Sold & Serviced in USA by:
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SPTTS

Transformer Test Systems
540 kVA – 3’240 kVA

HAEFELY

Current and voltage – our passion

General Description

Small Power Transformer Test Set SPTTS series is designed for routine testing of power transformers. All supported tests are performed in conformity with IEC 60076 and IEEE/ANSI C57.12.90. The test system includes a frequency converter-based power supply.

Frequency converter, the main power source, is well built with our special control algorithm and includes a noise filtering circuit making it perfect for transformer testing.

The test system can perform Load loss measurements, No-Load loss measurements, Induced voltage tests and conduct temperature rise tests.

Frequency converters are modular and can grow in terms of power as the need arises. The Electronic Power Supply - Frequency converter cabinet, EMC filter cabinet and the Logic Control cabinet- is typically built into cabinets mounted on robust skids.

Optionally the EPS can also be built in containers

Application specific step-up transformers, the loss measurement system, capacitor banks, high voltage filters complete the SPTTS offer package.

The Electronic Power Supply with its control software can be offered independently of the other components of the test system. This is especially helpful for test fields which are looking to replace their Motor Generator sets. Distributed Control Nodes communicating with central PLC, offer the chance to use existing switches, thus making the system highly adaptable.

Distributed Control Nodes are independent of type or brand of switches.

We offer end to end solution for transformer testing including consultation for setting up transformer factories through our **Engineering Packages**.

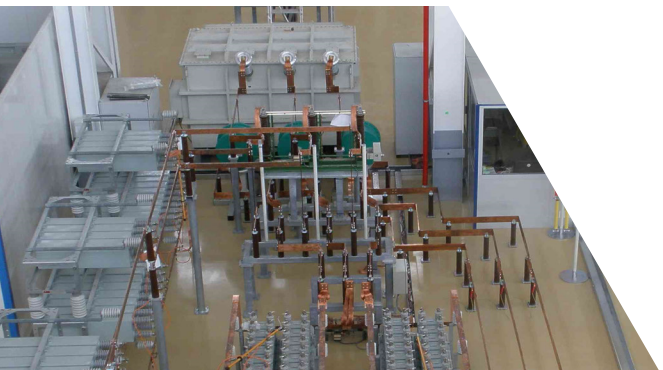
Other sizes and power capabilities are available.
Consult our sales department.

Features

- Total Harmonic Distortion (THD) < 5%
- SIL 3 rated, highly visual control system
- Partial discharge < 5pC when used with offered HV filters in a suitable environs
- Highly Accurate Loss measurement system
- Variable Frequency range
- Modular Electronic Power Supply
- Active Phase-symmetry and distortion control

