

AS/NZS 60079.7:2002
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(Incorporating Amendment No. 1)

Australian/New Zealand Standard™

**Electrical apparatus for explosive gas
atmospheres**

Part 7: Increased safety 'e'



This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL-014, Electrical Equipment in Hazardous Areas. It was approved on behalf of the Council of Standards Australia on 11 February 2002 and on behalf of the Council of Standards New Zealand on 19 February 2002.

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The following are represented on Committee EL-014:

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Australian/New Zealand Standard™

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Part 7: Increased safety 'e'

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-014, Electrical Equipment in Hazardous Areas.

This Standard incorporates Amendment No. 1 (July 2005). The changes required by the Amendment are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected.

This Standard is identical with and has been reproduced from IEC 60079-7:2001, *Electrical apparatus for explosive gas atmospheres, Part 7: Increased safety “e”*.

The objective of this Standard is to set out the requirements for the design, construction, testing and marking of electrical apparatus with type of protection increased safety ‘e’ intended for use in explosive gas atmospheres; it applies to electrical apparatus with a rated value of supply voltage not exceeding 11 kV r.m.s. a.c. or d.c. and these apparatus do not produce arcs, sparks, or excessive temperatures in normal operation or under specified abnormal conditions.

This Standard will run concurrently with AS 2380.6—1988, *Electrical equipment for explosive atmospheres—Explosion-protection techniques Part 6: Increased safety*, until the AS/NZS 60079 series is complete, at which time the AS 2380 series will be withdrawn.

A reference to an International Standard identified in the Normative References Clause by strikethrough (~~example~~) is replaced by a reference to the Australian or Australian/New Zealand Standard(s) listed immediately thereafter and identified by shading (example).

As this Standard is reproduced from an International Standard a full point should be substituted for a comma when referring to a decimal marker.

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the annex to which they apply. A ‘normative’ annex is an integral part of a Standard, whereas an ‘informative’ annex is only for information and guidance.

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Any table, figure or text of the international standard that is struck through is not part of this standard. Any Australian/New Zealand table, figure or text that is added is part of this standard and is identified by shading.

1 Scope

This part of IEC 60079 specifies the requirements for the design, construction, testing and marking of electrical apparatus with type of protection increased safety 'e' intended for use in explosive gas atmospheres. This Standard applies to electrical apparatus with a rated value of supply voltage not exceeding 11 kV r.m.s. a.c. or d.c. Additional measures are applied to ensure that the apparatus does not produce arcs, sparks, or excessive temperatures in normal operation or under specified abnormal conditions.

These specific requirements are additional to the general requirements in IEC 60079-0 that apply to type of protection increased safety 'e' unless specifically excluded.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 60079. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of IEC 60079 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of IEC and ISO maintain registers of currently valid International Standards.

References to International Standards that are struck through in this Clause are replaced by references to equivalent Australian or Australian/New Zealand Standards that are listed immediately thereafter and identified by shading.

IEC 60034-1, *Rotating electrical machines – Part 1: Rating and performance*

IEC 60034-5, *Rotating electrical machines – Part 5: Degrees of protection provided by internal design of rotating electrical machines (IP code) – Classification*

IEC 60044-6, *Instrument transformers – Part 6: Requirements for protective current transformers for transient performance*

IEC 60050(426), *International Electrotechnical Vocabulary – Chapter 426: Electrical apparatus for explosive atmospheres*

IEC 60050(486), *International Electrotechnical Vocabulary – Chapter 486: Secondary cells and batteries*

IEC 60061-1, *Lamp caps and holders together with gauges for the control of interchangeability and safety – Part 1: Lamp caps*