D12R, D6R, D3R Digital Winding Tester

Integrated testing capabilities

The DR series testers integrate a wide range of electrical tests which meet high quality standards. This instrument supports all major electric tests in a single field portable unit including surge, polarization index, DC HiPot, MegOhm and winding resistance. This instrument complies with IEEE recommendations.

Continuous innovation

With the DR Series testers, Baker Instrument Company continues to pioneer new breakthroughs that demonstrate our ongoing commitment to quality, reliability, and competitive advantage. The DR Series is the result of over 40 years of designing and building winding test instruments. It is the only tester available today that provides rugged testing capabilities at a multitude of voltages.

The power of digital testing

The D12R, D6R, and D3R are the latest digital testers offered by Baker Instrument Company, an SKF Group Company. These instruments are designed to maximize testing capabilities in a lightweight, sturdy format. Additional testing capabilities have been added to these testers, to make them a more comprehensive tool for predictive maintenance. As with the other digital testers, the D12R, D6R and D3R have high precision testing capabilites that allow data collection in the shop or the field. The results can then be printed immediately or stored for later use.

Resistance, HiPot, and Surge in one tester

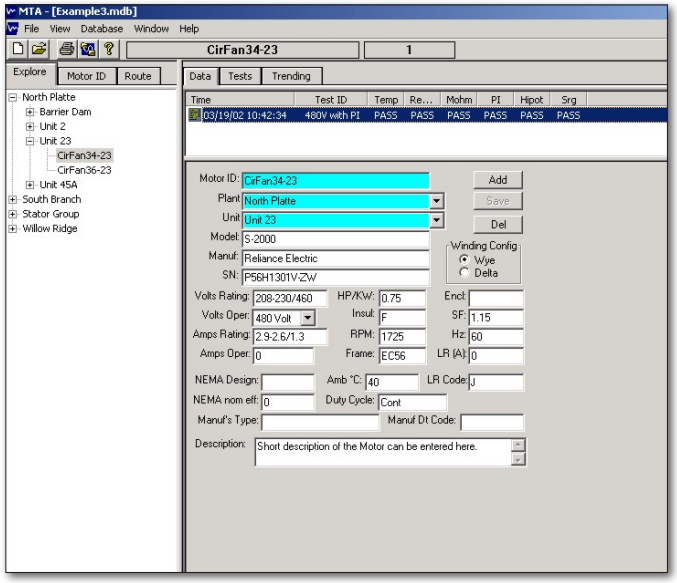
With the D12R, D6R, and D3R digital winding testers from Baker, perform Resistance, HiPot and Surge tests as well as digitize and store data for future use.

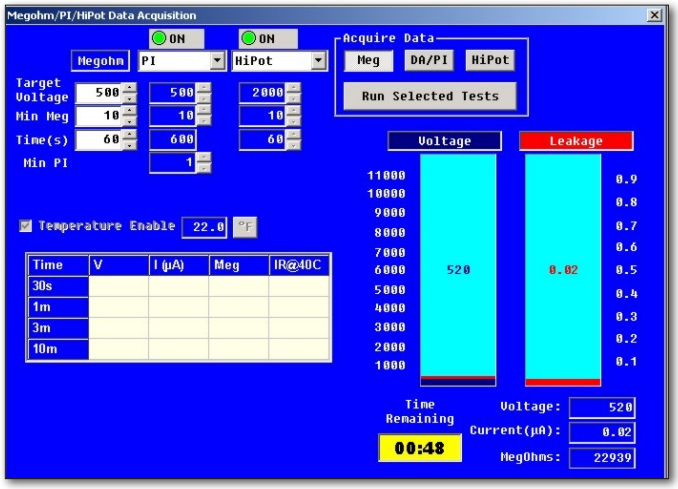
The Resistance test verifies the existence of dead shorts within the turn-to-turn coils, shows any imbalances between phases due to turn count differences and locates poor wire connections or contacts.

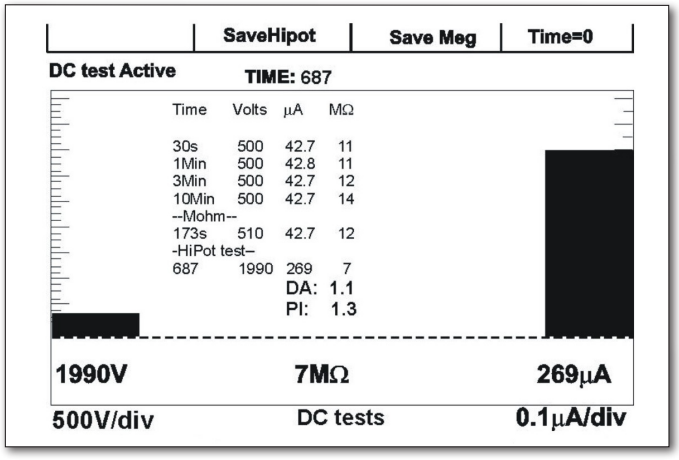
DC HiPot testing detects faults in groundwall/earth insulation, and also provides a complete Polarization Index test. The groundwall/earth insulation system consists of the wire and slot liner insulation, wedges, varnish, and sometimes phase paper.

