

VOLTECH NOTES

A MONTHLY PUBLICATION FROM THE MANUFACTURER OF THE WORLD'S MOST POPULAR POWER ANALYZERS AND TRANSFORMER TESTERS

ISSUE 3

Knowledge Base

Full copies of the extracts described in each issue of Voltech Notes are available free of charge in either hardcopy or electronic form.

Each application note provides a detailed explanation of a technical question on subjects that have been raised by our customers over the years.

Many of these application notes are new publications and are not available on our website. Topics covered so far include:

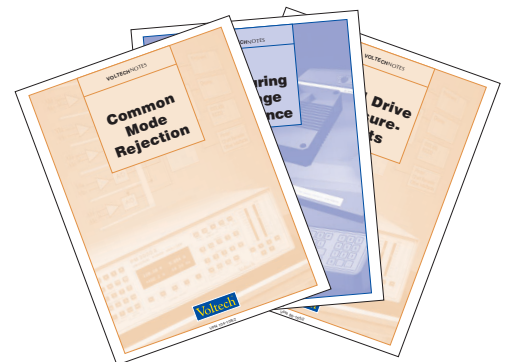
- AC Theory: Back to Basics
- Measuring Leakage Inductance
- Common Mode Rejection
- Kelvin Connections
- Laminate Transformer Testing



For a complete list of the technical notes that are available from Voltech, please request a copy of issues 1 and 2 of Voltech Notes.

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DATABASE CONNECTIVITY

Database Connectivity for Transformer Tester Results

- Real-time processing and analysis
- Compact, efficient data storage

The AT Series transformer testers and their associated PC Server software have always provided flexible methods of test results storage. The standard spreadsheet-compatible output is easy to use but it is difficult to manipulate in real time and can rapidly occupy large amounts of disk space.

The database connectivity option for the Server provides a method to connect to any ODBC-compatible database. When connected to the database of your choice, results can be processed, displayed, and acted upon in real time.

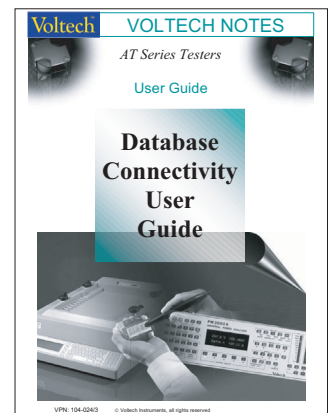
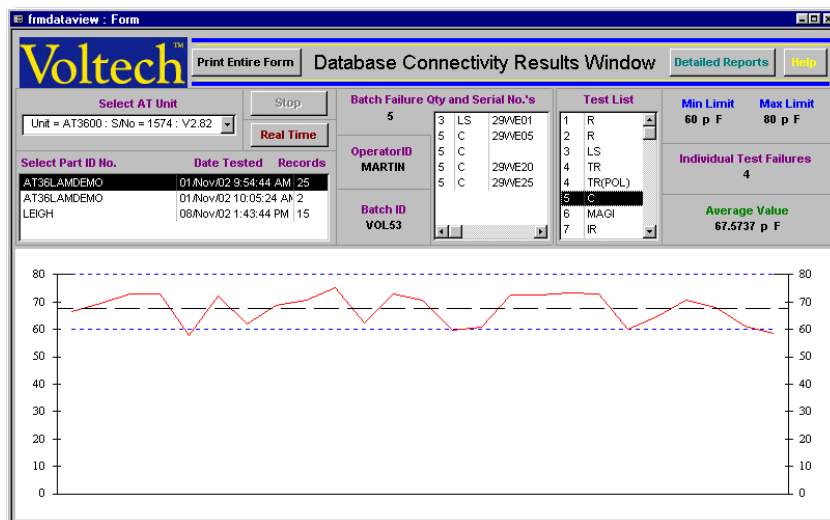
Sample databases in MS Access 97 or Access 2000 are available from us upon request.

DATABASE CONNECTIVITY USER GUIDE

This application note describes how to make a software connection between the PC Server for the Voltech AT Series transformer testers and a database. Detail of the operation of a sample database is included.

