

## Circuit Breaker Analyzer & Timer CAT03

- Simple & easy to operate
- 3 timing channels for main and resistive contacts
- Resistance measurement of pre-insertion resistors
- Download of test results on a USB memory stick
- Detailed analysis of test results using DV-Win software



### Description

Circuit Breaker Analyzer & Timer CAT03 is a standalone or a PC-controlled digital instrument for condition assessment of the circuit breakers. The timing channels record closing and opening of the main and resistor contacts. The main contact channels can also measure the resistance value of the pre-insertion resistors (if present in the circuit breaker). Test results are printed on the 80 mm thermal printer (optional accessory) in tabulated and graphical form.

The alphanumeric keypad is used for entering the breaker data, the test data and the control functions. CAT03 provides an easy selection of different operational modes: Open (O), Close (C), Open-Close (O-C), Close-Open (C-O), and Open-Close-Open (O-C-O). External trigger is used to start timing of the breaker when the CAT03 senses a voltage.

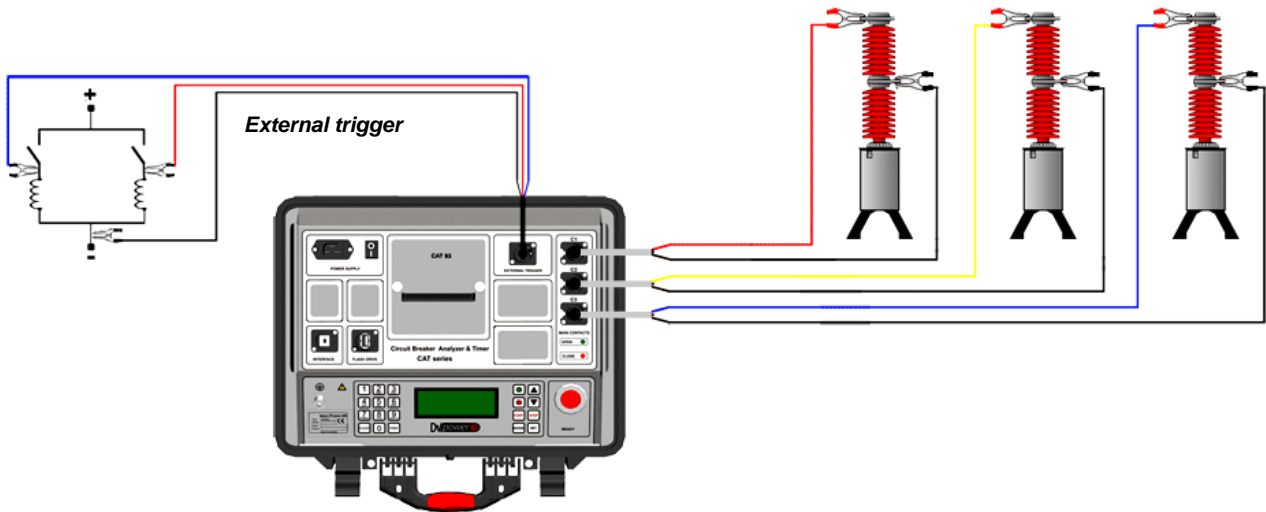
DV-Win software provides acquisition and analysis of the test results, as well as control of all the CAT03 functions from a PC. Graphical presentation of a variety of measurements and timing test results uses cursors and powerful zoom functions for detailed analysis. Colors, grids, scales and positioning of the test data are all controlled by the user. DV-Win supports an automatic unit conversion. (e.g.: cycles to seconds or mm to inches). The test records can be exported in .dwc file format for further analysis.

### Application

The list of the instrument application includes:

- A simultaneous measurement of 3 main contacts including pre-insertion resistors (if present in the circuit breaker),
- A resistance measurement of the pre-insertion resistors (if present in the circuit breaker),
- An evaluation of synchronization between the circuit breaker poles

### Connecting a test object to the CAT03



### Features

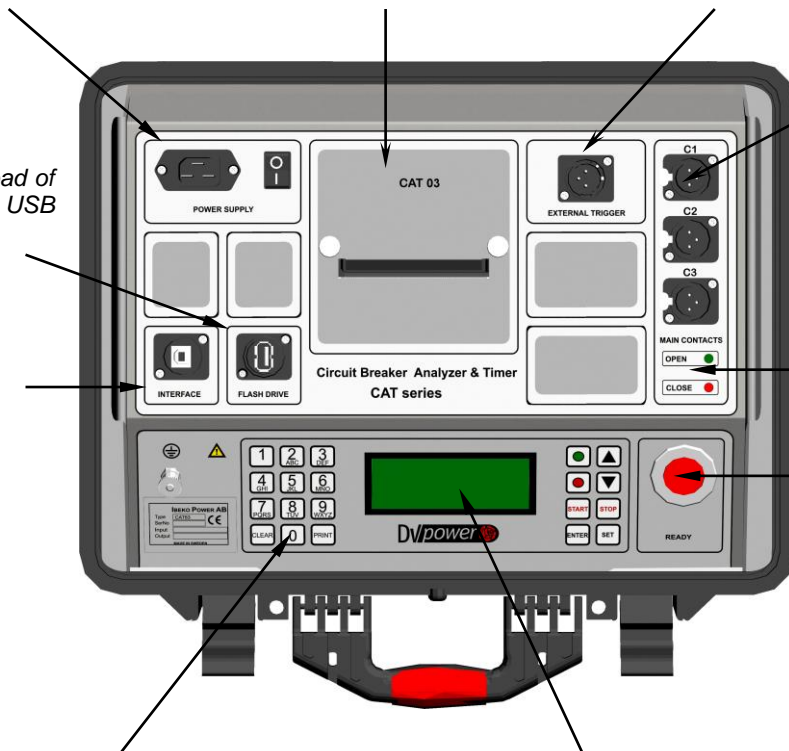
**Mains power supply input**  
90 V – 264 V AC; 50 Hz – 60 Hz

