



SLOVENSKI STANDARD

SIST EN 60079-15:2011

01-maj-2011

Nadomešča:

SIST EN 60079-15:2006

Eksplozivne atmosfere - 15. del: Zaščita opreme s protiekspluzijsko zaščito "n" (IEC 60079-15:2010)

Explosive atmospheres - Part 15: Equipment protection by type of protection n (IEC 60079-15:2010)

Explosionsfähige Atmosphäre - Teil 15: Geräteschutz durch Zündschutzart n (IEC 60079-15:2010)

Atmosphères explosives - Partie 15: Protection de matériels par mode de protection n (CEI 60079-15:2010)

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Ta slovenski standard je istoveten z: EN 60079-15:2010

ICS:

29.260.20	Električni aparati za eksplozivna ozračja	Electrical apparatus for explosive atmospheres
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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 60079-15

May 2010

ICS 29.260.20

Supersedes EN 60079-15:2005

English version

**Explosive atmospheres -
Part 15: Equipment protection by type of protection "n"
(IEC 60079-15:2010)**

Atmosphères explosives -
Partie 15: Protection du matériel
par mode de protection "n"
(CEI 60079-15:2010)

Explosionsfähige Atmosphäre -
Teil 15: Geräteschutz
durch Zündschutzart "n"
(IEC 60079-15:2010)

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This European Standard was approved by CENELEC on 2010-05-01. 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, Croatia, 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

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Foreword

The text of document 31/833/FDIS, future edition 4 of IEC 60079-15, prepared by IEC TC 31, Equipment for explosive atmospheres, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60079-15 on 2010-05-01.

This European Standard supersedes EN 60079-15:2005.

The significant technical changes with respect to EN 60079-15:2005 are as follows:

- addition of equipment protection levels;
- removal of the requirements for energy-limited “nL” and associated energy limited apparatus “[nL]”;
- removal of the requirements for encapsulated Devices “nC”;
- requirements for electrical connections expanded and clarified;
- requirements for luminaire ballasts expanded and clarified;
- requirements for evaluation and testing of motor rotors clarified;
- 15 kV limit for equipment protection by type of protection “n” added;
- spacing requirement for voltages above 10 kV modified;
- requirements for restricted breathing enclosures modified;
- modification to requirements for motor rotors and stators;
- addition of Annex A (informative);
- undated references to IEC 60079-0 included.

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

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN and CENELEC shall not be held responsible for identifying any or all such patent rights.

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) | 2011-02-01 |
| – latest date by which the national standards conflicting with the EN have to be withdrawn | (dow) | 2013-05-01 |

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.

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

Endorsement notice

The text of the International Standard IEC 60079-15:2010 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 60034-5	NOTE	Harmonized as EN 60034-5.
IEC/TS 60034-17	NOTE	Harmonized as CLC/TS 60034-17.
IEC 60068-2-6	NOTE	Harmonized as EN 60068-2-6.
IEC 60079-7:2006	NOTE	Harmonized as EN 60079-7:2007 (not modified).
IEC 60079-17	NOTE	Harmonized as EN 60079-17.
IEC 60079-18	NOTE	Harmonized as EN 60079-18.
IEC 60079-29-2	NOTE	Harmonized as EN 60079-29-2.
IEC 60297 series	NOTE	Harmonized in EN 60297 series (not modified).

