

**Plahvatusohtlikud keskkonnad. Osa 17:
Elektripaigaldiste kontroll ja korrashoid**

**Explosive atmospheres - Part 17: Electrical installations
inspection and maintenance**

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 60079-17:2007 sisaldab Euroopa standardi EN 60079-17:2007+AC:2008 ingliskeelset teksti.	This Estonian standard EVS-EN 60079-17:2007 consists of the English text of the European standard EN 60079-17:2007+AC:2008.
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English version

**Explosive atmospheres -
Part 17: Electrical installations inspection and maintenance
(IEC 60079-17:2007)**

Atmosphères explosives -
Partie 17: Inspection et entretien
des installations électriques
(CEI 60079-17:2007)

Explosionsfähige Atmosphäre -
Teil 17: Prüfung und Instandhaltung
elektrischer Anlagen
(IEC 60079-17:2007)

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

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Foreword

The text of document 31J/145/FDIS, future edition 4 of IEC 60079-17, prepared by SC 31J, Classification of hazardous areas and installation requirements, of IEC TC 31, Equipment for explosive atmospheres, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60079-17 on 2007-09-01.

This European Standard supersedes EN 60079-17:2003.

The significant technical changes with respect to EN 60079-17:2003 are as follows:

- additional requirements for inspection and maintenance of electrical installations for combustible dusts are included;
- knowledge, skills and competencies of "responsible persons", "technical persons with executive function" and "operatives" are explained in new Annex B;
- Equipment Protection Levels (EPLs) have been introduced and are explained in the new Annex C.

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) 2008-06-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2010-09-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60079-17:2007 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 60079-6	NOTE Harmonized as EN 60079-6:2007 (not modified).
IEC 60079-7	NOTE Harmonized as EN 60079-7:2007 (not modified).
IEC 60079-18	NOTE Harmonized as EN 60079-18:2004 (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 60204-1	NOTE Harmonized as EN 60204-1:2006 (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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60079-0 (mod)	- ¹⁾	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements	EN 60079-0	2006 ²⁾
IEC 60079-1	- ¹⁾	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"	EN 60079-1	2007 ²⁾
IEC 60079-2	- ¹⁾	Explosive atmospheres - Part 2: Equipment protection by pressurized enclosure "p"	-	-
IEC 60079-7	- ¹⁾	Explosive atmospheres - Part 7: Equipment protection by Increased safety "e"	EN 60079-7	2007 ²⁾
IEC 60079-10	- ¹⁾	Electrical apparatus for explosive gas atmospheres - Part 10: Classification of hazardous areas	EN 60079-10	2003 ²⁾
IEC 60079-11	- ¹⁾	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"	EN 60079-11	2007 ²⁾
IEC 60079-14	- ¹⁾	Electrical apparatus for explosive gas atmospheres - Part 14: Electrical installations in hazardous areas (other than mines)	EN 60079-14	2003 ²⁾
IEC 60079-15	- ¹⁾	Electrical apparatus for explosive gas atmospheres - Part 15: Construction, test and marking of type of protection "n" electrical apparatus	EN 60079-15	2005 ²⁾
IEC 60079-19	- ¹⁾	Explosive atmospheres - Part 19: Equipment repair, overhaul and reclamation	EN 60079-19	2007 ²⁾
IEC 60364-6 (mod)	- ¹⁾	Low voltage electrical installations - Part 6: Verification	HD 60364-6	2007 ²⁾

¹⁾ Undated reference.

²⁾ Valid edition at date of issue.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61241	Series	Electrical apparatus for use in the presence of combustible dust	EN 61241	Series
IEC 61241-1	- ¹⁾	Electrical apparatus for use in the presence of combustible dust - Part 1: Protection by enclosures "tD"	EN 61241-1 + corr. December	2004 ²⁾ 2006
IEC 61241-4	- ¹⁾	Electrical apparatus for use in the presence of combustible dust - Part 4: Type of protection "pD"	EN 61241-4	2006 ²⁾
IEC 61241-10	- ¹⁾	Electrical apparatus for use in the presence of combustible dust - Part 10: Classification of areas where combustible dusts are or may be present	EN 61241-10	2004 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⁾
IEC 61241-14	2004	Electrical apparatus for use in the presence of combustible dust - Part 14: Selection and installation	EN 61241-14	2004

