EESTI STANDARD EVS-EN 50104:2002

Hapniku avastamise ja mõõtmise elektriseadmed. Jõudlusnõuded ja katsemeetodid

Electrical apparatus for the detection and measurement of oxygen - Performance requirements and test methods

EESTI STANDARDIKESKUS

EESTI STANDARDI EESSÕNA **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN 50104:2002 sisaldab Euroopa standardi EN 50104:2002 ingliskeelset teksti. Käesolev dokument on jõustatud 18.12.2002 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 50104:2002 consists of the English text of the European standard EN 50104:2002. This document is endorsed on 18.12.2002 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.

Käsitlusala: This European Standard specifies performance requirements and test methods for portable, transportable and fixed electrical apparatus for the measurement of the oxygen concentration in gas mixtures indicating up to 25% (v/v). This European Standard applies to apparatus intended for commercial and industrial safety applications, including integral sampling system of aspirated apparatus.	**Scope:** This European Standard specifies performance requirements and test methods for portable, transportable and fixed electrical apparatus for the measurement of the oxygen concentration in gas mixtures indicating up to 25% (v/v). This European Standard applies to apparatus intended for commercial and industrial safety applications, including integral sampling system of aspirated apparatus.

ICS 19.080

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English version

Electrical apparatus for the detection and measurement of oxygen - Performance requirements and test methods

Appareils électriques de détection et de mesure de l'oxygène - Règles de performance et méthodes d'essai

Elektrische Geräte für die Detektion und Messung von Sauerstoff - Anforderungen an das Betriebsverhalten und Prüfverfahren

This European Standard was approved by CENELEC on 2002-02-01. 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.

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CENELEC

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

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Foreword

This third 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 atmospheres, on the basis of EN 50104:1998.

The text of the draft was submitted to the formal vote and was approved by CENELEC as EN 50104 on 2002-02-01.

This European Standard supersedes EN 50104:1998.

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)	2003-02-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2005-02-01

Annexes designated „informative“ are given for information only.
In this standard, Annexes A and B are informative.

Contents

1 Scope

This European Standard specifies test methods and performance requirements for portable, transportable and fixed electrical apparatus for the measurement of the oxygen concentration in gas mixtures indicating up to 25 % (v/v).

In the case of inert gas purging (inertization), it applies also to apparatus with an oxygen measuring function for explosion protection.

NOTE The most commonly used oxygen sensors in commercial equipment for industrial application are:
a) paramagnetic sensors;
b) electrochemical sensors (aqueous and solid electrolytes).

This European Standard is applicable to oxygen alarm apparatus intended to measure reliably the oxygen concentration, to provide an indication, alarm or other output function, the purpose of which is to give a warning of a potential hazard and, in some cases, to initiate automatic or manual protective action(s), whenever the level exceeds or falls below a preselected alarm concentration.

It is applicable to apparatus, including integral sampling systems of aspirated apparatus, intended to be used for commercial and industrial safety applications.

It does not apply to external sampling systems, or to apparatus of laboratory or scientific type, or to medical equipment, or to apparatus used only for process control purposes.

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 or oxygen
EN 50271	2001	Electrical apparatus for the detection and measurement of combustible gases, toxic gases or oxygen - Requirements and tests for apparatus using software and/or digital technologies
EN 60068-2-6	1995	Environmental testing - Part 2: Tests - Test Fc: Vibration (sinusoidal) (IEC 60068-2-6:1995 + corrigendum March 1995)