
Električne naprave za eksplozivne plinske atmosfere - 26. del: Konstrukcija, preskušanje in označevanje električnih naprav skupine II kategorije 1G (IEC 60079-26:2004, spremenjen)

Electrical apparatus for explosive gas atmospheres – Part 26: Construction, test and marking of Group II Category 1 G electrical apparatus

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English version

Electrical apparatus for explosive gas atmospheres
Part 26: Construction, test and marking
of Group II Category 1 G electrical apparatus
(IEC 60079-26:2004, modified)

Matériel électrique pour atmosphères
explosives gazeuses
Partie 26: Construction, essais et
marquage des matériels électriques
de Groupe II Catégorie 1 G
(CEI 60079-26:2004, modifiée)

Elektrische Betriebsmittel für
gasexplosionsgefährdete Bereiche
Teil 26: Konstruktion, Prüfung und
Kennzeichnung elektrischer Betriebsmittel
für Gruppe II Kategorie 1 G
(IEC 60079-26:2004, modifiziert)

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This European Standard was approved by CENELEC on 2004-04-01. 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 31/483/FDIS, future edition 1 of IEC 60079-26, prepared by IEC TC 31, Electrical apparatus for explosive atmospheres, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60079-26 on 2004-04-01.

Directive 94/9/EC requires equipment classification according to categories. Therefore, in all clauses where the text of IEC 60079-26 uses the term "Zone 0 Equipment", or equivalent, this shall be interpreted as referring to equipment of Category 1 G.

To this end, a draft amendment, prepared by the Technical Committee CENELEC TC 31, Electrical apparatus for explosive atmospheres - General requirements, was submitted to the formal vote and was approved by CENELEC for inclusion into EN 60079-26 on 2004-09-22.

This European Standard supersedes EN 50284:1999.

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) 2005-06-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2007-04-01

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Endorsement notice

The text of the International Standard IEC 60079-26:2004 was approved by CENELEC as a European Standard with agreed common modifications as given below.

COMMON MODIFICATIONS

Replace the title by:

Electrical apparatus for explosive gas atmospheres – Part 26: Construction, test and marking of Group II Category 1 G electrical apparatus.

Replace Clause 6 by:

6 Marking

6.1 General


The apparatus shall be marked according to the requirements of the Directive 94/9/EC for equipment Group II, Category 1 G and according to the type of protection as defined in the applicable standard.

Apparatus intended for installation in the boundary wall between areas requiring different categories shall have both categories marked on the label separated by a "/" and the corresponding symbols for each type of protection separated by a "/". In the case where the apparatus group or temperature class differ for the two types of protection, the complete designation of each rating shall be used and separated by a "/".


Where more than one type of protection is used in accordance with 4.2.4, the symbols for the types of protection shall be joined with a “+”.

6.2 Examples of marking


- a) Apparatus which is intended to be completely installed inside the Zone 0 area for example:

 II 1 G Ex ia IIC T6

or

 II 1 G Ex d+e IIB T4

- b) Associated apparatus, which is installed outside the hazardous area and providing external electrical circuits protected by intrinsic safety “ia” according to EN 50020, which can be connected to Category 1 apparatus, for example:

 II (1) G [Ex ia] IIC

NOTE 1 No designation of the temperature class is required, as this apparatus is located outside the hazardous area.

- c) Equipment which is installed in the boundary wall between areas requiring different categories, both categories are marked on the label separated by a slash for example:

 II1/2 G Ex d IIC T6 (standards.itech.ai)

or

 II 1/2 G Ex ia/d IIC T6 <https://standards.itech.ai/catalog/standards/sist/4fb3bf5-4647-4079-ab98-57ecfa9f79f8/sist-en-60079-26-2005>

NOTE 2 Intrinsic safety “ia” apparatus in Zone 0 with a flameproof “d” compartment in Zone 1.

or

 II 1/2 G Ex d+e/d IIB T4

NOTE 3 Two independent types of protection flameproof “d” and increased safety “e” in Zone 0 with a flameproof “d” compartment in Zone 1.

The documentation shall state which parts of the apparatus are suitable for installation in each zone.

