C	Phase Angle	D/Q
<b>Weak insulation</b> turn to turn, coil to coil, phase to phase	✓											
<b>Shorts</b> Turn to turn, coil to coil, phase to phase	✓						✓	✓	✓		✓	✓
<b>Weak ground wall</b>	✓	✓	✓	✓	✓	✓						
<b>Dielectric ground wall strength</b>		✓	✓									
<b>Dirty or moist windings</b>		✓	✓	✓	✓	✓				✓		
<b>Phase unbalance</b>	✓						✓	✓	✓		✓	✓
<b>Open coils</b>	✓						✓	✓	✓		✓	✓
<b>Reversed coils</b>	✓							✓	✓		✓	✓
<b>Motor lead connections</b>							✓					
<b>Power cable faults</b>	✓	✓	✓	✓	✓	✓						

# WINDOWS OPERATING SYSTEM AND REPORT SOFTWARE

- ▶ Test Report Pro or TRPro runs on PCs and works with models B to D
- ▶ Data is easily transferred back and forth between the iTIG II and a PC or server. It is done with one click using Ethernet, a wireless connection or a USB flash drive.
- ▶ Print reports from a PC or from the iTIG II directly
- ▶ 30GB+ SSD memory in the iTIG II can store over a million tests.

## PASS / FAIL RESULTS

Surge	PASS
MegOhm	PASS
Hipot	PASS
Hipot Step Test	PASS
Ohms Balance	PASS
Off-line Equip.Rating	PASS
On-line Equip.Rating	PASS

## LANGUAGES

The iTIG II and TRPro report software are available in multiple languages.

## OUTPUT OPTIONS

THE iTIG II SERIES IS AVAILABLE IN OUTPUTS FROM 4kV TO 40kV INCLUDING 12 and 15 kV HO-HIGH ENERGY OPTIONS.



## POWER PACKS

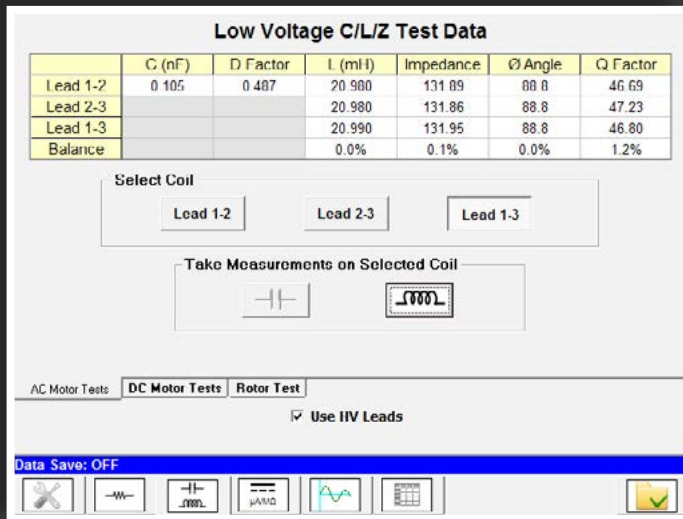
The Power Pack is used to test large, medium and high voltage rotating machines and transformers. Surge tests are load dependent and influenced by operating voltage, power, speed, frame size and coil type.

## PORTABLE POWER PACKS

- ✓ The ONLY TRULY portable Power Pack, weighing less than 50 lbs / 23 kg.
- ✓ 24kV and 30kV HO outputs, come in the same rugged case as the iTIG II.
- ✓ The iTIG II captures, displays, and stores the test data from the Power Pack.



# MEASUREMENT OPTIONS



## C, L AND Z MEASUREMENTS

Where more analysis is needed, for example for predictive maintenance, Electrom offers the CLZ option. It includes measurements of inductance, impedance and phase angle for windings and coils, and capacitance measured from the winding to ground. It also calculates Dissipation factor (D), also called Tan Delta, and Quality factor (Q).

## WINDING RESISTANCE

Model B and C come standard with 4-wire milli Ohm resistance measurement done through a Kelvin clamp lead set included.

Model D comes with 4-wire micro Ohm measurement and does ALL tests and measurements through one high voltage lead set.

## DC MOTOR ACCESSORIES

To make DC motor and armature testing easy, we offer a number of fixtures and probes:

- ATF-11 with adjustable span for armature surge tests
- ASP probe set (2) for armature surge tests
- ABT for Bar-to-Bar armature surge tests
- ARP Bar-to-Bar resistance measurement probes
- FS-12 foot switch to start various tests



# iTIG II 12kV SPECIFICATIONS

## SURGE

Surge Voltage Accuracy	10%
Repetition rate	50/60Hz
Capacitance	40 nF
Max. Surge Energy	2.9J
Max Current	800 A

## DC IR AND HIPOT

Voltage accuracy	2%
Current resolution	0.01 $\mu$ A
Current accuracy	2%
Max resistance	500 G $\Omega$
Min resistance	0.5 M $\Omega$
Resistance accuracy	4%
Current trip-out	0-2000 $\mu$ A

## WINDING RESISTANCE

Resolution	1 micro $\Omega$
Accuracy 100 $\mu\Omega$ to 2k $\Omega$	0.5% to 0.1%

## IMPEDANCE

Accuracy from 0.001 $\Omega$ to 2 M $\Omega$	<1%
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## INDUCTANCE

Accuracy from 0.01 mH to 20 H	<1%
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## CAPACITANCE

Accuracy from 0.1 nF to 10 mF	<1%
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Power Input: 110-240V  $\pm$ 10%, 50/60Hz  
Weight: ~35 lbs (~16kg) depending on options

## CONTACT US FOR MORE DETAILS

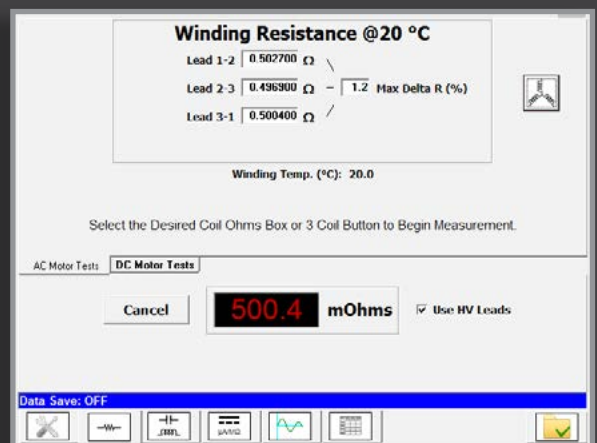
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Portable, rugged and lightweight



Model with 4 output leads



Automatic sequence of 3 resistance measurements for 3-phase motors.

