

Svenska Elektriska Kommissionen, SEK

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Elektrisk utrustning för områden med explosiv gasatmosfär – Del 1: Utförande med explosionstöt kapsling "d"

*Electrical apparatus for explosive gas atmospheres –
Part 1: Flameproof enclosures "d"*

Som svensk standard gäller europastandarden EN 60079-1:2004. Den svenska standarden innehåller den officiella engelska språkversionen av EN 60079-1:2004*).

Nationellt förord

Europastandarden EN 60079-1:2004

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 60079-1, Fifth edition, 2003 - Electrical apparatus for explosive gas atmospheres - Part 1: Flameproof enclosures "d"**

utarbetat inom International Electrotechnical Commission, IEC.

Standarden skall användas tillsammans med SS-EN 60079-0.

Tidigare fastställd svensk standard SS-EN 50018, utgåva 4, 2000 och SS-EN 50018/A1, utgåva 1, 2002, gäller ej fr o m 2007-03-01.

*) Corrigendum, March 2004, till EN 60079-1:2004 är inarbetat i texten.

Standarder underlättar utvecklingen och höjer elsäkerheten

Det finns många fördelar med att ha gemensamma tekniska regler för bl a säkerhet, prestanda, dokumentation, utförande och skötsel av elprodukter, elanläggningar och metoder. Genom att utforma sådana standarder blir säkerhetskraven tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

Många standarder inom elområdet beskriver tekniska lösningar och metoder som åstadkommer den elsäkerhet som föreskrivs av svenska myndigheter och av EU.

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SEK samordnar svenska intressenters medverkan i SEKs tekniska kommittéer och stödjer svenska experters medverkan i internationella och europeiska projekt.

Stora delar av arbetet sker internationellt

Utformningen av standarder sker i allt väsentligt i internationellt och europeiskt samarbete. SEK är svensk nationalkommitté av International Electrotechnical Commission (IEC) och Comité Européen de Normalisation Electrotechnique (CENELEC).

Standardiseringsarbetet inom SEK är organiserat i referensgrupper bestående av ett antal tekniska kommittéer som speglar hur arbetet inom IEC och CENELEC är organiserat.

Arbetet i de tekniska kommittéerna är öppet för alla svenska organisationer, företag, institutioner, myndigheter och statliga verk. Den årliga avgiften för deltagandet och intäkter från försäljning finansierar SEKs standardiseringsverksamhet och medlemsavgift till IEC och CENELEC.

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Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

SEK

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EUROPEAN STANDARD

EN 60079-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2004

ICS 29.260.20

Supersedes EN 50018:2000 + A1:2002
Incorporates Corrigendum March 2004

English version

Electrical apparatus for explosive gas atmospheres
Part 1: Flameproof enclosures 'd'
(IEC 60079-1:2003)

Matériel électrique pour atmosphères
explosives gazeuses
Partie 1: Enveloppes antidéflagrantes 'd'
(CEI 60079-1:2003)

Elektrische Betriebsmittel für
gasexplosionsgefährdete Bereiche
Teil 1: Druckfeste Kapselung 'd'
(IEC 60079-1:2003)

This European Standard was approved by CENELEC on 2004-03-01. 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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 31A/114/FDIS, future edition 5 of IEC 60079-1, prepared by SC 31A, Flameproof enclosures, of IEC TC 31, Electrical apparatus for explosive atmospheres, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60079-1 on 2004-03-01.

This European Standard supersedes EN 50018:2000 + A1:2002.

This standard is to be read in conjunction with EN 60079-0.

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) 2004-12-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2007-03-01

This European Standard was prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association and supports the essential requirements of Directive 94/9/EC.

Annex ZA has been added by CENELEC.

The contents of the corrigendum of March 2004 have been included in this copy.

Endorsement notice

The text of the International Standard IEC 60079-1:2003 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC 61508 NOTE Harmonized in EN 61508 series (not modified).

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 (mod)	1996	Rotating electrical machines Part 1: Rating and performance	EN 60034-1 + corr. February + A11	1998 2000 2002
IEC 60061 (mod)	series	Lamp caps and holders together with gauges for the control of interchangeability and safety	EN 60061	series
IEC 60079-0	1998 ¹⁾	Electrical apparatus for explosive gas atmospheres Part 0: General requirements	-	-
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	-	-
IEC 60079-7	2001	Part 7: Increased safety "e"	EN 60079-7	2003
IEC 60079-11	1999	Part 11: Intrinsic safety "i"	-	-
IEC 60086-1	2000	Primary batteries Part 1: General	EN 60086-1	2001
IEC 60112	1979	Method for determining the comparative and the proof tracking indices of solid insulating materials under moist conditions	HD 214 S2 ²⁾	1980
IEC 60127	series	Miniature fuses	EN 60127	series
IEC 60529	1989	Degrees of protection provided by enclosures (IP Code)	EN 60529 + corr. May	1991 1993

¹⁾ IEC 60079-0:1998 is superseded by IEC 60079-0:2004, which has been harmonized as EN 60079-1:2004.

²⁾ HD 214 S2 is superseded by EN 60112:2003, which is based on IEC 60112:2003.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60707	1981	Methods of test for the determination of the flammability of solid electrical insulating materials when exposed to an igniting source	HD 441 S1 ³⁾	1983
ISO 185	1988	Grey cast iron - Classification	-	-
ISO 965-1	1998	ISO general-purpose metric screw threads - Tolerances Part 1: Principles and basic data	-	-
ISO 965-3	1998	Tolerances – Part 3: Deviations for constructional threads	-	-
ISO 1210	1982	Plastics - Determination of flammability characteristics of plastics in the form of small specimens in contact with a small flame	-	-
ISO 2738	1999	Sintered metal materials, excluding hard metals - Permeable sintered metal materials - Determination of density, oil content and open porosity	EN ISO 2738	1999
ISO 4003	1977	Permeable sintered metal materials - Determination of bubble test pore size	EN 24003	1993
ISO 4022	1987	Permeable sintered metal materials - Determination of fluid permeability	-	-
ISO 6892	1998	Metallic materials - Tensile testing at ambient temperature	-	-
ASME B1.20.1	1983	Pipe threads, general purpose (inch)	-	-

³⁾ HD 441 S1 is superseded by EN 60707:1999, which is based on IEC 60707:1999.

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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.

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

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*

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*

IEC 60079-7:2001, *Electrical apparatus for explosive gas atmospheres – Part 7: Increased safety “e”*

IEC 60079-11:1999, *Electrical apparatus for explosive gas atmospheres – Part 11: Intrinsic safety “i”*

IEC 60086-1:2000, *Primary batteries – Part 1: General*

IEC 60112:1979, *Method for the determination of the proof and the comparative tracking indices of solid insulating materials*

IEC 60127 (all parts), *Miniature fuses*

IEC 60529:1989, *Degrees of protection provided by enclosures (IP Code)*

IEC 60707:1981, *Flammability of solid non-metallic materials when exposed to flame sources – List of test methods*

ISO 185:1988, *Grey cast iron – Classification*

ISO 965-1:1998, *ISO general-purpose metric screw threads – Tolerances – Part 1: Principles and basic data*

ISO 965-3:1998, *ISO general-purpose metric screw threads – Tolerances – Part 3: Deviations for constructional threads*

