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**Explosive Atmospheres - Part 25:
Intrinsically safe electrical systems**

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Explosive Atmospheres - Part 25: Intrinsically safe electrical systems

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Foreword (ISA)

All text of IEC 60079-25:2010 (Edition 2) 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 ten annexes in this standard. Annexes B, D, G and I are normative and are considered part of this standard. Annexes A, B, E, F, H and J are informative and are not considered part of this standard.

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1 Scope

This ~~part of IEC 60079 standard~~ contains the specific requirements for construction and assessment of intrinsically safe electrical systems, type of protection "i", intended for use, as a whole or in part, in Class I, Zone 0, 1, or 2, or Zone 20, 21, or 22 hazardous (classified) locations as defined by the National Electrical Code[®] (NEC), ANSI/NFPA 70[®] ~~in locations in which the use of Group I, II or III apparatus is required.~~

NOTE 1 This standard is intended for use by the designer of the system who may be a manufacturer, a specialist consultant or a member of the end-user's staff.

This standard supplements and modifies the general requirements of ANSI/ISA-60079-0 and ANSI/ISA-61241-0 ~~IEC 60079-0~~ and the intrinsic safety standard ANSI/ISA-60079-11 and ANSI/ISA-61241-11 ~~IEC 60079-11~~. Where a requirement of this standard conflicts with a requirement of ANSI/ISA-60079-0, ANSI/ISA-60079-11, ANSI/ISA-61241-0 ~~IEC 60079-0~~ or ANSI/ISA-61241-11 ~~IEC 60079-11~~, the requirement of this standard takes precedence.

~~This standard supplements IEC 60079-11, the requirements of which apply to electrical apparatus used in intrinsically safe electrical systems.~~

The installation requirements of Group II or Group III systems designed in accordance with this standard are specified in the National Electrical Code ANSI/NFPA 70 ~~IEC 60079-14~~.

NOTE 2 ~~Group I installation requirements are presently not provided in IEC 60079-14.~~

2 Normative References

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60060-1, *High-voltage test techniques – Part 1: General definitions and test requirements*

~~IEC 60079-0, Explosive atmospheres – Part 0: Equipment – General requirements~~

ANSI/ISA-60079-0 (12.00.01)-2009, Explosive atmospheres – Part 0: Equipment – General Requirements

~~IEC 60079-11:2006, Explosive atmospheres – Part 11: Equipment protection by intrinsic safety "i"~~

ANSI/ISA-60079-11 (12.02.01), Explosive Atmospheres – Part 11: Equipment protection by intrinsic safety "i"

~~IEC 60079-14:2007, Explosive atmospheres – Part 14: Electrical installations design, selection and erection~~

~~IEC 60079-15, Electrical apparatus for explosive gas atmospheres – Part 15: Construction, test and marking of type of protection "n" electrical apparatus~~

ANSI/ISA-60079-15 (12.12.02)-2009 Electrical Apparatus for Use in Class I, Zone 2 Hazardous (Classified) Locations: Type of Protection "n"

~~IEC 60079-27:2008, Explosive atmospheres – Part 27: Fieldbus intrinsically safe concept (FISCO)~~

ANSI/ISA-60079-27 (12.02.04)-2006, Fieldbus Intrinsically Safe Concept (FISCO) and Fieldbus Non-Incendive Concept (FNICO)