



VCBA 01

Vacuum Circuit Breaker Analyzer

Outstanding Features

- Comprehensive vacuum CB HV test and contact timing test in one box
- 10-80 kV DC in 1 kV steps
- Settable leakage current 100-300 micro A in 100 micro A steps
- Accurate trip, close circuit breaker time test (optional feature)
- Full-sized keypad
- Touch screen display
- Built-in 2" thermal printer
- Internally store up to 100 test records
- USB Flash drive interface for transferring test records to PC
- USB 2.0 PC interface for directly transferring test records to PC
- Enhanced safety features: audible and visual high voltage presence indicators, user-controlled safety switch

The Vacuum Circuit Breaker Analyzer 01 (VCBA 01) is Power Diagnostic Instrument Company's state-of-the-art, field portable, light weight instrument designed for the comprehensive diagnostic testing of vacuum circuit breakers. The VCBA 01 can perform high voltage DC vacuum integrity tests as well as operating time tests on the circuit breaker main contacts.

The VCBA 01 applies a test voltage to the vacuum bottle arcing chamber for the time specified in the test settings. While the test voltage is applied to the vacuum circuit breaker arcing chamber, the instrument monitors the leakage current to the ground. If the leakage current to the ground remains lower than the set limit, the instrument registers the test as successful. If the leakage current exceeds the set limit, the instrument shuts down and removes the test voltage from the arcing chamber and registers the test as a failed test.

Test Voltages and Safety Features

A high voltage DC test can be set between 10 kV to 80 kV in 1 kV steps. The VCBA 01 has a built-in safety switch as well as visual and audible indicators to signal the presence of high voltage for enhanced personnel safety. The unit also features a safety thumb switch with a 10ft cable so that the user can maintain a safe distance from the instrument. If the trigger of the safety switch is released in the middle of the test for any reason, the instrument will remove the high voltage and stop the test. The leakage current to the ground is measured during the test. The leakage current can be set to any value between 100 micro Amps to 300 micro Amps in 100 micro Amp steps.

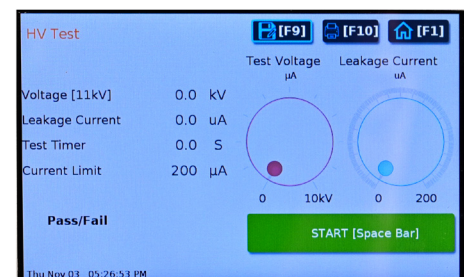
Operating Time Test

The VCBA 01 offers an optional circuit breaker testing feature that can test the operating time on the circuit breaker main contacts. The test is initiated manually and then the instrument records the time from initiation of the test to the completion of the close or open operation of the circuit breaker. The high-speed data acquisition rate of the instrument

during trip or close operation provides a 0.1ms resolution on the circuit breaker operating time. By setting the limit of the operating time in the test settings, the instrument can make a pass/fail determination.

User Interface

The VCBA 01 features a user-friendly interface for comprehensively testing vacuum circuit breakers. The unit's back-lit color LCD touch-screen (800 x 480 pixels) is viewable in bright sunlight and low-light and provides an intuitive menu structure where running a test is just few taps away. The full-sized industrial keyboard makes data entry very easy for information such as nameplate and setting information.



Data Storage and Analysis

The VCBA 01 can store up to 100 test results internally. Test results can be transferred to a PC via the unit's USB Flash drive interface (Flash drive not included) or directly via the USB 2.0 PC interface. The provided PC software can be used for analysis and report generation.

Built-in Thermal Printer

The VCBA 01 features a built-in 2" thermal printer for quick printout of results in the field.



VCBA 01 Technical Specifications

Physical Specifications	Dimensions: 20" w x 9" H x 17" D (51 cm x 22 cm x 43 cm) Weight: 22 lbs. (9.9 Kg)
Input Power	90 – 240 Vac, 50/60 Hz
HV Test	
Voltage Range	10 kV – 80 kV DC in 1 kV steps
Accuracy	1.50%
Output Voltage Ripple	3% max
Voltage Discharge Time	3 seconds
Leakage Current Setting	Up to 300 micro Amps, user selectable in 100 micro Amp steps
CB Timing Test (optional feature)	
Dry Contact Inputs	3 channels of CB main contacts
Trigger Input Voltage Open/Close	30 – 300 V, DC or peak AC
Breaker Operations	Open, Close, Open-Close, Close-Open
Timing Resolution	±0.1 millisecond accuracy: 0.05% of reading ±1 ms
User Interface	
Printer	Built-in 2" wide thermal printer
Display	Color touch-screen LCD (800 x 480 pixels)
Keyboard	Full-sized "QWERTY"-style industrial keyboard
Safety	
Safety Switch	Hand-operated safety switch with 10 ft cable
High Voltage Presence Indicators	Buzzer and LED high voltage presence indicators
Operating/Storage Temperatures and Humidity	
Temperature	Operating: -10°C to +50°C (+15°F to +122°F) Storage: -30°C to +70°C (-22°F to +158°F)
Humidity	90% RH @ +40°C (+104°F)
Data Storage and Analysis	
Internal Test Record Storage	Up to 100 timing and high voltage test records
External Test Record Storage	USB Flash drive interface for test record storage and firmware updates (Flash drive not included)
PC Software	Windows®-bases software is included with purchase price
Specifications are valid at nominal voltage and ambient temperature of +25°C (+77°F)	