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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	Series	Rotating electrical machines	EN 60034	Series
IEC 60034-1	-	Rotating electrical machines - Part 1: Rating and performance	EN 60034-1	-
IEC/TS 60034-25	-	Rotating electrical machines - Part 25: Guidance for the design and performance of a.c. motors specifically designed for converter supply	CLC/TS 60034-25	-
IEC 60061	Series	Lamp caps and holders together with gauges for the control of interchangeability and safety	-	-
IEC 60061-1	-	Lamp caps and holders together with gauges for the control of interchangeability and safety - Part 1: Lamp caps	EN 60061-1	-
IEC 60068-2-27	2008	Environmental testing - Part 2-27: Tests - Test Ea and guidance: Shock	EN 60068-2-27	2009
IEC 60079-0	2007	Explosive atmospheres - Part 0: Equipment - General requirements	EN 60079-0	2009
IEC 60079-1	-	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"	EN 60079-1	-
IEC 60079-11	-	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"	EN 60079-11	-
IEC 60112	-	Method for the determination of the proof and the comparative tracking indices of solid insulating materials	EN 60112	-
IEC 60155	-	Glow-starters for fluorescent lamps	EN 60155	-
IEC 60228	-	Conductors of insulated cables	EN 60228	-
IEC 60238	-	Edison screw lampholders	EN 60238	-
IEC 60269-3	-	Low-voltage fuses - Part 3: Supplementary requirements for fuses for use by unskilled persons (fuses mainly for household or similar applications) - Examples of standardized systems of fuses A to F	HD 60269-3	-
IEC 60400	-	Lampholders for tubular fluorescent lamps and starterholders	EN 60400	-

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60529	-	Degrees of protection provided by enclosures (IP Code)	EN 60529	-
IEC 60598	Series	Luminaires	EN 60598	Series
IEC 60598-1 (mod)	2008	Luminaires -	EN 60598-1	2008
-	-	Part 1: General requirements and tests	+ A11	2009
IEC 60598-2	Series	Luminaires - Part 2: Particular requirements	EN 60598-2	Series
IEC 60664-1	-	Insulation coordination for equipment within low-voltage systems - Part 1: Principles, requirements and tests	EN 60664-1	-
IEC 60927	-	Auxiliaries for lamps - Starting devices (other than glow starters) - Performance requirements	EN 60927	-
IEC 60947-7-1	-	Low-voltage switchgear and controlgear - Part 7-1: Ancillary equipment - Terminal blocks for copper conductors	EN 60947-7-1	-
IEC 60947-7-2	-	Low-voltage switchgear and controlgear - Part 7-2: Ancillary equipment - Protective conductor terminal blocks for copper conductors	EN 60947-7-2	-
IEC 60998-2-4	-	Connecting devices for low voltage circuits for household and similar purposes - Part 2-4: Particular requirements for twist-on connecting devices	EN 60998-2-4	-
IEC 60999-1	-	Connecting devices - Electrical copper conductors - Safety requirements for screw-type and screwless-type clamping units - Part 1: General requirements and particular requirements for clamping units for conductors from 0,2 mm ² up to 35 mm ² (included)	EN 60999-1	-
IEC 60999-2	-	Connecting devices - Electrical copper conductors - Safety requirements for screw-type and screwless-type clamping units - Part 2: Particular requirements for clamping units for conductors above 35 mm ² up to 300 mm ² (included)	EN 60999-2	-
IEC 61048	-	Auxiliaries for lamps - Capacitors for use in tubular fluorescent and other discharge lamp circuits - General and safety requirements	EN 61048	-
IEC 61184	-	Bayonet lampholders	EN 61184	-
IEC 61195	-	Double-capped fluorescent lamps - Safety specifications	EN 61195	-
IEC 61347-1 (mod)	2007	Lamp controlgear - Part 1: General and safety requirements	EN 61347-1	2008
IEC 61347-2-1	-	Lamp controlgear - Part 2-1: Particular requirements for starting devices (other than glow starters)	EN 61347-2-1	-
IEC 61347-2-2	-	Lamp controlgear - Part 2-2: Particular requirements for d.c. or a.c. supplied electronic step-down convertors for filament lamps	EN 61347-2-2	-
IEC 61347-2-3	-	Lamp controlgear - Part 2-3: Particular requirements for a.c. supplied electronic ballasts for fluorescent lamps	EN 61347-2-3	-

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61347-2-4	-	Lamp controlgear - Part 2-4: Particular requirements for d.c. supplied electronic ballasts for general lighting	EN 61347-2-4	-
IEC 61347-2-7	-	Lamp controlgear - Part 2-7: Particular requirements for d.c. supplied electronic ballasts for emergency lighting	EN 61347-2-7	-
IEC 61347-2-8	-	Lamp controlgear - Part 2-8: Particular requirements for ballasts for fluorescent lamps	EN 61347-2-8	-
IEC 61347-2-9	-	Lamp controlgear - Part 2-9: Particular requirements for ballasts for discharge lamps (excluding fluorescent lamps)	EN 61347-2-9	-

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Annex ZY (informative)

Significant changes between this European Standard and EN 60079-15:2005

This European Standard supersedes EN 60079-15:2005.

