SVENSK STANDARD SS-EN 60079-18

Fastställd	Utgåva	Sida	Ansvarig kommitté
2010-02-22	2	1 (1+37)	SEK TK 31

Explosiv atmosfär –
Del 18: Utrustning i utförande med ingjutning "m"

Explosive atmospheres –
Part 18: Equipment protection by encapsulation "m"

Som svensk standard gäller europastandarden EN 60079-18:2009. Den svenska standarden innehåller den officiella engelska språkversionen av EN 60079-18:2009.

Nationellt förord

Europastandarden EN 60079-18:2009

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
– **IEC 60079-18, Third edition, 2009 - Explosive atmospheres - Part 18: Equipment protection by encapsulation "m"**

jämte

Corrigendum, June 2009

utarbetad inom International Electrotechnical Commission, IEC.

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

Tidigare fastställd svensk standard SS-EN 60079-18, utgåva 1, 2004, SS-EN 60079-18 C1, utgåva 1, 2006 och SS-EN 61241-18, utgåva 1, 2007, gäller ej fr o m 2012-10-01.

ICS 29.260.20

Denna standard är fastställd av SEK Svensk Elstandard,
som också kan lämna upplysningar om **sakinnehållet** i standarden.
Postadress: SEK, Box 1284, 164 29 KISTA
Telefon: 08 - 444 14 00. *Telefax*: 08 - 444 14 30
E-post: sek@elstandard.se. *Internet*: www.elstandard.se

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.

SEK är Sveriges röst i standardiseringsarbetet inom elområdet

SEK Svensk Elstandard svarar för standardiseringen inom elområdet i Sverige och samordnar svensk medverkan i internationell och europeisk standardisering. SEK är en ideell organisation med frivilligt deltagande från svenska myndigheter, företag och organisationer som vill medverka till och påverka utformningen av tekniska regler inom elektrotekniken.

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.

Var med och påverka!

Den som deltar i SEKs tekniska kommittéarbete har möjlighet att påverka framtida standarder och får tidig tillgång till information och dokumentation om utvecklingen inom sitt teknikområde. Arbetet och kontakterna med kollegor, kunder och konkurrenter kan gynnsamt påverka enskilda företags affärsutveckling och bidrar till deltagarnas egen kompetensutveckling.

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

SEK Svensk Elstandard
Box 1284
164 29 Kista
Tel 08-444 14 00
www.elstandard.se

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60079-18

December 2009

ICS 29.260.20

Supersedes EN 60079-18:2004 + corr. April 2006 and EN 61241-18:2004

English version

Explosive atmospheres - Part 18: Equipment protection by encapsulation "m"

(IEC 60079-18:2009 + corrigendum 2009)

Atmosphères explosives -
Partie 18: Protection du matériel
par encapsulage "m"
(CEI 60079-18:2009 + corrigendum 2009)

Explosionsfähige Atmosphäre -
Teil 18: Geräteschutz
durch Vergusskapselung "m"
(IEC 60079-18:2009 + Corrigendum 2009)

CENELEC

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

Central Secretariat: Avenue Marnix 17, B - 1000 Brussels

Ref. No. EN 60079-18:2009 E

SEK Svensk Elstandard

Foreword

The text of document 31/784/FDIS, future edition 3 of IEC 60079-18, prepared by IEC TC 31, Equipment for explosive atmospheres, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60079-18 on 2009-10-01.

This European Standard supersedes EN 60079-18:2004 + corrigendum April 2006 and EN 61241-18:2004.

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 ATEX (94/9/EC). See Annex ZZ.

CENELEC/TC 31 as the responsible committee has concluded that this new edition of EN 60079-18 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 60079-18:2004".*

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

———————

Endorsement notice

The text of the International Standard IEC 60079-18:2009 + corrigendum June 2009 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60079-1	NOTE	Harmonized as EN 60079-1:2007 (not modified).
IEC 60079-2	NOTE	Harmonized as EN 60079-2:2007 (not modified).
IEC 60079-5	NOTE	Harmonized as EN 60079-5:2007 (not modified).
IEC 60079-6	NOTE	Harmonized as EN 60079-6:2007 (not modified).
IEC 60079-10	NOTE	Harmonized as EN 60079-10:2003 (not modified).
IEC 60079-14	NOTE	Harmonized as EN 60079-14:2008 (not modified).
IEC 60079-26	NOTE	Harmonized as EN 60079-26:2007 (not modified).
IEC 60079-28	NOTE	Harmonized as EN 60079-28:2007 (not modified).
IEC 60086-1	NOTE	Harmonized as EN 60086-1:2007 (not modified).
IEC 60622	NOTE	Harmonized as EN 60622:2003 (not modified).
IEC 60664-1	NOTE	Harmonized as EN 60664-1:2007 (not modified).
IEC 61241-10	NOTE	Harmonized as EN 61241-10:2004 (not modified).
IEC 61951-1	NOTE	Harmonized as EN 61951-1:2003 (not modified).

IEC 61951-2 NOTE Harmonized as EN 61951-2:2003 (not modified).

