

IEEE Std C37.20.4-2001
(Revision of
IEEE Std C37.20.4-1996)

IEEE Standard for Indoor AC Switches (1 kV–38 kV) for Use in Metal-Enclosed Switchgear

Sponsor

Switchgear Committee
of the
IEEE Power Engineering Society

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IEEE-SA Standards Board

Abstract: Indoor ac medium-voltage switches for use in enclosures for application in power circuits at voltages above 1 kV through 38 kV are covered. These include stationary or drawout, manual or power operation, fused or unfused.

Keywords: indoor ac switches, metal-enclosed switchgear

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Introduction

(This introduction is not part of IEEE Std C37.20.4-2001, IEEE Standard for Indoor AC Switches (1 kV–38 kV) for Use in Metal-Enclosed Switchgear.)

This standard was first issued as a Trial Use document. It is now being updated to include and reference the base document for Interrupter Switches IEEE Std 1247-1998.^a This document applies to switches used in metal-enclosed-switchgear as defined in the ANSI/IEEE C37.20 series. It does not apply to devices of similar construction used in other types of medium voltage (1 kV through 38 kV) equipment.

This standard has been revised to reflect needed technical changes that have been suggested since the original document was published. There have been three substantive changes in this revision, as follows:

- a) The asymmetrical factor for momentary rating has been changed from 1.6 to 1.55.
- b) The impulse test requirements have been defined as 3 by 9. This requires that nine additional tests be run in case of flash-over in the first set of the required three instead of the old requirement of three additional tests.
- c) A new rating has been created, “Rated Short-Time Withstand Current Duration.”

The above changes reflect a move to harmonize with IEC and to accept current industry practices.

This standard uses ANSI/IEEE Std 4-1978, IEEE Standard Techniques for High Voltage Testing, instead of IEEE Std 4-1995, the current revision of this document. This was done because of the omission of several correction factors and test procedures needed and used by the Switchgear Committee in standards for switchgear and circuit breakers. The Switchgear Committee has requested coordination and revision of the current standard IEEE Std 4-1995 to address these test procedures and correction factors.

This edition was prepared by the Power Switchgear Assemblies Technical Committee of the National Electrical Manufacturers Association (NEMA) and the Switchgear Assemblies Subcommittee of the IEEE Switchgear Committee. NEMA is responsible for Clause 5 and Clause 7. The Switchgear Assemblies Subcommittee of the IEEE Switchgear Committee is responsible for Clause 3, Clause 4, Clause 6, and Clause 8. Through this joint effort over the many years, the switchgear assemblies standards have been of extreme value to the industry. Further suggestion for improvement gained in the use of this standard will be welcome.

^aInformation on references can be found in Clause 2.

This standard is one of a series covering Switchgear Assemblies as follows (see Figure A). Other standards in the series are listed below.

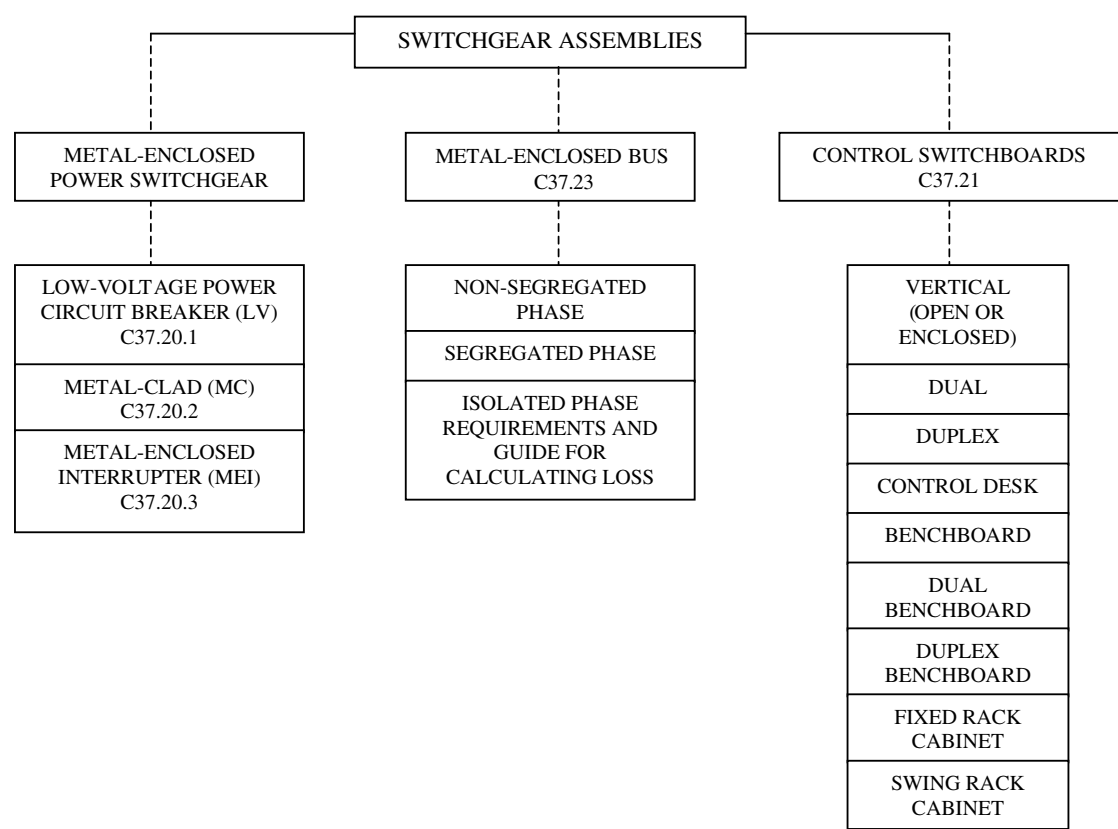


Figure A—Types of switchgear assemblies

ANSI C37.22-1997	American National Standard Preferred Ratings and Related Required Capabilities for Indoor AC Medium Voltage Switches Used in Metal-Enclosed Switchgear
IEEE Std C37.20.1-1993 (R1998)	IEEE Standard for Metal-Enclosed Low-Voltage Power Circuit Breaker Switchgear
IEEE Std C37.20.2-1999	IEEE Standard for Metal-Clad and Station-Type Cubicle Switchgear
IEEE Std C37.20.3-2001	IEEE Standard for Metal-Enclosed Interrupter Switchgear
IEEE Std C37.20.4-2001	IEEE Trial-Use Standard for Indoor AC Medium-Voltage Switches for Use in Metal-Enclosed Switchgear
IEEE Std C37.20.6-1997	IEEE Standard for 4.76 kV to 38 kV Rated Grounding and Testing Devices Used in Enclosures
IEEE Std C37.21-1985	IEEE Standard for Control Switchboards
IEEE Std C37.23-1987 (R1991)	IEEE Standard for Metal-Enclosed Bus and Guide for Calculating Losses in Isolated-Phase Bus

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