Surge testing detects faults in both inter-turn winding and phase-to-phase insulation systems. Using advanced analog-to-digital conversion hardware, the DR series captures the surge test waveform, remembers it, displays it indefinitely and prints it to the included printer. This surge waveform storage capability can be applied to other motors besides simple induction motors. The DR series can be used to test all the rotating fields of a synchronous motor by storing the wavform from a surge test on one coil, and comparing it to every other coil's waveform. 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.

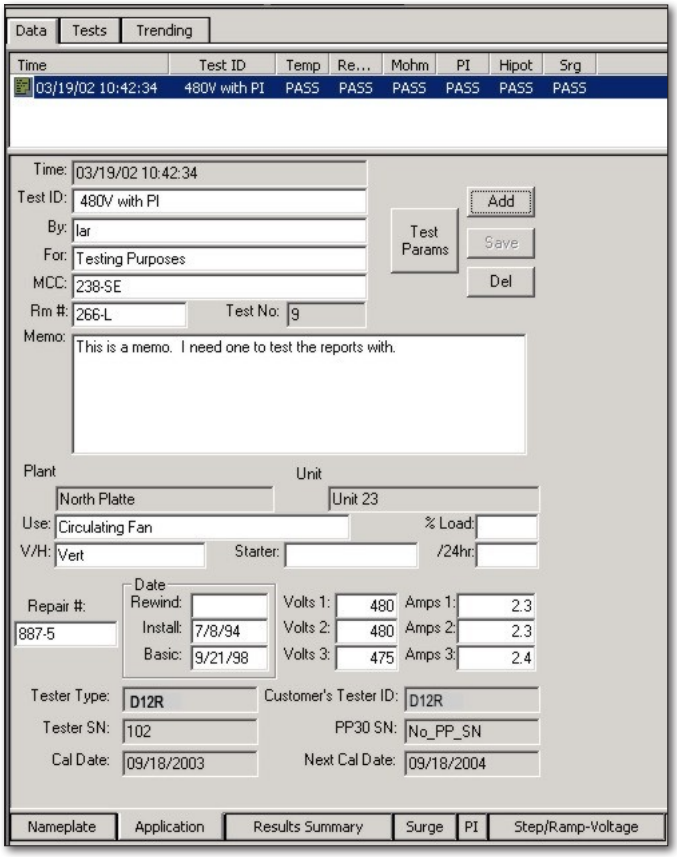






Digital MTA software – MTA for Windows

The digital winding tester can operate on its own in the field, and then transfer the test data to a computer running 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.



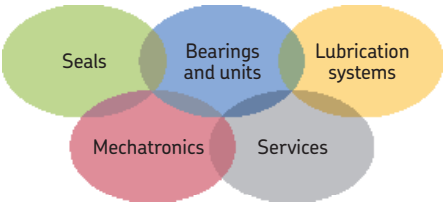
Features

- 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
- QRR reliability high voltage design
- Zero start interlock for tester high voltage output
- Sharp 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 lead insulated to 40kV rating
- Dedicated test leads for Resistance testing
- Test lead select switch with all leads grounded operator safety position
- Parallel printer and PC interface

Options

- Footswitch for push to test hands free operation
- PP30 30 kV Surge/DC HiPot power pack
- Motor Test Management Analysis software (MTA for Windows)

	D12R	D6R	D3R
Surge test			
Output voltage	0 to 12,000 V	0 to 6,000 V	0 to 3,000 V
Max output current	400 A	350 A	190 A
Pulse energy	2.88 J	0.72 J	0.18 J
Sweep range	2 to 2000 µs	2 to 2000 µs	2 to 2000 µs
Volts division	250/500/1,000/1,500	250/500/1,000/1,500	500/1,000/2,000/3,000
Repetition rate	5 Hz	5 Hz	5 Hz
Voltage measurement and accuracy	± 12%	± 12%	± 12%
DC HiPot test			
Output voltage	0 to 12,000 V	0 to 6,000 V	0 to 3,000 V
Max output current	1,000 µA	1,000 µA	1,000 µA
Current resolution	0.1, 1, 10, 100 µA/Div	0.1, 1, 10, 100 µA/Div	0.1, 1, 10, 100 µA/Div
Over-current trip settings	1, 10, 100, 1.000 µA	1, 10, 100, 1.000 µA	1, 10, 100, 1.000 µA
Full scale voltage and current measurement and accuracy	± 5%	± 5%	± 5%
MΩ accuracy	± 10%	± 10%	± 10%
Max MΩ reading	50,400 MΩ	50,400 MΩ	50,400 MΩ
Resistance measurements	0.0008 to 216 Ω	0.0008 to 216 Ω	0.0008 to 216 Ω
Physical characteristics			
Weight	42 lb	42 lb	42 lb
Dimensions, in (W x H x D)	19 x 8 x 23	19 x 8 x 23	19 x 8 x 23
Power requirements	85 to 264 V AC 50/60 Hz at 2.5 A	85 to 264 V AC 50/60 Hz at 2.5 A	85 to 264 V AC 50/60 Hz at 2.5 A



The Power of Knowledge Engineering

Drawing on five areas of competence and application-specific expertise amassed over 100 years, SKF brings innovative solutions to OEMs and production facilities in every major industry worldwide.

These five competence areas include bearings and units, seals, lubrication systems, mechatronics (combining mechanics and electronics into intelligent systems), and a wide range of services, from 3-D computer modelling to advanced condition monitoring and reliability and asset management systems.

A global presence provides SKF customers uniform quality standards and universal product availability.

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