SCR ELEKTRONIKS

SALES PRESENTATION FOR

RCCB & RCBO TESTING EQUIPMENTS










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LIST OF TEST EQUIPMENT

- **Lab (Type) Test:**
  1. TEST PANEL FOR RCCB TYPE TEST OF RCBO/RCCB
  2. SENSITIVITY TEST BENCH FOR RCCB
  3. THREE PHASE (3 STATIONS) TEMPERATURE RISE & POWER LOSS TEST BENCH FOR RCCB
  4. PC CONTROLLED RCCB MAG-DEMAG TESTING
  5. 28 DAYS & TEMPERATURE RISE TEST PANEL FOR RCCB/RCBO (WITH 3 PHASE SOURCE)
  6. RCCB & RCBO 3 PHASE ENDURANCE TEST BENCH
- **Routine Test:**
  1. AUTOMATIC ROUTINE TEST SYSTEM FOR RCCB
  2. PC BASED ROUTINE TEST OF RCCB (HV+SENSITIVITY TEST)
  3. HIGH VOLTAGE TEST SETUP FOR RCCB
  4. TEST BENCH FOR RCCB
- **Demonstration Briefcase:**
  1. RCCB LEAKAGE TRIP VERIFICATION / DEMONSTRATION BRIEFCASE

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1. RCCB TYPE TEST

- **What It Is?**
  - SCR Elektroniks have designed this system to carryout the type test namely, Verifications of Operating Characteristic as per IS 12640 & IEC 61008 clause No. 9.9 & 9.15, 9.16.
  - This is useful for checking the exact tripping value of current and also provides a facility to measure the tripping time at different leakage current.
- **Models Available :**
  - The system can be customized for RCCB / RCBO / e RCBO or two or all of the above.
  - Plus, tests can be selected or dropped to get an exact solution.
  - Also the system is available in manual + semi automatic mode as also fully automatic PC based mode.

Basic Specifications :

- Input : Default is 230 V AC +\- 10 %; specify while ordering.
- Leakage Current Ranges: 10mA, 30mA, 50mA, 100mA ,300mA & 500mA.
- Current Adjustment: Between 10mA to 2500mA at 230V AC, Coarse with Switching and Fine with Toropot
- Current Measurement :
  - a. Digital mAmps Meter, 3 ½ Digit, 2 ranges.
  - b. Transient Signal Recording Meter
- Time Measurement: 5 Digit 0 to 99.999 Sec.
- Protection: Through MCB.
- Other specifications as per customizations / user dependant test parameters or standards.

Salient Features :

- Fully Automatic Operation.
- All in one solution.
- Dynamic fixture (optional) available for testing RCCBs of various frame sizes.
- Powerful software capable of pre-setting test recipes with MS-Excel based test reports.
- Facility to add or drop tests.
- Test Stand for ease of use / connection with 500 A sourcing bus bars.
- Inbuilt load bank for alpha angle setting - fine resolution.
- Individual test option available

- **Key Benefits :**

  - The product is helpful in conducting all of the electrical type tests mentioned in one go.
  - The user has to simply connect the RCCB / RCBO and all the tests are sequential and automatic. This is an ideal bench for production houses willing to test RCCBs on a samples per batch basis as also for commercial test labs keen to issue compliance certificates as per BIS / IEC / other norms.
  - The reports can be customized as per the format of the final report to be submitted to the customer.

- **Key Photos :**

RCCB Type Test

2. SENSITIVITY TEST BENCH FOR RCCB

- **What It Is?**
  - This panel is used to perform:
    1. Verification of the operating characteristic test as per IEC 61008-1clause no.9.9.2.1, 9.9.2.2, 9.9.2.3, 9.9.2.4.
    2. Verification of trip free mechanism test as per IEC 61008-1 clause no.9.15.
    3. Verification of the operation of test device at the limits of rated voltage test as per IEC 61008-1 clause no.9.16.
  - The test bench is designed with state –of-art Technology and to test entire range of RCCB/RCBO as per IEC 61008-1, IEC 61009-1

- **Models Available :**
  - The system can be customized for RCCB / RCBO / e RCBO or two or all of the above. Plus, tests can be selected or dropped to get an exact solution.
  - Also the system is available in manual + semi automatic mode as also fully automatic PC based mode.

Basic Specifications :

- Input: Default is 230 V AC +\- 10 %; specify while ordering.
- Leakage Current Ranges: 10mA, 30mA, 50mA, 100mA ,300mA & 500mA.
- Current Adjustment:
  a) Between 10mA to 2500mA at 230V AC, Coarse with Switching and Fine with Toropot
  b) Servo Controlled 0 to 500Amps at 20V. (10Amp to 125Amp Continuous).
- Current Measurement:
  a) Digital mAmps Meter, 3 ½ Digit, 2 ranges.
  b) Transient Signal Recording Meter
- Time Measurement: 5 Digit a) 0 to 99.999 Sec.
- Protection: Through MCB

Salient Features :

- Variable Current Source Output 1 with adjustable Resistance Bank: The resistance value of bank will be adjusted to pass test current like IΔn, 2*IΔn, 5*IΔn (any value between 10mA and 1500mA).
- Variable Current Source: Output 2 : This is servo controlled constant current source with 0 to 125Amp continuous and up to 500Amp short time @ 20V having CT ranges 5, 10, 20, 50, 100, 200 and 500 Amp .
- Variable AC Voltage Source: 0-300V AC @ 1A max
- Digital Time Interval Meter to measure trip time during speed of operation test : This will be auto range type to measure time from 1msec to 9999 Sec. The Start & Stop signals will be current sensing type.
- Programmable Logic: This is used for selecting different Test, setting the test parameters.
- Digital mA meter to measure leakage current.
- Digital Voltmeter to measure Test Voltage.
- Switching Arrangement: To select different test circuits.
- Entire system is enclosed in aesthetic panel in aluminium sections.
- Toggle Operated manual fixture for 2 pole and 4 pole RCCB.

- **Key Benefits :**

  - The product is helpful in conducting all of the electrical type tests mentioned in one go. The user has to simply connect the RCCB / RCBO and conduct tests one after another.
  - This is an ideal bench for production houses willing to test RCCBs on a samples per batch basis as also for commercial test labs keen to issue compliance certificates as per BIS / IEC / other norms.

