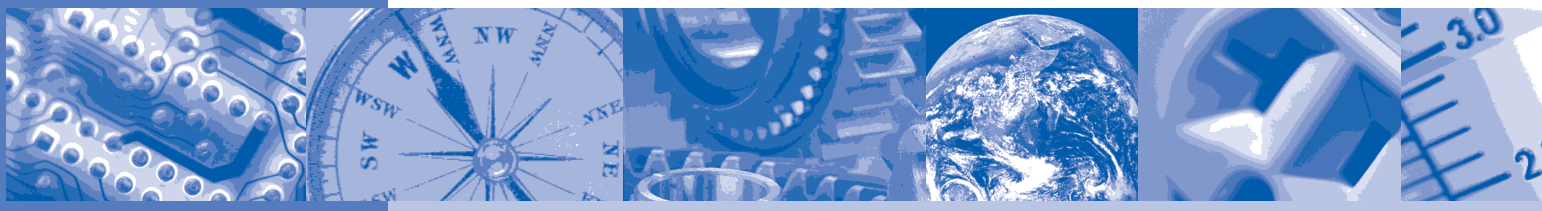
ISA–S12.00.01–1999 (IEC 60079-0 Mod)



Electrical Apparatus for Use in Class I, Zones 0, 1, & 2 Hazardous (Classified) Locations — General Requirements

Approved 15 July 1999

ISA–S12.00.01–1999
Electrical Apparatus for Use in Class I, Zones 0, 1 & 2 Hazardous (Classified) Locations:
General Requirements

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This standard was approved for publication by the ISA Standards and Practices Board on 15 July 1999.

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Contents

Foreword

All text of IEC 60079-0:1998 is included. U.S. National Deviations are shown by ~~strikeout~~ through text deleted and underline under text added. Tables, or portions of tables, that are to be deleted are shown as shaded; figures to be deleted are marked with the overlay "X." There are six annexes in this Standard. Annexes A, D, E, and F are informative and are not considered part of this Standard. Annexes B, and C are Normative and are considered part of this Standard.

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1 Scope

This standard specifies the general requirements for construction, testing and marking of electrical apparatus, Ex cable entries and Ex components, intended for use in potentially explosive atmospheres of gas, vapor and mist defined as Class I, Zone 0, 1 or 2 by the National Electrical Code, NFPA 70.

~~This standard does not specify requirements for safety, other than those directly related to the explosion risk.~~

Apparatus covered by this standard and the associated standards noted below shall also comply with the applicable requirements for similar apparatus for use in unclassified locations. A list of commonly applied standards is shown in informative annex E.

NOTE — Requirements for safety of electrical equipment in ordinary (unclassified) locations can be found in ANSI Standards, NEMA Standards, Federal Regulations, etc.

This standard is ~~or will be~~ supplemented or modified by the following standards ~~parts of IEC 60079~~ concerning specific types of protection:

- Flameproof enclosures ‘d’, ~~IEC 60079-1~~ (ISA-S12.22.01-1998 [IEC 60079-1 Mod]);
- Pressurized enclosures ‘p’, ~~IEC 60079-2;~~ see Note 3;
- Powder-filling ‘q’, ~~IEC 60079-5~~ (ISA-S12.25.01-1998 [IEC 60079-5 Mod]);
- Oil-immersion ‘o’, ~~IEC 60079-6~~ (ISA-S12.26.01-1998 [IEC 60079-6 Mod]);
- Increased safety ‘e’, ~~IEC 60079-7~~ (ISA-S12.16.01-1998 (IEC 60079-7 Mod));
- Intrinsic safety ‘i’, ~~IEC 60079-11~~ (ISA-S12.02.01-1999 [IEC 60079-11 Mod]);~~-~~
- Encapsulation ‘m’, ~~IEC 60079-18~~ (ISA-S12.23.01-1998 [IEC 60079-18 Mod]).
- ~~Caplights for mines susceptible to firedamp - under consideration.~~

This ~~part of IEC 60079~~ standard and the ~~parts of IEC 60079 mentioned above~~ above documents are not applicable to the construction of electromedical apparatus, shot-firing exploders, test devices for exploders and for shot-firing circuits.

NOTE 1 — In addition to the types of protection listed above, ~~IEC 60079-15~~ (ISA dS12.12.02 [IEC 60079-15 Mod]), is applicable for use in potentially explosive atmospheres.

NOTE 2 — Apparatus not conforming with this standard or the standards listed in this clause, may be considered safe by a national or other authorised body for use in potentially explosive atmospheres. In such cases, the apparatus is identified with the symbol 's'.

NOTE 3 — The requirements for pressurization can be found in ANSI/NFPA 496, “Pressurized Enclosures for Electrical Equipment,” along with additional guidance in ISA-RP12.4-1996, “Pressurized Enclosures.”

2 ~~Normative~~ References

The following ~~normative~~ documents may contain provisions, which, through reference in this text, constitute provisions of this ~~International~~ Standard. At the time of publication, the editions indicated were valid. All ~~normative~~ documents are subject to revision, and parties to agreements based on this ~~International~~ Standard are encouraged to investigate the possibility of applying the most recent editions of the ~~normative~~ documents indicated below. Members of IEC and ISO maintain registers of currently valid International Standards. ANSI maintains registers of currently valid US National Standards.