



## Circuit Breaker Analyzer & Timer CAT03

- Simple & easy to operate
- Timing measurement
- 3 Channels for main contacts
- Results printed on 80 mm thermal printer
- Detailed analysis of test results with DV-Win software



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

An alphanumeric keypad is used for entering Breaker data, Test data and Control functions. CAT03 provides 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). The start of measurement is activated remotely by using External trigger.

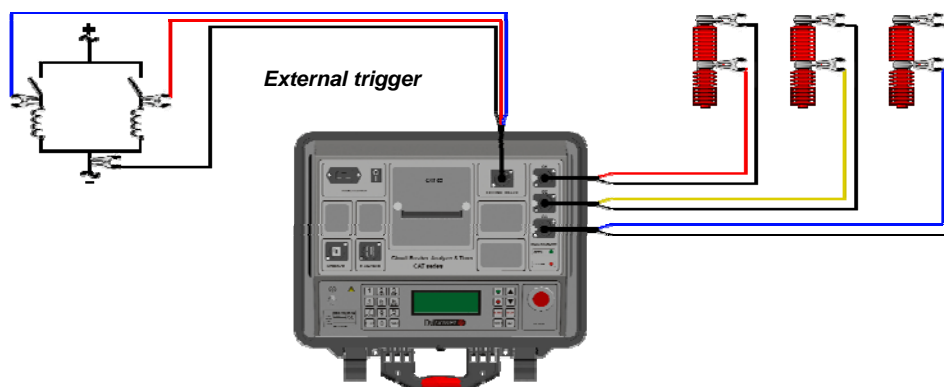
DV-Win software provides full control of all CAT03 functions from a PC, acquisition and analysis of test results. Graphical presentation of variety of measurements and timing test results uses cursors and powerful zoom functions for detailed analysis. Colors, grids, scales and positioning of the test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

### Application

Typical application is:

- ✓ Simultaneous measurement of 3 Main contacts including pre-insertion resistors (if present in the circuit breaker),
- ✓ Resistance measurement of pre-insertion resistors (if present in the circuit breaker),
- ✓ Evaluation of the synchronization between the circuit breaker poles,
- ✓ Display and print test results, both numerically and graphically.

### Connecting a test object to 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**  
Used for remote activation of CAT03

**PC communication**  
USB interface

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

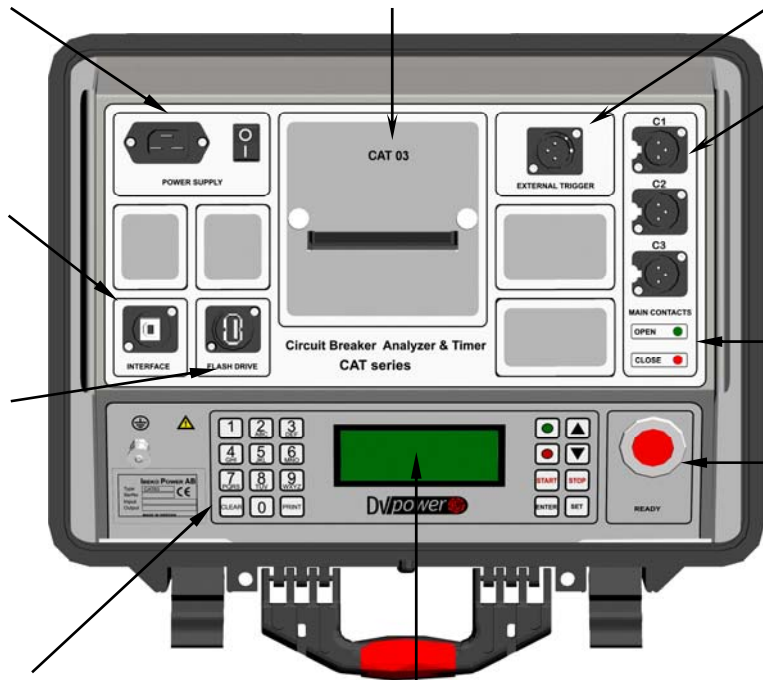
**Main contacts inputs**  
Used for timing of main and pre-insertion resistor contacts, and for resistance measurement of pre-insertion resistors

**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.



Main contacts cables set



External trigger cable

**Ordering information:**

- CAT0300-N-00** CAT03 device with ground cable, USB cable and CD with software
- CM-05-30C3A2** Main Contact Cables 5 m with alligator clamps\*

- CE-05-00C4B1** External Trigger Cable 5 m with banana plugs\*

\*The above cables are also available in many other lengths and terminations. Please contact IBEKO Power for more information.

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## 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
- Each input group is isolated with respect to the others

### Breaker Operation

- Close (C),
  - Open (O),
  - Close-Open (C-O),
  - Open-Close (O-C),
  - Open-Close-Open (O-C-O)
- User can select any desired test sequence

### Printer (optional)

- Thermal printer
- Graphic and numeric printout of contact and travel wave form
- Paper width 80 mm

### Dimensions and Weight

- Dimensions: 410 mm x 180 mm x 320 mm  
16,14 in x 7,08 in x 12,59 in
- Weight: 7 kg / 15,4 lb

### Electromagnetic Compatibility (EMC)

- CE conformity: EMC standard 2004/108/EC

### Environmental conditions

- Operating temperature:  $-10 \text{ }^\circ\text{C}$  -  $+50 \text{ }^\circ\text{C}$   
 $14 \text{ }^\circ\text{F}$  -  $+122 \text{ }^\circ\text{F}$
- 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

### 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

### DV-Win software

- User friendly software
- Complete control of CAT03 during the testing
- Complete analysis of tests results
- Internal memory for pre-defined Test plans
- Database for managing and analysis of all testing

### 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; 50-60 Hz

### Safety Standards

- European standards: EN 61010-1; LVD 73/23/EEC
- International standards:  
IEC 61010-1; UL 3111-1  
CAN/CSA-C22.2 No 1010.1-92

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