

SOLUTIONS Distribution Transformer Test System TTS1100A





ingenious measurements







Distribution Transformer Test System TTS1100A Routine Testing of Medium Voltage Power Transformers





Highlights

This test system solution was designed for routine tests of medium voltage distribution transformers according to IEC60076.

It is optimized for testing transformers with up to 2.5MVA and rated voltages up to 30kV.

Output Data

- 100kVA Power Supply
- Voltage up to 1500V
- Current up to 120A

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Sa	lfas		PSI2100	A 100kVA	Power	Supply
			Measureme	nts		
	Voltage	Current	Power	Power	P factor	Frequen
L1	410.2 V	1.35 A	0.15 kW	0.00 kVA	0.46	50.00 H
L2	410.9 V	2.22 A	0.39 kW	0.00 kVA	0.74	50.00 H
L3	411.4 V	2.10 A	0.25 kW	0.00 kVA	0.51	50.00 H
					ter	Output
Transf	ormer L1 22.1	°C	HV Transform	ier 24		
Transf	ormer L2 22.1	°C				
	ormer L3 22.2					
	Sinefilter 22.4	°C				
+						<u>^</u>



Challenges

For an efficient use in industrial production a test system needs the ability to adapt to test requirements of a broad product range while keeping the testing process easy, efficient and safe.

The special requirement for this system is the capability to do short circuit tests at power transformers with various rated input and short circuit voltages, induced withstand voltage tests and no load test with one flexible power supply.

Of course the operator safety is very important, as high power electrical tests are always very dangerous.

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Our Solution

Our compact inverter power supply provides all required test voltages with variable frequency in the range 50-150Hz. 4 power ranges are available for optimised adaption to the various test requirements of distribution transformers. The remote control of all components and automatic switching of the measuring points during voltage ratio test allow comfortable testing from the control desk and increase productivity and safety.

This system is fully equipped with a safety control unit, estop buttons, safety doors, safety fence and a light curtain for test area according to EN 50191 to provide maximum safety for the operators during every day work.

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Transformer Test Steps

- Winding Resistance Measurement
- Voltage Ratio and Vector Group Measurement
- Short Circuit Test
- No Load Test
- Induced Overvoltage Withstand Test
- Separate Source AC Withstand Voltage Test
- Temperature Sensor Test

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Technical Specifications

Power Supply	3-phase inverter, 100kVA, 50-150Hz 4 power ranges 500V/120A - 750V/80A - 1000V/60A - 1500V/40A
Power Measurement	4-channel precision power meter Basic accuracy 0.1% Voltage measurement up to 1500 VAC
Switching Matrix	8 measuring points 1kV, 1 A For voltage ratio and vector group test
Winding Resistance	4-wire measurement, resolution 1μΩ Basic accuracy 0.03%
High Voltage Test	175kVAC, 200mA



Features

- 100kVA Sine Inverter Power Supply
- Measurement Unit with Precision Power Analyzer
- Automatic switching of measurement points
- Complete safety system with
 - Emergency stop buttons
 - Warning lamps
 - Safety doors
 - Light curtain
 - Safety fence



SOLUTIONS Please contact us for your individual solution!

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SOLFAS TECHNOLOGIE GMBH

We specialize in the development and distribution of test systems, power supplies and measuring instruments. Experts in electrical testing and automation, our company offers a broad range of high-performance full-service testing solutions and measuring instruments. We provide clients in the automotive, aerospace, energy and traditional industry sectors with the equipment they need to test high power components, such as chokes, transformers and electric motors.

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