

HEAT CYCLING TEST SETS FOR POWER CABLES

Application

The LVTS family of heat cycling test sets is designed for inductive heating of cable samples. The LVTS has the capability to heat a cable sample to a desired temperature for a preset period of time.

By including appropriate options on the LVTS, or by utilizing additional equipment, the heated cable can be simultaneously stressed with DC or AC high voltage as well as impulse voltage in accordance with all applicable international standards.

Models Available

There are two styles of LVTS available. The SCR (Silicon Control Rectifier) version and the Regulator version. The SCR uses a solid state regulator which offers faster rise time and instantaneous return to zero. The compact design allows the SCR to be maneuvered easily. Time tested, the SCR has proved to be a reliable and economical choice for many testing applications.

The Regulator version uses a separate column or toroidal regulator. This system produces a true sine wave over the full output range and operates at very low impedance. The design of the Regulator versions allows the flexibility for multiple taps on the regulator if there is a need for stacked transformers. Phenix Technologies could also implement a master-slave unit to expand testing capabilities for multiple units. Inductive compensation is available to lower input power, regulator size and in most cases cost.

The LVTS units are available in multiples of 15 volts and 1000 amps. Thus, an LVTS15-2000 or an LVTS45-3000 would be two of the possibilities. The actual rating and design which is appropriate for a particular application depends on a number of factors. We can recommend the specific model which will satisfy your needs if you provide the following information:

- ▼ Conductor type and cross-section
- ▼ Insulation type and cross-section
- ▼ Length of cable to be tested
- ▼ Ambient and test temperatures
- ▼ Time allowed to reach test temperature

Description

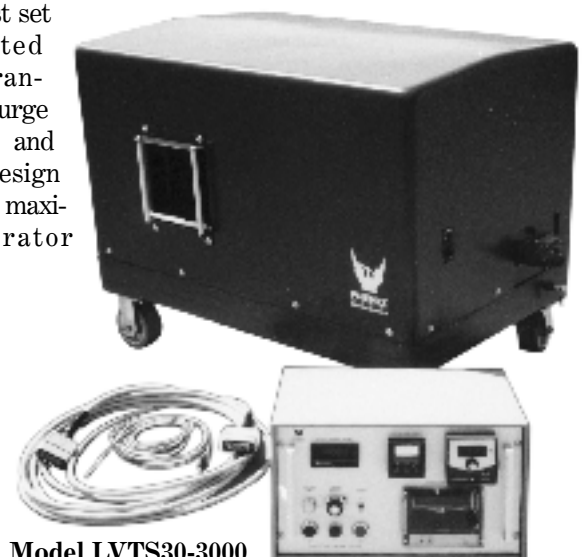
The ring core heating transformer in the SCR version is fed by a solid state regulator. The regulator and the heating transformer are mounted on a mobile base which is enclosed by a fiberglass cover. A separate control unit, built into a standard 19" rack with interconnecting cables, is provided.

The regulator version has its ring core heating transformer fed by a separately mounted variable voltage regulator. This design allows flexibility for increased testing capabilities. A separate control unit, built into a standard 19" rack with interconnecting cables, is provided.

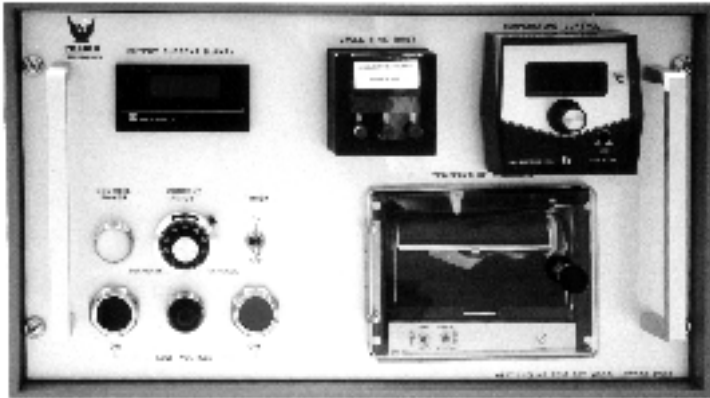
Both the SCR and Regulator version provide a thermocouple for use with the temperature controller of the cable insulation. The relationship between insulation temperature and conductor temperature is calculated before the heat cycling test, then the insulation temperature is preset to the value necessary to preheat the conductor to the desired level. The LVTS heats the insulation to the preset level and maintains that temperature for the period set on the timer.

