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BSI Standards Publication

## Explosive atmospheres

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Part 0: Equipment - General requirements

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## National foreword

This British Standard is the UK implementation of EN IEC 60079-0:2018. It is identical to IEC 60079-0:2017, incorporating corrigendum January 2020. It supersedes BS EN 60079-0:2012+A11:2013, which is withdrawn.

The start and finish of text introduced or altered by corrigendum is indicated in the text by tags. Text altered by IEC corrigendum January 2020 is indicated in the text by AC1 AC1.

The UK participation in its preparation was entrusted to Technical Committee EXL/31, Equipment for explosive atmospheres.

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 31 July 2018.

### Amendments/corrigenda issued since publication

Date	Text affected
31 March 2020	Implementation of IEC corrigendum January 2020

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## EUROPÄISCHE NORM

July 2018

ICS 29.260.20

Supersedes EN 60079-0:2012

English Version

## Explosive atmospheres - Part 0: Equipment - General requirements (IEC 60079-0:2017)

Atmosphères explosives - Partie 0: Matériel - Exigences  
générales  
(IEC 60079-0:2017)

Explosionsgefährdete Bereiche - Teil 0: Betriebsmittel -  
Allgemeine Anforderungen  
(IEC 60079-0:2017)

This European Standard was approved by CENELEC on 2017-12-04. 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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre 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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



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

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

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The text of document (31/1345/FDIS), future edition 7 of IEC 60079-0, prepared by IEC/TC 31 "Equipment for explosive atmospheres" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60079-0:2018.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2019-01-06
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2021-07-06

This document supersedes EN 60079-0:2012.

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

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For the relationship with EU Directive(s) see informative Annex ZZ, which is an integral part of this document.

### **Endorsement notice**

The text of the International Standard IEC 60079-0:2017 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/TS 60034-25	NOTE	Harmonized as CLC/TS 60034-25.
IEC 60034-29	NOTE	Harmonized as EN 60034-29.
IEC 60079-2	NOTE	Harmonized as EN 60079-2.
IEC 60079-5	NOTE	Harmonized as EN 60079-5.
IEC 60079-6	NOTE	Harmonized as EN 60079-6.
IEC 60079-7	NOTE	Harmonized as EN 60079-7.
IEC 60079-10-1	NOTE	Harmonized as EN 60079-10-1.
IEC 60079-10-2	NOTE	Harmonized as EN 60079-10-2.
IEC 60079-11	NOTE	Harmonized as EN 60079-11.
IEC 60079-13	NOTE	Harmonized as EN 60079-13.
IEC 60079-14	NOTE	Harmonized as EN 60079-14.
IEC 60079-15	NOTE	Harmonized as EN 60079-15.
IEC 60079-17	NOTE	Harmonized as EN 60079-17.
IEC 60079-18	NOTE	Harmonized as EN 60079-18.
IEC 60079-19	NOTE	Harmonized as EN 60079-19.
IEC 60079-25	NOTE	Harmonized as EN 60079-25.
IEC 60079-28	NOTE	Harmonized as EN 60079-28.
IEC 60079-29-1	NOTE	Harmonized as EN 60079-29-1.

