

American Standard Specifications for
**Distribution Enclosed, Open, and
Open-Link Cutouts**

Sponsor

Electrical Standards Board

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Foreword

(This Foreword is not a part of American Standard Specifications for Distribution Enclosed, Open, and Open-Link Cutouts, C37.42-1962.)

This publication is one of a series of complementary American Standards:

American Standard Service Conditions and Definitions for Distribution Cutouts and Fuse Links, Secondary Fuses, Distribution Enclosed Single-Pole Air Switches, Power Fuses, Fuse Disconnecting Switches, and Accessories, C37.40-1962

American Standard Design Tests for Distribution Cutouts and Fuse Links, Secondary Fuses, Distribution Enclosed Single-Pole Air Switches, Power Fuses, Fuse Disconnecting Switches, and Accessories, C37.41-1962

American Standard Specifications for Distribution Enclosed, Open, and Open-Link Cutouts, C37.42-1962

American Standard Specifications for Distribution Fuse Links for Use in Distribution Enclosed, Open, and Open-Link Cutouts, C37.43-1962

American Standard Specifications for Distribution Oil Cutouts and Fuse Links, C37.44-1962

American Standard Specifications for Distribution Enclosed Single-Pole Air Switches, C37.45-1962

American Standard Specifications for Power Fuses and Fuse Disconnecting Switches, C37.46-1962

American Standard Guide for Application, Operation, and Maintenance of Distribution Cutouts and Fuse Links, Secondary Fuses, Distribution Enclosed Single-Pole Air Switches, Power Fuses, Fuse Disconnecting Switches, and Accessories, C37.47-1962

These standards coordinate the following publications of the American Institute of Electrical Engineers, The Edison Electric Institute, and the National Electrical Manufacturers Association:

Fuses Above 600 Volts, AIEE Standard 25-1958

High-Voltage Fuses, NEMA Standard SG 2-1958

Standards for Distribution Fuse Links, EEI Publication TDJ-110; NEMA Publication 108-1960

Standards for Mounting Brackets for Distribution Cutouts and Distribution Class Lightning Arresters, EEI Publication TDJ-19; NEMA Publication 100-1960

Close liaison was maintained with AIEE, EEI, and NEMA during the development of American Standards C37.40-1962 through C37.47-1962 in order to incorporate the latest thinking up to the time of publication.

With the exception of the following subsections, these standards have been approved by the National Electrical Manufacturers Association as NEMA Standards:

40-3.4.6.1.1 of American Standard C37.40-1962

42-4 and 42-5.5.6.3 of American Standard C37.42-1962

44-5 of American Standard C37.44-1962

45-4 of American Standard C37.45-1962

46-5.1 of American Standard C37.46-1962

The American Standards Association wishes to acknowledge its indebtedness to all who have given so freely of their time and knowledge in compiling these standards. Suggestions for improvement

gained in the use of this standard will be welcomed. They should be sent to the American Standards Association, 10 East 40th Street, New York 16, N. Y.

The ASA Sectional Committee on Power Switchgear, C37, which developed this standard, had the following personnel at the time of approval:

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Contents

SECTION	PAGE
42-1. Scope	7
42-2. Rating	7
42-2.1 Rating Information	7
42-2.2 Rated Voltage, Continuous Current, Interrupting Current, Short-Time Current, and Basic Impulse Insulation Level (BIL)	7
42-2.3 Rated Frequency	7
42-2.4 Rated Load-Break Current for Distribution Load-Break Cutouts ..	7
42-3. Design Test Requirements	7
42-3.1 Dielectric Tests	7
42-3.2 Interrupting Tests	9
42-3.3 Load-Break Tests for Load-Break Cutouts	9
42-3.4 Radio-Influence Tests	9
42-3.5 Short-Time Current Tests for Disconnecting Cutouts	10
42-3.6 Temperature-Rise Limitations	10
42-3.7 Expendable Cap, Static Relief Pressure Tests	10
42-4. Acceptance Tests	10
42-5. Construction Requirements	10
42-5.1 Color Coding for Enclosed Cutouts	10
42-5.2 Color of Porcelain	10
42-5.3 Expendable Caps for 100-Ampere Open Cutouts	10
42-5.4 Fuse Holder Dimensions	10
42-5.5 Mounting Bracket	10
42-5.6 Mounting Support on Cutouts	14
42-5.7 Terminal Dimensions	14
42-5.8 Switch Stick (Switch Hook) for Use with Distribution Cutouts ..	15
42-6. Nameplate Marking	15
42-6.1 Nameplate Marking for Distribution Enclosed, Open, and Open-Link Cutouts	15
42-7. Application Requirements	16
42-7.1 Basis for Selection of Rated Voltage of Distribution Cutouts	16
42-7.2 Guide for Selection of Rated Voltage of Distribution Cutouts	16
Tables	
Table 1 Rated Voltage, Continuous Current, Interrupting Current, Short-Time Current, and Basic Impulse Insulation Level	8
Table 2 Withstand Test Voltages	9
Table 3 Limits of Radio-Influence Voltage	9
Table 4 Range of Conductor Sizes	14
Table 5 Guide for Selection of Rated Voltage of Distribution Cutouts ...	17
Figures	
Fig. 1 Type A Mounting Bracket	12
Fig. 2 Type B Mounting Bracket	13
Fig. 3 Switch Sticks for Use with Distribution Cutouts	15
Fig. 4 Location of Distribution Cutouts	16

