

NEMA VE 1-2009

Metal Cable Tray Systems



NEMA VE 1

**METAL CABLE TRAY
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NEMA Standards Publication VE 1-2009

Canadian Standards Association Publication CSA C22.2 No. 120.1-09

Metal Cable Tray Systems

Published by:

National Electrical Manufacturers Association

1300 North 17th Street
Rosslyn, Virginia 22209

www.nema.org

In Canada, published by:

Canadian Standards Association

5060 Spectrum Way, Suite 100
Mississauga, ON, Canada L4W 5N6

www.csa.ca

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Canadian Standards Association

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Preface

This is the common CSA and NEMA Standard for Metal Cable Tray Systems. It is the third edition of C22.2 No. 126.1, superseding the previous editions published in 2002 and 1998, and the fifth edition of NEMA VE 1, superseding the previous edition published in 2002.

This common Standard was prepared by the CANENA Technical Harmonization Committee for Metal Cable Tray Systems, comprising members from the Canadian Standards Association, National Electrical Manufacturers Association, and the cable tray manufacturing industry. The efforts of the CANENA Technical Harmonization Committee are gratefully acknowledged.

This standard is considered suitable for use for conformity assessment within the stated scope of the standard.

This Standard was reviewed by the CSA Subcommittee on Cable Tray Systems under the jurisdiction of the Technical Committee on Wiring Products and the Strategic Resource Group, and has been formally approved by the Technical Committee. Where reference is made to a specific number of samples to be tested, the specified number is considered to be a minimum quantity. This Standard was also approved at NEMA by the Codes and Standards Committee.

NOTE—Although the intended primary application of this Standard is stated in its Scope, it is important to note that it remains the responsibility of the users of the Standard to judge its suitability for their particular purpose.

Level of Harmonization

This Standard uses an IEC format, but is not based on, nor is it to be considered equivalent to, an IEC standard. This Standard is published as an equivalent standard.

An equivalent standard is a standard that is substantially the same in technical content, except as follows. Technical deviations are allowed for Codes and Governmental Regulations and those recognized as being in accordance with NAFTA Article 905, for example, because of fundamental, climatic, geographical, technological, or infrastructural factors, scientific estimation, or the level of protection that the country considers appropriate. Presentation of the NEMA and CSA versions is to be word for word except for editorial changes.

Reasons for Differences to IEC

The Technical Harmonization Committee (THC) identified one IEC standard that addresses electrical cable tray systems included in the scope of this Standard. The THC determined the safe use of electrical cable tray is dependent on the design, performance, and installation of the cable tray system. The IEC standard does not mention the equipment grounding function of cable tray, and there are no requirements for corrosion protection at this time. Significant investigation is required to assess safety and system issues that may lead to harmonization of traditional North American electrical cable tray standards with those presently addressed in the known IEC standard. The THC agreed such future investigation might be facilitated by completion of harmonization of the North American standards for electrical cable tray.

Interpretations

The interpretation by the Standards Development Organization (SDO) of an identical or equivalent standard is to be based on the literal text to determine compliance with the standard in accordance with the procedural rules of the SDO. If more than one interpretation of the literal text has been identified, a revision is to be proposed as soon as possible to each of the SDOs to more accurately reflect the intent.

CSA Effective Date

The effective date for CSA will be announced through *CSA Informs* or a CSA Certification Notice.

NEMA Effective Date

The effective date for NEMA will be the publication date.

Foreword (NEMA)

This Standards Publication provides technical requirements concerning the construction, testing, and performance of metal cable tray systems. The development of this publication is the result of many years of research, investigation, and experience by the members of the Cable Tray Section of NEMA. Throughout the development of this publication, test methods and performance values have been related as closely as possible to end-use applications. It has been developed through consultation among manufacturers, with users and engineering societies, to result in improved serviceability and safety of metal cable tray systems.

This publication reflects the study of applicable building codes and the *National Electrical Code*[®], and adheres to applicable national material and manufacturing standards, such as those of the American Society for Testing and Materials, the American Iron and Steel Institute, the Aluminum Association, and Underwriters Laboratories, Inc. The NEMA Cable Tray Section periodically reviews this publication for any revisions necessary, to keep it up to date with advancing technology.

Comments or recommended revisions are welcomed and should be submitted to:

Vice President, Technical Services
National Electrical Manufacturers Association
1300 North 17th Street, Suite 1752
Rosslyn, Virginia 22209

The primary purpose of this Standards Publication is to encourage the manufacture and utilization of standardized metal cable tray systems and to eliminate misunderstandings between manufacturers and users.

The cable tray system manufacturer has limited or no control over the following factors, which are vital to a safe installation:

- a. environmental conditions;
- b. system design;
- c. product selection and application;
- d. installation practices; and
- e. system maintenance.

This Standards Publication was developed by the Cable Tray Section, and has been promulgated with a view toward promoting safety of persons and property by the proper selection and use of metal cable tray systems. At the time it was approved, the Cable Tray Section was composed of the following members:

Cablofil, Inc.—Mason, Utah, IL
Chalfant Manufacturing Company—Cleveland, OH
Cooper B-Line—Highland, IL
Cope/Allied Electrical Group—Harvey, IL
MP Husky Corporation—Greenville, SC
P-World Products, Inc.—Atlanta, GA
The Wilsmore Company—West Hartford, CT
Thomas & Betts Corporation—Memphis, TN

Section 1

SCOPE

This Standard specifies the requirements for metal cable trays and associated fittings designed for use in accordance with the rules of the *Canadian Electrical Code (CEC), Part I*, and the *National Electrical Code (NEC)*.