

# GKC433M

Circuit Breaker Analyzer



Focusing on designing and manufacturing portable HV test equipment.

PD detector, HV Switchgear analyzer, CT/PT analyzer, Micro-ohmmeter, Capacitance& Dissipation factor tester.

**HANDY**

**Electrical Instruments Professional Manufacturer**

# Circuit Breaker Analyzer

## GKC433M

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### FEATURES

- Test the mechanical and electrical characteristics of various high-voltage circuit breakers, isolating switches, and contactors.
- Test parameters such as closing time, opening time, asynchronous time, bounce time, pre insertion time, and cooperating time for 12 main contacts, 6 contacts with closing resistors, 6 main contacts, and 6 auxiliary contacts.
- Measure the pre-insert time and resistance of 6 resistor contacts.
- The instrument interface is equipped with 12 contact status indicator, which facilitate the judgment of the closing and opening status or whether the wiring is correct.
- There is one analog transducer input channel and one digital transducer input channel. Measure the stroke, penetration, rebound, overshoot time, overshoot, and speed of the switchgear using resistive transducers and digital transducers.

● Accurately measure the rotation angle of single or multi turn operating mechanisms, with a measurement resolution of up to 0.05 degrees. To provide data basis for determining whether the switch movement is in place.

- Perform closing, opening, O-C-O, C-O, and O-C control.
- Able to test the mechanical characteristics of manually operated circuit breakers.
- Edit and store 50 switch models with various speed definitions.
- It has the function of changing the speed definition and recalculating after the testing is completed.
- Built in high-power adjustable DC power supply, with manual voltage adjustment knob, closing button, and opening button, it can quickly perform close / opening operation and action voltage testing.
- The built-in continuous output DC power supply is used for motor energy storage.
- It has the function of measuring motor current. By analyzing the current of the circuit breaker or isolation switch motor, it can be determined whether the energy storage system of the circuit breaker or the motion system of the isolation switch is abnormal.
- The output control adopts electronic switches, which have high control accuracy and long service life.
- Built-in current sensors measure the current of the closing and opening coils.
- The instrument can store 500 sets of test data without losing data in case of power failure.
- The stored test data can be transferred to a USB drive.
- Use a USB flash drive to upgrade the software inside the instrument.
- The LCD screen, which can display the operation interface, test data, contact waveform, travel curve, and current curve clearly both indoors and outdoors.
- High speed thermal printers can print test data, contact waveforms, travel curves, and current curves.
- It has the function of conducting up to 10000 automatic operation tests.
- A USB communication cable can be used to connect the computer for operation.
- Test data can be opened for analysis, envelope generation, and test report generation on a computer.
- Equipped with communication interfaces, it can be equipped with external dynamic resistance measurement, both sides grounding test, and graphite contact testing modules (optional).
- Support online testing of Bluetooth 2.0 and above devices, and extract internal test data from the instrument. (Optional)



## SPECIFICATIONS

<b>Sampling Frequency</b>	10kHz@1 to 10000ms 5kHz@10000 to 20000ms
<b>Timing Measurements</b>	
Range	1 to 20000ms
Accuracy	$\pm(0.05\%t+0.1)\text{ms}$
Resolution	0.1ms@1 to 10000ms 0.2ms@10000 to 20000ms
<b>Analog Section</b>	
Input Range	0 to 5V
Transducer Resistance	50Ω to 5kΩ
<b>Digital Section</b>	
Interface	RS422
Transducer Accuracy	$\pm0.1^\circ$
Transducer Resolution	0.05°
<b>Stroke Measurements</b>	
Range(Depends on transducer length)	Max. 1000mm
Minimum Resolution	0.1mm
Accuracy	$\pm(0.5\%L+0.2)\text{mm}$
<b>Speed Measurements</b>	
Range	0 to 20m/s
Resolution	0.01m/s
<b>Output</b>	
DC Power Supply	10 to 270V/20A
DC Power Supply Power	3kW
Output Control Power	300V DC/AC, 30A DC/AC
<b>DC Volt-meter Measurements</b>	
Range	0 to 300V
Accuracy	$\pm(0.5\%U+1)\text{V}$
<b>Coil Current Measurements</b>	
Range	DC 0 to 3A to 30A
AC Peak	DC 0 to 3A to 30A
Resolution	0.01A
<b>Motor Current Measurements</b>	
Range	DC 0 to 4A to 40A
AC Peak	DC 0 to 4A to 40A
Resolution	0.01A
<b>PIR Resistance Measurements</b>	
Range	50 to 200Ω
Resolution	0.1Ω
Accuracy	$\pm(1\%R+1)\Omega$
<b>Operating Environment</b>	
Power Supply	198 to 264V AC, 47 to 63Hz
Trigger Voltage	$\geq 30\text{V}$
Temperature	-10°C to 50°C
Huimidity	$\leq 90\%\text{RH}$ non-condensing
<b>Dimensions</b>	
Size	427×357×193mm
Weight	9kg