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INTRODUCTION

Electrical installations in hazardous areas possess features specially designed to render them suitable for operations in such atmospheres. It is essential for reasons of safety in those areas that, throughout the life of such installations, the integrity of those special features is preserved; they therefore require initial inspection and either

- a) regular periodic inspections thereafter, or
- b) continuous supervision by skilled personnel

in accordance with this standard and, when necessary, maintenance.

NOTE Correct functional operation of hazardous area installations does not mean, and should not be interpreted as meaning, that the integrity of the special features referred to above is preserved.

EXPLOSIVE ATMOSPHERES –

Part 17: Electrical installations inspection and maintenance

1 Scope

This part of IEC 60079 applies to users and covers factors directly related to the inspection and maintenance of electrical installations within hazardous areas only, where the hazard may be caused by flammable gases, vapours, mists, dusts, fibres or flyings.

It does not include:

- other fundamental installation and inspection requirements for electrical installations;
- the verification of electrical equipment;
- the repair and reclamation of explosion protected equipment (see IEC 60079-19).

This standard supplements the requirements of IEC 60364-6.

In the case of dusts, fibres or flyings the level of housekeeping may influence the inspection and maintenance requirements.

This standard is intended to be applied where there can be a risk due to the presence of explosive gas or dust mixtures with air or combustible dust layers under normal atmospheric conditions. It does not apply to

- underground mining areas,
- areas where a risk can arise due to the presence of hybrid mixtures,
- dusts of explosives that do not require atmospheric oxygen for combustion,
- pyrophoric substances.

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 60079-1, *Explosive atmospheres – Part 1: Equipment protection by flameproof enclosures "d"*

IEC 60079-2, *Explosive atmospheres – Part 2: Equipment protection by pressurized enclosures "p"*

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

IEC 60079-10, *Electrical apparatus for explosive gas atmospheres – Part 10: Classification of hazardous areas*

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

IEC 60079-14, *Electrical apparatus for explosive gas atmospheres – Part 14: Electrical installations in hazardous areas (other than mines)*

IEC 60079-15, *Electrical apparatus for explosive gas atmospheres – Part 15: Construction, test and marking of type of protection "n" electrical apparatus*

IEC 60079-19, *Explosive atmospheres – Part 19: Equipment repair, overhaul and reclamation*

IEC 60364-6, *Low-voltage electrical installations – Part 6: Verification*

IEC 61241 (all parts), *Combustible dust*

IEC 61241-1, *Electrical apparatus for use in the presence of combustible dust – Part 1: Protection by enclosures "tD"*

IEC 61241-4, *Electrical apparatus for use in the presence of combustible dust – Part 4: Type of protection "pD"*

IEC 61241-10, *Electrical apparatus for use in the presence of combustible dust – Part 10: Classification of areas where combustible dusts are or may be present*

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

IEC 61241-14:2004, *Electrical apparatus for use in the presence of combustible dust – Part 14: Selection and installation*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60079-0 and the following apply.

NOTE Additional definitions applicable to explosive atmospheres can be found in Chapter 426 of the International Electrotechnical Vocabulary (IEV) IEC 60050 (426).

3.1

close inspection

inspection which encompasses those aspects covered by a visual inspection and, in addition, identifies those defects, such as loose bolts, which will be apparent only by the use of access equipment, for example steps, (where necessary), and tools

NOTE Close inspections do not normally require the enclosure to be opened, or the equipment to be de-energized.

3.2

continuous supervision

frequent attendance, inspection, service, care and maintenance of the electrical installation by skilled personnel who have experience in the specific installation and its environment in order to maintain the explosion protection features of the installation in satisfactory condition

3.3

detailed inspection

inspection which encompasses those aspects covered by a close inspection and, in addition, identifies those defects, such as loose terminations, which will only be apparent by opening the enclosure, and/or using, where necessary, tools and test equipment