Dual timers are provided for the purpose of presetting the heating cycle of the sample under test. One timer presets the ON time (the period during which the sample temperature will be maintained at the preset level) while the other timer presets the OFF time (the period during which the sample will be allowed to cool down). Because the LVTS is designed for continuous duty, the cycling can be repeated indefinitely according to the user's needs.

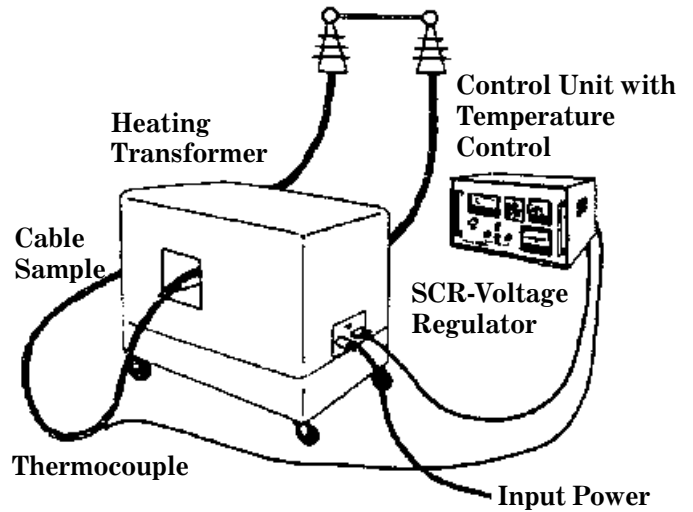
The test set is protected against transients by surge suppressors and includes design features for maximum operator safety.



Model LVTS30-3000



LVTS Controls with Optional Features



Standard Features

- ▼ Main power circuit breaker
- ▼ Digital currentmeter
- ▼ Temperature controller with thermocouple (20 ft.) to monitor test sample
- ▼ Zero start interlock
- ▼ Dual timers, settable up to 20 hours each
- ▼ Voltage ON/OFF pushbuttons
- ▼ Heavy duty casters on the transformer base
- ▼ Instruction manual with parts list and schematics

Options

- ▼ Dual-speed strip chart
- ▼ Removable yoke for more convenient insertion of a very long test sample into the ring-core heating transformer
- ▼ Pedestal for mounting controls
- ▼ Inductive compensation
- ▼ Master-slave unit capabilities

LVTS Specifications (SCR)

Model	kVA	Input Voltage	Input amps	Output V	Output amps	Height (mm)	Width (mm)	Depth (mm)	Weight (kgs)
LVTS 15-2000	30	220/380/480	150/87/69	0-15v	0-2000	34" (864)	46" (1168)	20" (508)	1385 lb (630)
LVTS 30-2000	60	220/380/480	300/174/137	0-30v	0-2000	36" (914)	46" (1168)	30" (762)	2800 lb (1273)
LVTS 15-3000	45	220/380/480	225/130/103	0-15v	0-3000	36" (914)	49" (1245)	35" (889)	2050 lb (932)
LVTS 30-3000	90	220/380/480	450/261/205	0-30v	0-3000	47" (1194)	56" (1422)	31" (787)	3038 lb (1381)

The PHENIX Technologies Product Line

- ▼ High Voltage AC Dielectric Test Sets
- ▼ Resonant Test Sets
- ▼ Variable Frequency Resonant Test Sets
- ▼ DC Hipots and Insulation Test Sets
- ▼ Automatic Insulating Material Testers (D149)
- ▼ Microhmmeters
- ▼ Liquid Dielectric Test Sets
- ▼ Megohmmeters
- ▼ AC/DC Kilovoltmeters
- ▼ Partial Discharge Detector
- ▼ Vacuum/Oil Interrupter Testers
- ▼ Bucket Truck Testers
- ▼ High-Frequency Cable Aging Test Sets
- ▼ Heat Cycling Test Sets
- ▼ Rubber Goods-Protective Equipment Testers
- ▼ Core Loss Testers
- ▼ AC, DC and AC/DC Motor Test Sets
- ▼ Water Brake Dynamometers
- ▼ Transformer Test Sets
- ▼ Frequency Response Analyzer
- ▼ High Current / Circuit Breaker Test Sets
- ▼ Recloser Test Sets
- ▼ DC Power Supplies
- ▼ High Voltage DC Cable Thumpers
- ▼ High Voltage Terminations
- ▼ High Power Column-Type Variable Transformers
- ▼ High Power Thoma-Type Variable Transformers
- ▼ Voltage and Current Stabilizers
- ▼ Impulse Generators/Standard Capacitors/Coupling Capacitors

Your local representative is



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