## ACCESSORIES



ABBM23 Linear Transducer



KTF Linear Transducer



CWY Linear Transducer



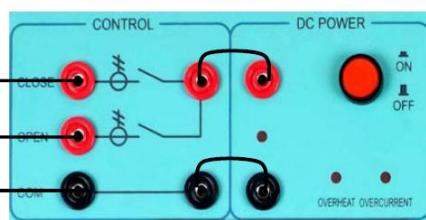
KPC Linear Transducer



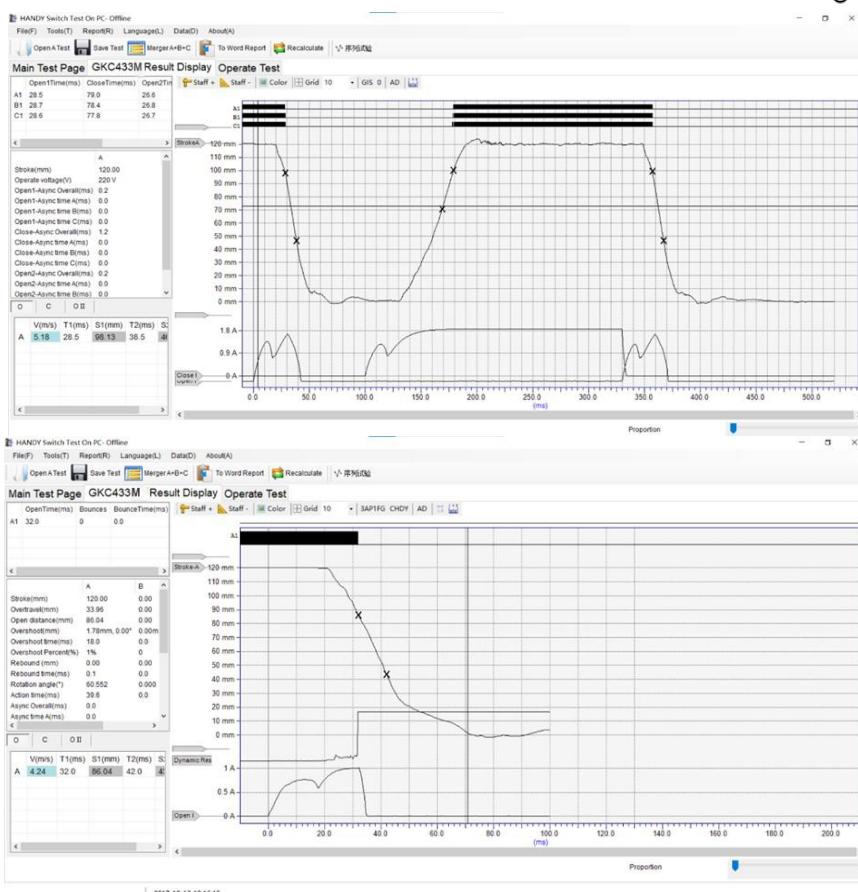
XC355 Rotary Transducer



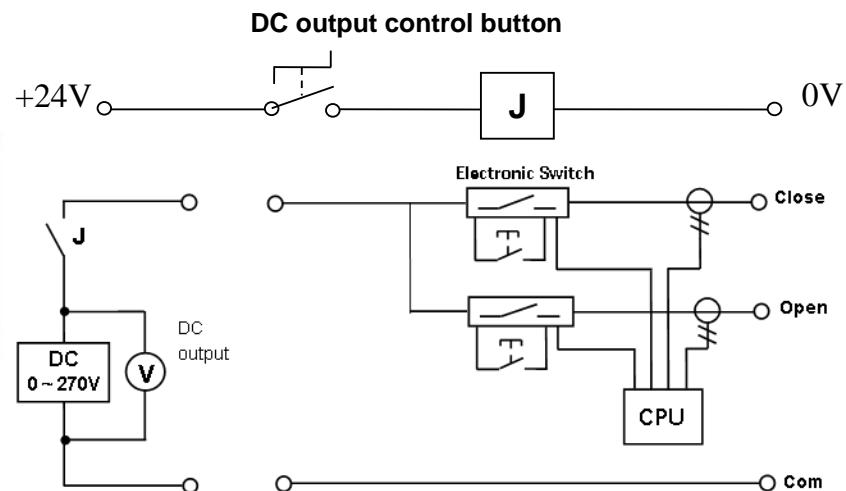
Digital Rotary Transducer



## Test Results



The instrument built-in an adjustable DC power supply, can be regulated from 0 to 270V, power 3kVA, max current is 10A. The power equipped with overcurrent and overheat protection. And it can be used as control power supply of the circuit breaker and DC power supply of the charging motor.



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