The significant changes with respect to EN 60079-15:2005 are as listed below.

	Type		
	Minor and editorial changes	Extension	Substantial change regarding ESR's ^a
Addition of Equipment Protection Levels		X	
Removal of the requirements for Energy-limited "nL" and associated energy limited apparatus "[nL]"		X	
Removal of the requirements for Encapsulated Devices "nC"		X	
Requirements for electrical connections expanded and clarified		X	
Requirements for luminaire ballasts expanded and clarified		X	
Requirements for evaluation and testing of motors rotors clarified	X		
15 kV limit for Equipment protection by type of protection "n" added		X	
Spacing requirement for voltages above 10 kV modified		X	
Requirements for restricted breathing enclosures modified		X	
Modification to requirements for motor rotors and stators		X	
Addition of Annex A (informative): Information on installation of nA machines to be considered for eventual inclusion into IEC 60079-14	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 new edition does not contain substantial changes regarding the ESRs.

Annex ZZ (informative)

Coverage of essential requirements of the directive 94/9/EC

This European Standard has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association and within its scope the standard covers only the following essential safety requirements out of those given in Annex II of the EC Directive 94/9/EC:

ESR	Equivalent requirement in EN 60079-15:2005
1.0.1 dash 2	Definition 3.7 of EN 60079-15 and principles of the type of protection "n" for gas atmospheres
1.0.2	Definition 3.7 and Notes of EN 60079-15 and reference to EN 60079-0
1.0.3	Reference to EN 60079-0
1.0.4	Reference to EN 60079-0
1.0.5	Clause 24 of EN 60079-15 and reference to EN 60079-0
1.0.6	Clause 25 of EN 60079-15 and reference to EN 60079-0
1.1	Reference to EN 60079-0
1.2.1	Generally covered by EN 60079-15 and EN 60079-0
1.2.2	Reference to EN 60079-0
1.2.3	Not applicable. Release of flammable material is not foreseen
1.2.4	Not applicable. Dust atmospheres and deposits are out of scope
1.2.5	Reference to EN 60079-0
1.2.6	Warning label deemed adequate for Category 3 Equipment
1.2.7	Reference to EN 60079-0 and relevant standards for normal industrial applications.
1.2.8	Not specifically applied to Category 3 Equipment but covered in general for normal conditions by the installation requirements in EN 60079-14
1.2.9	Clause 17 of EN 60079-15
1.3.1	Principle of the type of protection "n" as far as applicable and reference to EN 60079-0
1.3.2	Reference to EN 60079-0
1.3.3	Reference to EN 60079-0
1.3.4	Clauses 8.7 of EN 60079-15 and reference to EN 60079-0
1.3.5	Not applicable to electrical equipment
1.4	Reference to EN 60079-0
1.5.1	Clause 12 in respect of charging of batteries
1.5.2 to 1.5.8	Not applicable
1.6.1 to 1.6.3	Not applicable
1.6.4	Reference to EN 60079-0
1.6.5	Not applicable

ESR	Equivalent requirement in EN 60079-15:2005
2.0, 2.1 and 2.2	Not applicable – out of scope
2.3.1	Fundamental basis of EN 60079-15 and references to EN 60079-0
2.3.2	Not applicable – out of scope
3	Not applicable – out of scope

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IEC 60079-15

Edition 4.0 2010-01

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Explosive atmospheres –
Part 15: Equipment protection by type of protection "n"

Atmosphères explosives –
Partie 15: Protection du matériel par mode de protection « n »

INTERNATIONAL
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COMMISSION

COMMISSION
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