



AUTOMATED TEST SET FOR INSULATING MATERIALS

Application—Versatility

The PHENIX Technologies Automated Dielectric Breakdown Test Set line offer complete design solutions for testing the dielectric strength of a wide range of solid insulating materials. It has the capability of testing to the ASTM D149 and IEC 60243-1 standards as well as other comparable international standards.

Accuracy and Flexibility

- User friendly PLC (Programmable Logic Controller) with Operator Interface Unit allows for easy, systematic testing.
- Graphic interface display control packages available to operate either from remote PC or control panel.
- Versatility of fully automated mode or manual mode.
- Continuously variable output voltage from near-zero to full output voltage by utilizing a PLC controlled variable autotransformer.
- Mobile, rugged, one-piece integrated design houses controls, regulator, high voltage transformer and materials test chamber; with optional oversize caster wheels available.
- Operator safe test chamber provides a clean testing area.

Automated Modes—Easy Testing

Many automated mode selections are at the operator's fingertips with our state-of-the-art CE, and PC control packages. (Please refer to PHENIX AC Dielectric brochure #60402)

- Maintain one voltage level for a preset dwell time.
- Raise voltage in even increments and dwells at each level for an equal amount of time. Specify number of steps and/or maximum voltage level.
- Cycle voltage between two levels with independent dwell times.
- 1-15 different voltage levels with independent dwell times and ramp rates.

Operator Interface and Messaging Display:

- Alerts operator of any unsafe testing conditions
- Communicates any premature test completions
- Displays test status



Standard Features

The following features are included on all Phenix Technologies Automated Test Sets:

- Pre-settable over voltage and over current trip point
- Memory voltmeter
- Main Circuit Breaker
- Graphic Interface Display
- Transparent doors with high voltage interlock
- Fast-acting overload protection
- Easily mobile, crane forklifting design provisions
- Isolated RS-232 port for computer data acquisition and control

Options

- Windows™-based software package for database, data acquisition, and control.
- Optional heavy-duty wheels for mobility.
- Optional writing shelf.
- Wide variety of test fixtures with electrodes.

Instrumentation

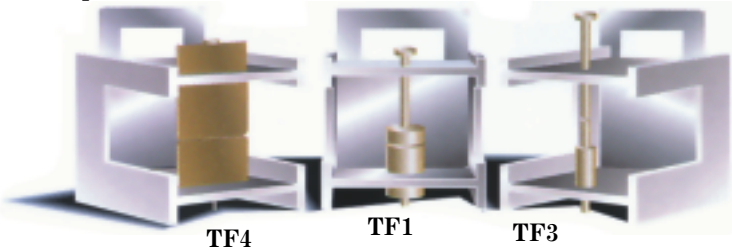
Output voltage is measured by means of peak responding circuitry with accuracy of $\pm(0.8\%$ of reading + 0.2% of range + LCD).

Output current is measured by means of true RMS conversion with accuracy of $\pm(0.8\%$ of reading + 0.2% of range + LCD).

Dwell timer function is based on the PLC's internal timer. Value of 9999 hours: 59 minutes: 59 seconds is displayed.

Memory voltage is measured by means of peak responding circuitry and is displayed in its $\sqrt{2}$ form.

NOTE: All of the metering functions are displayed on the Operator Interface Unit.



Optional Electrodes

Phenix Technologies can supply a wide variety of test fixtures with electrodes. The most common are:

TF1: Opposing cylinders 2" (51 mm) in diameter, 1" (25 mm) thick with edges rounded to 0.25" (6.4 mm) radius.

TF2: Opposing cylinders 1" (25 mm) in diameter, 1" (25 mm) thick with edges rounded to 0.125" (3.2 mm) radius.

TF3: Opposing cylindrical rods 0.25" (6.4 mm) in diameter with edges rounded to 0.0313" (0.8 mm) radius.

TF4: Flat plates 0.25" (6.4 mm) thick and 4.25" (108 mm) wide with edges square and ends rounded to 0.125" (3.2 mm) radius.

TF5: Hemispherical electrodes 0.5" (12.7 mm) in diameter

TF6: Opposing cylinders: the lower one 3" (75 mm) in diameter, 0.60" (15 mm) thick; the upper one 1" (25 mm) in diameter, 1" (25 mm) thick; with edges of both rounded to 0.12" (3 mm) radius.

In addition, an oil bath can be supplied for use with any of the above electrodes.

Technical Data of Typical Units*

	AC UNITS			
Model	6CCE20-0.8/D149	6CCE30-2/D149	6CCE50-5/D149	6CCE100-5/D149
Input	120V@10A or 220V@5A	120V@20A or 220V@10A	220V@25A or 480V@15A	220V@25A or 480V@15A
Output	0-20KV@40mA	0-30KV@67mA	0-50KV@100mA	0-100KV@50mA
Duty:				
Continuous	0.5KVA	1.4KVA	3.5KVA	3.5KVA
1 Hr. On/1 Hr. Off	0.8KVA	2.0KVA	5.0KVA	5.0KVA
Dimensions (W x D x H)				
Overall:	23 x 24 x 68 inches 585 x 610 x 1727 mm	23 x 24 x 68 inches 585 x 610 x 1727 mm	23 x 24 x 68 inches 585 x 610 x 1727 mm	33 x 45 x 74 inches 840 x 1145 x 1880 mm
Test Chamber	19 x 20 x 15 inches 485 x 510 x 380 mm	19 x 20 x 15 inches 485 x 510 x 380 mm	19 x 20 x 15 inches 485 x 510 x 380 mm	30 x 34 x 24 inches 765 x 865 x 610 mm
Weight	400 lbs. 180 Kg	440 lbs. 200 Kg	480 lbs. 217 Kg	1000 lbs. 455 Kg
	AC/DC Units		DC Units	
Model	6TCE440/20-5/D149	6TCE4100/50-5/D149	4TCE40-10/D149	4TCE100-5/D149
Input	110V@5A or 220V@3A	220V@25A or 480V@15A	110V@5A or 220V@3A	220V@25A or 480V@15A
Output	0-20KVAC@5mA 0-40KVDC@5mA	0-50KVAC@40mA 0-100KVDC@40mA	0-40KVDC@10mA	0-100KVDC@40mA
Duty:				
Continuous:	0.14KVA	3.5KVA	0.28KVA	3.5KVA
1 Hr. On/1 Hr. Off	0.20KVA	5.0KVA	0.40KVA	5.0KVA
Dimensions (W x D x H)				
Overall:	51 x 36 x 79 inches 1295 x 915 x 2005 mm	51 x 36 x 79 inches 1295 x 915 x 2005 mm	28 x 70 x 24 inches 712 x 1778 x 610 mm	28 x 70 x 24 inches 712 x 1778 x 610 mm
Test Chamber:	27 x 20 x 27 inches 685 x 510 x 685 mm	27 x 20 x 27 inches 685 x 510 x 685 mm	19 x 20 x 15 inches 485 x 510 x 380 mm	19 x 20 x 15 inches 485 x 510 x 380 mm
Weight	1200 lbs. 544 Kg	1750 lbs. 794 Kg	380 lbs. 172 Kg	450 lbs. 205 Kg

NOTE: These are typical ratings only. PHENIX TECHNOLOGIES can design a test system with output voltage/current required by your application. All sets operate on 50/60Hz. Sets requiring 220V input will operate at 208-240V. Sets requiring 480V input will operate at 380-600V.

* Specifications subject to change without notice.



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