When the "Real Time" button has been pressed, and a result has been returned from the AT, the record count and graph will extend automatically.

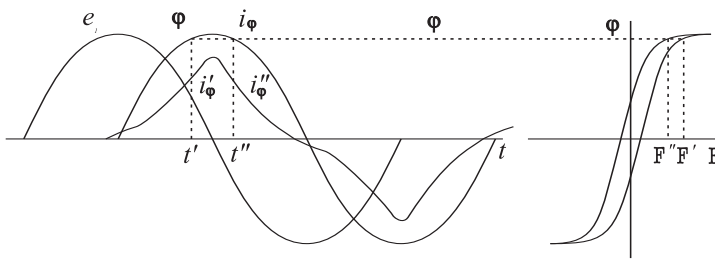
EXTRACT



TESTING POWER TRANSFORMERS

Power transformers are tested to international standards such as IEEE C57 and IEC 76-1. These standards require the careful measurement of simultaneous rms and mean voltage at low power factors. This note discusses the measurement problems involved.

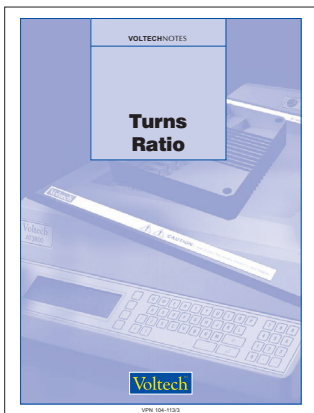
Under no-load conditions, the current drawn by a power transformer is dominated by the magnetizing current, which is distorted and lags the voltage by 90° .



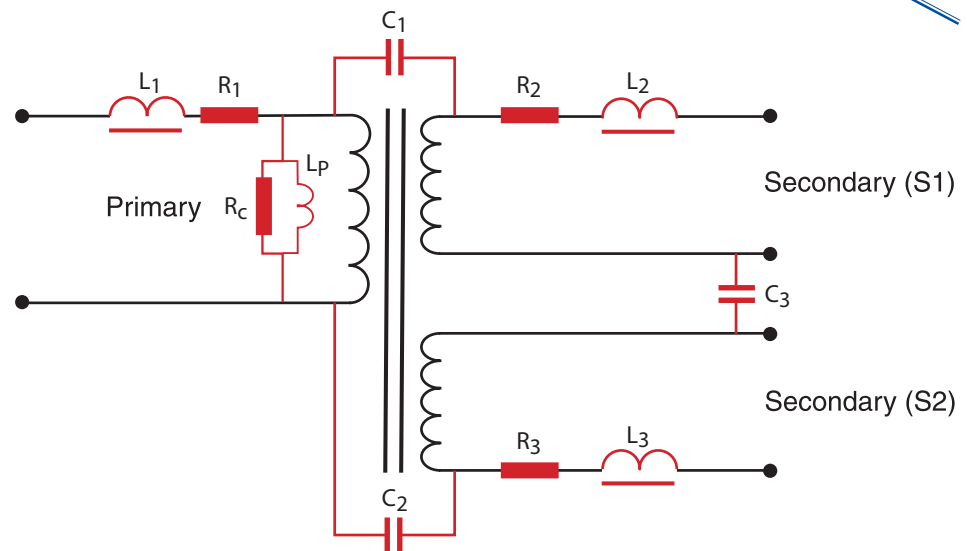
EXTRACT

URNS RATIO

Turns ratio is one of the basic measurements often made on a transformer to confirm its design and construction. Often, the measured ratio is less than you would expect. The details of the different methods of measuring turns ratio are discussed in this technical note.



With a theoretical, "ideal" transformer, the ratio of the physical turns on any winding could be established simply by measuring the rms output voltage on one winding ...



EXTRACT

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(Item # 104-024) | <input type="checkbox"/> Turns Ratio
(Item # 104-113) |
| <input type="checkbox"/> Testing Power Transformers
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