

15KV Digital Surge/DC High Potential and Bar-to-Bar Tester

Baker's proven test capabilities and reliability combine with the features of digital technology in the D165.



The D165 performs Surge/DC HiPot and low impedance Bar-to-Bar tests then prints results or stores data for later analysis.

Dependability and Digital Accuracy

The D165 brings you the latest innovations in the testing of electrical insulation systems. This tester features the proven accuracy and reliability of over 4 decades of Baker experience in testing and adds the convenience of digital technology. Now perform tests in the shop or field and print results immediately or store data for later use - all in one unit. The D165 represents Baker's ongoing commitment to quality in the design of state-of-the-art test equipment.



Designs that work for you

The D165 is specifically designed to diagnose faults in large electrical windings, improving quality in the shop and reducing unnecessary and costly downtime in the field. The 15KV output allows you to thoroughly test larger windings with lower impedance and higher capacitance. The D165 satisfies the requirements of testing the windings of both AC motors and DC armatures by producing a surge with higher voltage and higher instantaneous current.

The D165 also offers you all of the convenient features of digital technology. The tester captures any Surge test waveform, displays it as long as needed (especially beneficial when testing armatures), and prints it to a compatible ink jet printer. Test results from up to 10 motors in the field can be stored,

retrieved, printed and downloaded to a desktop computer program for file management and analysis. Each of the 10 motor records can store up to three surge wave patterns plus DC hipot test voltage and current. All options are easily accessed with on-screen prompts.

Surge and HiPot Testing

The D165's Surge test allows you to test all insulation systems of an electrical winding: turn-turn, group-group, coil-coil, and phase-phase. The DC HiPot test supplements the Surge test by providing thorough testing of the ground wall insulation. Now you can be sure that you will detect insulation faults in the winding that may go undetected by meg-ohm and hipot testing only.

Armature Testing

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

The D165 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 armatures used by manufacturers and rebuilders.

FEATURES

- Storage of test data for up to 10 motors
 - ~3 Surge Wave Patterns with Amplitude and Timebase
 - ~Surge Test Peak Voltage Amplitude
 - ~DC HiPot Voltage
 - ~DC HiPot Leakage Current
 - ~Insulation Resistance
 - ~On screen display of PI measurement
- Baker's QRR reliability high voltage design
- Zero start interlock for tester High Voltage Output
- Bright, sharp, digital 5-inch display
- "Leads Energized" safety warning indicator
- HiPot Over-Current safety warning indicator
- Input source "Open Ground" operator safety disable and warning indicator.
- Test leads insulated to 45 KV rating
- Parallel printer and PC interface
- Armature Bar-to-Bar test & fixture
- Compatible ink jet printer
- FS-12 Footswitch for Push to Test allows hands free operation.

TEST SPECIFICATIONS*

SURGE TEST

| | |
|-------------------------|-----------------|
| Maximum Output Voltage | 15,000 Volts |
| Maximum Output Current | 800 amps peak |
| Maximum Pulse Energy | 11.3 joules |
| Minimum Test Inductance | 25 microhenries |
| Discharge Capacitance | .1 micro-farad |

DC HIGH POTENTIAL TEST

| | |
|------------------------|-----------------------|
| Maximum Output Voltage | 15,000 Volts |
| Maximum Output Current | 1000 microamps |
| Overcurrent Trip | 10/100/1000 microamps |
| Current Resolution | 1/10/100 microamps |

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 |

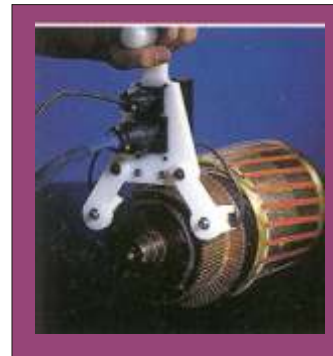
PHYSICAL CHARACTERISTICS

| | |
|--------------------|---|
| Weight | 56 kg./123 pounds |
| Dimensions | 520 x 433 x 660 mm 20.5 x 17 x 23.6 inches |
| Power Requirements | 120 VAC/1000 watts or 220 VAC/1000 watts |

* Data subject to change without notice. Printed in USA 10/01.

OPTIONS

- RAS-12 Roll Around Stand for convenient height of operation and movement.
- MTA for Windows Motor Test Management and Analysis Software
- ATPO2 Armature Test Probes and Clips



Whether you're trouble shooting, manufacturing, or rebuilding, Baker's digital tester consistently detects faulty windings that other testers miss.



BAKER INSTRUMENT COMPANY
PO Box 587, Fort Collins, CO 80522
PH: (970) 282-1200, (800) 752-8272
Fax: (970) 282-1010
www.bakerinst.com