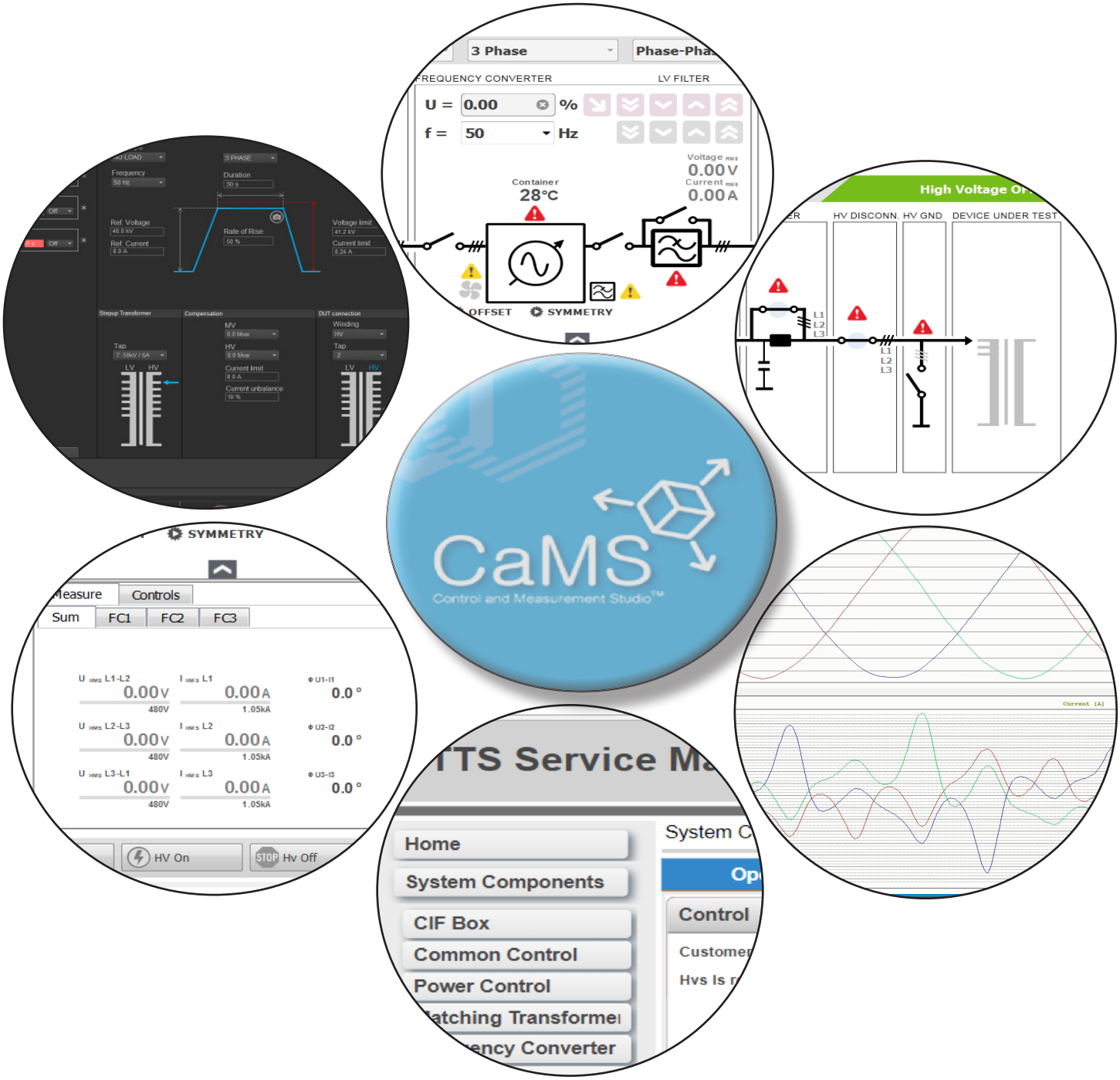
Advantages

- Conforms to IEC 60076
- Safe, easy operability
- Conforms to IEC 60076 and is measured as per IEC 60270 and can be used for Partial Discharge tests on cast resin, dry type transformers
- Overall system accuracy certification
- Suitable for Load and No-Load loss 50/60 Hz tests as well as induced voltage tests > 100 Hz
- Capacity increase on tap
- Controlling and reducing harmonic distortion during No-Load tests



The Main user interface is easy to operate with complete visualization of the test system being available to the operator throughout the testing. Tests can be easily configured, switches moniotored and test parameters observed and recorded and alarms supervised.

Software is based on Control and Measurement Studio concept and is used by haefely across varied measurement devices making integration easy. This sotware, ably supplemented by the Distributed Control Nodes, keeps track of test progress and informs the operator. Sensors are available at every important point and raise and display alarms



System components are simplified glyphs on the visualization pane. Specific control and status widgets are embedded in the representation. Open/closed contactors are visualized open or closed on the screen. Manual switches can be visualized as well. One single screen shows test **configuration**, **status** and **alarms**.

Control software and the firmware can be **updated** remotely using for example TeamViewer / PC Visit.