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IEC/IEEE 60079-30-1	NOTE	Harmonized as EN 60079-30-1.
IEC 60079-31	NOTE	Harmonized as EN 60079-31.
IEC/TS 60079-32-1	NOTE	Harmonized as CLC/TR 60079-32-1.
IEC/TS 60079-39	NOTE	Harmonized as CLC/TS 60079-39 <sup>1)</sup> ).
IEC 60254 (series)	NOTE	Harmonized in EN 60254 series.
IEC 60623	NOTE	Harmonized as EN 60623.
IEC 60896-11	NOTE	Harmonized as EN 60896-11.
IEC 60896-21	NOTE	Harmonized as EN 60896-21.
IEC 60952 (series)	NOTE	Harmonized in EN 60952 series.
IEC 61056-1	NOTE	Harmonized in EN 61056-1.
IEC 61427 (series)	NOTE	Harmonized in EN 61427 series.
IEC 61951-1	NOTE	Harmonized as EN 61951-1.
IEC 61951-2	NOTE	Harmonized as EN 61951-2.
IEC 61960 (series)	NOTE	Harmonized in EN 61960 series.
ISO/IEC 80079-20-2	NOTE	Harmonized as EN ISO/IEC 80079-20-2.
ISO/IEC 80079-34	NOTE	Harmonized as EN ISO/IEC 80079-34.
ISO/IEC 80079-36	NOTE	Harmonized as EN ISO/IEC 80079-36.
ISO/IEC 17000	NOTE	Harmonized as EN ISO/IEC 17000.

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<sup>1)</sup> Under preparation. Stage at the time of publication: CLC/FprTS 60079-39:2017.

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(normative)

### Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: [www.cenelec.eu](http://www.cenelec.eu).

Publication	Year	Title	EN/HD	Year
IEC 60034-1	-	Rotating electrical machines - Part 1: Rating and performance	EN 60034-1 <sup>2)</sup>	-
IEC 60034-5	-	Rotating electrical machines - Part 5: Degrees of protection provided by the integral design of rotating electrical machines (IP code) - Classification	EN 60034-5	2001
IEC 60079-1	-	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"	EN 60079-1	2014
IEC 60079-20-1	-	Explosive atmospheres - Part 20-1: Material characteristics for gas and vapour classification - Test methods and data	EN 60079-20-1	2010
IEC 60079-26	-	Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga	EN 60079-26	2015
IEC 60079-35-1	-	Explosive atmospheres - Part 35-1: Caplights for use in mines susceptible to firedamp - General requirements - Construction and testing in relation to the risk of explosion	EN 60079-35-1	2011
IEC 60086-1	-	Primary batteries - Part 1: General	+AC EN 60086-1	2011 2015
IEC 60192	-	Low pressure sodium vapour lamps - Performance specifications	EN 60192	2001
IEC 60216-1	-	Electrical insulating materials - Thermal endurance properties - Part 1: Ageing procedures and evaluation of test results	EN 60216-1	2013
IEC 60216-2	-	Electrical insulating materials - Thermal endurance properties - Part 2: Determination of thermal endurance properties of electrical insulating materials - Choice of test criteria	EN 60216-2	2005
IEC 60243-1	-	Electric strength of insulating materials - Test methods - Part 1: Tests at power frequencies	EN 60243-1	2013
IEC 60423	-	Conduit systems for cable management - Outside diameters of conduits for electrical installations and threads for conduits and fittings	EN 60423	2007
IEC 60529	-	Degrees of protection provided by enclosures (IP Code)	EN 60529	1991
			+EN 60529:1991/corrigendum May 1993	1993

<sup>2)</sup> Under preparation. Stage at the time of publication: FprEN 60034-1:2017.

