

**Gaaside ja aurude avastamiseks
mõeldud avatud trajektooriga aparadi
spetsifikatsioon . Osa 2: Põlevate
gaaside avastamiseks mõeldud
aparadi jõudlusnõuded**

Specification for open path apparatus for the
detection of gases and vapours - Part 2:
Performance requirements for apparatus for the
detection of combustible gases

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 50241-2:2001 sisaldab Euroopa standardi EN 50241-2:1999 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 19.06.2001 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 50241-2:2001 consists of the English text of the European standard EN 50241-2:1999.</p> <p>This document is endorsed on 19.06.2001 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala:</p> <p>This European Standard specifies performance requirements for Group II portable, transportable and fixed apparatus for the detection and measurements of integral concentrations of combustible gas or vapour in air over a defined open path. The apparatus, or parts thereof, may be installed or transported for use in potentially explosive atmospheres. The general requirements and test methods applicable to the apparatus covered by this European Standard are specified in Part 1.</p>	<p>Scope:</p> <p>This European Standard specifies performance requirements for Group II portable, transportable and fixed apparatus for the detection and measurements of integral concentrations of combustible gas or vapour in air over a defined open path. The apparatus, or parts thereof, may be installed or transported for use in potentially explosive atmospheres. The general requirements and test methods applicable to the apparatus covered by this European Standard are specified in Part 1.</p>
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ICS 13.320, 19.080

Võtmesõnad:

English version

**Specification for open path apparatus for the detection of
combustible or toxic gases and vapours
Part 2: Performance requirements for apparatus for
the detection of combustible gases**

Spécifications pour les détecteurs
à chemin optique ouvert de gaz et
vapeurs toxiques
Partie 2: Règles de fonctionnement pour
les détecteurs de gaz combustible

Anforderungen an Geräte mit offener
Meßstrecke für Detektion brennbarer
oder toxischer Gase und Dämpfe
Teil 2: Anforderungen an das
Betriebsverhalten von Geräten für die
Detektion brennbarer Gase

This European Standard was approved by CENELEC on 1998-10-01. 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, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization
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Europäisches Komitee für Elektrotechnische Normung

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Foreword

This European Standard was prepared by SC 31-9, Electrical apparatus for the detection and measurement of combustible gases to be used in industrial and commercial potentially explosive atmospheres, of Technical Committee CENELEC TC 31, Electrical apparatus for explosive atmospheres

The text of the draft was submitted to the formal vote and was approved by CENELEC as EN 50241-2 on 1998-10-01.

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) 1999-10-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 1999-10-01

This European Standard has been prepared under a mandate given to CENELEC by the European Commission and covers essential requirements of EC Directive 94/9/EC.

1	Scope.....	4
2	Normative references	4
3	Definitions	4
4	General requirements	4
5	Performance requirements.....	4
5.1	Requirements for tests	4
5.2	Unpowered storage	5
5.3	Calibration curve (not applicable to alarm-only apparatus)	5
5.4	Drift (continuous duty apparatus only).....	5
5.5	Alarm	5
5.6	Temperature variation	5
5.7	Pressure variation	6
5.8	Water vapour interference	6
5.9	Vibration	6
5.10	Alignment.....	6
5.11	Time of response.....	6
5.12	Power supply variations.....	6
5.13	Power supply interruptions and transients.....	7
5.14	Recovery from power supply interruption	7
5.15	Electromagnetic compatibility	7
5.16	Attenuation of radiation	7
5.17	Beam blockage.....	7
5.18	Long range operation	7
5.19	Direct solar radiation (applicable for apparatus intended for outdoor use).....	8
6	Field verification equipment	8
7	Instructions for use	8

1 Scope

This European Standard specifies performance requirements for Group II¹ portable, transportable and fixed apparatus for the detection and measurement of integral concentrations of combustible gas or vapour in air over a defined open path. The apparatus, or parts thereof, may be installed or transported for use in potentially explosive atmospheres. The general requirements and test methods applicable to the apparatus covered by this European Standard are specified in Part 1.

This European Standard concerns apparatus intended to provide measurement or warning of specific combustible gases in air which constitute a potential hazard by virtue of their flammability.

Open path detection apparatus as covered by this European Standard measures the path integral concentration. It is not capable of resolving the spatial variation of concentration along the optical path.

2 Normative references

This European Standard incorporates by dated or undated references, provisions from other publications. These normative references are cited at the appropriate place in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 50270	1999	Electromagnetic compatibility: Electrical apparatus for the detection and measurement of combustible gases, toxic gases and oxygen
EN 50241-1	1999	Specification for open-path apparatus for the detection of gases and vapours - Part 1: General requirements and test methods

3 Definitions

For the purpose of this European Standard, the definitions given in EN 50241-1 apply.

4 General requirements

It shall be verified by inspection of the apparatus and the documentation provided by the manufacturer that the general requirements as specified in clause 4 of EN 50241-1 are fulfilled.

5 Performance requirements

5.1 Requirements for tests

5.1.1 Gas cells

Gas cells, as described in 5.2.4.1 of EN 50241-1, used for tests with combustible gases, shall be constructed such that errors in measurement arising from variations of attenuation with wavelength in the windows of the cells shall be less than 2% of measuring range or 5% of the measured value, whichever is the greater.

¹ Group II apparatus is suitable for places with potentially explosive atmospheres, other than mines susceptible to firedamp.