Basic Specifications :

- Input: Default is 230 V AC +\- 10 %; specify while ordering.
- Leakage Current Ranges: 10mA, 30mA, 50mA, 100mA ,300mA & 500mA.
- Current Adjustment:
  a) Between 10mA to 2500mA at 230V AC, Coarse with Switching and Fine with Toropot
  b) Servo Controlled 0 to 500Amps at 20V. (10Amp to 125Amp Continuous).
- Current Measurement:
  a) Digital mAmps Meter, 3 ½ Digit, 2 ranges.
  b) Transient Signal Recording Meter
- Time Measurement: 5 Digit a) 0 to 99.999 Sec.
- Protection: Through MCB

- **Key Photos :**

Sensitivity Test Bench For RCCB

3. TEMPERATURE RISE & POWER LOSS TEST BENCH

- **What It Is?**
  - The SCR Elektroniks RCCB Temperature Rise and Power Loss Test Bench is economically designed to verify temperature rise and measure power loss as per clause 9.8.1 of IEC 61008

- **Models Available and Customization :**
  - The test bench can be customized as per the rated current range of the RCBOs (typically up to 63 A and up to 125 A). Additionally, The bench can be made to test MCBs also.
  - The number of temperature measurement channels can be customized as per the client preference.
  - Further customizing options are micro-controller based / PC based with fully automatic section and testing plus report generation.
  - The equipment can be clubbed with 28 days testing equipment.

Basic Specifications :

- Adjustable Constant Current Source 3 Nos.
- 0.5A to 63Amp at 30V open ckt. Voltage.
- CT range 25A, 50A, 100A – 3 Nos.
- The CT range and resistance for RCCB rating to be selected through shorting links: 16A, 20A, 25A, 32A, 40A, 45A, 50A, 63A at 30V with bypass arrangement for each phase.
- Panel will be capable for testing three samples of same rating may SP/DP/TP/FP
- True RMS sensing current controller shall maintain current better than class 1.0 accuracy through out the range.
- Digital Temperature Indicator min 28 Channels with minimum 28 No. Thermocouple bid, Teflon insulated will be provided with sufficient length to connect it to product. Channel selection by rotary switch.
- Cooling will be provided by means of Exhaust fans distributed all over to remove the hot air generated inside the panel cabinet.
- Overall accuracy of the panel is better than class 1.0
- The entire system will be housed in sturdy M-S Cabinet (Trolley)
- The equipment will have very good finish preferably powder coated Siemens Grey color finish.
- Calibration certificate will be provided for individual meter and also for complete system.
- Following meter indications will be provided:
  i. Digital Temperature Indicator with 28 input for thermocouple.
  ii. Digital Volt Meter with 5 ranges (200mV, 2V, 20V, 200V, 250V) – 1 No.
  iii. To measure open circuit voltage & mV drop across RCCB .
  iv. Digital Ammeter with CT (Indication on servo controller) – 3 Nos.

Salient Features :

- Stand-alone unit after initial configuration of test parameters.
- 28 Days test module can be included as per customer demand.
- Cooling shall be provided by means of optimally placed Exhaust fans distributed all over to remove the hot air generated inside the panel cabinet.
- Easy Serviceability due to smart internal wiring pattern.
- Servo controlled mechanism to control current (+/- 1%) against incoming fluctuations.
- Microcontroller based timer unit for quick and easy user interface and automated operation.
- User may opt for test bench with heating chamber for testing at 60 o C

- **Key Benefits :**

  - The test is carried out to measure the power loss across each pole, i.e. what are the losses per pole in an MCB.
  - Also temperature rise of various parts - including current carrying parts can be measured. Thus, the reasons for power loss can be assessed.

- **Key Photos :**

Three Phase Temperature Rise & Power Loss Test Bench For RCCB

4. PC CONTROLLED RCCB MAG-DEMAG TESTING

- **What It Is?**
  - The RCCB Mag-Demag testing setup is designed to test and calibrate the Permanent Magnet Relay in the RCCB for tripping at the desired leakage current level.
  - The setup consists of an arrangement where the magnetizing and demagnetizing of the PMR takes place by external magnetic field and actual tripping is checked by passing a pre-configured leakage current, till the desired tripping band is obtained.

- **Models Available :**
  - The user can comment on the specifications and we can customize the test system.
  - The fixture developed will be custom-built as per user samples.

- **Features:**
  - Can magnetically calibrate 2/4 pole RCCB on a single machine.
  - Pneumatically operated fixture for ease of connection and operator safety.
  - Can be easily integrated on an assembly line.
  - Additional electrical leakage current tripping test for verification.

- **Specifications:**
  - RCCB leakage current ratings: 10, 30, 50, 100, 300, 500 mA.
  - Entire system is controlled and operated by NI LABVIEW Software.
  - Built in calibration and maintenance module.
  - Data can be logged and exported to Excel and can be viewed remotely.

- **Key Benefits :**

  - The test bench is designed to calibrate the PMR used in an RCCB / RCBO to make it trip within an exact zone of tripping.

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- **Key Photos :**

Pc Controlled RCCB Mag-Demag Testing

5. 28 DAYS & TEMPERATURE RISE TEST PANEL FOR RCCB/RCBO (WITH 3 PHASE SOURCE)

- **What It Is?**
  - 3 station RCCB/RCBO 28 Days and Temperature Rise Test Bench is economically designed to verify the 28 Days Test (21 hr ON, 3 hr OFF Test) and Temperature Rise of the parts of a Circuit Breaker.

- **Models Available :**
  - The test bench can be customized as per the rated current range of the RCBOs (typically upto 63 A and upto 125 A). Additionally, The bench can be made to test MCBs also.
  - Further customizing options are micro-controller based / PC based with fully automatic seection and testing plus report generation. The equipment can be clubbed with temperature rise + power loss test bench

Basic Specifications :

- Adjustable Constant Current Source : 0.5 Amps to 182Amps in 3 ranges at open circuit voltage of more than 30volt – 3 Nos.
- Specially designed true RMS sensing current controller maintains current with the help of stepper motor within +/- 1% throughout the range.
- Micro controller based Sequential Timer maintains the sequence of operations and displays the test status.
- Digital Temperature Indicator min 28 channels with minimum 28 Nos. Thermocouple bid, Teflon insulated will be provided.
- Overall accuracy : 1.0.
- Digital Milivolt Meter with 3 ranges is provided for measurement of watt loss (Voltage Drop).
- Inductors with tapping for each range will be provided for maintaining the open circuit voltage to 30V. This eliminates energy wastage during test.
- Forced cooling will be provided by means of an Exhaust fan to remove the hot air generated inside the panel cabinet.
- The entire system will be housed in sturdy M.S. Cabinet (trolley) duly powder coated.

