

MCCB-250

molded case circuit breaker tester



Vanguard Instruments
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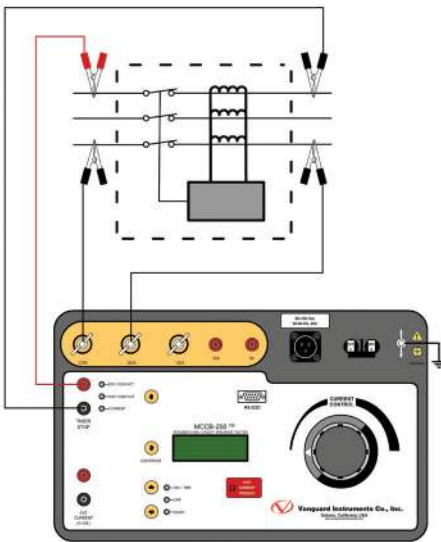
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ordering information

Part No.	Description
9066-UC	110V MCCB-250 unit and cables
9067-UC	220V MCCB-250 unit and cables
9066-SC	MCCB-250 shipping case

MCCB-250 connections



Product Overview

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 (see table below). 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.

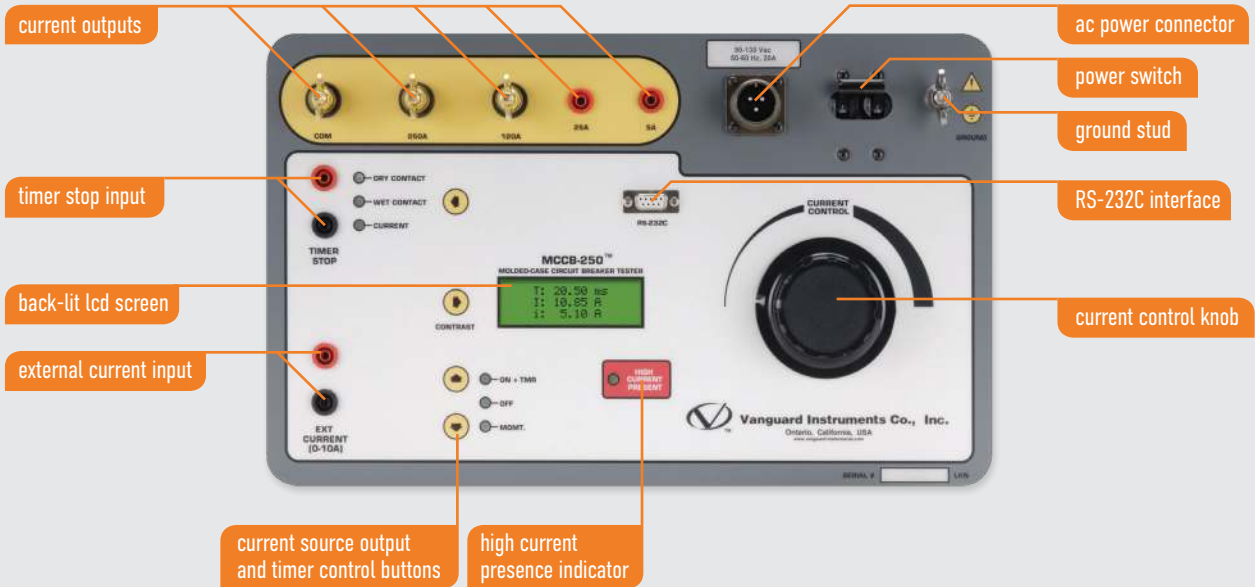
External Current Input

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.



















Over-Current and Duration Table

percentage rated current	max on time	max off time
100% (1x)	30 minutes	30 minutes
200% (2x)	3 minutes	5 minutes
300% (3x)	30 seconds	4 minutes

