CBA-6
Circuit Breaker Analyzer

KGT® Instruments & Equipment

Product Features

- Strong Immunity to Interference - CBA-6 remains stable and secure during testing, even in environments with strong electromagnetic interference, such as substations.
- Efficient Testing Time - Equipped with twelve time testing channels, this device can simultaneously test single-phase four-pole circuit breakers, reducing testing time to half that of other equipment.
- Closing Resistance Testing Function - It includes a function for testing the closing resistance across six channels, covering a testing range of 50 ohms to 700 ohms. This enables quick and accurate closing resistance testing.
- High Testing Precision - The time testing precision can reach 0.5% of the reading with a ±0.1ms deviation, and the speed testing precision can achieve 1% of the reading with a ±0.1 m/s deviation. The auxiliary contact time measurement accurately captures the circuit breaker's metal short-circuit duration.
- Robust Field Applicability - This instrument is compatible with all models of metal contacts produced both domestically and internationally, encompassing SF6 switches, GIS composite apparatuses, vacuum switches, and oil switches. It accommodates acceleration sensors, linear displacement sensors, rotation sensors, and facilitates simple installation.
- User-Friendly Operation - The main unit features a large LCD screen with adjustable contrast for enhanced visibility. The menu is available in Chinese, offering intuitive guidance for operation. With a single switch action, all data and waveform graphs are displayed. The simplified wiring allows for one-time connection of multi-pole circuits to complete testing efficiently.

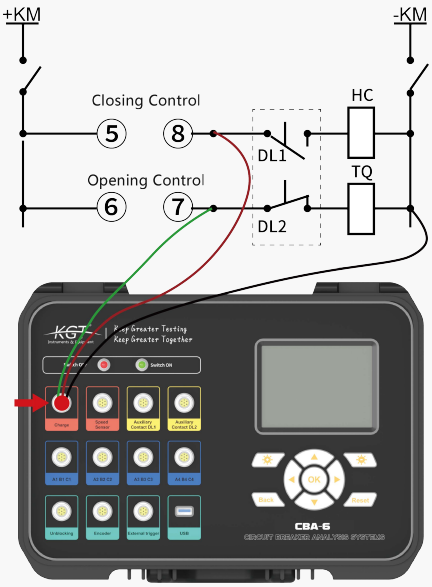
Testing Standards

In accordance with the requirements of GB50150-2016 "Standard for Acceptance Test of Electrical Installation Engineering Electrical Equipment," sulfur hexafluoride circuit breakers and vacuum circuit breakers are required to undergo various tests to assess their operational characteristics. These tests include measuring the opening and closing time of the circuit breaker, evaluating the opening and closing speed, assessing the synchronization and coordination of the opening and closing actions, measuring the input time and resistance value of the closing resistance, examining the insulation resistance and direct current resistance of the opening and closing coils, and conducting tests on the circuit breaker's operating mechanism. These tests collectively contribute to the comprehensive evaluation of the circuit breaker's action characteristics.

Product Functions

The instrument is capable of conducting action characteristic tests on all models of metal contacts for SF6 switches, GIS composite appliances, vacuum switches, and oil switches produced domestically and internationally.

The testing scope encompasses various parameters including time (inherent opening and closing time, in-phase synchronization, inter-phase synchronization), speed (momentary opening speed, momentary closing speed, maximum speed, time-travel characteristic curve), travel (total travel, contact gap, over-travel, overshoot travel, rebound amplitude), closing resistance, reclosing (closing-opening, opening-closing, opening-closing-opening process time; short-time delay, no-current delay), current (opening and closing coil opening and closing current values, current waveform), and action voltage.



Wiring diagram

Tested Objects

CBA-6 is designed for conducting action characteristic tests on SF6 switches, GIS composite apparatuses, vacuum switches, and oil switches with metal contacts, spanning voltage ranges from 6kV to 500kV.

Application Fields

- Power Grids
- Subway
- Railways
- Nuclear Power Plants
- Hydroelectric Power Stations
- Wind Power Plants
- Photovoltaic Power Stations
- Power Inspection Companies
- Oilfields
- Petrochemical Industry
- Manufacturing Enterprises

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Technical Data

Environmental	
Mains Input	220V±10% 50Hz±10%
Atmospheric Pressure	86～106kPa
Temperature	-10～45℃
Humidity	≤80%RH
Safety Performance	
Insulation Resistance	＞2MΩ
Dielectric Strength	Power Supply to Chassis AC 1.5KV 1-minute Withstand Voltage Test, No Flashover or Arcing
Basic Parameters	
Timing Measurement	Measurement Range: 5.0ms to 16s Resolution: 0.1ms Error ① 0.5% of Reading ±0.1ms ② Synchronization: ±0.1ms
Speed Measurement	Measurement Range: 0.10 m/s to 20.00 m/s Resolution: 0.01 m/s Error: 1% of Reading ±0.1 m/s
Motion Measurement	Measurement Range Vacuum Circuit Breaker: 50.0mm SF6 Circuit Breaker: 300.0mm Oil-Less Circuit Breaker: 600.0mm Resolution: 0.1mm Accuracy: 1% of Reading ±1mm
Closing Resistance	Measurement Range: 7000Ω Resolution: 1Ω
Current Measurement	Measurement Range: 20.00A Resolution: 0.01A
Mains Output	
Mains Output	DC 30～250V Digitally Adjustable / 20A (Instantaneous Operation)
Dimensions and Weight	
Dimensions and Weight	380mm(L)×300mm(W)×300mm(H) 12kg