Salient Features :

- Stand alone unit after initial configuration of test parameters: The panel is capable to generate accurate test results for a continuous period of 28 days as required in the 28 days test
- The test system is not suspeptible to test data loss due to utility power cut - the test begins from the point it got interrupted due to utility power cut
- Power Loss Measurement available as an extra feature
- Single / Three Phase operation possible
- Servo controlled mechanism to control current (+/- 1%) against incoming fluctuations
- Microcontroller based timer unit for quick and easy user interface and automated operation
- Inductors with tapping for each range will be provided for maintaining the open circuit voltage to 30V. This eliminates energy wastage during test
- User may opt for test bench with heating chamber for testing at 60

- **Key Photos :**

28 Days & Temperature Rise Test Panel For RCCB/RCBO

6. RCCB & RCBO 3 PHASE ENDURANCE TEST BENCH

- **What It Is?**
  - The SCR Elektroniks Endurance Test Bench is designed for electrical and mechanical endurance RCCB as per clause 9.10 of IEC 61008-1.
  - The source and the load is designed to comply as per the general test conditions specified in Cl 9.10.Verification of the operating characteristic test as per IEC 61008-1clause no.9.9.2.1, 9.9.2.2, 9.9.2.3, 9.9.2.4.
- **Models Available :**
  - The product can be customized for different rated currents of RCBOs and also different rated leakage currents for RCBOs.
  - It can also be customized as per the number of test stations. Additional customizing options include PC / PLC bench.

Basic Specifications :

- Micro Controller Based Programmable timer to set ON / OFF Time 0 – 99.9sec.
- 3 Phase Digital Voltmeter.
- 3 Phase Digital Ammeter.
- 3 Phase Digital Power Factor Meter.
- Electro Magnetic Counter: It will count the number of operation.
- Current Sensing Circuit: To detect contact weld & contact open. 7. This will give a signal to cut off the Load, if fault persists for predefined time.
- RCCB Testing Resistive Load with 30mA, 100mA and 300mA will be provided. Following Tests will be performed for RCCB i.e.
- Endurance Test at rated voltage
- Endurance Test with residual current
- Push Button Test
- The above tests will be selected with Rotary Selector Switch

Salient Features :

- Completely stand alone unit after initial configuration of test parameters.
- Smartly designed pneumatic fixture to accommodate more type of MCBs.
- Safety / Diagnostic Feature: Contact Weld / Contact Open indication for opening or welding of current carrying contacts inside the panel.
- Micro controller based operation enables input settings as per IEC as well as user configurable for other settings.
- Graded inductors for accurate power factor output Industrial grade wire wound resistors enables continuous operation without overheating of the load bank.
- MCB Range Selection: Through neatly labelled shorting links
- User friendly digital interface to input test parameters.
- The user may simultaneously test RCCBs of different brands and compare the test results (Ideal Application for Test Labs and Certification Agencies)

- **Key Benefits :**

  - The test is helpful in conducting both the rated current endurance and leakage current endurance, robustness and repeatability.
  - Also endurance of push test button is conducted for quality and repeatability

- **Key Photos :**

RCCB & RCBO 3 Phase Endurance Test Bench

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1. AUTOMATIC ROUTINE TEST SYSTEM FOR RCCB

- **What It Is?**
  - SCR ELEKTRONIKS have developed Test Set up for carrying out Routine Tests namely, “Tripping Test” and “Performance of the Test Device Test” as per IEC 61009-1 (Annexure D).
  - The panel is designed to perform routine test for RCCB in production line, automatically once the product is loaded in Test Fixture..

- **Models Available :**
  - The Test can be customized as per the exact tests required by the customer.
  - Plus those production floors which have standardized automation on a particular brand of PLC such as Siemens, ABB, Mitsubishi, etc. - we can make the solution incorporating PLC also.
  - Also the test jig is exactly designed to accommodate the RCCBs being tested.

Basic Specifications :

- Input Supply: 230 V AC +\- 10 % 50Hz.
- Leakage Current Ranges: 10mA, 30 mA, 50 mA, 100 mA ,300mA & 500 mA.
- Current Adjustment: Between 10 mA to 550 mA, at 230VAC Coarse with Switches and Fine with Toropot.
- Time Measurement: 5 Digit a) 0 to 99.999 Sec. & b) 1 mSec.
- Control: Sequence of operation and time measurement is through specially designed Microcontroller based unit with PC compatible port RS232.
- Transient Recording Meter for measurement of Current.
- Current Measurement: Digital mAmps Meter, 3 ½ Digit, 3 ranges.
- Fixture : Electro pneumatic fixture is used for connection & mechanical operation.
- Protection: Through MCB.
- Cabinet : Enclosed in elegant Aluminium Profile section with Powder Coating.

Salient Features :

- The RCCB can be tested in production line for the 3 tests (Trip/No Trip test, and Push Button Test) automatically in Auto mode.
- In manual mode, the user will select the pole and the test manually and with the use of appropriate push buttons, the tests can be performed.
- The panel can work in two modes:
  1. Manual mode: Here all the settings for a Particular test is done manually. Various selector Switch is adjusted to appropriate positions.
  2. Auto mode: Here too all the settings for current are to be done manually using the selector switch and the Variac Knob. But all the tests are done automatically. There is no need to perform different tests one by one.
- A switch is placed to indicate whether the RCCB's fixture is placed in appropriate position.
- Can test RCCB with ratings of 10, 30, 50, 100, 300, 500 mA
- Specially designed fixture to automatically On/Off the RCCB's Dolly and the Push Button.
- All the displays can be generated through the display meter.

Key Benefits :

- The product tests all the electrical routine tests as listed for RCCBs of various ratings- excellent low cost option for RCCB routine testing

- **Key Photos :**

Automatic Routine Test System For RCCB

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2. PC BASED ROUTINE TEST OF RCCB (HV+SENSITIVITY TEST)

- **WHAT IT IS?**
  - The Test Panel is designed to carry out Routine Test of RCCB as per Annexure D of IEC 61009.
  - The Test Panel will be PLC based & PC Data logging for monitoring and controlling the sequence and storing the data.
  - It will be designed for 2 Stations.
- **Models Available :**
  - The system can be custom built for the number of stations as well as the testing parameters such as leakage current and high voltage values.
  - Fixtures can be customized also. PC based and PLC+PC based options available as per the customer preference

Basic Specifications :

- Tripping Test as per your specifications for IΔn – 30mA, 100mA, 300mA, 500mA.
- Electrical Strength Test (High Voltage) as per the combinations in your specifications for both fixture for 2 pole or 3 pole or 4 pole products, Two at a time.
- Performance of Test Device : As per your specifications.

- **Salient Features :**

  - Siemens make PLC with HMI.
  - Programmable Current Sources – 2 Nos.
  - Pneumatic Fixtures – 2 Nos.
  - PC : Either Dell / HP make with Windows 8 licence copy.
  - The entire system will be housed in elegant Aluminium Extruded Sections.

