

# MCCB-250

*molded case circuit breaker tester*



**Vanguard Instruments Company, Inc.**  
[www.vanguard-instruments.com](http://www.vanguard-instruments.com)

# MCCB-250

## molded case circuit breaker tester



The MCCB-250 is a programmable, high-current source designed specifically for testing molded-case circuit breakers as well as thermal, magnetic, or solid-state overload motor-protection relays.

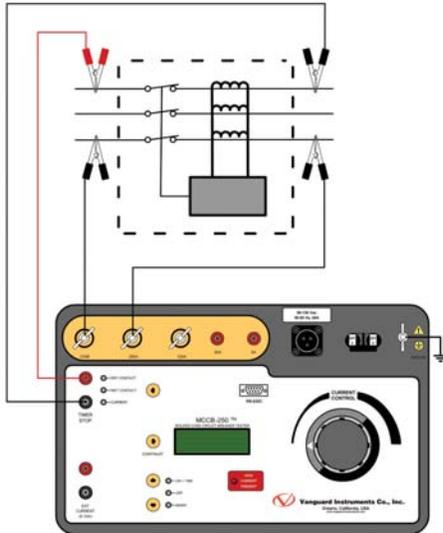
### Built-in Timer

The MCCB-250's built-in timer can test the time-delay characteristics of protection relays and molded-case circuit breakers. Once the test is initiated, the current source and the timer are automatically turned on at the next zero-crossing point of the AC. The timer stops when the MCCB-250 input detects a change in the dry contact or voltage input, or detects the removal of the test current. The test results are then displayed in milliseconds and fractions of cycle(s) on the unit's back-lit LCD screen (20 characters by 4 lines).

### Current Source

The MCCB-250 has 4 current-source outputs (5 A @ 120 Vac, 25 A @ 24 Vac, 120 A @ 6 Vac, 250 A @ 3 Vac) that conduct the test current through the high-impedance load circuits. Each current source can tolerate short-duration over-loads up to 4 times the rated current (1000 A max). This feature is used for testing the instantaneous trip element of molded-case circuit breakers. When using this feature, the selected test current is displayed on the LCD screen. When the MCCB-250 is used as a current source, the current-flow time (the current-on period) is displayed on the LCD screen.

### MCCB-250 connections



### External Current Input

The MCCB-250 also provides an external current input (0 - 10 A). Both internal and external current source readings can be viewed at the same time.

### Output Current and Duration table

current	on time	off time
100% (1x)	30 minutes	30 minutes
200% (2x)	3 minutes	5 minutes
300% (3x)	30 seconds	4 minutes
400% (4x)	4 seconds	7 minutes

## ordering information

Part number <b>MCCB-250</b>	MCCB-250 and cables
Part number <b>MCCB-250-CASE</b>	MCCB-250 shipping case
Part number <b>MCCB-250-10FT</b>	MCCB-250 test leads - 10 foot
Part number <b>MCCB-250-20FT</b>	MCCB-250 test leads - 20 foot

