

VCBA 01

Vacuum Circuit Breaker Analyzer



- Comprehensive vacuum CB HV test and contact timing test
- 10-80 kV DC in 1 kV steps with 1.5% accuracy
- Settable leakage current 50-300 micro-A in 50 micro-A steps
- Accurate trip & close circuit breaker main contact timing test.
- Touch screen LCD screen for improved productivity
- Built-in 2" thermal printer
- Enhanced safety features: audible and visual high voltage presence indicators, user-controlled safety switch
- Optional Battery back up

Introduction:

The Vacuum Circuit Breaker Analyzer 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 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 10 ft 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.

User Interface

The VCBA 01 features a user-friendly interface for comprehensively testing vacuum circuit breakers.



The unit's back-lit color LCD touchscreen (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 quite easy for information such as nameplate and setting information.

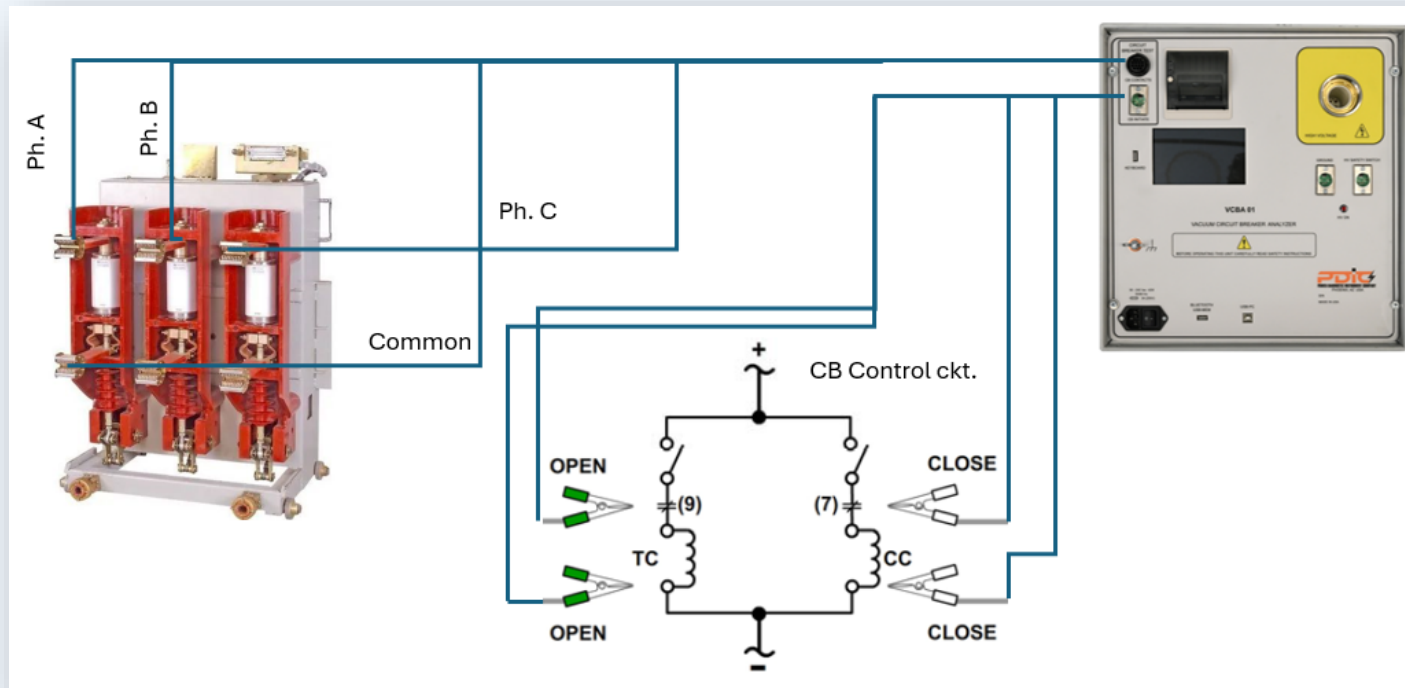
Built-in Thermal Printer

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

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.

Circuit Breaker Timing Test

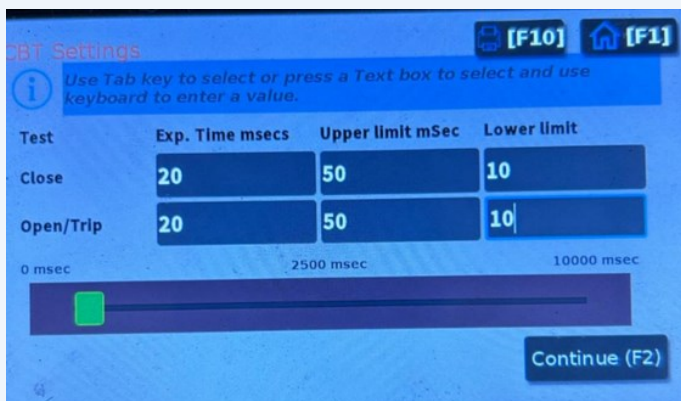


Circuit Breaker Timing Test

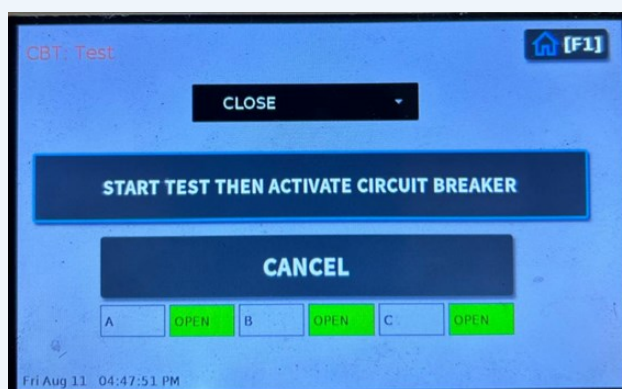
The **VCBA 01** offers an advanced optional feature that allows users to test the operating time of a circuit breaker's main contacts with precision. It enables comprehensive timing tests, including:

- Open
- Close
- Close-Open
- Open-Close

Users can set upper and lower limit values for trip and close times, allowing the **VCBA 01** to automatically determine a **Pass/Fail** status based on the test results.



The **VCBA 01** features an intuitive user interface that displays the circuit breaker status, enabling users to select the appropriate test with confidence. Once a test is activated, a countdown timer appears on the screen, prompting the user to initiate the test before the timer expires. This ensures a streamlined testing process.



Test results from the **VCBA 01** can be securely stored within the device and easily transferred to a USB drive or downloaded to a PC via USB using **PDIC Software**. This powerful software allows users to generate comprehensive test reports, incorporating nameplate data, configuration settings, test information, detailed results, and **Pass/Fail** determinations. Effortlessly document and analyze your circuit breaker testing with precision and ease.

Technical Specification : VCBA 01

HV TEST

Input Power	90 – 240 Vac, 50/60 Hz	Optional back up battery
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	50 to 300 micro-Amps, 50 micro-Amp steps	

CB TEST (OPTIONAL)

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

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 and firmware updates	

PHYSICAL SPECIFICATIONS

Dimensions	15" w x 6" H x 14" D (37 cm x 15 cm x 35 cm)	
Weight	22 lbs. (10.0 Kg)	