- **Key Benefits :**

  - The equipment is a fully automatic one to test all the routine tests of RCCB in one go.
  - All the user needs to do is put the RCCB on a tray and the entire sequence is fast and automatic with detailed data storage and report generation.
  - Even operator safety interlocks are implemented

- **Key Photos :**

Pc Based Routine Test Of RCCB (HV+Sensitivity Test)

3. HIGH VOLTAGE TEST SETUP FOR RCCB

- **What It Is?**
  - Generate High Voltage across the Output terminal and measure the Leakage current flowing across the Earth Terminal.
  - Product ranging up to 5 kV.
  - Range of leakage current for tripping threshold up to 100 – 200 mA
  - Prominently featuring indication lamps and buzzers for indicating results of test
  - Quick and Easy Selection of leakage current threshold value
  - This HV Tester is unique in the fact that it is provided with an indigenously designed fixture to RCCB with the facility to test the di electric strength between:
  - Test 1:- HV apply across terminals
  - Test 2:- HV apply between terminals of adjacent poles.
  - Test 3: HV apply between terminals of all poles and enclosures.

Features & Specifications:

- **Voltage :** 0 – 5 kV.
- **Current :** 0 – 5, 10, 25, 50, 100, 200mAmps.
- **Time Setting :** 0 to 60 Sec.
- **Safety Factors :** a) Zero Interlocks.
- b) Shrouded type Push Button for H.T. ON.
- c) H.V. Transformer heavy duty epoxy cast.
- **Indications :** a) High Voltage and leakage current on separate meters.
- b) Separate lamp indication for H.T. ON, OK, NOT OK
- With Timer and “OK”, “NOT OK” indications.

- **Key Benefits :**

  - Zero interlock and specially designed probe & transformer for customer safety
  - The test is conducted to asses the dielectric withstand capacity of an RCCB for various insulation paths - between the body and terminals, adjacent terminals and opposite terminals, etc.
  - The settable maximum allowable leakage current allows the user to compare RCCB prototypes and subject the RCCB to harsher conditions than in real world

- **Key Photos :**

High Voltage Test Setup For RCCB

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1. RCCB LEAKAGE TRIP VERIFICATION / DEMONSTRATION BRIEFCASE

- **What It Is?**
  - The RCCB leakage trip verification briefcase is a portable test set up for demonstrating the operational characteristics of a residual current device (RCCB / RCD / RCBO) as per IEC 61008 and IEC 61009.
  - The briefcase integrates the speed of operation test, sensitivity test, trip / no trip test and push button test in a single unit thus making it an all in one solution at a lesser cost and size.

- **Models Available :**
  - Portable and Light Weight Briefcase making the unit ideal for sales person for demonstrations.
  - The product can also be customized for PC based testing.

Key Benefits :

- Portable & Light weight so the sales person can carry the briefcase with him for demonstration purpose.
- Economical because single model is useful for entire range of RCCB's.

Basic Specifications :

- Input supply: 230 V, 2A, 50 Hz (single phase)
- Test Current: 0-500 mA AC
- Test Current Resolution: 0.1 mA
- RCCB Ratings: 30 mA, 50 mA, 100 mA, 300 mA
- Test Time Resolution: 1 milliseconds

Salient Features :

- Small in weight, size and portable than most of the conventional RCCB test kits
- Single model for entire range of RCCBs ensures Economical solution. Single model for both 2 and 4 pole RCCBs: Economical solution
- Speed of operation, sensitivity, trip-no trip test and push button test carried out sequentially in a single unit
- Enclosed in flight case for easy carrying (with a handle) and safety
- Programmable AC Solid state current source ensures precision testing and display
- Single micro controller unit for user interface with keypad: Current and trip time is programmed digitally
- Digital indication of current and time
- Conformance indication: Fail / Pass
- In-built calibration feature

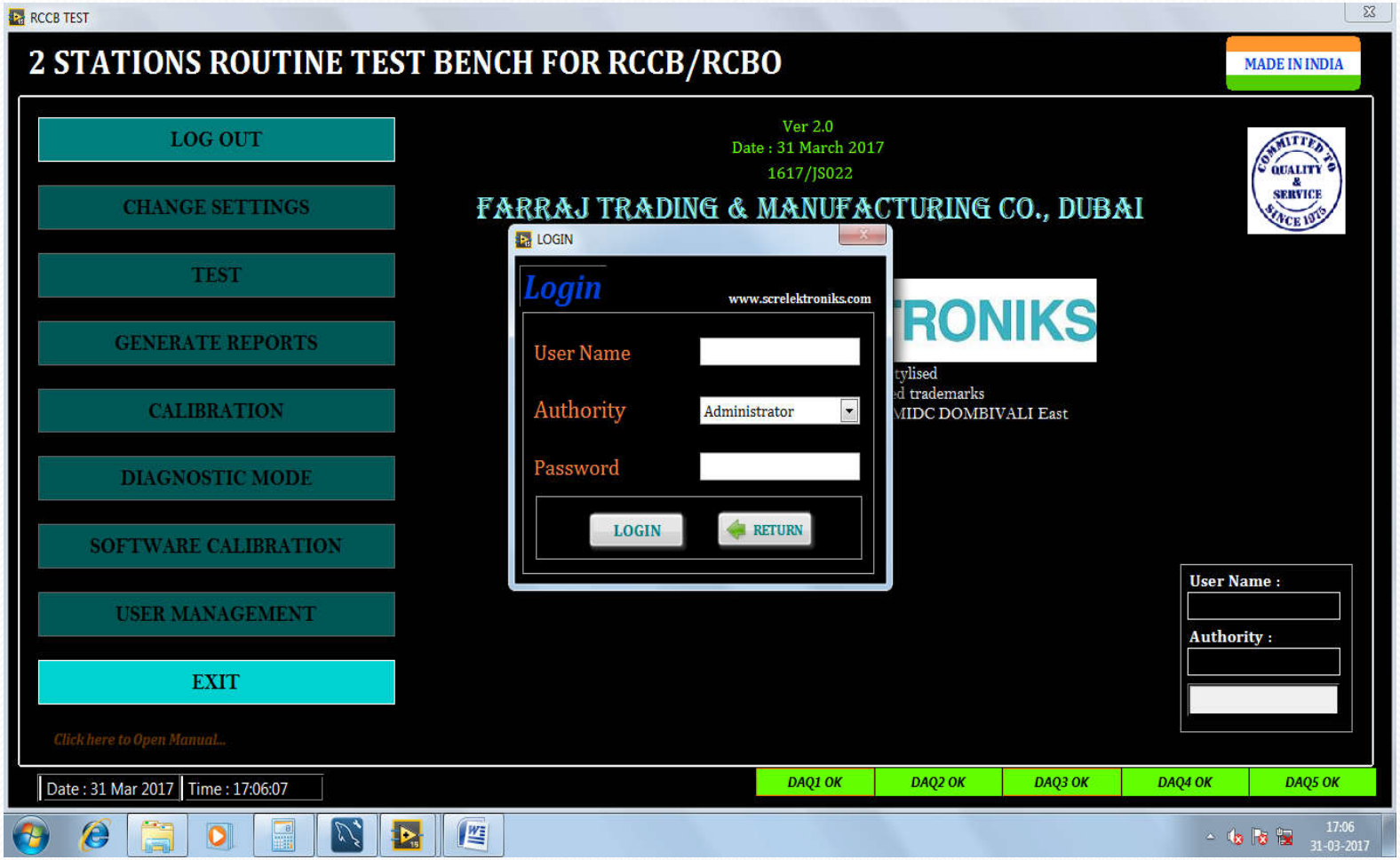
- **Key Photos :**

RCCB Leakage Trip Verification / Demonstration Briefcase

Test It With Testware :

