

AMERICAN NATIONAL STANDARD

ANSI/ISA-60079-11 (12.02.01)-2014

Supersedes ANSI/ISA-60079-11 (12.02.01)-2013

**Explosive Atmospheres –
Part 11: Equipment protection
by intrinsic safety “i” (Edition 6.2)**

Approved 28 March 2014

Commitment for Amendments

This standard is issued jointly by ISA and Underwriters Laboratories Incorporated (UL). Comments or proposals for revisions on any part of the standard may be submitted to ISA or UL at any time. Revisions to this standard will be made only after processing according to the standards development procedures of ISA and UL. ***ISA and UL will issue revisions to this standard by means of a new edition or revised or additional pages bearing their date of issue.***

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The most recent designation of ANSI/ISA-60079-11 and ANSI/UL 60079-11 as American National Standards occurred on 28 March 2014.

This ANSI/UL Standard for Safety, which consists of the sixth edition, is under continuous maintenance, whereby each revision is ANSI approved upon publication. Comments or proposals for revisions on any part of the standard may be submitted to UL at any time. Proposals should be submitted via a Proposal Request in UL's On-Line Collaborative Standards Development System (CSDS) at <http://csds.ul.com>.

ISA
ANSI/ISA-60079-11
Edition 6.2

Underwriters Laboratories Inc.
ANSI/UL 60079-11
Sixth Edition



Explosive atmospheres – Part 11: Equipment protection by intrinsic safety “i”

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General Notes

This is the common ISA and UL standard for Explosive atmospheres - Part 11: Equipment protection by intrinsic safety “i”. It is edition 6.2 of ANSI/ISA-60079-11 (superseding ANSI/ISA-60079-11-2013) and edition 6 of ANSI/UL 60079-11.

ANSI/ISA-60079-11 and ANSI/UL 60079-11 contain identical requirements, with the publication date of. The presentation and format of the standards material may differ between the two published standards.

This common standard was prepared by ISA and Underwriters Laboratories Inc. (UL).

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 adopts the IEC text with deviations.

The requirements are presented in different formats. The ISA version of the standard illustrates the national differences from the IEC text through the use of legislative text (strike-out and underline). The UL version of the standard illustrates national differences immediately following the IEC text. National differences between the UL version and the ISA version shall be word for word except for editorial changes.

Interpretations

The interpretation by the SDO of an identical or equivalent standard shall 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 shall be proposed as soon as possible to each of the SDOs to more accurately reflect the intent.

UL Effective Date

The effective date for UL is the date of publication. However, the fifth edition of UL 60079-11 will also be effective until 1 September 2018.

A UL effective date is one established by Underwriters Laboratories Inc. and is not part of the ANSI approved standard.

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Preface (ISA)

This ISA standard is based on the 6th edition of IEC Publication 60079-11 including Corrigendum 1. It is the intention of the ISA12 Committee to develop an ANSI Standard that is harmonized with IEC 60079-11 to the fullest extent possible. This preface is included for informational purposes and is not part of ANSI/ISA-60079-11. The document is a modification of the IEC document and includes U.S. deviations encompassing both additions and deletions of information.

The entire text of IEC 60079-11:2011 is included in this document including Corrigendum 1. U.S. National Deviations are shown by ~~strikeout~~ through deleted text and underlining of added text. Tables, or portions of tables, that are to be deleted are shown as shaded; figures to be deleted are marked with the overlay "X." Some tables have been reformatted to allow for US standard paper sizes. There are ten annexes in this standard. Annexes A, B, D, F and G are normative and form part of the requirements of this standard. Annexes C, E, H, I and J are informative and are not considered part of this standard.

The significant changes with respect to the previous edition are listed below:

- Inclusion of non-edition specific references to ANSI/ISA-60079-0.
- The merging of the apparatus requirements for FISCO from ANSI/ISA-60079-27.
- The merging of the requirements for combustible dust atmospheres from ANSI/ISA-61241-11.
- Clarification of the requirements for accessories connected to intrinsically safe apparatus; such as chargers and data loggers.
- Addition of new test requirements for opto-isolators.
- Introduction of Annex H about ignition testing of semiconductor limiting power supply circuits.
- [Clarification of the spacing requirements applicable to protective fuses.](#)

The standards referenced within this document may contain provisions which, through reference in this text, constitute requirements of this document. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this document are encouraged to investigate the possibility of applying the most recent editions of the standards indicated within this document. Members of IEC and ISO maintain registers of currently valid International Standards. ANSI maintains registers of currently valid U.S. National Standards.

This document has been prepared as part of the service of ISA toward a goal of uniformity in the field of instrumentation. To be of real value, this document should not be static but should be subject to periodic review. Toward this end, the Society welcomes all comments and criticisms and asks that they be addressed to the Secretary, Standards and Practices Board; ISA; 67 Alexander Drive; P. O. Box 12277; Research Triangle Park, NC 27709; Telephone (919) 549-8411; Fax (919) 549-8288; E-mail: standards@isa.org.

The ISA Standards and Practices Department is aware of the growing need for attention to the metric system of units in general, and the International System of Units (SI) in particular, in the preparation of instrumentation standards. The Department is further aware of the benefits to USA users of ISA standards of incorporating suitable references to the SI (and the metric system) in their business and professional dealings with other countries. Toward this end, this Department will endeavour to introduce SI-acceptable metric units in all new and revised standards, recommended practices, and technical reports to the greatest extent possible. IEEE/ASTM SI 10, *American National Standard for Metric Practice*, and future revisions, will be the reference guide for definitions, symbols, abbreviations, and conversion factors.

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