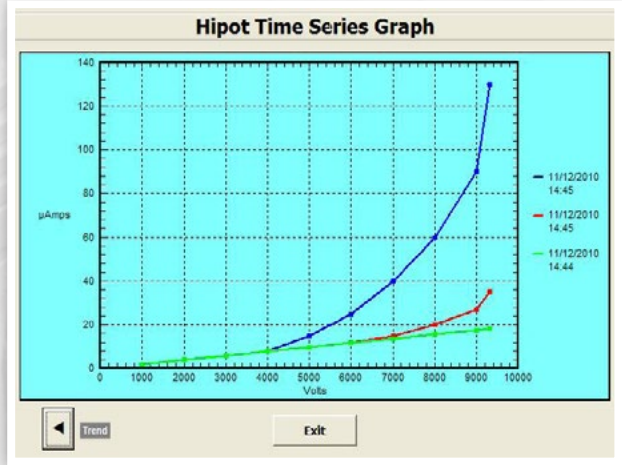
ELECTROM INSTRUMENTS

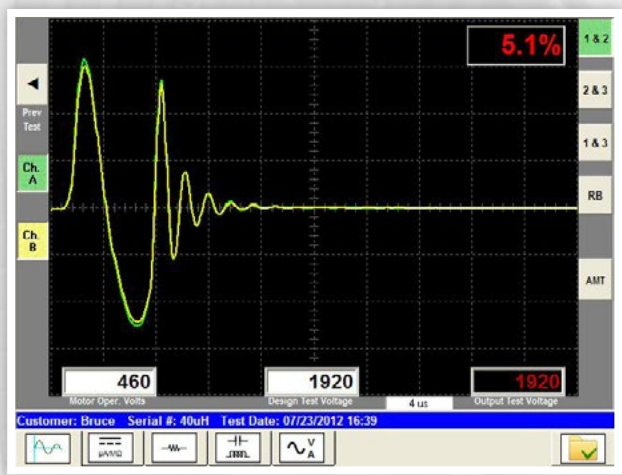
The NEW iTIG II Winding and Motor Analyzer

A revolution in automated, safe, and comprehensive high and low voltage tests – all in a lightweight package. The Electrom iTIG II offers a comprehensive range of high and low voltage motor tests to analyze the condition of insulation systems in all types of windings and coils. Like its predecessor, the Electrom iTIG surge tester, the iTIG II has a modular and flexible design. It comes in several different models with varying options and output ranges from 4kV to 12kV to fit most budgets. Tests and product features can be added to various models at any time as the needs of the user change.

A few more iTIG II features and benefits include:

- Models range from basic manual testers to automatic testers.
- Lightest tester of its class on the market.
- Works with high frequency 50/60Hz two channel surge pulses. This eliminates ionization dissipation present in low frequency surge tests. As a result, the iTIG II finds weak insulation at lower voltages than low frequency testers and better simulates motor operating conditions.
- Comes with Automatic Quick Surge™ and Surge Guard™, which enables the user to enter the surge test voltage, push a button, and let the machine run the test independently.
- Surge waveform ranges are automatically set for all models; this eliminates the need to specify configurations, push buttons, or turn dials.
- The iTIG II can also provide comprehensive high accuracy low voltage resistance, impedance, phase angle, inductance, and capacitance testing.
- High accuracy milli Ohm resistance measurement is standard on most models; temperature compensated micro Ohm measurement with 1 micro Ohm resolution is optional.
- Special coil testing mode with comparison to master coil.
- No external keyboard is required for data entry, but can be used if preferred.
- Most models come with test report software and 50 GB of data and report storage.
- Accessories for DC tests and AC rotor bar tests are available.
- For higher voltage testing, Electrom offers portable 24kV and 30kV Power Packs that come in the same case as the iTIG II.





iTIG II test and measurement options

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

Uses for iTIG II Tests and Measurements

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

Output Options

The iTIG II is available with 4kV, 6kV and 12kV, maximum outputs. For higher outputs and very large equipment, a Power Pack is required.

Power Packs

When is a Power Pack Required?