IEC 61960-1 NOTE Harmonized as EN 61960-1:2001 (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.

Publication	Year	Title	EN/HD	Year
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 60079-11	-[1)]	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"	EN 60079-11	2007[2)]
IEC 60079-15	-[1)]	Explosive atmospheres - Part 15: Equipment protection by type of protection "n"	EN 60079-15	200X[3)]
IEC 60079-26	-[1)]	Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga	EN 60079-26	2007[2)]
IEC 60079-31	-[1)]	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"	EN 60079-31	2009[2)]
IEC 60127	Series	Miniature fuses	EN 60127	Series
IEC 60243-1	-[1)]	Electrical strength of insulating materials - Test methods - Part 1: Tests at power frequencies	EN 60243-1	1998[2)]
IEC 60691	-[1)]	Thermal-links - Requirements and application guide	EN 60691	2003[2)]
IEC 60730-2-9 (mod)	-[1)]	Automatic electrical controls for household and similar use - Part 2-9: Particular requirements for temperature sensing controls	-	-
IEC 60738-1	-[1)]	Thermistors - Directly heated positive temperature coefficient - Part 1: Generic specification	EN 60738-1	2006[2)]
IEC 61241-11	-[1)]	Electrical apparatus for use in the presence of combustible dust - Part 11: Protection by intrinsic safety 'iD'	EN 61241-11	2006[2)]

[1)] Undated reference.

[2)] Valid edition at date of issue.

[3)] To be ratified.

Publication	Year	Title	EN/HD	Year
IEC 61558-2-6	-[1)]	Safety of power transformers, power supply units and similar - Part 2-6: Particular requirements for safety isolating transformers for general use	EN 61558-2-6	2009[2)]
IEC 62326-4-1	-[1)]	Printed boards - Part 4: Rigid multilayer printed boards with interlayer connections - Sectional specification - Section 1: Capability Detail Specification - Performance levels A, B and C	EN 62326-4-1	1997[2)]
ISO 62	-[1)]	Plastics - Determination of water absorption	-	-
ANSI/UL 248-1	-[1)]	Standard for low-voltage fuses - Part 1: General requirements	-	-
ANSI/UL 746B	-[1)]	Standard for polymeric materials - Long-term property evaluations	-	-

CONTENTS

EXPLOSIVE ATMOSPHERES –

Part 18: Equipment protection by encapsulation “m”

1 Scope

This part of IEC 60079 gives the specific requirements for the construction, testing and marking of electrical equipment, parts of electrical equipment and Ex components with the type of protection encapsulation “m” intended for use in explosive gas atmospheres or explosive dust atmospheres.

This part applies only for encapsulated electrical equipment, encapsulated parts of electrical equipment and encapsulated Ex components (hereinafter always referred to as “m” equipment) where the rated voltage does not exceed 11 kV.

The application of electrical equipment in atmospheres, which may contain explosive gas as well as combustible dust simultaneously may require additional protective measures.

This standard does not apply to dusts of explosives, which do not require atmospheric oxygen for combustion, or to pyrophoric substances

This standard does not take account of any risk due to an emission of flammable or toxic gas from the dust.

This standard supplements and modifies the general requirements of IEC 60079-0. Where a requirement of this standard conflicts with a requirement of IEC 60079-0, the requirement of this standard shall take precedence.

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 60079-0, *Explosive atmospheres – Part 0: Equipment – General requirements*

IEC 60079-7, *Explosive atmospheres – Part 7: Equipment protection by increased safety “e”*

IEC 60079-11, *Explosive atmospheres – Part 11: Equipment protection by intrinsic safety “i”*

IEC 60079-15, *Explosive atmospheres – Part 15: Equipment protection by type of protection "n"*

IEC 60079-26, *Explosive atmospheres – Part 26: Equipment with equipment protection level (EPL) Ga*

IEC 60079-31, *Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosures “t”*

IEC 60127 (all parts), *Miniature fuses*

IEC 60243-1, *Electrical strength of insulating material – Test methods – Part 1: Tests at power frequencies*

IEC 60691, *Thermal-links – Requirements and application guide*

IEC 60730-2-9, *Automatic electrical controls for household and similar use – Part 2-9: Particular requirements for temperature sensing controls*

IEC 60738-1, *Thermistors – Directly heated positive temperature coefficient – Part 1: Generic specification*

IEC 61241-11, *Electrical apparatus for use in the presence of combustible dust – Part 11: Protection by intrinsic safety 'iD'*

IEC 61558-2-6, *Safety of power transformers, power supply units and similar – Part 2: Particular requirements for safety isolating transformers for general use*

IEC 62326-4-1, *Printed boards – Part 4: Rigid multilayer printed boards with interlayer connections – Sectional specification – Section 1: Capability detail specification – Performance levels A, B and C*

ISO 62, *Plastics – Determination of water absorption*

ANSI/UL 248-1, *Standard for low-voltage fuses – Part 1: General requirements*

ANSI/UL 746B, *Standard for polymeric materials – Long term property evaluations*