NEMA Standards Publication

ANSI/NEMA C37.57-2003 (R2010)

American National Standard for Switchgear - Metal-Enclosed Interrupter Switchgear Assemblies - Conformance Testing

National Electrical Manufacturers Association

National Electrical Manufacturers Association
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Secretariat:

National Electrical Manufacturers Association

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Foreword (This Foreword is not part of American National Standard C37.57-2003.)

This standard has been developed to describe selected tests and procedures to demonstrate conformance in accordance with Section 6 of Tests, of American National Standard for Metal-Enclosed Interrupter Switchgear, ANSI/IEEE C37.20.3-2001. To facilitate its use and to permit timely revisions based on experience, a separate document has been provided.

This standard is one of several in a series of test procedures for conformance testing of switchgear products. Although this standard is written for general guidance, performance criteria are established so that this standard can be adopted as the basis for certification of indoor ac medium-voltage switches for use in metal-enclosed switchgear for nonutility installations subject to regulation by public authorities and similar agencies concerned with laws, ordinances, regulations, administrative orders and similar instruments.

This standard was prepared by a Working Group sponsored by the Power Switchgear Assemblies Technical Committee of the Switchgear Section of the National Electrical Manufacturers Association (NEMA 8SG-V). During the course of its preparation, coordination has been maintained with the Power Switching Equipment Technical Committee of the Switchgear Section of the National Electrical Manufacturers Association (NEMA 8SG-VI) and the Switchgear Committee of the Power Engineering Society of the Institute of Electrical and Electronics Engineers.

Through this joint effort over many years, the switchgear assemblies standards have been of extreme value to the industry and further suggestions for improvement gained in the use of this standard will be welcomed.

Suggestions for improvement of this standard will be welcome. They should be sent to the National Electrical Manufacturers Association, 1300 North 17th Street, Suite 1752, Rosslyn, VA 22209.

This standard was processed and approved for submittal to ANSI by Accredited Standards Committee on Power Switchgear C37. Committee approval of the standard does not necessarily imply that all committee members voted for its approval. At the time of its approval, the C37 Committee had the following members:

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For Metal-Enclosed Interrupter Switchgear Assemblies— Conformance Testing

1 Scope

This standard is a conformance testing standard optionally applicable to all metal-enclosed interrupter switchgear assemblies designed, tested, and manufactured in accordance with ANSI/IEEE C37.20.3. The requirement of ANSI/IEEE C37.20.3 is sufficient for application of metal-enclosed interrupter switchgear assemblies, and conformance testing is not necessary to satisfy the basic requirements of that standard. Conformance testing is performed to show compliance with the basic requirements when required to satisfy special agreements or regulatory agency requirements. Conformance testing may be performed associated with the basic design testing if agreeable to those concerned; however, conformance testing is more likely to be performed some time after original development to satisfy a special need. Conformance testing need not be performed if not required.

Metal-enclosed interrupter (MEI) switchgear may include control and instrumentation components unique for the application, which are not individually evaluated under this standard.

NOTE—In this standard, the use of the term "MEI switchgear" shall be considered to mean "metal-enclosed interrupter switchgear."

This standard does not cover equipment intended for use in installations under the exclusive control of electric utilities for the purpose of communication or metering, or for the generation, control, transformation, transmission, and distribution of electric energy located in buildings used exclusively by utilities for such purposes or located outdoors on property owned or leased by the utility or on public highways, streets, or roads, or outdoors by established rights on private property.

NOTE—An electric utility is an entity that is overseen by a public utility commission, a public service commission, or other regulatory agency having jurisdiction for such installations.

1.1 General

This standard specifies the tests that shall be required to demonstrate that the MEI switchgear being tested conforms with the ratings assigned to it and meets the electrical and mechanical performance requirements specified in ANSI/IEEE C37.20.3.

1.2 Definitions

1.2.1 Design tests

Design tests are tests made by the manufacturer to determine the adequacy of the design of a particular type, style, or model of equipment or its component parts to meet its assigned ratings and to operate satisfactorily under normal service conditions or under special conditions if specified. Design tests may be used to demonstrate compliance with applicable standards of the industry.