The Power Pack is used to test large, high voltage rotating machines and transformers. This includes slow speed 4,160V motors, transformers, form coils, and power generators that are tested to higher voltages. The surge test is a load dependent test; load determinations are influenced by many factors, including the operating voltage, horse power, rotating speed, frame size, coil type, and more. Contact Electrom to discuss your applications and determine if a Power Pack is required.

Power Pack Features

- 24kV and 30kV Power Packs are portable and have the same rugged case as the iTIG II.
- Larger power packs are available with the Electrom iTIG winding analyzer.
- The iTIG II captures, displays, and stores hipot data and surge waveforms from the Power Pack.
- Power Packs are manually operated.

Report Software

Test Report Pro, which is also called TRPro, is a test report software that runs on iTIG II models B to D. Reports can be printed directly from the iTIG II. TRPro can also run on PC's, allowing PC-generated reports to be emailed to customers. Data and information can be transferred back and forth between the iTIG II and a PC quickly and efficiently, allowing instant access to test results and feedback. It can be done with a memory stick or through the Ethernet option.

The type of data stored varies depending on the iTIG II model, and can include customer information, equipment tag, specifications, job number, location of the equipment, and more. The built-in data storage also houses test data, analysis, and notes.

When test results are compared over time, the TRPro software is an extremely valuable tool for predictive and preventative maintenance.

Accessories & Measurement Options

Rotor Bar Clamp

The RTR-03 is a clamp-on current transformer that is specifically designed to monitor the 50/60Hz signal from one phase of an induction motor. Its purpose is to detect and locate an open or damaged bar in the rotor. The RTR-03 is compatible with the iTIG II B, C and D.

Armature Test Fixture (ATF) for DC Motors

The ATF is a one-size-fits-all hand-held fixture that is used to test large and small DC Armatures with any iTIG II model. The test spans an adjustable number of bars. Only two span tests are usually needed to find out if the armature is good or bad; this test is most effective when used with a Foot Switch.

Foot Switch

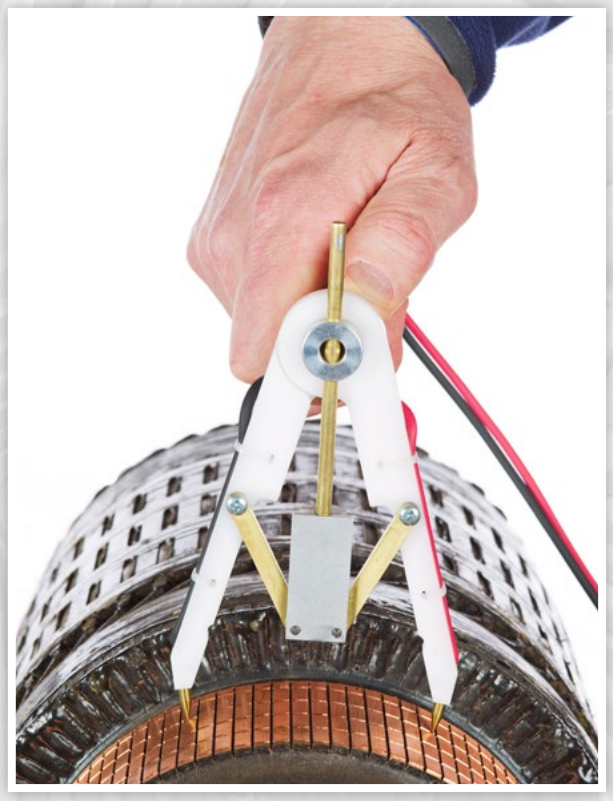
The FS-01 is a hands-free way to energize the iTIG II while in Surge Mode instead of using the Start button on the machine's front panel. This enables the operator to safely and easily hold the ATF while running a test.

