CSA Group

C22.2 No. 159-18
National Standard of Canada

Plugs, connectors, receptacles, and similar wiring devices for use in hazardous locations

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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 to judge its suitability for their particular purpose.

National Standard of Canada

C22.2 No. 159-18

Plugs, connectors, receptacles, and similar wiring devices for use in hazardous locations

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Preface

This is the third edition of CSA C22.2 No. 159 *Plugs, connectors, receptacles, and similar wiring devices for use in hazardous locations*. It supersedes the previous editions published in 1987 and 1982 under the title *Attachment plugs, receptacles, and similar wiring devices for use in hazardous locations*.

Changes to this edition include the

a) addition of Division 2 and Class III;
b) removal of requirements covered by other standards; and
c) addition of Annex A to indicate how C22.2 No. 182.1 and C22.2 No. 182.3 are applied for the products covered by this Standard.

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

This Standard was prepared by the Integrated Committee on Hazardous Location Products 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.

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 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. 159-18
Plugs, connectors, receptacles, and similar wiring devices for use in hazardous locations

1 Scope

1.1
This Standard covers receptacles with attachment plugs; receptacles with attachment plugs interlocked with circuit breakers; receptacles with attachment plugs interlocked with switches; and cable and cord connectors, couplers, and flanged equipment power inlets and flanged equipment power outlets with ratings as specified in Clause 1.2 intended for connection to copper conductors only and for installation and use in the following hazardous locations in accordance with the Rules of *Canadian Electrical Code, Part I* and CSA M421:

a) Class I, Division 1, Groups A, B, C, and D;
b) Class I, Division 2, Groups A, B, C, and D;
c) Class II, Groups F and G; and
d) Class III.

1.2
This Standard covers

a) Class I, Division 1 and Class II devices rated not more than 600 A or not more than 600 V ac or not more than 250 V dc;
b) Class I, Division 2 devices rated not more than 1200 A and not more than 1000 V ac or not more than 1000 V dc; and
c) equipment for gaseous mines rated not more than 1100 V ac.

1.3
This Standard does not cover plug and receptacle/connector combinations that do not incorporate either a delayed withdrawal, an interlock mechanism or other retaining device.

Note: *In this Standard, devices that are classified for Group G locations are acceptable for use in atmospheres containing coal or coke dust.*

1.4
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, including all amendments published thereto.

CSA Group

C22.1-15
Canadian Electrical Code, Part I

CAN/CSA-C22.2 No. 0-10 (R2015)
General Requirements — Canadian Electrical Code, Part II

C22.2 No. 25-17
Enclosures for use in Class II, Groups E, F, and G hazardous locations

C22.2 No. 30-M1986 (R2016)
Explosion-proof enclosures for use in Class I hazardous locations

C22.2 No. 94.2-15
Enclosures for electrical equipment, environmental considerations

C22.2 No. 182.1-17
Plugs, receptacles, and cable connectors of the pin and sleeve type

C22.2 No. 182.3-16
Special use attachment plugs, receptacles, and connectors

C22.2 No. 298-16
High voltage couplers

C22.2 No. 1691-12 (R2016)
Single pole locking-type separable connectors

CAN/CSA-C22.2 No. 60079-1:16
Explosive atmospheres — Part 1: Equipment protection by flameproof enclosures “d”

CAN/CSA-C22.2 No. 60079-31:15
Explosive atmospheres — Part 31: Equipment dust ignition protection by enclosure “t”

CAN/CSA-C22.2 No. 60529:16
Degrees of protection provided by enclosures (IP Code)

M421-16
Use of electricity in mines