**Thermal printer (built-in 80 mm wide)**  
Graphic and numeric printout of contact and travel wave form

**External Trigger input**  
External trigger is used to start timing of the breaker when sensing a voltage.

**Flash drive**  
Used for direct download of test results on a USB memory stick

**PC communication**  
USB interface



**Main contacts inputs**  
Used for timing of main and pre-insertion resistor contacts, and for resistance measurement of pre-insertion resistors

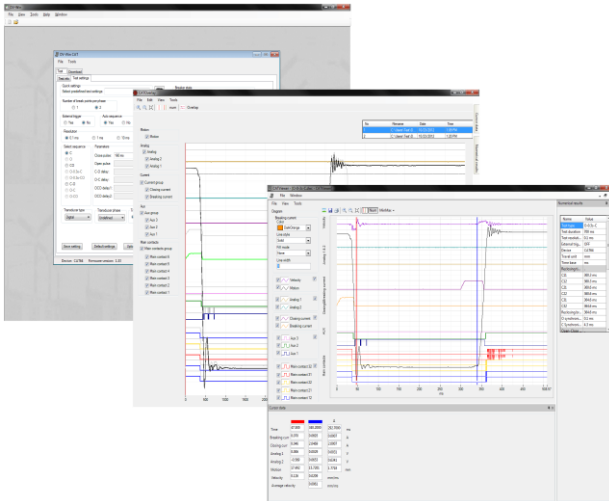
**Breaker state indicator**  
The state of circuit breaker is indicated

**READY button**  
Prepares the instrument for start of the test

**Alphanumeric keypad**  
Used for entering Breaker data, Test data and Control functions

**LCD Screen**  
20 Characters by 4 Lines; LCD display with backlight, viewable in bright sunlight.

## DV-Win software



DV-Win software provides the following features:

- Full control of the CAT functions from a PC.
- Downloading the test results from the instrument.
- Acquisition and analysis of the test results.
- The test results can be viewed, edited, saved, printed and exported.
- Viewing and overlaying several graphs, for an easy test result comparison.
- Selecting the measurement points and intervals using the two cursors.
- Zoom and pan graph feature.
- Specific test sequence setup.
- Customized configuration of the test result graphs.
- Creation of the predefined test plans for an easy and quick field testing.

## Accessories

### Included

- DV-Win PC software
- Ground cable
- USB cable

### Recommended

- Main contacts cables set 5 m with alligator clamps
- External trigger cable 5 m with banana plugs\*
- Cable bag

### Optional

- Built-in 80 mm thermal printer
- Thermal paper roll
- External trigger cable 10 m with banana plugs



**Main contacts cables set 5 m with alligator clamps\***

**External trigger cable 5 m with banana plugs\***

\*The above cables are also available in several lengths and terminations.

\*The above linear analog transducers are available in several lengths.

Please contact DV Power for more information.

## Technical Data

### Main contact inputs

- Number of contact inputs: 3
- Each channel detects Main and Pre-insertion resistor contacts.
  - Closed  $\leq 10 \Omega$ ,
  - Resistor contacts range  $10 \Omega$  to  $10 \text{ k}\Omega$ ,
  - Open  $\geq 10 \text{ k}\Omega$
  - Open circuit voltage: 20 V DC
  - Short circuit current 50 mA
- Each channel measures resistance of pre-insertion resistors

### Time measurement

Time measurement resolution:

- 0,1 ms for 2 s test duration;
- 1 ms for 20 s test duration;
- 10 ms for 200 s test duration;

Time accuracy 0,05% of the reading  $\pm$  resolution

### External trigger

- Trigger input voltage: 10 V – 300 V AC/DC

### Mains power supply

- Connection according to IEC/EN60320-1; UL498, CSA 22.2
- Mains supply: 90 V - 264 V AC
- Frequency: 50/60 Hz
- Input power: 250 VA
- Fuse 2 A / 250 V, Fast blow, but not user replaceable

### Applicable standards

- Installation/overvoltage: category II
- Pollution: degree 2
- Safety: LVD 2006/95/EC (CE Conform)  
EN 61010-1
- EMC: Directive 2004/108/EC (CE Conform)  
Standard EN 61326-1:2006
- CAN/CSA-C22.2 No. 61010-1, 2nd edition, including Amendment1

### Breaker operation

- Close (C),
- Open (O),
- Close-Open (C-O),
- Open-Close (O-C),
- Open-Close-Open (O-C-O)

### Printer (optional)

- Thermal printer
- Graphic and numeric printout
- Paper width 80 mm

### Dimensions and weight

- Dimensions: 405 mm x 170 mm x 335 mm  
15,9 in x 6,7 in x 13,1 in
- Weight: 5,5 kg / 12 lbs

### Environmental conditions

- Operating temperature:  $-10 \text{ }^\circ\text{C}$  -  $+55 \text{ }^\circ\text{C}$  /  $14 \text{ }^\circ\text{F}$  -  $+131 \text{ }^\circ\text{F}$
  - Storage & transportation:  $-40 \text{ }^\circ\text{C}$  -  $+70 \text{ }^\circ\text{C}$  /  $-40 \text{ }^\circ\text{F}$  -  $+158 \text{ }^\circ\text{F}$
- Humidity 5 % - 95 % relative humidity, non condensing

*All specifications herein are valid at ambient temperature of  $+25 \text{ }^\circ\text{C}$  and recommended accessories.  
Specifications are subject to change without notice.*