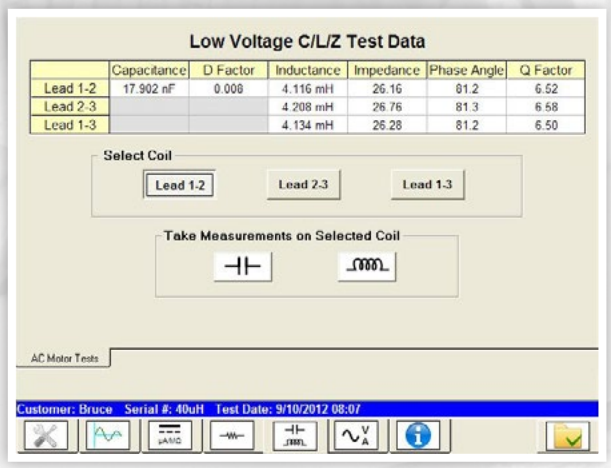
Low Resistance

Models B to D come with milli Ohm resistance measurement accurate to ±0.2%.
For more difficult applications where lower resistance is required or where the difference between measurements should be measured in micro Ohms, choose the micro Ohm option which has 1$\mu\Omega$ resolution and accuracy of ±0.2% ±2 $\mu\Omega$.

C, L and Z Measurements

For applications where more analysis is needed in a shop or for predictive maintenance, Electrom offers the CLZ option. It includes measurements of inductance/impedance/phase angles for windings and coils, and capacitance measurements from the windings to the ground. It also presents Dissipation factor (D) for the capacitance and Quality factor (Q) for the inductance.





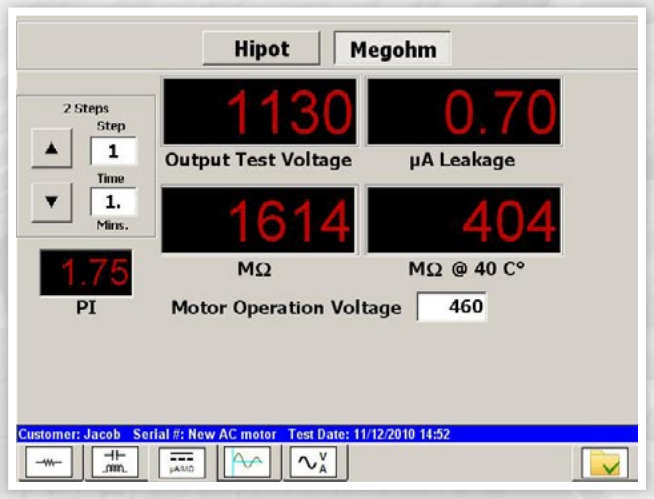
iTIG II 12kV Specifications*

Surge

Surge Voltage Accuracy	6%
Capacitance	40 nF
Max. Surge Energy	2.9J
Max Current	800 A

DC IR and Hipot

Voltage accuracy	2%
Current resolution	0.01 μA
Current accuracy	2%
Max resistance	500 GΩ
Min resistance	0.5 MΩ
Resistance accuracy	4%
Current trip-out	0-2 mA



Resistance

Resolution	1 $\mu\Omega$
Accuracy 10$\mu\Omega$ to 2kΩ	0.2% ± 2$\mu\Omega$

Impedance

Accuracy from 0.001 Ω to 2 MΩ	<1%

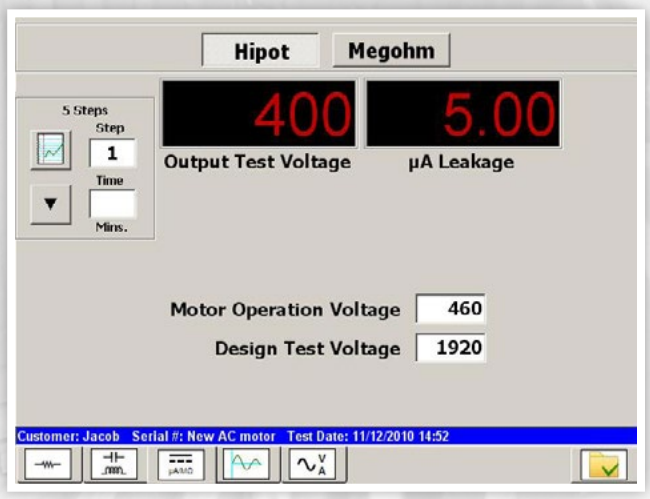
Inductance

Accuracy from 0.01 mH to 20 H	<1%

Capacitance

Accuracy from 0.1 nF to 10 mF	<1%

*Preliminary



Power Input:	100-240V 50/60Hz, 2.5A
Weight:	34-35 lbs (±16kg) depending on options

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