Elektriseadmed põlevate gaaside avastamiseks ja mõõtmiseks. Jõudlusnõuded rühma I seadistele, mis näitavad õhus kuni 5 % (v/v) metaani

Electrical apparatus for the detection and measurement of combustible gases - Performance requirements for Group I apparatus indicating up to 5 % (v/v) methane in air

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 50055:2001 sisaldab Euroopa standardi EN 50055:1998 ingliskeelset teksti.	This Estonian standard EVS-EN 50055:2001 consists of the English text of the European standard EN 50055:1998.
Standard on kinnitatud Eesti Standardikeskuse 19.06.2001 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	This standard is ratified with the order of Estonian Centre for Standardisation dated 19.06.2001 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
Standard on kättesaadav Eesti standardiorganisatsioonist.	The standard is available from Estonian standardisation organisation.

ICS 13.230, 19.080, 29.260.20

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 50055

July 1998

ICS 13.220.60;19.080

Supersedes EN 50055:1991 + A1:1995

Descriptors: Electrical apparatus, explosive atmosphere, mine susceptible to firedamp, detector, measuring apparatus, flammable gas, combustible gas, characteristic

English version

Electrical apparatus for the detection and measurement of combustible gases Performance requirements for Group I apparatus indicating up to 5 % (v/v) methane in air

Appareils électriques de détection et de mesure des gaz combustibles
Règles de performances des appareils du Groupe I pouvant indiquer jusqu'à 5 % (v/v) de méthane dans l'air

Elektrische Geräte für das Aufspüren und die Messung brennbarer Gase
Anforderungen an das Betriebsverhalten von Geräten der Gruppe I mit einem Meßbereich bis zu 5 % (V/V) Methan in Luft

This European Standard was approved by CENELEC on 1996-12-09. 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
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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

Ref. No. EN 50055:1998 E

Foreword

This second edition, of the 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 atmosphere, on the basis of EN 50055:1991, its amendment A1:1995 and a second amendment.

This second amendment was approved by CENELEC on 1996-12-09 for incorporation into a new edition of EN 50055.

This European Standard replaces EN 50055:1991 + A1:1995.

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) 1999-01-01

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

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.

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1 Scope

1.1 This European Standard specifies performance requirements for Group I (as defined in European Standard EN 50054) portable, transportable and fixed apparatus for the detection and measurement of methane concentrations in mine air. The apparatus, or parts thereof, are intended for use in mines susceptible to firedamps and shall meet the general requirements and test methods specified in EN 50054.

1.2 This European Standard is restricted to apparatus intended for the detection and measurement of methane volume ratios in air from 0 % (v/v) up to but not exceeding 5 % (v/v).

2 Normative references

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

EN 50054	1998	Electrical apparatus for the detection and measurement of combustible gases General requirements and test methods

3 Definitions

For the purposes of this European Standard, the definitions given in EN 50054 apply.

4 General requirements

The apparatus shall comply with the general requirements specified in EN 50054 and with the performance requirements specified in clause 4 of this European Standard.

Compliance shall be determined in accordance with the appropriate test requirements and methods, including initial calibration, specified in EN 50054.

5 Performance requirements

5.1 General

The normal conditions for test are specified in subclause 5.3 of EN 50054. Compliance shall be determined in accordance with the test methods specified in subclause 5.4 of EN 50054.

5.2 Unpowered storage

After being submitted to the conditions specified in subclause 5.4.2 of EN 50054, the apparatus shall meet the requirements specified in 5.3 to 5.25 of this European Standard.

5.3 Calibration curve (not applicable to alarm-only apparatus)

After initial adjustment with the standard test gas, each of the three indications (after correction using the manufacturer's calibration curve, if necessary) obtained for each of four gas volume ratios distributed over the measuring range shall not differ from these volume ratios by more than $\pm$ 0,1 % (v/v) methane or $\pm$ 5 % of the indication, whichever is the greater.

5.4 Drift (continuous duty apparatus)

The medium term variation shall not exceed $\pm$ 0,1 % (v/v) methane or $\pm$ 5 % of the indication, whichever is the greater, in air and in the standard test gas.

In addition, the apparatus shall be run in a methane-air mixture (methane volume ratio 1,0 % (v/v) to 1,5 % (v/v)) for 5 days, readings being taken daily in clean air and in the standard test gas and the variation of the indication in the standard test gas shall not exceed $\pm$ 0,1 % (v/v) methane.