American Standard Specifications for Distribution Enclosed, Open, and Open-Link Cutouts

This publication is one of a series of American Standards designated C37.40- through C37.47-1962. See back cover for titles.

42-1. Scope

This standard applies to high voltage fuses (above 600 volts) and accessories, as follows:

- (1) Enclosed, open, and open-link types of distribution cutouts and fuses for ac (alternating-current) distribution systems
- (2) Fuse supports, fuse mountings, fuse hooks, and fuse tongs, all of the type used exclusively with products listed in (1)
- (3) Removable switch blades for products listed in (1)

42-2. Rating

42-2.1 Rating Information

42-2.1.1 Ratings. The ratings of distribution enclosed, open, and open-link cutouts shall include:

- (1) *Rated continuous current*, determined by the temperature-rise design tests at rated continuous current specified in 42-3.6, made under the usual service conditions specified in 40-2.1 of American Standard C37.40-1962.
- (2) *Rated nominal and maximum design voltages*, determined by the dielectric and current interrupting design tests specified respectively in 42-3.1 and 42-3.2, at altitudes up to 3,300 feet (1,000 meters) as specified in 40-2.1 of American Standard C37.40-1962.
- (3) *Rated frequency*, specified in 40-2.1 of American Standard C37.40-1962.
- (4) *Rated interrupting current*, in terms of available rms (root-mean-square) short-circuit current, determined by the current interrupting design tests specified in 42-3.2.
- (5) *Basic impulse insulation level (BIL)*, determined by the impulse withstand tests specified in 42-3.1.
- (6) *Rated load-break current* (when provision is made for load-break operation), determined by the design tests specified in 42-3.3.
- (7) *Rated short-time currents*, momentary and 4 second, determined by the design tests specified in 42-3.5.

42-2.1.2 Performance Characteristics. The performance characteristics of a distribution enclosed, open, and open-link cutout shall include:

- (1) Low-frequency dry- and wet-withstand voltages specified in 42-3.1.
- (2) Temperature-rise limitations specified in 42-3.6.
- (3) Radio-influence levels specified in 42-3.4.

42-2.2 Rated Voltage, Continuous Current, Interrupting Current, Short-Time Current, and Basic Impulse Insulation Level (BIL). Rated voltage, continuous current, interrupting current, short-time current, and basic impulse insulation level (BIL) of distribution enclosed, open, and open-link cutouts shall be as given in Table 1. (The color coding or identifying color as specified in 42-5.1 and the terminal sizes as specified in 42-5.7 are construction requirements, not ratings.)

42-2.3 Rated Frequency. The rated frequency of distribution cutouts shall be 60 cycles per second.

42-2.4 Rated Load-Break Current for Distribution Load-Break Cutouts. The rated load-break current of distribution load-break enclosed, open, and open-link cutouts shall correspond to the rated maximum continuous current of the cutouts as specified in the third column of Table 1.

42-3. Design Test Requirements

42-3.1 Dielectric Tests. Distribution enclosed, open, and open-link cutouts shall be capable of withstanding the following test voltages when tested as specified in 41-4 of American Standard C37.41-1962 and as follows:

42-3.1.1 Test Voltages. The withstand test voltages shall be as given in Table 2.

42-3.1.2 Points of Application of Voltage. The test voltages shall be applied:

- (1) For terminal to ground tests, between each terminal and all other metal parts which may be grounded, with the fuse holder, including the conducting element or equivalent, or the blade, completely assembled ready for service
- (2) For terminal to terminal tests, between each terminal with the fuse holder or blade in the open position