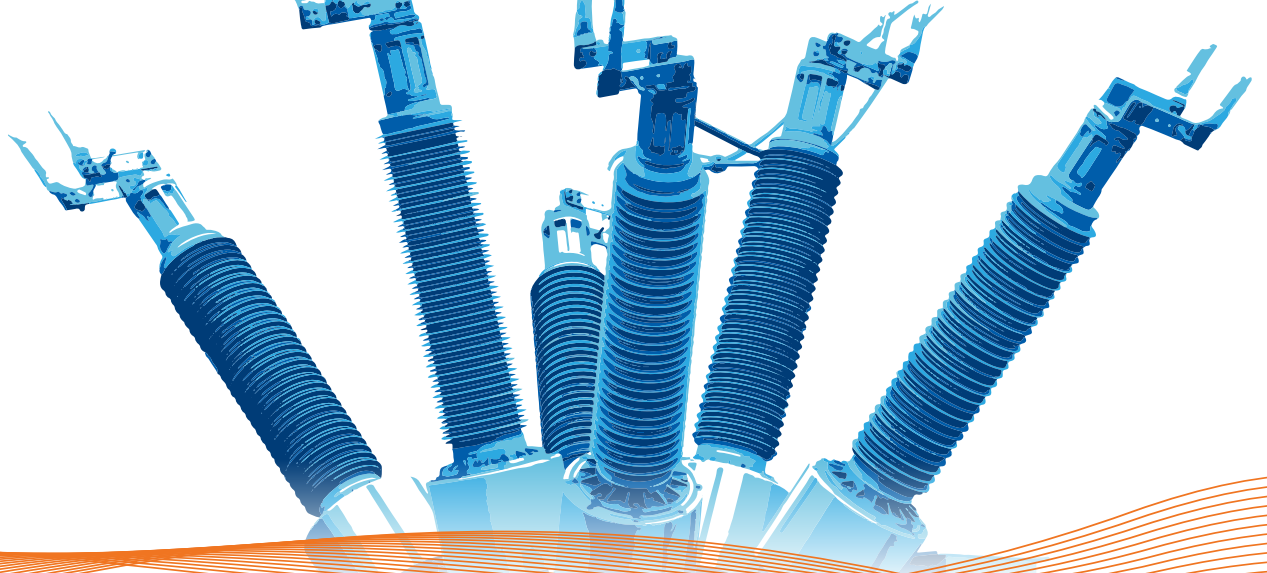
MCCB-250 Features



MCCB-250 technical specifications

 physical specifications	Dimensions: 17"W x 12½"H x 10½"D (42.6 cm x 32 cm x 27 cm) Weight: 46 lbs. (21 Kg)	 input voltage	100 – 120 Vac or 200 – 240 Vac (factory-pre-set), 50/60 Hz
 output currents	0 – 5 A @ 120 Vac max; 0 – 25 A @ 24 Vac max; 0 – 120 A @ 6 Vac max; 0 – 250 A @ 3 Vac max;	 instantaneous current	700A
 measurement method	isolated CT for both internal and external current meters	 internal current meter range	100 mA – 1000 A; accuracy: 1% of reading, ±20 mA
 timer stop inputs	voltage input (24 V – 300 V, dc or peak ac), dry contact input, or removal of primary current	 external current meter range	10 mA – 10 A; accuracy: 1% of reading, ±20 mA
 display	back-lit LCD screen (20 characters by 4 lines); viewable in bright sunlight and low light levels	 timer reading range	1 ms – 2 hours; accuracy: 0.1% of reading±1 ms
 safety	designed to meet IEC61010 (1995), UL61010A-1, CSA-C22.2 standards	 computer interface	RS-232C port for factory calibration and diagnostics
 temperature	Operating: -10°C to +50°C (+15°F to +122°F) Storage: -30°C to +70°C (-22°F to +158°F)	 humidity	90% RH @ 40°C (104°F) non-condensing
 cables	power cord, ground cable, 10-foot (3.0m) #4 AWG current cable set, 10-foot (3.0m) #10 AWG current cable set	 altitude	2,000 m (6,562 ft) to full safety specifications
 options	shipping case	 warranty	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.

Founded in 1991 and located in Ontario, California, USA, Vanguard Instruments™ offers a wide range of diagnostic test equipment that accurately and efficiently measures the health of critical substation equipment, such as transformers, circuit breakers, and protective relays.

Our first product was a computerized, extra high voltage (EHV) circuit breaker analyzer, which became the forerunner of an entire line of EHV circuit breaker test equipment. Over the years, our portfolio has grown tremendously 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 application-specific products.

Our instruments are rugged, reliable, accurate, and user friendly. They eliminate tedious and time-consuming operations, while providing fast, complex test-result calculations. Using our equipment helps reduce errors and eliminates the need to memorize long sequences of procedural steps.

In 2017, Vanguard Instruments became a part of Doble Engineering Company, an energy industry leader in hardware, software, and services that diagnose and monitor the health of critical assets.



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