

Australian/New Zealand Standard™

**Electrical apparatus for explosive gas  
atmospheres**

**Part 25: Intrinsically safe systems**

## **AS/NZS 60079.25:2004**

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 24 November 2003 and on behalf of the Council of Standards New Zealand on 27 November 2003. It was published on 27 January 2004.

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**Electrical apparatus for explosive gas atmospheres**

**Part 25: Intrinsically safe systems**

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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.

The objective of this Standard is to set out 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 explosive atmospheres in Group II locations.

This Standard is identical with, and has been reproduced from, IEC 60079-25:2003, *Electrical apparatus for explosive gas atmospheres – Part 25: Intrinsically safe systems*.

Footnotes have been added to the original text of IEC 60079-25:2003, under C.4, to provide clarification on the specific items/aspects marked with \* and †.

Variations to IEC 60079-25:2003 are indicated at the appropriate places throughout this standard. Strikethrough (~~example~~) identifies IEC text, tables and figures which, for the purposes of this Australian/New Zealand Standard, are deleted. Where text, tables or figures are added, each is set in its proper place and identified by shading (example). Added figures are not themselves shaded, but are identified by a shaded border.

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**Australian/New Zealand Standard****Electrical apparatus for explosive gas atmospheres  
Part 25: Intrinsically safe systems**

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**1 Scope**

**1.1** This part of IEC 60079 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 explosive atmospheres in Group II locations. 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.

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

**1.3** The installation requirements of a Group II system designed in accordance with this standard are specified 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.

References to international standards that are struck through in this clause are replaced by references to Australian or Australian/New Zealand Standards that are listed immediately thereafter and identified by shading. Any Australian or Australian/New Zealand Standard that is identical to the International Standard it replaces is identified as such.

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

~~IEC 60079-0, *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 60079-11:1999, *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 60079-11:1999)

IEC 60079-14:2002, *Electrical apparatus for explosive gas atmospheres – Part 14: Electrical installations in hazardous areas (other than mines)*