



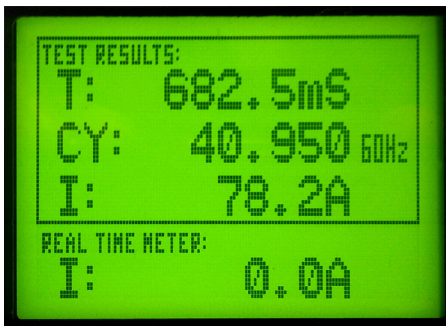
# MCCB-500

*molded case circuit breaker tester*

## ordering information

Part No.	Description
9107-UC	110V MCCB-500 and cables
9108-UC	220V MCCB-500 and cables
9107-SC	MCCB-500 shipping case

## Sample Test Results Screen



## Product Overview

The Vanguard MCCB-500 is a microprocessor-based high current circuit breaker test set. This unit provides a variable high current source, control, metering, and timing circuitries for testing overload relays and thermal and magnetic circuit breakers.

## Current Source

The MCCB-500's current source has 3 outputs: 4vac @ 500A, 14Vac @ 125A, and 70Vac @ 25A. The current sources can output short-duration overload conditions. This feature is convenient for performing instantaneous trip tests of molded case circuit breakers, or testing the time delay characteristics of magnetic overload relays.

Test current is measured and displayed on a 128 x 64 pixel back-lit LCD screen that is clearly visible in direct sun light or low light levels. Control switches are used to turn the current source on and off, select the timer stop input type (current mode, dry contact, or wet contact), and control the LCD contrast.

A "momentary" mode can turn on the current source, capturing the current reading and displaying the value on the LCD. This feature can be used to set the test current and minimizes the possibility of overheating the device under test.

Test current is turned on at the zero crossing point using a solid state device for reliability and precision timing.

## Built-in Current Meter

The MCCB-500 features a built-in current meter that displays the test current (100mA - 3000A). Current reading accuracy is:  $\pm 1\%$  of reading,  $\pm 2$  digits. Test results (current reading and time) are retained after performing a test so that the test results can be reviewed. This is a convenient feature when used with the momentary mode to preset the test current to avoid overheating the circuit breaker.

## Current Source Thermal Protection

Built in thermal sensor allows the microprocessor to monitor the transformer current source operating temperature.

## Built-in Timer

The MCCB-500's built-in timer displays the test results in milliseconds and cycles. The cycle time (50 or 60 Hz) is selectable by the user. Timer reading range is from 0.1 ms to 2 hours. Timer resolution is 0.1 ms and the timer accuracy is  $\pm 0.1\%$  of reading,  $\pm 0.1$  ms.

**Timer Start Mode:** Timer can be started when the current source is turned on or off.

**Timer Stop Mode:** Timer can be stopped with the removal of the test current or detection of a status change of dry contact or voltage input.

## Output Current and Duration Table
















percentage rated current	max on time	max off time
40% (200 A)	continuous	continuous
100% (500 A)	30 minutes	30 minutes

NOTE: The MCCB-500 is capable of delivering 2600A instantaneous current.

# MCCB-500 Controls & Indicators



## MCCB-500 technical specifications

 <b>physical specifications</b>	<b>Dimensions:</b> 16"W x 14"H x 13" D (40.6 cm x 35.5 cm x 33 cm) <b>Weight:</b> 92 lbs. (42 Kg)	 <b>input voltage</b>	100 – 120 Vac or 200 – 240 Vac (factory-pre-set), 50/60 Hz
 <b>internal current meter</b>	1 A – 3,000A; accuracy: 1% of reading, ±2 digits	 <b>measurement method</b>	isolated CT
 <b>timer stop inputs</b>	voltage input (20V – 300V, DC or peak AC), dry contact input, or removal of test current	 <b>timer reading range</b>	0.1ms – 2 hours (also displayed in cycles); accuracy: 0.1% of reading, ±0.1ms
 <b>display</b>	back-lit LCD screen (128 x 64 pixels); viewable in bright sunlight and low light levels	 <b>output currents</b>	<b>500A @ 4V, 125A @ 14V, 25A @ 70V</b>
 <b>humidity</b>	90% RH @ 40°C (104°F) non-condensing	 <b>safety</b>	designed to meet IEC61010 (1995), UL61010A-1, CSA-C22.2 standards
 <b>temperature</b>	<b>Operating:</b> -10°C to +50°C (+15°F to +122°F) <b>Storage:</b> -30°C to +70°C (-22°F to +158°F)	 <b>altitude</b>	2,000 m (6,562 ft) to full safety specifications
 <b>cables</b>	two 5-foot (1.5m) #2/0 current cables, two 10-foot (3.0m) external timer input cables with alligator clips, one ground cable, one power cord	 <b>warranty</b>	one year on parts and labor
 <b>furnished accessories</b>	shipping case		

**NOTE :** the above specifications are valid at nominal voltage and ambient temperature of +25°C (+77°F). Specifications are subject to change without notice.