



BSI Standards Publication

Explosive atmospheres

Part 31: Equipment dust ignition protection
by enclosure "t"

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National foreword

This British Standard is the UK implementation of EN 60079-31:2009. It is identical to IEC 60079-31:2008. It supersedes BS EN 61241-1:2004 which is withdrawn.

The start and finish of text introduced by or altered by corrigendum is indicated in the text by tags. Text altered by IEC corrigendum March 2009 is indicated in the text by AC AC.

The UK Committee GEL/31 does not endorse Annex ZY in its current form and a revision is currently under way between the Joint Working Group of CEN TC305 and CLC TC31. A replacement Annex ZY will become available at some time in the future.

The UK participation in its preparation was entrusted to Technical Committee GEL/31/20, Apparatus for use in the presence of ignitable dust.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 30 September 2010.

Amendments/corrigenda issued since publication

Date	Text affected
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English version

**Explosive atmospheres -
Part 31: Equipment dust ignition protection by enclosure "t"
(IEC 60079-31:2008 + corrigendum 2009)**

Atmosphères explosives -
Partie 31: Protection du matériel
contre l'inflammation des poussières
par enveloppe "t"
(CEI 60079-31:2008 + corrigendum 2009)

Explosionsfähige Atmosphäre -
Teil 31: Geräte-Staubexplosionsschutz
durch Gehäuse "t"
(IEC 60079-31:2008 + Corrigendum 2009)

This European Standard was approved by CENELEC on 2009-10-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 31/765/FDIS, future edition 1 of IEC 60079-31, prepared by IEC TC 31, Equipment for explosive atmospheres, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60079-31 on 2009-10-01.

This European Standard supersedes EN 61241-1:2004 + corrigendum December 2006.

The following dates were fixed:

- latest date by which the EN has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 2010-07-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2012-10-01

This European Standard has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association and covers essential requirements of EC Directive 94/9/EC. See Annex ZZ.

CENELEC/TC 31 as the responsible committee has concluded that this edition of EN 60079-31 does not contain substantial changes regarding the ESRs.

The State of the Art is included in Annex ZY “*Significant changes between this European Standard and EN 61241-1:2004*”.

Annexes ZA, ZY and ZZ have been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60079-31:2008 + corrigendum March 2009 was approved by CENELEC as a European Standard without any modification.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60034-1	- ¹⁾	Rotating electrical machines - Part 1: Rating and performance	EN 60034-1	2004 ²⁾
IEC 60079-0	- ¹⁾	Explosive atmospheres - Part 0: Equipment - General requirements	EN 60079-0	2009 ²⁾
IEC 60079-7	- ¹⁾	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"	EN 60079-7	2007 ²⁾
IEC 60127	Series	Miniature fuses	EN 60127	Series
IEC 60691	- ¹⁾	Thermal-links - Requirements and application guide	EN 60691	2003 ²⁾
ISO 965-1	- ¹⁾	ISO general-purpose metric screw threads - Tolerances - Part 1: Principles and basic data	-	-
ISO 965-3	- ¹⁾	ISO general-purpose metric screw threads - Tolerances - Part 3: Deviations for constructional threads	-	-

¹⁾ Undated reference.

²⁾ Valid edition at date of issue.

Annex ZY (informative)

Significant changes between this European Standard and EN 61241-1:2004

The significant changes with respect to EN 61241-1:2004 are as listed below.

	Type		
	Minor and editorial changes	Extension	Substantial change regarding ESR's ^a
title changed to Equipment dust ignition protection by enclosure "t"	X		
combination and rationalisation of practice A and B into a single practice, and some constructional requirements that may have applied to only one practice now apply to all enclosures		X	
introduction of three levels of protection, "ta", "tb" and "tc"		X	
defined test voltage ranges and overload conditions for thermal tests		X	
introduction of a pressure test prior to the IP test		X	
restrictions on power and voltage levels for level of protection "ta"		X	
introduction of a variant of the IP6X test for level of protection "ta"		X	
compulsory dust layer thermal test for protection level "ta" by surrounding the enclosure with dust to a depth of at least 500 mm on all available surfaces		X	
^a ESR = Essential Health and Safety Requirements (Annex II of Directive 94/9/EC)			

General conclusion on the change of the State of the Art by this standard

CENELEC/TC 31 as the responsible committee has concluded that this edition of EN 60079-31 does not contain substantial changes regarding the ESRs.