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 Where 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 60079-0	– ¹⁾	Electrical apparatus for explosive gas atmospheres Part 0: General requirements	EN 60079-0	2004 ²⁾
IEC 60079-1	– ¹⁾	Electrical apparatus for explosive gas atmospheres Part 1: Flameproof enclosures 'd'	EN 60079-1	2004 ²⁾
IEC 60079-10	– ¹⁾	Part 10: Classification of hazardous areas	EN 60079-10	2003 ²⁾
IEC 60079-11	– ¹⁾	Part 11: Intrinsic safety "i"	-	-
IEC 60079-14	– ¹⁾	Part 14: Electrical installations in hazardous areas (other than mines)	EN 60079-14	2003 ²⁾
IEC 60079-18	– ¹⁾	Part 18: Construction, test and marking of type of protection encapsulation "m" electrical apparatus	EN 60079-18	2004 ²⁾
IEC 60695-11-10	– ¹⁾	Fire hazard testing Part 11-10: Test flames - 50 W horizontal and vertical flame test methods	EN 60695-11-10	1999 ²⁾

¹⁾ Undated reference.

²⁾ Valid edition at date of issue.

**NORME
INTERNATIONALE
INTERNATIONAL
STANDARD**

**CEI
IEC**

60079-26

Première édition
First edition
2004-03

**Matériel électrique pour atmosphères
explosives gazeuses –**

**Partie 26:
Construction, essais et marquage
des matériels électriques de Groupe II
utilisables en Zone 0**

**Electrical apparatus for explosive
gas atmospheres –**

**Part 26:
Construction, test and marking
of Group II Zone 0 electrical apparatus**

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Commission Electrotechnique Internationale
International Electrotechnical Commission
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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ELECTRICAL APPARATUS FOR EXPLOSIVE GAS ATMOSPHERES –**Part 26: Construction, test and marking
of Group II Zone 0 electrical apparatus**

FOREWORD

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International Standard IEC 60079-26 has been prepared by IEC technical committee 31: Electrical apparatus for explosive atmospheres.

The text of this standard is based on the following documents:

FDIS	Report on voting
31/483/FDIS	31/494/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this publication will remain unchanged until 2006. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

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ELECTRICAL APPARATUS FOR EXPLOSIVE GAS ATMOSPHERES –

Part 26: Construction, test and marking of Group II Zone 0 electrical apparatus

1 Scope

This part of IEC 60079 specifies the particular requirements for construction, test and marking for electrical apparatus of Group II intended for use in Zone 0 as defined in IEC 60079-10.

This electrical apparatus, within the operational parameters specified by the manufacturer, ensures a very high level of protection that includes rare faults related to the apparatus or two faults occurring independently of each other.

NOTE 1 A malfunction may result from a failure of the component parts of the electrical apparatus or from anticipated externally applied influences. Two independent malfunctions which may occur more frequently and which, separately, would not create an ignition hazard but which, in combination, could create a potential ignition hazard, should be regarded as occurring together to form a rare fault.

This electrical apparatus is intended for use in Zone 0 hazardous areas, in which explosive gas atmospheres caused by mixtures of air and gases, vapours or mists under normal atmospheric conditions are present continuously, for long periods or frequently.

This standard also applies to apparatus mounted across the boundary between Zone 0 and Zone 1.

EXAMPLE: In the wall of a storage vessel.

This standard also applies to apparatus installed outside Zone 0, but electrically connected to apparatus inside Zone 0 (associated apparatus).

This standard supplements the general requirements in IEC 60079-0 and the requirements of the standardized types of protection, in accordance with the IEC 60079 series, to adapt the level of safety provided by those standards to the very high level of risk in Zone 0.

NOTE 2 In designing apparatus for operation in explosive gas atmospheres under conditions other than the atmospheric conditions given in IEC 60079-0, this standard may be used as a guide. However, additional testing is recommended related specifically to the intended conditions of use. This is particularly important when the types of protection 'Flameproof enclosure' (IEC 60079-1) and 'Intrinsic safety' (IEC 60079-11) are applied.

NOTE 3 The classification of hazardous areas in zones is defined in IEC 60079-10.

NOTE 4 There may be other non-electrical sources of ignition (for example ultrasonic, optical or ionizing radiation) that are not addressed by this standard; these should also be taken into consideration (see, for example, EN 1127-1).