

15KV Digital Surge / DC HiPot / Resistance and Bar-to-Bar tester

Baker's proven test capabilities and reliability combine with the features of digital technology in the D65R



The D65R is the newest digital tester offered by Baker Instrument Company. This instrument is designed to maximize testing capabilities in a lightweight, sturdy format. Additional testing capabilities have been added to the tester, to make it a more comprehensive tool for predictive maintenance. As with the other Digital testers, the new D65R's high precision testing capabilities allows data collection in the shop or the field. The results can then be printed immediately or stored for later use. This tester demonstrates Bakers continual commitment to motor integrity and Insulation testing.

Resistance, HiPot and Surge in one Tester

The D65R is specifically designed to diagnose faults in large electrical windings with lower impedance and higher capacitance. With the D65R Digital Winding Tester from Baker, you can perform Resistance, HiPot and Surge tests, as well as digitize and store data for future use.

The Resistance Test verifies the existence of dead shorts within the turn-to-turn coils, shows any imbalances between phases due to turn count differences, along with locating poor wire connections or contacts.

DC HiPot testing detects faults in groundwall/earth insulation, and also provides a complete Polarization Index test. The groundwall/earth insulation system consists of the wires insulation, slot liner insulation, wedges, varnish, and sometimes phase paper.

Surge testing detects faults in both inter-turn winding and phase-to-phase insulation systems. Using advanced analog-to-digital conversion hardware, the "D" series captures the surge test waveform, remembers it, displays it indefinitely, and prints it to the included ink jet printer. This surge waveform storage capability can be applied to other motors besides simple induction motors. The D Series can be used to test all the rotating fields of a synchronous motor by storing the waveform from a surge test on one coil, and comparing that waveform to a waveform from every other coil. The Digital Winding Tester can also be used on DC armatures and fields. The resulting waveform can then be compared to all other bar-to-bar or span tests to detect a winding fault.

Test results from up to 10 motors in the field can be stored, retrieved, printed, and uploaded to a desktop program for file management and analysis. Each of these 10 motor records has its own memory location. Each location can store up to three surge wave patterns plus DC HiPot test voltage and current. The Digital Winding Tester can operate on its own in the field, and then transfer the test data to a computer running Baker's Motor Test Acquisition (MTA for Windows) software for further analysis. MTA for Windows provides database capabilities, waveform comparison, report generation, printouts, and other functions that turns test data into usable information. All options are easily accessed with on-screen prompts.

Call us today. At Baker, we never stop looking for ways to improve your competitive edge with test solutions.

Armature Testing

The lower impedance of series-wound armatures (example: traction motors, transit and lift truck armatures) makes accurate Surge tests of these coils difficult. To achieve sufficient voltage differences between adjacent bars, standard surge testers use excessive voltage which may harm the windings.

The D65R allows you to safely test these coils using higher currents. When testing these coils a specific voltage is applied on adjacent commutator bars reducing the need for excessively high voltage and the danger of damage to the coil. Inter-bar voltages can be varied from 50 to 900 volts on large, cross-connected equalized armatures. This bar-to-bar testing is the preferred method of testing DC armataures used by manufacturers and rebuilders.

Features

Storage of test data for up to 10 motors
- 3 Surge Wave Pattern with Amplitude and Time base
- Surge Test Peak Voltage Amplitude
- DC HiPot Voltage, Leakage Current
- Insulation Resistance

- Baker's QRR reliability High Voltage Design
- Zero Start Interlock for Tester High Voltage Output
- Bright, Sharp 5-inch digital display
- Leads Energized safety warning indicator
- HiPot Over-Current safety warning indicator
- Input Source Open Ground operator safety disable and warning indicator.
- Test Lead insulated to 45 kV rating
- Dedicated Test Leads for Resistance Testing
- Armature Bar-to-Bar test & fixture
- Parallel Printer and PC interface

Options

- FS-12 Footswitch for Push to Test hands free operation
- Motor Test Management Analysis Software (MTA for Windows 95, 98 & NT)
- Compatible Ink Jet printer

Specifications*

Surge Test

Meets IEEE-522 for voltage rise times.

Maximum Output Voltage	15000 Volts
Maximum Output Current	800 amps
Maximum Pulse Energy	11.3 joules
Minimum Test Inductance	25 microhenries
Discharge Capacitance	.1 micro-farad

DC HiPot Potential Test

Maximum Output Voltage	15000 Volts
Maximum Output Current	1000 mAmps
Overcurrent Trip	1/10/100/1000 mAmps
Current Resolution	0.1/1/10/100 mAmps per div.

Resistance Test	.0008 ohms - 216 ohms

Bar-to-Bar Test

Maximum Voltage	1,900 Volts (no load)
Maximum Current	5,000 amps
Maximum Stored Energy	11.3 joules
Maximum Test Inductance	20 microhenries
Minimum Test Inductance	0.4 microhenries

Physical Characteristics

Weight (pounds)	59 lbs
Dimensions	22 x 9 x 24 in (WxHxD)
Power Input	85-264 VAC 50/60 Hz

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