

NEMA 250-2008

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# Enclosures for Electrical Equipment (1000 Volts Maximum)



**NEMA 250**

**ENCLOSURES FOR  
ELECTRICAL EQUIPMENT  
(1000 VOLTS MAXIMUM)**

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**NEMA Standards Publication 250-2008**

*Enclosures for Electrical Equipment (1000 Volts Maximum)*

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**TABLE OF CONTENTS**

<b>1</b>	<b>GENERAL</b> .....	1
1.1	Scope.....	1
1.2	References .....	1
1.3	Definitions .....	3
<b>2</b>	<b>ENCLOSURE TYPES, FEATURES, AND APPLICATIONS</b> .....	5
2.1	General .....	5
2.2	Specific Types .....	5
<b>3</b>	<b>CONSTRUCTION</b> .....	9
3.1	General .....	9
3.2	Units of Measurement .....	9
3.3	Materials—General.....	9
3.4	Materials—Polymeric.....	9
3.5	Corrosion Protection—General .....	9
	3.5.1 Indoor Corrosion Protection .....	10
	3.5.2 Outdoor Corrosion Protection.....	10
	3.5.3 Annealed Coating.....	10
	3.5.4 Bends and Forms on Zinc Coatings.....	11
	3.5.5 Hot Dipped Galvanized Damage.....	11
	3.5.6 Cast Iron .....	11
	3.5.7 Corrosion Protection for Type 3X, 3RX, 3SX, 4X and 6P Enclosures .....	11
3.6	Openings .....	11
	3.6.1 Equipment Openings.....	11
	3.6.2 Ventilation.....	11
	3.6.3 Drainage Openings .....	12
3.7	Mounting.....	12
3.8	Conduit Connection .....	12
3.9	Hubs and Fittings.....	12
3.10	Knockouts .....	12
3.11	External Operating Mechanisms .....	13
3.12	Access to Interior.....	13
3.13	Closing Hardware .....	13
3.14	Gaskets.....	13
3.15	Observation Windows.....	14
<b>4</b>	<b>MARKING</b> .....	15
4.1	Type Designations .....	15
4.2	Supplemental Markings .....	15
4.3	Location of Markings .....	15
4.4	Enclosure Orientation .....	15
4.5	Conduit Hubs and Closure Plates .....	15
4.6	Equipment Openings .....	16
4.7	Drainage Openings.....	16
<b>5</b>	<b>DESIGN TESTS</b> .....	17
5.1	General .....	17
5.2	Test For Protection against Access to Hazardous Parts .....	22
	5.2.1 Non-ventilated Enclosures Test Method .....	22
	5.2.2 Ventilated Enclosures Test Method .....	22
	5.2.3 Evaluation.....	22
5.3	Test for Protection against Ingress of Water (Dripping and Light Splashing).....	22
	5.3.1 Method A .....	22
	5.3.2 Method B .....	22
	5.3.3 Evaluation.....	23
5.4	Test for Protection against Ingress of Water (Rain).....	23

5.4.1	Method.....	23
5.4.2	Evaluation.....	23
5.5	Test for Protection against Ingress of Solid Foreign Objects (Settling Airborne Dust, Lint, Fibers, And Flyings).....	26
5.5.1	Outdoor Dust Test.....	26
5.5.2	Indoor Dust Tests.....	26
5.6	External Icing Test.....	28
5.6.1	Test Method.....	28
5.6.2	Evaluation.....	28
5.7	Test for Protection against Ingress of Water (Hosedown).....	29
5.7.1	Test Method.....	29
5.7.2	Evaluation.....	29
5.8	Indoor Corrosion Protection (Rust-Resistance Test (24-Hour Salt Spray Test)).....	29
5.8.1	Test Equipment.....	29
5.8.2	Salt Solution.....	29
5.8.3	Air Supply.....	30
5.8.4	Temperature.....	30
5.8.5	Test Procedure.....	30
5.8.6	Evaluation.....	30
5.9	Outdoor Corrosion Protection.....	30
5.9.1	600-Hour Salt Spray Test.....	30
5.9.2	Evaluation.....	30
5.9.3	1200-Hour Moist Carbon Dioxide—Sulfur Dioxide Test.....	30
5.10	Corrosion Protection—Type 3X, 3RX, 3SX, 4X Or 6F Enclosures.....	30
5.10.1	Evaluation.....	31
5.11	Test for Protection against Ingress of Water (Temporary Submersion).....	31
5.11.1	Test Method.....	31
5.11.2	Evaluation.....	31
5.12	Test for Protection against Ingress of Water (Prolonged Submersion).....	31
5.12.1	Alternate Tests.....	31
5.13	Oil Exclusion Test.....	32
5.13.1	Test Method.....	32
5.13.2	Evaluation.....	32
5.14	Gasket Tests.....	32
5.14.1	Aging Test.....	32
5.14.2	Evaluation.....	32
5.14.3	Oil immersion Test.....	33
<b>Annex A— Comparison Between NEMA Enclosure Type Numbers and ANSI/IEC Enclosure Classification Designations.....</b>		<b>34</b>
A.1	GENERAL.....	34
<b>Annex B— Descriptions, Applications, Features, and Test Criteria of Enclosures for Hazardous (Classified) Locations.....</b>		<b>37</b>
B.1	GENERAL.....	37
B.2	SPECIFIC TYPES.....	37
B.2.1	Enclosure Features.....	38
B.2.2	Enclosure Test Criteria.....	39
<b>Table</b>		
2-1	Comparison of Specific Applications of Enclosures for Indoor Nonhazardous (Non-Classified) Locations.....	5
2-2	Comparison of Specific Applications of Enclosures for Indoor and Outdoor Nonhazardous (Non-Classified) Locations.....	6
3-1	Knockout Dimensions.....	13

