



GDBT-1000kVA Transformer Test Bench



Test Object:

22.9kV Single Phase transformers and special transformers,

load voltage and current: AC 0-650V/78A, AC 0-1200V/29A, AC 0-2400V/14.6A

The impedance of tested transformer is within 7%, HV side is 23kV, 11kV, 6kV.

LV side is 0.05kV-2.4kV.

This test bench can conduct below test

1. No-load test including no-load loss, the percent of no-load current to rated current.
2. Load test including load loss, impedance voltage percentage, automatic temperature conversion and load loss test under 30% or above full current.
3. Induced voltage test.

Features

1. Manual record test data and save in the database.
2. The data of No-load test can be corrected by waveform and rated voltage automatically.
3. The data of Load test can be corrected by temperature (75°C, 100°C, 120°C, 145°C) and rated current.
4. In No-load test, LV side voltage can be monitored.
5. In Load test, HV side current can be monitored.
6. All test functions and test process can be selected and controlled by buttons of front panel.
7. All test results are corrected according to the requirement of GB1094, IEC60076 or ANSI C57.
8. Test procedure can be proceed by PC software.
9. All data can be stored and printed.
10. With zero protection, over-current protection and over-voltage protection functions.
11. CT/PT range switch automatically.
12. The test bench will fully control to the whole loop circuit and monitor the measurement.
13. Safety alarm system.

Specifications

Transformer Load and No-load Tester (Just for reference, the final model is Fluke Norma 4000)

Voltage range: 0-1000V

Current range: 0.25-20A, accuracy 0.2%.

Power accuracy 0.3%.

Power factor 0.050-1.000, accuracy 0.3%

Frequency 40-70Hz, accuracy 0.1%.

Power P

No-load current I_0 , %

No-load loss P_0

Load loss P_k

Impedance voltage U_k

Power P_o

Average line voltage U_n

Average current I_n .

HV CT specifications

Voltage range: 3kV

Measuring range: 0.25A-110A

Accuracy 0.05%

Turns ratio is 100,50,30,20,10,5,2.5/1A

PT specifications

Voltage range: 0.1kV-3kV(50Hz-400Hz)

Accuracy 0.05%

Turns ratio is 3,2,1,0.5kV/0.1kV

Variable Frequency Power Supply

Input voltage: Single phase AC380V, 60Hz

Measuring range: 0-800V

Rated capacity: 30kVA

Output current: 0-37.5A

Output frequency: 180Hz, 240Hz, 400Hz \pm 2%

Intermediate Transformer

Capacity: 40kVA

Input Voltage: Single phase 500V

Output Voltage: 0-650V-1200V-2400V

100kVA Single Phase Regulator

Input voltage: Single phase 380V/60Hz, output voltage 20-650V.

Max. Load current: 154A

It is non contact regulating, easy to use.

When input voltage is constant, it can adjust output voltage smoothly with load. It is designed by rated frequency 60Hz.

Design Requirement

All required test are equipped in the same bench, each function is independent. All test are automatic.

Transformer Characteristic Test(No-load and Load Test)

It is controlled by PC and supplied induced voltage regulator 100kVA, intermediate transformer 40kVA.

We can customize different rating models based on actual requirement.