- SCR ELEKTRONIKS Testware enable you to automate the testing process, eliminates any room for human error and make automated testing, monitoring & reporting a breeze.
- Testware has all facilities like data logging, report generation, setting parameters for test through entering of some values, generation of graphs plotted against various factors. Generation of current and voltage waveforms are also possible
- Testware also has user hierarchy and password protection, diagnostic and calibration software modules, recipe configuration techniques and smart and friendly user interfaces
- We also boast of an in-house team of talented LabVIEW engineers being trained continuously

- ## Some Typical Software Screenshots:



Login Window

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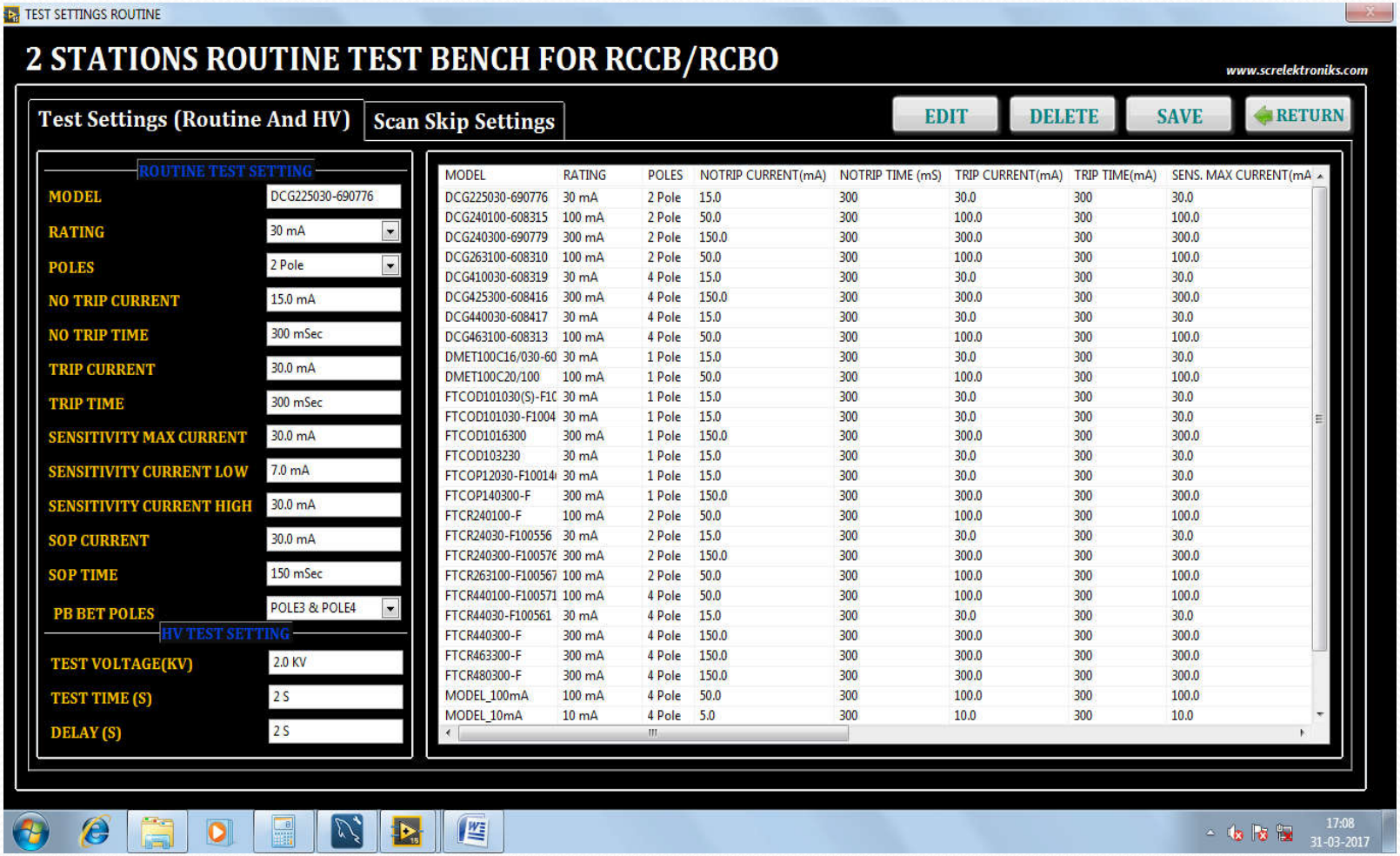
- **Some Typical Software Screenshots:**



