C22.2 No. 270-16

CSA Group

# Arc fault protective devices

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# ***Arc fault protective devices***



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# Preface

This is the second edition of C22.2 No. 270, *Arc fault protective devices,* one of a series of Standards issued by CSA Group under Part II of the *Canadian Electrical Code*. It supersedes the previous edition published in 2014.

This edition includes additional requirements for leakage current detector interrupters, deletion of references to branch/feeder type AFCIs, updated testing figures, an updated limited short circuit test for cord connected devices, a revised finger probe, and numerous other smaller updates throughout.

Arc fault protective devices are usually embodied in combination with another device. As such, the user of this Standard will need to reference additional requirements as found in CSA C22.2 No. 5, CSA C22.2 No. 144.1, CSA C22.2 No. 21, and CSA C22.2 No. 42 as applicable.

For general information on the Standards of the *Canadian Electrical Code, Part II*, see the Preface of CAN/CSA-C22.2 No. 0, *General Requirements — Canadian Electrical Code, Part II*.

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

This Standard was prepared by the Subcommittee on Arc Fault Protective Devices under the jurisdiction of the Technical Committee on Industrial Products and the Strategic Steering Committee on Requirements for Electrical Safety, and has been formally approved by the Technical Committee.

Interpretations: The Strategic Steering Committee on Requirements for Electrical Safety 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 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 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.*

# C22.2 No. 270-16
# Arc fault protective devices

## 1 Scope

### 1.1
This Standard applies to arc fault protective devices designed to be installed in accordance with the Rules of the *Canadian Electrical Code, Part I*.

### 1.2
These devices include arc fault circuit interrupters (AFCI) and devices that incorporate arc fault circuit protection for use on single phase, 120 V, or single phase, two-pole, three-wire 120/240 V alternating current, 60 Hz circuits having a maximum current rating of up to 20 A for permanently connected devices.

### 1.3
This Standard also includes cord-connected devices for use on single phase, 120 V, or single phase, two-pole, three-wire 120/240 V alternating current, 60 Hz supply up to 30 A.

### 1.4
This Standard additionally applies to leakage current detector interrupters.

### 1.5
In this Standard, “shall” is used to express a requirement, i.e., a provision that the user is obliged to satisfy in order to comply with the standard; “should” is used to express a recommendation or that which is advised but not required; and “may” is used to express an option or that which is permissible within the limits of the Standard.

Notes accompanying clauses do not include requirements or alternative requirements; the purpose of a note accompanying a clause is to separate from the text explanatory or informative material.

Notes to tables and figures are considered part of the table or figure and may be written as requirements.

Annexes are designated normative (mandatory) or informative (non-mandatory) to define their application.

## 2 Reference publications
This Standard refers to the following publications, and where such reference is made, it shall be to the edition listed below:

**CSA Group**
C22.1-15
*Canadian Electrical Code, Part I*

  