Remote linking can be utilized for troubleshooting of the SPTTS as well bringing downtime of the system to a minimum

Electronic Power Supply

540 kVA (430 kW) ~ 3’240 kVA (2’500 kW), 480V, 3 Ph

312 kVA (250 kW) ~ 1’872 kVA (1’500 kW), 1 Ph

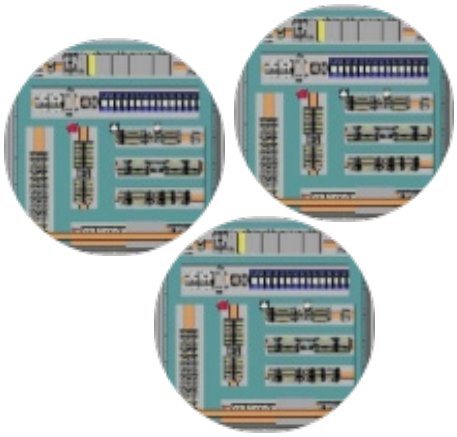
(16.66 Hz*) 50 ~ 200 Hz

Loss Measurement System - TMS

TMS a high accuracy, high stability loss measurement system is offered in the SPTTS with varied voltage and current capacities. More details in TMS datasheet

100 kV / 200 kV

2000 A / 4000 A



Distributed Control Nodes

DCNs make it easy to integrate the SPTTS into test fields. Control nodes can be placed as near test field components as necessary.

Monitors Step-Up, Capacitor bank
Monitoring and controlling switches

High Voltage Filters

Well-tuned High voltage filters attenuate noise in the High Voltage circuit. These filters can be disconnected from the test circuit during No-Load loss and Loss tests, with automatic switches

50 kV, 100 kV – 100 A

Step-up Transformer

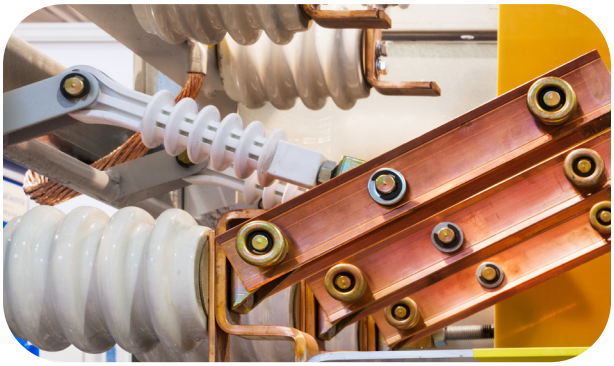
540 kVA ~ 3’240 kVA, 480V, 3 Ph

312 kVA ~ 1’872 kVA, 1 Ph

4.8 kV, 40 kV, 80 kV, 170 kV

(16.66 Hz*) 50 ~ 200 Hz

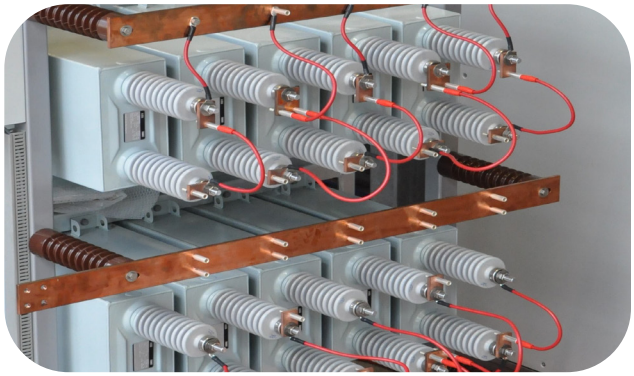
Switches



To be used with Step-up transformer, Capacitor bank, Filter bypass, HV Ground

Manufactured by a Haefely approved supplier

Capacitor Bank



Various sizes of capacitor banks with automated or manual switching are offered as an option

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Partial Discharge Detectors

The DDX 9121b is the latest in the DDX family for partial discharge & radio interference voltage testing.

With the DDX 9121b user can setup, control, test, monitor and generate test reports from a single computer. Up to 9 channels can be stacked for 9 simultaneous measurements

Global Presence

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