



PRODUCT UPDATE

Announcing a new test capability for the DLRO200 and 600

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At present the current DLRO product offering (including the DLRO200 and 600) is intended to check and measure contact resistance in high voltage circuit breakers, disconnecting switches, bus bar joints and any other low resistance measurement.

Now, we are pleased to announce the addition of a new test capability recently identified for the DLRO 200 and 600 specifically, AND one that no other competitor presently can offer.

That new test capability is called an "individual pole resistance test" or MILLIVOLT DROP TEST, and it is performed on Low Voltage Molded Case Breakers. Even better, nothing has changed with the DLRO 200 or 600. Both of them already provide a millivolt readout both on the display and in print. This complies with the NEMA standard (AB 4-1996) which prescribes this test as part of the "inspection and preventive maintenance of molded case circuit breakers". Here are the details:

Some of the test methods currently employed in the field often provide a relatively poor indication of the real condition of a circuit breaker. Contact resistance on small low voltage molded case circuit breakers (15-600 Amps) although a common test, should not be considered the only reliable measure of a breaker's ability to carry rated current. An alternative method is to pass a known level of direct current (DC) through the contact structure and measure the DC millivolt drop across the contacts.

The millivolt drop test procedure outlined in NEMA standard publication AB 4-1996 Section 5.4 can be used to assess the electrical integrity of connections and contacts within a molded case circuit breaker. The IEEE paper by John Shea and John Bindas, "Measuring Molded Case Circuit Breaker Resistance" vol. CHMT-16, No2, March 1993 is also available as a guideline for more reliable millivolt drop measurements.

The procedure for the millivolt drop test specifies using a 24 volt (or less) direct current power supply capable of supplying the rated current of the circuit breaker. For circuit breakers rated higher than 500 amperes, the power supply should be capable of delivering no less than 500 amperes.

Proper thermal performance of a well loaded circuit breaker is by far the best indicator of a circuit breaker's current carrying capability, and a millivolt drop test performed at rated current, can serve to indicate whether further testing is required.

If the resistance and millivolt drop test data raise concerns in regards to circuit breaker integrity, a proper thermal test is recommended.

Attached is the NEMA Standard (AB 4-1996) governing this test for your reference.