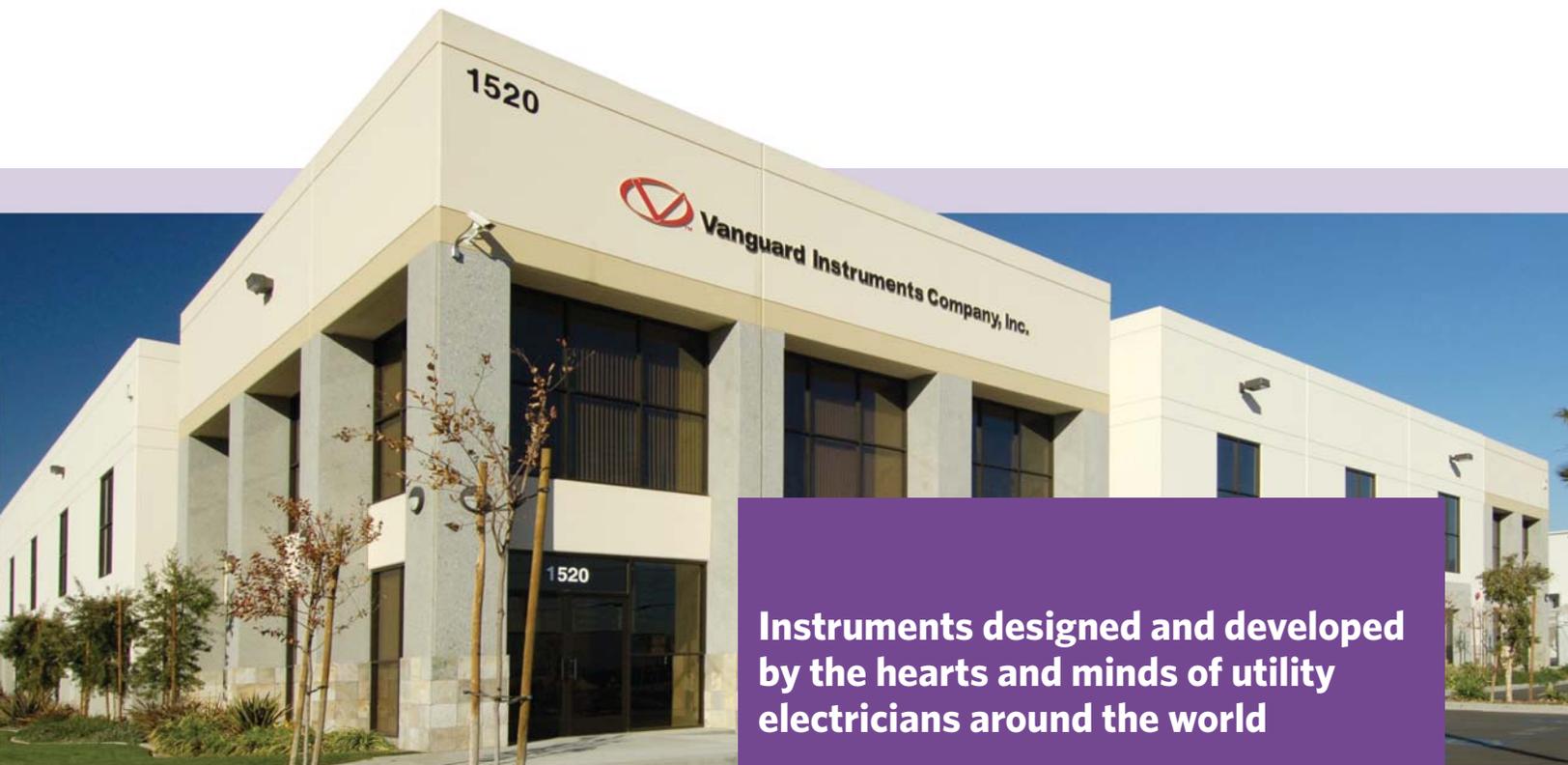
# MCCB-250 Controls & Indicators



## MCCB-250 specifications

<b>type</b>	250 Ampere current source
<b>physical specifications</b>	17"W x 12½"H x 10½"D (42.6 cm x 32cm x 27 cm); Weight: 46 lbs (21 kg)
<b>input power</b>	100 – 120 Vac or 200 – 240 Vac (factory pre-set), 50/60 Hz
<b>output currents</b>	0 – 5 A @ 120 Vac max; 0 – 25 A @ 24 Vac max; 0 – 120 A @ 6 Vac max; 0 – 250 A @ 3 Vac max
<b>internal current meter</b>	100 mA – 1000 A; Accuracy: 1% of reading ±20mA
<b>measurement method</b>	isolated CT
<b>external meter range</b>	10 mA – 10 A; Accuracy: 1% of reading, ±2mA
<b>measurement method</b>	isolated CT
<b>timer reading range</b>	1ms – 2 hours; Accuracy: 0.1% of reading ±1ms
<b>timer stop inputs</b>	boltage input (24V – 300V, DC or peak AC), dry contact input, or removal of primary current
<b>display</b>	back-lit LCD Screen (20 characters by 4 lines); viewable in bright sunlight and low-light levels
<b>computer interface</b>	RS-232C port for factory calibration and diagnostics
<b>safety</b>	designed to meet IEC61010 (1995), UL61010A-1, CSA-C22.2 standards
<b>environment</b>	Operating: -10°C to +50°C (+15°F to +122°F); Storage: -30°C to +70°C (-22°F to +158°F)
<b>humidity</b>	90% RH @ 40°C (104°F) non-condensing
<b>altitude</b>	2,000 m (6,562 ft) to full safety specifications
<b>cables</b>	power cord, ground cable, 10-foot #2 AWG test leads
<b>options</b>	transportation case
<b>warranty</b>	one year on parts and labor

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



## Instruments designed and developed by the hearts and minds of utility electricians around the world

Vanguard Instruments Company, (VIC), was founded in 1991. Currently, our 28,000 square-foot facility houses Administration, Design & Engineering, and Manufacturing operations. From its inception, VIC's vision was, and is to develop and manufacture innovative test equipment for use in testing substation EHV circuit breakers and other electrical apparatus.

The first VIC product was a computerized circuitbreaker analyzer, which was a resounding success. It became the forerunner of an entire series of circuitbreaker test equipment. Since its beginning, VIC's product line has expanded to include microcomputer-based, precision micro-ohmmeters, single and three phase transformer winding turns-ratio testers, transformer winding-resistance meters, mega-ohm resistance meters, and a variety of other electrical utility maintenance support products.

VIC's performance-oriented products are well suited for the utility industry. They are rugged, reliable, accurate, user friendly, and most are computer controlled. Computer control, with innovative programming, provides many automated testing functions. VIC's instruments eliminate tedious and time-consuming operations, while providing fast, complex, test-result calculations. Errors are reduced and the need to memorize long sequences of procedural steps is eliminated. Every VIC instrument is competitively priced and is covered by a liberal warranty.



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