Settings Window

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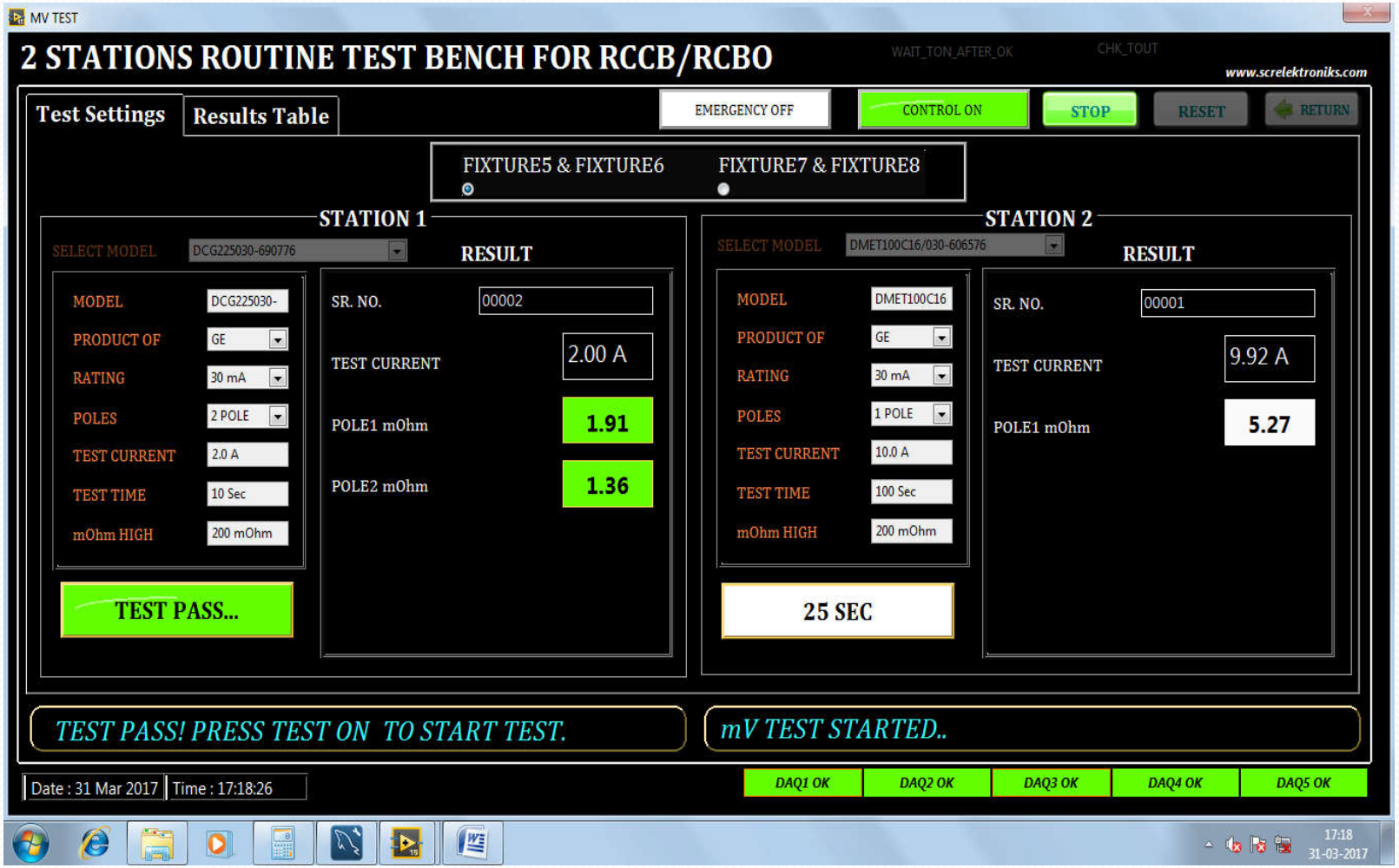
- **Some Typical Software Screenshots:**



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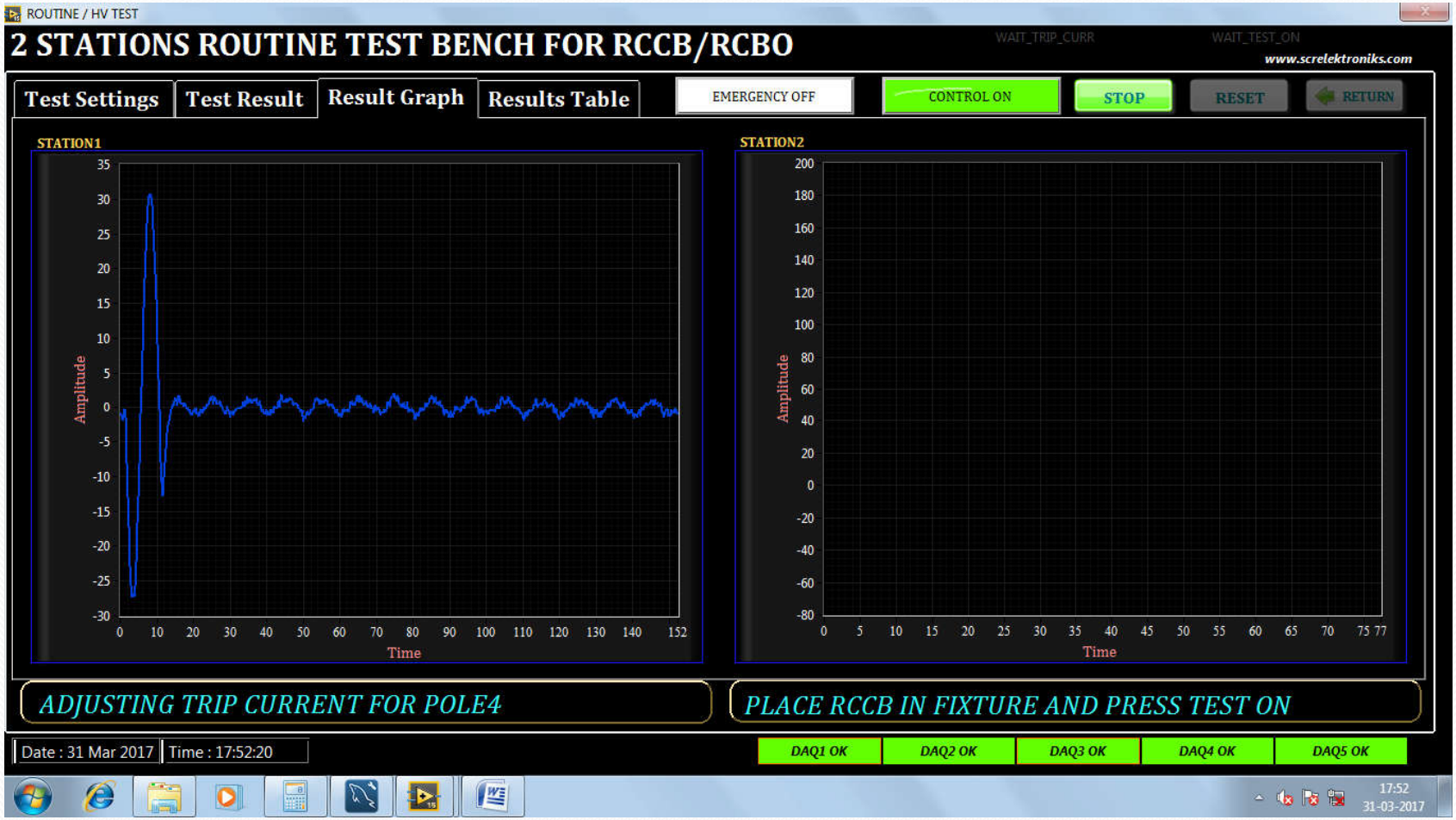
- **Some Typical Software Screenshots:**



