NEMA Standards Publication

ANSI C37.55-2020

American National Standard for Medium-Voltage Metal-Clad Switchgear Assemblies — Conformance Test Procedures

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 C37.55-2020.)

This Standard has been developed to describe selected tests and procedures to demonstrate conformance in accordance with Section 6, Tests, of IEEE Std. C37.20.2 Metal-Clad Switchgear. It is published separately from IEEE Std.C37.20.2 to facilitate its use and to permit timely revisions based on experience.

Major revisions have been made to this edition to coordinate with revisions made to IEEE Std. C37.04, IEEE Std. C37.09 and IEEE Std. C37.20.2. Previous editions of this Standard shall continue to apply for conformance tests made on equipment rated in accordance with the earlier editions of IEEE Std. C37.04, IEEE Std. C37.06 (withdrawn in 2018), IEEE Std. C37.09 and IEEE Std. C37.20.2.

This Standard is one of several in a series of test procedures for conformance testing of switchgear products. While this Standard is written for general guidance, performance criteria are established so that this Standard can be adopted as the basis for certification of metal-clad switchgear for use in non-utility installations subject to regulation by public authorities and similar agencies concerned with laws, ordinances, regulations, administrative orders, and similar instruments.

This Standard has been prepared by a Working Group sponsored by the Power Switchgear Assemblies Technical Committee of the Switchgear Section of the National Electrical Manufacturers Association (NEMA 8-SG-V). During the course of its preparation, coordination has been maintained with the High Voltage Power Circuit Breaker Technical Committee of the Switchgear Section of the National Electrical Manufacturers Association (NEMA 8-SG). Reports of progress were also made at regular intervals to the Switchgear Committee of the Power Engineering Society of the Institute of Electrical and Electronics Engineers.

Suggestions for improvement of this Standard will be welcome. They should be sent to the National Electrical Manufacturers Association, 1300 North 17th Street, Suite 900, 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 ASC C37 Committee had the following Members:

John Webb, Chair
Gerard Winstanley, Secretary

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Users	Roy Alexander Paul Barnhart Pete Dwyer George Nourse Mike Weitzel
General Interest	Doug Edwards John Leach Paul Sullivan Michael Wactor
Producers	Darryl Moser Carl Schneider John Webb Eddie Wilkie Terrance Woodyard

The following Members composed the NEMA Power Switchgear Assemblies Technical Committee at the time of publication of this Standard:

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1 Scope

Conformance Testing Standard

This Standard is a conformance testing Standard optionally applicable to all medium-voltage metal-clad switchgear assemblies designed, tested, and manufactured in accordance with IEEE Std. C37.20.2, Metal-Clad Switchgear. This Standard covers selected tests to demonstrate the conformance of the basic switchgear section (which includes the structure, circuit breaker compartments, instrument compartments, buses, and internal connections) with the "Tests" clause of IEEE Std. C37.20.2.

In this Standard, the use of the term "MC switchgear" shall be considered to mean "metal-clad switchgear." The use of the term "circuit breaker" shall be considered to mean "indoor alternating current medium-voltage circuit breakers (rated above 1000 volts) applied as removable elements in metal-enclosed switchgear assemblies," unless qualified by other descriptive terms.

1.1 Purpose

This Standard specifies the tests that shall be performed to demonstrate that the MC switchgear being tested conforms with the ratings assigned to it and meets the mechanical and electrical performance requirements specified in IEEE Std. C37.20.2.

2 References

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments or corrigenda) applies.

ANSI C29.10, *Wet Process Porcelain Insulators — Indoor Apparatus Type*

ANSI C37.54, *Conformance Test Procedures for Alternating Current High-Voltage Circuit Breakers Applied in Metal-Enclosed Switchgear Assemblies*

ANSI C37.57, *Metal-Enclosed Interrupter Switchgear Assemblies — Conformance Testing*

ANSI C37.58, *Indoor Medium-Voltage Switches for Use in Metal-Enclosed Switchgear — Conformance Test Procedures*

IEEE Std. C37.04, *Ratings and 3 Requirements for AC High Voltage Circuit Breakers with Rated Maximum Voltage above 1000 V*

IEEE Std. C37.09, *Test Procedures for AC High-Voltage Circuit Breakers with Rated Maximum Voltage above 1000V*

IEEE Std. C37.20.2, *Metal-Clad Switchgear*

IEEE Std. C57.12.28, *Standard for Pad-Mounted Equipment—Enclosure Integrity*

3 Definitions

The definitions of terms contained in this Standard, or in other Standards referred to in this Standard, are not intended to embrace all legitimate meanings of the terms. They are applicable only to the subject treated in this Standard.