

Liquid Dielectric Test Sets

- Lightweight and ruggedly constructed for years of field or lab use
- Economical liquid dielectric testing solution
- Simple set-up
- > Semi-automatic operation

TESTING APPLICATIONS

Measure the breakdown voltage of insulation fluids used in transformers, capacitors, bushings and related high voltage equipment. With the appropriate oil vessel test cell, these test sets are designed to perform tests in accordance with standards ASTM D1816, ASTM D877, IEC 60156, BS 148, VDE 0370, plus other applicable standards.

DESCRIPTION

Three standard models rated at 60, 75, and 100 kV are available. The operating controls are conveniently grouped on the front panel and include a large, easy-to-read digital voltmeter, on/off switch with indicator light, rate of rise selector switch, plus a start/reset switch. The test compartment is provided with a transparent cover interlocked to the test circuit with a limit switch to ensure full operating safety.

The test set is semi-automatic. The liquid to be tested is placed in the test cell and then placed in the test compartment on the cradle contacts, the rate of rise is selected, the test chamber lid closed, and the switch moved to start position. The test set will automatically raise the voltage. When a breakdown of the liquid occurs, the test sample failure lamp will illuminate, and the meter will hold the breakdown voltage level.

ENVIRONMENTAL CONDITIONS

- 10-40°C, indoor/outdoor in fair weather
- Humidity <95% non-condensing
- Altitude <3000 ft (1000 meters)



SAFETY and DESIGN FEATURES

- Center tapped high voltage transformer.
- Safety interlock engaged when lid is open.
- Fast acting relay ensures immediate cutout at flashover.
- · Lamp indicating AC power on.
- Lamp indicating test sample breakdown.
- Fuses are located on the input to the test set and on the primary of the high voltage transformer.
- Zero start interlock
- Memory voltmeter retains breakdown voltage.
- The test compartment is provided with outlet for convenient plug-in of motor driven stirrer when testing to ASTM D1816 and VDE standards.





















	MODEL	LD60	LD75	LD100		
INPUT	Voltage / Current	120 V, 5 A 230 V, 2.5 A	120 V, 5 A 230 V, 2.5 A	120 V, 5 A 230 V, 2.5 A		
	Frequency	50 or 60 Hz (Voltage and frequency required must be specified)				
OUTPUT	Voltage	0-60 kV at 500 VA	0-75 kV at 500 VA	0-100 kV at 500 VA		
	Maximum Voltage to Earth	30,000 V	37,500 V	50,000 V		
RATE OF RISE	selectable	500/2000/3000 Volts per Second	2000 Volts per Second, Variable	2000 Volts per Second, Variable		
DUTY		continuous breakdown testing				
DIGITAL MEMORY VOLTMETER	Range	~0-60 kV	~0-75 kV	~0-100 kV		
	Accuracy	+/-1% of Full Scale	+/-1% of Full Scale	+/-1% of Full Scale		
DIMENSIONS & WEIGHTS	Length Width Height	21.25" (540 mm) 16.75" (426 mm) 13.75" (350 mm) 51 lbs (23 kgs)	30" (762 mm) 18" (457 mm) 13" (330 mm) 120 lbs (54 kgs)	36" (914 mm) 20" (508 mm) 16" (406 mm) 135 lbs (61 kgs)		
_ ~	Weight					
SHIPPING SIZE	Length Width	24" (610 mm) 21" (533 mm)	40" (1016 mm) 30" (762 mm)	40" (1016 mm) 30" (762 mm)		
	Height	18" (457 mm)	32" (813 mm)	32" (813 mm)		
₹.	Weight	63 lbs (29 kgs)	220 lbs (100 kgs)	230 lbs (104 kgs)		

OPTIONS

TEST CELLS

TYPE	TEST STANDARD	TEST ELECTRODES	GAP SETTING	RATE OF RISE			
TC/DE (flat electrodes)	ASTM D877	Polished brass disc 1" (25 mm) diameter	.1" +/-0.0005"	3000 Volts per Second			
TC/VDE (motorized with stirrer)	ASTM D1816	Spherical dome 1.4" (36 mm) diameter	.04" or .08" +/-0.001"	500 Volts per Second			
TC/IEC	IEC 60156	Spherical dome 36 mm (1.4") diameter	2.5 mm +/-0.1 mm	2000 Volts per Second			
TC/BS	BS 148	Spherical cap 12.5 mm (.5") diameter	2.5 mm +/-0.1 mm	2000 Volts per Second			



Type TC/DE









Type TC/BS

Liquid Dielectric Comparison Unit

The LDCU is an AC voltmeter which is used to make periodic performance checks of the system. See LDCU data sheet for more details.

High Voltage • High Current • High Power Test Systems and Components





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