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Performance specifications				
IEC 60664-1	-	Insulation coordination for equipment within low-voltage systems - Part 1: Principles, requirements and tests	+prAA EN 60664-1	2017 2007
IEC 60947-1	-	Low-voltage switchgear and controlgear - Part 1: General rules	EN 60947-1	2007
IEC 62626-1	-	Low-voltage switchgear and controlgear enclosed equipment - Part 1: Enclosed switch outside the scope of IEC 60947-3 for various applications, to provide isolation of electrical equipment during repair and maintenance work	EN 62626-1	2014
ISO 48	-	Rubber, vulcanized or thermoplastic - Determination of hardness (hardness between 10 IRHD and 100 IRHD)	-	-
ISO 178	-	Plastics - Determination of flexural properties	EN ISO 178	2010
ISO 179	series	Plastics - Determination of Charpy impact properties	EN ISO 179	series
ISO 262	-	ISO general purpose metric screw threads- Selected sizes for screws, bolts and nuts	-	-
ISO 273	-	Fasteners - Clearance holes for bolts and screws	EN 20273	1991
ISO 527-2	-	Plastics - Determination of tensile properties - Part 2: Test conditions for moulding and extrusion plastics	EN ISO 527-2	2012
ISO 965-1	-	ISO general purpose metric screw threads - Tolerances – Part 1: Principles and basic data	-	-
ISO 965-3	-	ISO general purpose metric screw threads- Tolerances – Part 3: Deviations for constructional screw threads	-	-
ISO 3601-1	-	Fluid power systems - O-rings – Part 1: Inside diameters, cross-sections, tolerances and designation codes	-	-
ISO 3601-2	-	Fluid power systems - O-rings - Part 2: Housing dimensions for general applications	-	-
ISO 4014	-	Hexagon head bolts - Product grades A and B	EN ISO 4014	2011
ISO 4017	-	Fasteners - Hexagon head screws - Product grades A and B	EN ISO 4017	2014
ISO 4026	-	Hexagon socket set screws with flat point	EN ISO 4026	2003
ISO 4027	-	Hexagon socket set screws with cone point	EN ISO 4027	2003
ISO 4028	-	Hexagon socket set screws with dog point	EN ISO 4028	2003
ISO 4029	-	Hexagon socket set screws with cup point	EN ISO 4029	2003
ISO 4032	-	Hexagon regular nuts (style 1) - Product grades A and B	EN ISO 4032	2012
ISO 4762	-	Hexagon socket head cap screws	EN ISO 4762	2004
ISO 4892-2	-	Plastics - Methods of exposure to laboratory light sources - Part 2: Xenon-arc lamps	EN ISO 4892-2	2013
ISO 7380	-	Hexagon socket button head screws	EN ISO 7380	2011
ISO 14583	-	Hexalobular socket pan head screws	EN ISO 14583	2011
ANSI/UL 746B	-	Polymeric Materials - Long-Term Property Evaluations	-	-
ANSI/UL 746C	-	Standard for Polymeric Materials - Use in Electrical Equipment Evaluations	-	-
ASTM D 5964	-	Standard Practice for Rubber IRM 901, IRM 902, and IRM 903 Replacement Oils for ASTM No. 1, ASTM No. 2, ASTM No. 3 Oils, and IRM 905 formerly ASTM No. 5 Oil	-	-

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## Additional Information relating to the European ATEX Directive 2014/34/EU

### ZY.1 Equipment Groups and Categories

In all cases Equipment Protection Levels (EPL) as defined by EN IEC 60079-0 are related to the corresponding Equipment Groups and Equipment Categories according to table ZY.1. The same applies if a standard makes reference to the intended use of equipment in Zones according to the definitions in EN 60079-10-1 and EN 60079-10-2.

Table ZY.1

EN IEC 60079-0		Directive 2014/34/EU		EN 60079-10-X
EPL	Group	Equipment Group	Equipment Category	Zones
Ma	I	I	M1	Not Applicable
Mb			M2	
Ga	II	II	1G	0
Gb			2G	1
Gc			3G	2
Da	III	II	1D	20
Db			2D	21
Dc			3D	22

### ZY.2 Instructions

The manufacturer or his authorized representative in the Community is to draw up the instructions for use in the required Community languages.

In clause 30.1 under: "instructions for safety addressing the following areas – installation and erection;"

"Information other than the general requirements given in IEC 60079-14"

Is replaced by

"Information other than the general requirements given in EN 60079-14 and EN 50628"

NOTE EN 50628 - Erection of electrical installations in underground mines

### ZY.3 Marking

#### ZY.3.1

The marking according to this standard is to be supplemented by the marking according to Directive 2014/34/EU. Examples are given below.

European marking examples

Directive part	Standard part	Equipment example
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I M2

Ex db I Mb

Mining equipment,