Result Graph window

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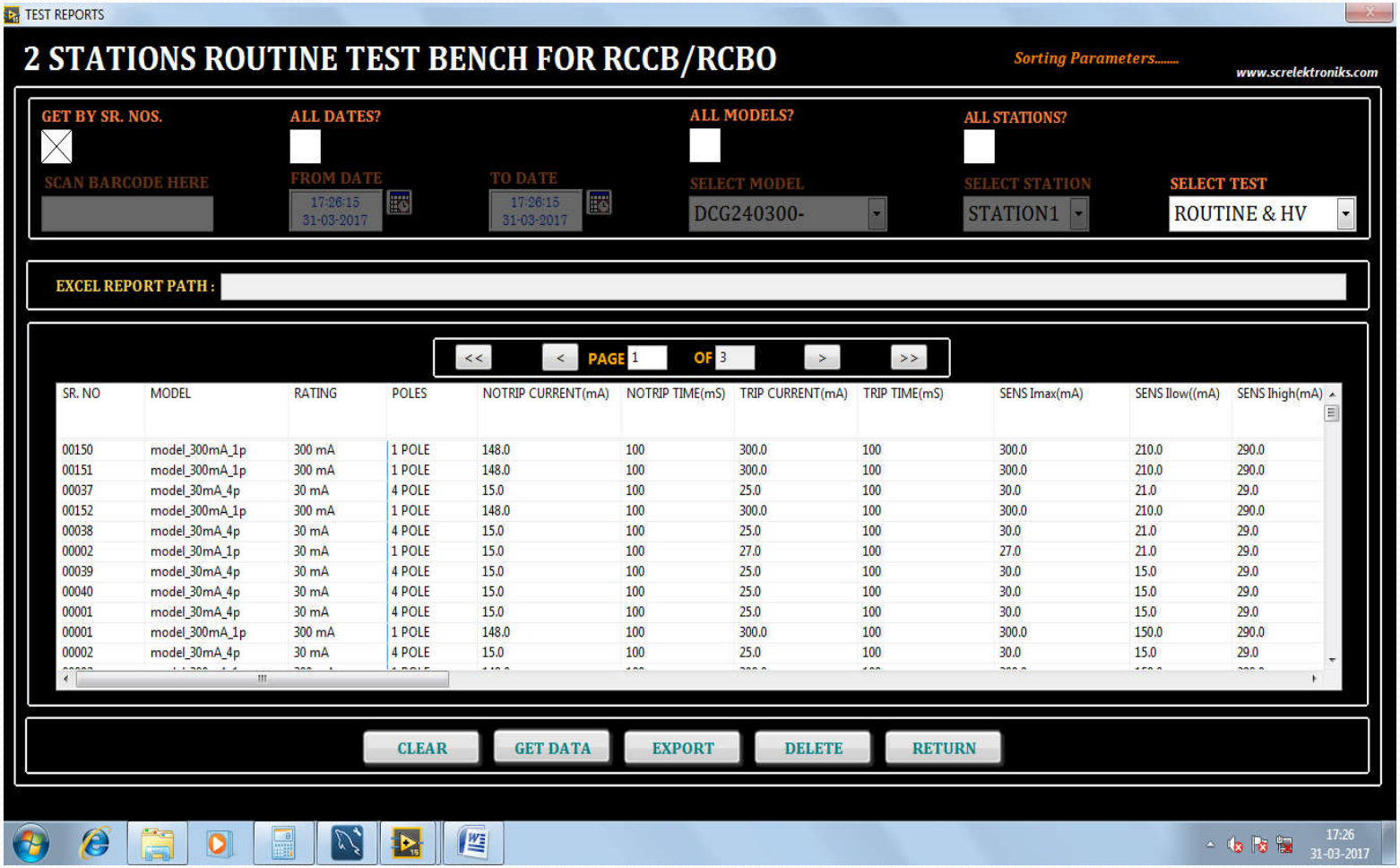
- **Some Typical Software Screenshots:**



Results Window

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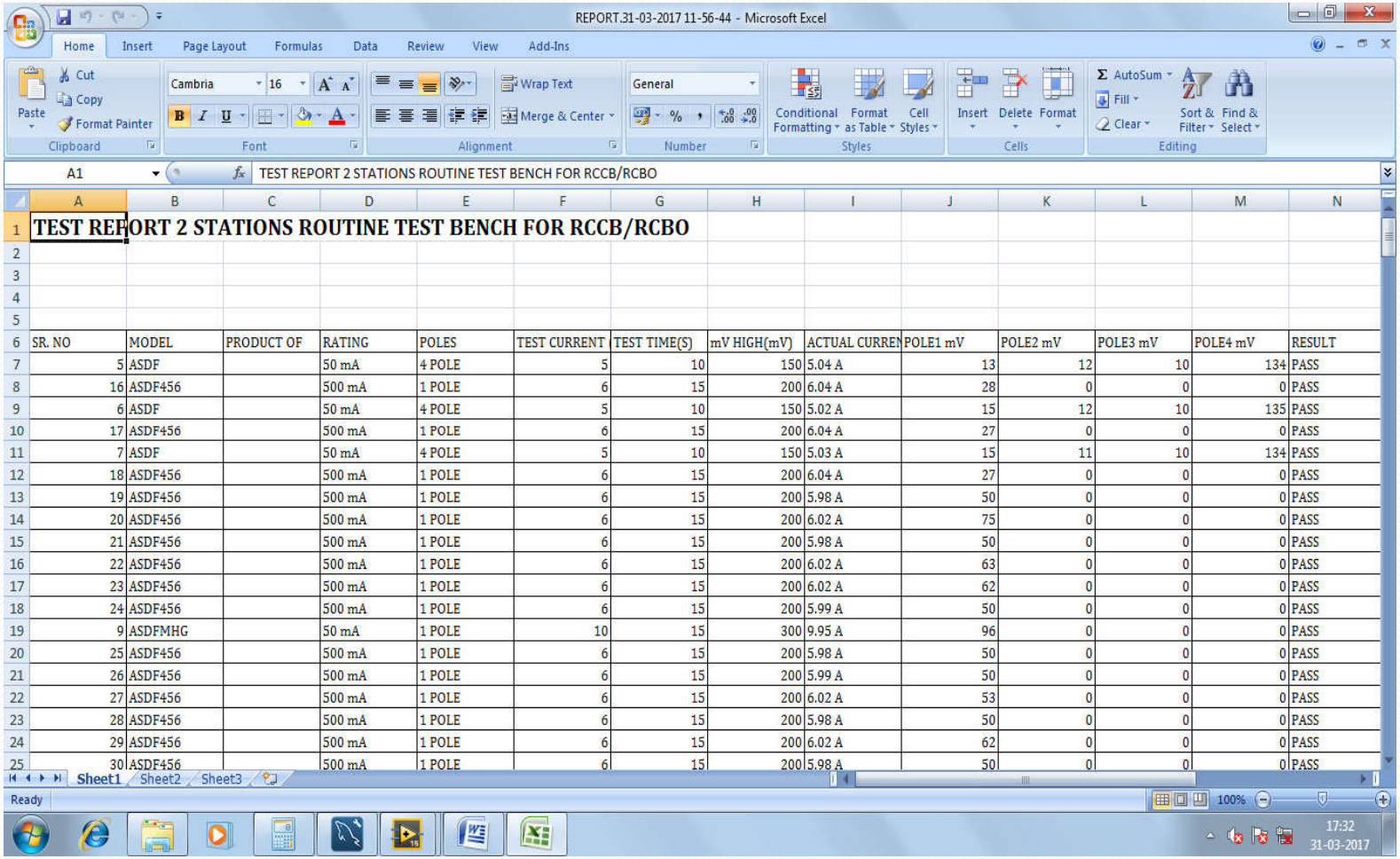
- **Some Typical Software Screenshots:**



