

Dielectric Breakdown Voltage of Insulating Oils

Test Method

The majority of high-voltage transformers, cables, switchgears, transducers, capacitors, and rectifiers use insulating oils for insulating electrically live parts and to carry off thermal energy. The quality of the insulating oil must be checked at regular intervals to ensure a long equipment service life. The most important requirement of an insulating oil is a high dielectric strength. Determination of the dielectric breakdown voltage of insulating oils provides an early detection method for any reduction in the insulating properties.

Automatic Dielectric Breakdown Tester

- Conforms to ASTM D877, D1816 and related test specifications
- Output voltage: 100kV
- Features 2.8" ultra bright color display for optimal readability and mobility
- Built-in printer offers direct evaluation and reporting of results
- Internal battery, external 12V power supply
- Automatic Vernier function for electrode gap spacing
- Measurement of Silicone based oils
- Internal temperature measurement of oil sample
- Bluetooth PC Connectivity and USB Flashdrive Capability

Specifications

Conforms to the specifications of:

ASTM D877, D1816; BS EN 60156; CEI EN 60156;
IEC 156; VDE 0370 Pt. 5

Output Voltage: Up to 100kV rms symmetrical

Voltage measurement accuracy: 0 - 100kV ± 1 kV

Voltage slew rate: 0.5 - 10kV/s

Resolution (displayed): 0.1kV

Power Supply: 85V - 264V, 47Hz - 63Hz, 12V external supply

Power consumption: 75VA

Internal rechargeable battery: 1 x 12V / 7.2Ah

Switch-off time on flashover: < 5 μ s

Measurement of oil temperature: 0 - 100°C / 32 - 212°F

Temperature Resolution: 1°C / 1.8°F

Display: 2.8" color (ultra bright)

Selectable Programs: ASTM D1816-04-1mm, ASTM D1816-04-2mm, ASTM D877-02A, ASTM D877-02B, IEC 156/95

Customer-specific programs: Unlimited

PC Software: Included

Printer: Dot Matrix Hard Copy Output

Interface: Bluetooth

USB: USB memory stick

Operating Temperature: -5°C - 45°C (23°F - 113°F)

Storage Temperature: -20°C - 60°C



Included Accessories

Calibration Sheet

User Manual

AC Power Cable

PC Software

Integrated Battery

Integrated Printer

Dimensions wxdxh,in.(cm)

21.51x13.5x11.81 (52.1x34.3x30)

Net Weight: 71 lbs (32 kg) Including Battery

Ordering Information

Catalog No.

K16177	Automatic Dielectric Breakdown Tester, 100kV, 100-240V 50/60Hz
Accessories	
K16177-5	D1816 Test Cell for kV100
K16177-6	D877 Test Cell for kV100
K16177-7	IEC 156 Test Cell with Ball Electrode
K16177-8	IEC 156 Test Cell with Spherical Cup / VDE Electrode



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