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CSA B72:20
National Standard of Canada

Installation code for lightning protection systems

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Contents

Preface

This is the third edition of CSA B72, *Installation code for lightning protection systems*. It supersedes the previous editions published in 1987 and 1960.

The major changes to this edition include the following:

a) The Standard has been updated and expanded in order to harmonize lightning protection standards within North America.
b) The requirements for the various components that make up a system have been consolidated into their own sections (e.g., air terminals, conductors), and ANSI/CAN/UL 96:2016 has been incorporated as the component standard
c) Further requirements regarding specialized structures and classes have been included following the base requirements in the initial sections.
d) New requirements have been added under Class IV installations, covering a number of specialized structures, including buildings constructed of structural metallic systems, telecommunications equipment, and rooftop helipads.
e) A new clause has been added on protection for solar arrays.
f) The informative annexes have been expanded into four annexes. Further guidance has been provided for inspection and maintenance of lightning protection systems, the risk analysis has been updated to conform to current best practices, and an annex on surge protective devices has been added.

This Standard was prepared by the Technical Committee on Installation Code for Lightning Protection Systems, under the jurisdiction of the Strategic Steering Committee on Fuels and Appliances, and has been formally approved by the Technical Committee.

This Standard has been developed in compliance with Standards Council of Canada requirements for National Standards of Canada. It has been published as a National Standard of Canada by CSA Group.

Interpretations: The Strategic Steering Committee on Standards for Fuels and Appliances has provided the following direction for the interpretation of standards under its jurisdiction: "The literal text shall be used in judging compliance of products with the safety requirements of this Standard. When the literal text cannot be applied to the product, such as for new materials or construction, and when a relevant CSA committee interpretation has not already been published, CSA's procedures for interpretation shall be followed to determine the intended safety principle."

Notes:

1) *Use of the singular does not exclude the plural (and vice versa) when the sense allows.*
2) *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.*
3) *This Standard was developed by consensus, which is defined by* CSA Policy governing standardization — Code of good practice for standardization *as "substantial agreement. Consensus implies much more than a simple majority, but not necessarily unanimity". It is consistent with this definition that a member may be included in the Technical Committee list and yet not be in full agreement with all clauses of this Standard.*
4) *To submit a request for interpretation of this Standard, please send the following information to* ***inquiries@csagroup.org*** *and include "Request for interpretation" in the subject line:*
   a) *define the problem, making reference to the specific clause, and, where appropriate, include an illustrative sketch;*
   b) *provide an explanation of circumstances surrounding the actual field condition; and*
   c) *where possible, phrase the request in such a way that a specific "yes" or "no" answer will address the issue.*

Committee interpretations are processed in accordance with the CSA Directives and guidelines governing standardization *and are available on the* Current Standards Activities *page at* ***standardsactivities.csa.ca***.

5) *This Standard is subject to review within five years from the date of publication. Suggestions for its improvement will be referred to the appropriate committee. To submit a proposal for change, please send the following information to* ***inquiries@csagroup.org*** *and include "Proposal for change" in the subject line:*
   a) *Standard designation (number);*
   b) *relevant clause, table, and/or figure number;*
   c) *wording of the proposed change; and*
   d) *rationale for the change.*

CSA B72:20
Installation code for lightning protection systems

0 Introduction

0.1 General

The function of a lightning protection system is to provide a means by which a lightning discharge can enter or leave the earth while eliminating or minimizing damage to the structure on which the system is installed.

0.2 Overview

The following document provides requirements for protection from lightning for the majority of structures that designers and builders will encounter. Specialized structures falling outside the scope of this document should be treated on an individual basis.

0.3 Users

This Standard is intended to be used by

a) lightning protection installers, designers, and maintenance personnel;
b) engineers, architects, and other design professionals; and
c) authorities having jurisdiction, third-party inspection agencies, and nationally recognized testing laboratories.

1 Scope

1.1

This Standard covers the protection from lightning of

a) recreational, residential, institutional, medical, agricultural, industrial, commercial, military, and telecommunications buildings and structures;
b) tall, slender structures such as smokestacks, silos, tanks, towers, masts, and poles;
c) immobile property such as equipment, tents, fences, trees, and solar arrays; and
d) high-risk structures with dangerous contents such as explosives and flammable goods.

1.2

This Standard covers the protection from lightning of structures housing electrical generation, transmission, and distribution systems, as well as structures housing communication systems, but not the equipment or installation requirements for such systems.

1.3

This Standard does not cover installation requirements for early streamer emission systems or charge dissipation/charge transfer systems. No recognized standards body or testing agency exists for Canadian installations of these devices.