TEST REPORT 2 STATIONS ROUTINE TEST BENCH FOR RCCB/RCBO

SR. NO	MODEL	PRODUCT OF	RATING	POLES	TEST CURRENT	TEST TIME(S)	mV HIGH(mV)	ACTUAL CURREN	POLE1 mV	POLE2 mV	POLE3 mV	POLE4 mV	RESULT
5	ASDF		50 mA	4 POLE	5	10	150	5.04 A	13	12	10	134	PASS
16	ASDF456		500 mA	1 POLE	6	15	200	6.04 A	28	0	0	0	PASS
6	ASDF		50 mA	4 POLE	5	10	150	5.02 A	15	12	10	135	PASS
17	ASDF456		500 mA	1 POLE	6	15	200	6.04 A	27	0	0	0	PASS
7	ASDF		50 mA	4 POLE	5	10	150	5.03 A	15	11	10	134	PASS
18	ASDF456		500 mA	1 POLE	6	15	200	6.04 A	27	0	0	0	PASS
19	ASDF456		500 mA	1 POLE	6	15	200	5.98 A	50	0	0	0	PASS
20	ASDF456		500 mA	1 POLE	6	15	200	6.02 A	75	0	0	0	PASS
21	ASDF456		500 mA	1 POLE	6	15	200	5.98 A	50	0	0	0	PASS
22	ASDF456		500 mA	1 POLE	6	15	200	6.02 A	63	0	0	0	PASS
23	ASDF456		500 mA	1 POLE	6	15	200	6.02 A	62	0	0	0	PASS
24	ASDF456		500 mA	1 POLE	6	15	200	5.99 A	50	0	0	0	PASS
9	ASDFMHG		50 mA	1 POLE	10	15	300	9.95 A	96	0	0	0	PASS
25	ASDF456		500 mA	1 POLE	6	15	200	5.98 A	50	0	0	0	PASS
26	ASDF456		500 mA	1 POLE	6	15	200	5.99 A	50	0	0	0	PASS
27	ASDF456		500 mA	1 POLE	6	15	200	6.02 A	53	0	0	0	PASS
28	ASDF456		500 mA	1 POLE	6	15	200	5.98 A	50	0	0	0	PASS
29	ASDF456		500 mA	1 POLE	6	15	200	6.02 A	62	0	0	0	PASS
30	ASDF456		500 mA	1 POLE	6	15	200	5.98 A	50	0	0	0	PASS

Report on Excell Sheet

- **Documentation That Will Be Provided With Product :**

  - Layout (dimensions, etc.)
  - Metering and PCB termination diagram
  - Power wiring diagram
  - Control wiring diagram
  - User manual
  - Data acquisition module details (for PC based variants)
  - Signed warranty certificate
  - Calibration certificates (NABL optional)

Why SCR Elektroniks ?

- Since 1975: Rich Experience In Test And Measurement
- Customized Solution
- Dedicated After Sales Support Team
- Designed More Than 100 Different Products
- In- House Team Of Micro-controller Design, Electrical And Electronic Design, Micro Controller Development, Labview (PC) Software And PLC Logic, Production, Testing And Commissioning And Support
- In-house Development Of Critical Electronic And Electrical Meters, Modules And Components
- ISO 9001 : 2015 Certified By Bureau Veritas – Maintaining High Quality In Our Internal Process
- Listed By IEC In The Past
- Fair And Consistent Pricing
- Our Ultimate Prize: Customer Delight

LIST OF OUR VALUABLE CUSTOMERS FOR RCCB :

Sr. No.	Customer Name	Destination
1	M/s. Siemens Limited	Aurangabad
2	M/s. Anchor Electricals Pvt. Ltd	Daman, Haridwar, Mumbai, Bhiwandi
3	M/s. Polycab	Nashik
4	M/s. UL India	Bangalore
5	M/s. Havells India Limited	Baddi, Neemrana, Rajashthan
6	M/s. Indo Asian Fusegear	Noida
7	M/s. Hager Electro Pvt. Ltd	Pune

8	M/s. ABB Limited	Bangalore, Valsad
9	M/s. Danitrint Nigeria Limited	Nigeria
10	Equipos De Simulacion Y Ensayos S. L.	Morocco
11	PT. Tridinamika Jaya Instruments	Indonesia
12	G Nine Modular Pvt. Ltd.	Vasai, Mumbai
13	Ewest Egypt	Egypt
14	Orel Corporation (Pvt) Ltd.,	Shrilanka
15	Novateur Electrical & Digital Systems Pvt. Ltd	Haridwaar, Haryana
16	Teknic Electric (I) Pvt. Ltd.	Andheri
17	Larsen & Toubro Limited	Mumbai
18	Central Power Research Institute	Bhopal
19	V Guard Industries	Cochin

20	IMO Precision Controls Limited	United Kindom
21	Guts Circuit Breakers Pvt. Ltd	Hyderabad
22	Jakarta International Expo	Indonesia
23	Alfanar Electrical Systems	Riyadh
24	Teknic Controls	Mumbai
25	Arthur C. Clarke Institute For Modern Technologies	Srilanka
26	ENAMC	Algeria
27	Datar Nouveau Energietechnik Ltd.	Nashik
28	Honeywell Electrical Devices and Systems India Limited	Dehradun
29	Cosmo Electricals	Haridwar
30	Efapel	Portugal
31	Polycab Wires (P) Ltd.	Nashik

SCR ELEKTRONIKS

- For More Details Contact:

  SCR ELEKTRONIKS

- **Address:** W 188, MIDC Phase 2, Dombivli (E), Pin:421204 India
- **Phone**: +91 251 2871778
- **Email**: auto@screlektroniks.com
- **Website**: www.screlektroniks.com

THANK YOU