AS/NZS 60079.15:2006
IEC 60079-15, Ed. 3 (2005)
(Incorporating Amendment No. 1)

AS/NZS 60079.15:2006

Australian/New Zealand Standard™

Electrical apparatus for explosive gas atmospheres

Part 15: Construction, test and marking of type of protection, 'n' electrical apparatus

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 14 December 2005 and on behalf of the Council of Standards New Zealand on 21 December 2005.
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The following are represented on Committee EL-014:

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Australian Coal Association
Australian Electrical and Electronic Manufacturers Association
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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.

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Electrical apparatus for explosive gas atmospheres

Part 15: Construction, test and marking of type of protection, 'n' electrical apparatus

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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; it will supersede AS 2380.9—1991, *Electrical equipment for explosive atmospheres—Explosion protection techniques Part 9: Type of protection n—Non-sparking* two years from publication.

This Standard incorporates Amendment No. 1 (December 2006). 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 60079-15, Ed. 3 (2005), *Electrical apparatus for explosive gas atmospheres – Part 15: Construction, test and marking of type of protection, "n" electrical apparatus*.

The objective of this Standard is to specify requirements for the construction, test and marking of Group II electrical apparatus with type of protection 'n', intended for use in explosive gas atmospheres.

This Standard will run concurrently with AS 2380.9—1991, *Electrical equipment for explosive atmospheres—Explosion protection techniques Part 9: Type of protection n—Non-sparking* for two years from publication; after two years, AS 2380.9—1991 will be withdrawn.

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

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

(b) In the source text 'this part of IEC 60079' should read 'this part of AS/NZS 60079'.

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

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Electrical apparatus for explosive gas atmospheres Part 15: Construction, test and marking of type of protection, 'n' electrical apparatus

1 Scope

This part of IEC 60079 specifies requirements for the construction, testing and marking for Group II electrical apparatus with type of protection, "n" intended for use in explosive gas atmospheres.

This part is applicable to non-sparking electrical apparatus and also to electrical apparatus with parts or circuits producing arcs or sparks or having hot surfaces which, if not protected in one of the ways specified in this standard, could be capable of igniting a surrounding explosive gas atmosphere. This standard describes several different methods by which this can be achieved which may be combined with other methods described in IEC 60079-0.

This part supplements the general requirements in IEC 60079-0. The relationship of IEC 60079-0 to this part is as indicated in Table 1.

Table 1 – Relationship of this part to IEC 60079-0

Clause of IEC 60079-0		IEC 60079-0 clause application to IEC 60079-15				
		Type of protection nC	Non sparking apparatus nA and nA nL	Restricted breathing apparatus nR	Energy limited apparatus nL	Associated energy limited apparatus [nL] and [Ex nL]
4	Apparatus grouping and temperature classification	Yes	Yes	Yes	Yes	Yes
5	Temperatures					
5.1	Environmental influences	Yes	Yes	Yes	Yes	Yes
5.2	Service temperature	Yes	Yes	Yes	Yes	Yes
5.3	Maximum surface temperature	Yes	Yes	Yes	Yes	No
5.4	Surface temperature and ignition temperature	No	No	No	No	No
5.5	Small components	Yes	Yes	Yes	Yes	No
6	Requirements for all electrical apparatus					
6.1	General	Yes	Yes	Yes	Yes	Yes
6.2	Mechanical strength of apparatus	Yes	Yes	Yes	Yes [c)]	No
6.3	Opening times	No	No	Yes	No	No
6.4	Circulating currents	Yes	Yes	Yes	No	No
6.5	Gasket retention	Yes	Yes	Yes	Yes	No
7	Non-metallic enclosures and non-metallic parts of enclosures					