D40R: 40kV High Voltage Surge/High Potential/Resistance Tester

The D40R brings you the latest innovations in the testing of electrical insulation systems. This tester features the proven accuracy and reliability of over 40 years of experience. Specifically designed for shop performance, this digital instrument provides a cost effective solution to large motor testing. The D40R represents Baker Instrument Company, an SKF Group Company's on-going commitment to quality in the design of high performance test equipment.

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The D40R is a high performance stand alone impulse generator specifically designed to diagnose faults in very large electrical motors and windings, improving quality in the shop and reducing necessary and costly downtime in the field. The 40kV output allows you to thoroughly test larger windings with lower impedance and higher capacitance. The D40R satisfies the requirements of testing the windings of both AC motors and DC armatures by producing a Surge with higher voltage and instantaneous current.

The D40R offers you all of the convenient features of digital technology. It performs Resistance, DC HiPot and Surge tests along with incorporating a supply monitor to insure safe operation from a well grounded source. Additional safety features include a front panel emergency stop switch, zero-start interlock, and a test conclusion forced ground relay on output leads. The control and display module provides the user with comprehensive testing results.

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

The DC high potential (HiPot) test can also be done using the D40R. Test voltage is set by the output control from 500 volts up to 40,000 volts. Current is displayed and an overcurrent trip circuit monitors the test. If current exceeds the trip level, the test is automatically halted. In its most sensitive setting, the protective circuit will operate as low as 10 microamps.

The Surge Test's voltage rise time is 100-200 nanoseconds (0.1 - 0.2 microseconds), so the *D40R complies with IEEE Standard 522-1992 and IEC Standard 34-15* when testing motor windings and coils.

The D40R is housed in a new mobile case with the control unit permanently affixed to the upper face. 60Kv high voltage test leads are provided along with dedicated Kelvin Resistance test leads for convenient portable testing. These features along with the unsurpassed testing capabilities make the D40R a powerful and technically advanced tester for in house shop or field environments.

*SPECIFICATIONS**

SURGE TEST

Maximum Output Voltage	40,000 Volts
Maximum Output Current	2,700 amps peak
Maximum Pulse Energy	120 joules
Impulse Rise Time	.1-.2 microseconds
Impulse Repetition Rate	.5 Hz (1 pulse per 2 sec.)
Minimum Test object Inductance	24 micro-Henries
Discharge Capacitance	.15 micro-farads

DC HIGH POTENTIAL TEST

Maximum Output Voltage	40,000 Volts
Maximum Output Current	1000 microamps
Overcurrent Trip	1000/100/10 microamps
Current Resolution	1/10/100 microamps

Resistance Test	.0008 ohms - 216 ohms

PHYSICAL CHARACTERISTICS

Weight (pounds)	305 pounds
Dimensions	24 x 55 x 26 inches
Power Requirements	110V/220V Single Phase 1000 Watts, 50/60 Hz

6" Solid Rubber Wheels

OPTION

Power Requirements 220V/50Hz

8" pneumatic Wheels with Transport Lifting Strap Kit.

1.2/50 microsecond rise time (user selectable front panel switch)

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