

AMERICAN NATIONAL STANDARD

ANSI/ISA-61241-11 (12.10.04)-2006 (R2015)

**Electrical Apparatus for Use in Zone 20, Zone 21
and Zone 22 Hazardous (Classified) Locations –
Protection by Intrinsic Safety “iD”**

Approved 29 September 2015

ANSI/ISA-61241-11 (12.10.04)-2006 (R2015), Electrical Apparatus for Use in Zone 20, Zone 21 and Zone 22 Hazardous (Classified) Locations – Protection by Intrinsic Safety “iD”

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FOREWORD

All text of IEC 61241-11:2005 including Corrigendum 1 is included in this document. U.S. National Deviations are shown by ~~strikeout~~ through deleted text and underline under added text. There are four annexes in this standard. Annex D is informative and is not considered part of this standard. Annexes A, B and C are normative and are considered part of this standard.

IEC 61241-11:2005 has been withdrawn and replaced by IEC 60079-11:2011, *Explosive atmospheres – Part 11: Equipment protection by intrinsic safety "i"*. ANSI/ISA-61241-11 (12.10.04)-2006 (R2015) is being maintained for the 2017 publication of NFPA 70: *National Electrical Code®*, in which the ISA standard is referenced.

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1 Scope

This standard ~~part of IEC 61244~~ specifies requirements for the construction and testing of intrinsically safe apparatus intended for use in an explosive dust atmosphere potentially explosive dust cloud or dust layer environments and for associated apparatus that is intended for connection to intrinsically safe circuits which enter such atmospheres environments.

This standard supplements the general requirements of ANSI/ISA-61241-0 ~~IEC 61241-0~~: except as indicated in Table A the following list. Where a requirement of this standard conflicts with a requirement of ANSI/ISA-61241-0 the requirements of this standard shall take precedence.

NOTE Intrinsically safe and associated intrinsically safe apparatus ~~Apparatus~~ utilized in systems ~~will~~should ~~shall~~ meet the requirements of ~~IEC ANSI/ISA-RP12.06.01 IEC 60079-25~~.

If associated apparatus is protected by a type of protection listed in ANSI/ISA-61241-0 ~~IEC 61241-0~~ or ANSI/ISA-60079-0 ~~IEC 60079-0~~ then the requirements of that method of protection together with the relevant standards, parts of ISA-61241-X ~~IEC 61241-0~~ or ANSI/ISA-60079-X, ~~IEC 60079~~ also apply to the associated apparatus. The list of exclusions in Table A which follows is directly applicable to associated apparatus intended for use in situations where there is no explosive dust potentially hazardous atmosphere and in other circumstances should be used in combination with the requirements of the other methods of protection.

Table A — Exclusion of specific clauses of ANSI/ISA-61241-0 (12.10.02)-2006

Clause or subclause of IEC <u>ANSI/ISA-61241-0</u>		Intrinsically safe apparatus	Associated apparatus
4.1	General	Applies	Applies
4.2	Principles for design and testing of apparatus for use in Zone 20	Applies	Excluded
4.3	Opening enclosures	Applies	Excluded
4.4	Environmental conditions	Applies	Excluded
5.1	Maximum surface temperature	Applies	Excluded
5.2	Maximum surface temperature with respect to dust layers above 50 mm	Applies	Excluded
5.3	Ambient temperature	Applies	Applies
6.1	Non-metallic enclosures and non-metallic parts of enclosures	Applies	Excluded
6.1.1	Material specification	Applies	Excluded
6.1.2	Plastic materials	Applies	Excluded
6.1.3	Verification of compliance	Applies	Excluded
6.1.4	Thermal endurance	Applies	Excluded
6.1.5	Electrostatic charges	Applies	Excluded
6.2	Enclosures containing light metals	Applies	Excluded
6.2.1	Composition	Applies	Excluded
6.2.2	Threaded holes	Excluded	Excluded
7	Fasteners	Excluded	Excluded
8	Interlocking devices	Excluded	Excluded
9	Bushings	Excluded	Excluded