
**Električne naprave za uporabo v prisotnosti gorljivega prahu - 4. del: Vrsta
zaščite "pD" (IEC 61241-4:2001)**

Electrical apparatus for use in the presence of combustible dust - Part 4: Type of
protection "pD" (IEC 61241-4:2001)

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Electrical apparatus for use in the presence of combustible dust
Part 4: Type of protection "pD"
(IEC 61241-4:2001)

Matériels électriques destinés
à être utilisés en présence
de poussières combustibles
Partie 4: Type de protection "pD"
(CEI 61241-4:2001)

Elektrische Betriebsmittel zur Verwendung
in Bereichen mit brennbarem Staub
Teil 4: Zündschutzart "pD"
(IEC 61241-4:2001)

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This European Standard was approved by CENELEC on 2006-04-01. 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, 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

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

Foreword

The text of the International Standard IEC 61241-4:2001, prepared by SC 31H, Apparatus for use in the presence of combustible dust, of IEC TC 31, Electrical apparatus for explosive atmospheres, was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 61241-4 on 2006-04-01.

This European Standard is to be read in conjunction with EN 61241-0 as applicable to "Equipment Group II, Categories 2D and 3D".

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) 2007-07-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2009-04-01

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 and ZZ have been added by CENELEC.

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Endorsement notice

The text of the International Standard IEC 61241-4:2001 was approved by CENELEC as a European Standard without any modification.

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 60034-1 (mod)	1996	Rotating electrical machines Part 1: Rating and performance	EN 60034-1 ¹⁾ + corr. February	1998 2000
IEC 61241	Series	Electrical apparatus for use in the presence of combustible dust	EN 61241	Series
IEC 61241-1-1	1999	Electrical apparatus for use in the presence of combustible dust Part 1-1: Electrical apparatus protected by enclosures and surface temperature limitation - Specification for apparatus	-	-
IEC 61241-1-2	1999	Electrical apparatus for use in the presence of combustible dust Part 1-2: Electrical apparatus protected by enclosures and surface temperature limitation - Selection, installation and maintenance	-	-
IEC 61241-3	1997	Electrical apparatus for use in the presence of combustible dust Part 3: Classification of areas where combustible dusts are or may be present	-	-

¹⁾ EN 60034-1 is superseded by EN 60034-1:2004, which is based on IEC 60034-1:2004.

Annex ZZ (informative)

Coverage of Essential Requirements of EC Directives

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 requirements out of those given in Annex II of the EC Directive 94/9/EC:

- ER 1.0.1 to ER 1.0.5
- ER 1.2.1 (partly), ER 1.2.2 (partly), ER 1.2.6 to ER 1.2.8
- ER 1.3.1
- ER 1.4.1 (partly)
- ER 1.5.1 to ER 1.5.3
- ER 1.6.2 (partly), ER 1.6.3, ER 1.6.4 1st paragraph
- ER 2.1.2.1 to ER 2.1.2.4
- ER 2.2.2.1 to ER 2.2.2.4
- ER 2.3.2.1 to ER 2.3.2.3

Compliance with this standard provides one means of conformity with the specified essential requirements of the Directive concerned.

<https://standards.iteh.ai/catalog/standards/sist/b1b4e17d-b83e-43c7-8ec6-44a0559a3523/en-61241-4-2006>
EN 61241-4:2007

WARNING: Other requirements and other EC Directives may be applicable to the products falling within the scope of this standard.

NORME
INTERNATIONALE
INTERNATIONAL
STANDARD

CEI
IEC

61241-4

Première édition
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2001-03

**Matériels électriques destinés à être utilisés
en présence de poussières combustibles –**

**Partie 4:
Type de protection «pD»**

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**Electrical apparatus for use in the presence of
combustible dust –**

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**Part 4:
Type of protection "pD"**

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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ELECTRICAL APPARATUS FOR USE IN THE PRESENCE OF
COMBUSTIBLE DUST –

Part 4: Type of protection "pD"

FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
- 3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical specifications, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
- 5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.
- 6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 61241-4 has been prepared by subcommittee 31H: Apparatus for use in the presence of combustible dust, of IEC technical committee 31: Electrical apparatus for explosive atmospheres.

This bilingual version (2001-07) replaces the English version.

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

FDIS	Report on voting
31H/117/FDIS	31H/127/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 3.

Annexes A and B form an integral part of this standard.

The committee has decided that the contents of this publication will remain unchanged until 2005. At this date, the publication will be

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

ELECTRICAL APPARATUS FOR USE IN THE PRESENCE OF COMBUSTIBLE DUST –

Part 4: Type of protection "pD"

1 Scope

This part of IEC 61241 gives requirements on the design, construction, testing and marking of electrical apparatus for use in combustible dust atmospheres in which a protective gas (air or inert gas), maintained at a pressure above that of the external atmosphere, is used to prevent the entry of dust which might otherwise lead to the formation of a combustible mixture within enclosures which do not contain a source of combustible dust.

This standard contains the specific requirements for construction and testing, including protective requirements that apply to electrical apparatus with type of protection pressurization "pD" intended for use in potentially combustible dust atmospheres.

This standard includes the requirements for the construction of the enclosure and its associated components, including, if any, the inlet and outlet ducts for the protective gas, and for the safety provisions and devices necessary to ensure that pressurization is established and maintained for type of protection pressurization "pD".

Requirements for pressurized enclosures with an internal source of dust release are not included in this standard.

This standard does not cover the requirements for pressurized rooms with or without internal sources of dust release.

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 cover combined gas and dust hazard. Those requirements are under consideration.

The requirements contained in this standard are supplementary to those in IEC 61241-1-1.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 61241. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of IEC 61241 are encouraged to investigate the possibility of applying the most recent editions of the normative documents listed below. For undated references, the latest edition of the normative document referred to applies. Members of IEC and ISO maintain registers of currently valid International Standards.

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

¹⁾ There exists a consolidated edition 10.2 (1999) that includes edition 10.0 and its amendments.