AS/NZS 60079.7:2006
IEC 60079-7, Ed. 4.0 (2006)
(Incorporating Amendment No. 1)

AS/NZS 60079.7:2006

Australian/New Zealand Standard™

Explosive atmospheres

Part 7: Equipment protection by increased safety ‘e’

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL-014, Equipment for Explosive Atmospheres. It was approved on behalf of the Council of Standards Australia on 10 November 2006 and on behalf of the Council of Standards New Zealand on 15 December 2006.
This Standard was published on 27 December 2006.

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We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comments to the Chief Executive of either Standards Australia or Standards New Zealand at the address shown on the back cover.

This Standard was issued in draft form for comment as DR 06540.

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Explosive atmospheres

Part 7: Equipment protection by increased safety ‘e’

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-014, Equipment for Explosive Atmospheres, to supersede AS/NZS 60079.7:2000.

This Standard incorporates Amendment No. 1 (May 2007). 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.

The objective of this Standard is to specify 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 where the rated voltage does not exceed 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.

This Standard is identical with, and has been reproduced from IEC 60079-7, Ed. 4.0 (2006), *Explosive atmospheres – Part 7: Equipment protection by increased safety "e"*.

The significant changes with respect to the previous edition are—

(a) requirements for electrical connections expanded and clarified;

(b) requirements for luminaire ballasts expanded and clarified; and

(c) requirements for evaluation and testing of motor rotors clarified.

As this Standard is reproduced from an International Standard, the following applies:

(i) Its number does not appear on each page of text and its identity is shown only on the cover and title page.

(ii) In the source text 'IEC 60079-7' should read 'AS/NZS 60079.7'.

(iii) A full point should be substituted for a comma when referring to a decimal marker.

The terms 'normative' and 'informative' are used 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.

CONTENTS

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Australian/New Zealand Standard

Explosive atmospheres
Part 7: Equipment protection by increased safety ‘e’

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 where the rated voltage does not exceed 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.

This standard supplements and modifies the general requirements of IEC 60079-0. Where a requirement of this standard conflicts with a requirement of IEC 60079-0, the requirement of this standard takes precedence.

NOTE Increased safety "e" can provide Equipment Protection Levels (EPL) Mb or Gb. For further information, see Annex I.

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

AS 1359.101, *Rotating electrical machines—General requirements—Rating and performance* (identical to IEC 60034-1)

IEC 60034-5, *Rotating electrical machines – Part 5: Degrees of protection provided by the 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 (IEV) – Chapter 426: Electrical apparatus for explosive atmospheres*

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

IEC 60061-2, *Lamp caps and holders together with gauges for the control of interchangeability and safety – Part 2: Lampholders*

~~IEC 60064, *Tungsten filament lamps for domestic and similar general lighting purposes – Performance requirements*~~

AS 2325, Tungsten filament lamps for general service—Performance requirements (identical to IEC 60064)