

# DIELECTRIC BREAKDOWN VOLTAGE OF INSULATING OILS



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BOHEMIA, NEW YORK • HOUSTON, TEXAS

# DIELECTRIC BREAKDOWN VOLTAGE OF INSULATING OILS



K16175

## 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 Portable Dielectric Breakdown Tester

- Conforms to ASTM D877, D1816 and related test specifications
- Output voltage: 75kV
- 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 75kV rms symmetrical  
Voltage measurement accuracy: 0 - 75kV  $\pm$ 1kV  
Voltage slew rate: 0.5 - 10kV/s  
Resolution (displayed): 0.1kV  
Power Supply: 85V - 264V, 47Hz - 63Hz, 12V external supply  
Power consumption: 60VA  
Internal rechargeable battery: 1 x 12V / 7.2Ah  
Switch-off time on flashover: < 5 $\mu$ s  
Measurement of oil temperature: 0 - 100 $^{\circ}$ C / 32 - 212 $^{\circ}$ F  
Temperature Resolution: 1 $^{\circ}$ C / 1.8 $^{\circ}$ 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 $^{\circ}$ C - 45 $^{\circ}$ C (23 $^{\circ}$ F - 113 $^{\circ}$ F)  
Storage Temperature: -20 $^{\circ}$ C - 60 $^{\circ}$ C (-4 $^{\circ}$ F - 140 $^{\circ}$ F)  
Relative Humidity: Non-condensing

## Included Accessories

Calibration Sheet      AC Power Cable      Integrated Printer  
User Manual            Internal Battery

## Dimensions WxHxD, in.(cm)

16.9x11x9.85 (43x28x25)

Net Weight: 48.5 lbs (22kg)

## Shipping Information

Shipping Weight: 54.5 lbs (24.7kg)

Dimensions: 25x21x19in. (63.5x53.4x48.3cm)

## Ordering Information

Catalog No.	
K16175	Automatic Dielectric Breakdown Tester, 0-75kVAC

### Accessories

K16175-4	Transport Case
K16175-5	Test Vessel complete with electrodes for ASTM D1816
K16175-6	Test Vessel complete with electrodes for ASTM D877
K16175-12	Spacer Gauge, 1mm
K16175-13	Spacer Gauge, 2mm
K16175-14	Spacer Gauge, 2.5mm



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