5-1A	Degrees of Protection against Access to Hazardous Parts .....	18
5-1B	Degrees of Protection against Solid Foreign Objects .....	19
5-1C	Degrees of Protection against Water .....	20
5-1D	Additional Protection.....	21
5-2	Tightening Torque .....	23

**Figures**

5-1	Rain-test Spray-head Piping .....	24
5-2	Rain-test Spray Head .....	25

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## FOREWORD

This Standards Publication covers the classification and description of enclosures for electrical equipment. Enclosures for rotating apparatus have not been included. The primary purpose of this publication is to permit a potential user to determine:

1. The type of enclosure appropriate for the application.
2. The features the enclosure is expected to have.
3. The tests applied to the enclosure to demonstrate its conformance to the description.

These standards are used by the electrical industry to provide guidelines for the manufacture and proper application of enclosures and to promote the benefits of repetitive manufacturing and widespread enclosure availability.

Each type of enclosure is described in general and functional terms where practicable and omits reference to structural details and specific applications except where they are essential to the identification of the enclosure type. For such structural details and specific applications, see the appropriate NEMA product standards publication.

Individual product standards publications incorporating enclosure construction unique to the product design may reflect the type of designations contained herein provided the design tests for such construction equal or exceed the requirements of these Standards Publication.

User needs have been considered throughout the development of this publication. Proposed or recommended revisions should be submitted to:

Vice President, Technical Services  
National Electrical Manufacturers Association  
1300 N. 17th Street  
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This Standards Publication was developed by the NEMA Enclosure Section of the National Electrical Manufacturers Association. Section approval of the standard does not necessarily imply that all section members voted for its approval or participated in its development. At the time it was approved, the Enclosure Section was composed of the following members:

Allied Moulded Products, Inc. — Bryan, OH  
Boltswitch, Inc. — Crystal Lake, IL  
Carlton, Lamson & Sessions — Cleveland, OH  
Cooper B-Line — Sherman, TX  
Cooper Crouse-Hinds — Syracuse, NY  
Eaton Corporation — Pittsburgh, PA  
EGS Electrical Group — Skokie, IL  
GE Industrial Systems — Plainville, CT  
Hoffman Enclosures Inc. — Anoka, MN  
Hubbell Incorporated — Bridgeport, CT

Killark Electric Mfg. Company — St. Louis, MO  
Milbank Manufacturing Company — Concordia, MO  
Moeller Electric Corporation — Franklin, MA  
Penn Panel & Box Company — Collingdale, PA  
Rittal Corporation — Springfield, OH  
Robroy Industries, Inc. — Belding, MI  
Siemens Energy & Automation, Inc. — Alpharetta, GA  
Square D Company/Schneider Electric — Lexington, KY  
Thomas & Betts Corporation — Memphis, TN

## Section 1 GENERAL

### 1.1 SCOPE

This standard covers enclosures for electrical equipment rated not more than 1000 Volts and intended to be installed and used as follows:

- a. Non-hazardous (non-classified) locations
  1. Enclosures for indoor locations, Types 1, 2, 5, 12, 12K, and 13; and
  2. Enclosures for indoor or outdoor locations, Types 3, 3X, 3R, 3RX, 3S, 3SX, 4, 4X, 5, and 6P.
- b. Hazardous (classified) locations
  1. Enclosures for indoor locations, Types 7 and 9;
  2. Enclosures for indoor or outdoor locations, Type 8; and
  3. Enclosures for mining applications, Type 10.

Requirements for enclosures for non-hazardous (non-classified) locations are contained in the body of the standard. Requirements for enclosures for hazardous (classified) locations are contained in Annex A of the standard.

This standard covers the requirements to provide protection to the enclosed equipment against specific environmental conditions.

This standard supplements requirements for enclosures that are contained in the individual product standards.

This standard does not cover the requirements for protection of devices against conditions such as condensation, icing, corrosion, or contamination, which may occur within the enclosure or which may enter via conduit or unsealed openings.

A product that contains features, characteristics, components, materials, or systems new or different from those in use when the standard was developed, and that involves a risk of fire, electric shock, or injury to persons shall be evaluated using the appropriate additional component and end-product requirements as determined necessary to maintain the level of safety for the user of the product as originally anticipated by the intent of this standard.

### 1.2 REFERENCES

The following documents contain provisions, which through reference in this text, constitute provisions of this Standards Publication. By reference herein these publications are adopted, in whole or in part as indicated, in this publication.

**American National Standards Institute (ANSI)**  
11 West 42nd Street  
New York, NY 10036

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