

Australian/New Zealand Standard™

**Electrical apparatus for explosive gas
atmospheres**

Part 1: Flameproof enclosures 'd'

AS/NZS 60079.1:2005

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 8 April 2005 and on behalf of the Council of Standards New Zealand on 15 April 2005.
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The following are represented on Committee EL-014:

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Australian/New Zealand Standard™

Electrical apparatus for explosive gas atmospheres

Part 1: Flameproof enclosures 'd'

Originated as AS/NZS 60079.1:2002.
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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, to supersede AS/NZS 60079.1:2002.

This Standard is identical with, and has been reproduced from IEC 60079-1, Ed.5.0(2003), *Electrical apparatus for explosive gas atmospheres – Part 1: Flameproof enclosures “d”*.

The objective of this Standard is to set out the requirements for the construction and testing of electrical apparatus with type of protection ‘d’, intended for use in explosive gas atmospheres.

This Standard is to be read in conjunction with AS/NZS 60079.0, the requirements of which apply to electrical apparatus with flameproof enclosures.

This edition contains the following significant technical changes with regard to the previous edition:

- (a) Revisions to Clause 5 regarding the use of corrosion inhibiting grease, and regarding electroplating of joint surfaces.
- (b) Revisions to Clause 5 regarding gaps whose dimensions are less than required in the tables, and regarding taper threaded joints.
- (c) Revisions to Clause 13 regarding entries for flameproof enclosures.
- (d) Revisions to Clause 13 regarding cable glands and conduit entries.
- (e) Revisions to Clause 14 regarding test voltage for motors.
- (f) Revisions to Clause 15 regarding type tests for apparatus used at an ambient temperature below -20°C , or at an ambient temperature above 60°C .
- (g) Revisions to Clause 16 regarding routine tests for apparatus used at an ambient temperature below -20°C .
- (h) Revisions to Clause 19 regarding non-metallic enclosures.
- (i) Revisions to Annex C regarding Ex blanking elements and thread adapters.
- (j) Addition of a new normative Annex D regarding empty flameproof enclosures as Ex components.
- (k) Addition of a new normative Annex E regarding cells and batteries.

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- (i) Its number appears on the cover and title page while the international standard number appears only on the cover.
- (ii) In the source text ‘this International Standard’ should read ‘this Australian/New Zealand Standard’.
- (iii) A full point substitutes 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.

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Australian/New Zealand Standard**Electrical apparatus for explosive gas atmospheres
Part 1: Flameproof enclosures 'd'****1 Scope**

This part of IEC 60079 contains specific requirements for the construction and testing of electrical apparatus with the type of protection flameproof enclosure "d", intended for use in explosive gas atmospheres.

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.

References to international standards that are struck through in this clause are replaced by references to identical Australian or Australian/New Zealand Standards that are listed immediately thereafter and identified by shading.

~~IEC 60034-1:1996, *Rotating electrical machines—Part 1: Rating and performance*~~

AS 1359.101—1997, *Rotating electrical machines—General requirements—Rating and performance* (identical to IEC 60034-1:1996)

IEC 60061 (all parts), *Lamp caps and holders together with gauges for the control of interchangeability and safety*

~~IEC 60079-0:1998, *Electrical apparatus for explosive gas atmospheres—Part 0: General requirements*~~

AS/NZS 60079.0:2000, *Electrical apparatus for explosive gas atmospheres—General requirements* (identical to IEC 60079-0:1998)

~~IEC 60079-1-1:2002, *Electrical apparatus for explosive gas atmospheres—Part 1-1: Flameproof enclosures "d"—Method of test for ascertainment of maximum experimental safe gap*~~

AS/NZS 60079.1.1:2002, *Electrical apparatus for explosive gas atmospheres—Flameproof enclosures 'd'—Method of test for ascertainment of maximum experimental safe gap* (identical to IEC 60079-1-1:2002)

~~IEC 60079-7:2001, *Electrical apparatus for explosive gas atmospheres—Part 7: Increased safety "e"*~~

AS/NZS 60079.7:2002, *Electrical apparatus for explosive gas atmospheres—Increased safety 'e'* (identical to IEC 60079-7:2001)

~~IEC 60079-11:1999, *Electrical apparatus for explosive gas atmospheres—Part 11: Intrinsic safety "i"*~~

AS/NZS 60079.11:2000, *Electrical apparatus for explosive gas atmospheres—Intrinsic safety 'i'* (identical to IEC 60079-11:2002)